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# POLICY MEASURES TO STRENGTHEN REGULATORY FRAMEWORKS FOR SUSTAINABLE COASTAL, MARINE TOURISM AND MINING ACTIVITIES TOWARDS AQUATIC BIODIVERSITY AND ENVIRONMENTAL CONSERVATION IN KENYA



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## I. Background

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

AU-IBAR is a specialized technical office of the Department of Agriculture, Rural Development, Blue Economy and Sustainable Environment (DARBE) of the African Union Commission (AUC) 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 is currently undertaking intervention in the fisheries, aquaculture sector, 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.

### 1.2 *Background and Rationale for the Policy Measures*

The African Union Agenda 2063 is the Strategic framework for the socio-economic transformation of the continent over the next 50 years refers specifically to the Blue and Ocean Economy as the Goal 6 for accelerated economic growth especially for the priority areas of Marine Resources and Energy; and Ports Operations and Marine Transport. The Goal 7 also addresses BE by having priority areas such as Sustainable natural resource management and Biodiversity conservation; Sustainable consumption and production patterns; Water security; Climate resilience and natural disasters preparedness and prevention; Renewable

energy that are integral to BE Development in Africa. Secondly, the Blue Economy also constitutes Goal 14 of the UN Agenda 2030 with the areas of intervention initially focused on, among others, Marine resources and the cross-cutting issues of Blue governance and institutional changes such as Coordination and spatial Planning and Gender, youths and vulnerable people inclusiveness in addition to the Democratization of BE.

Further, 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, studies were conducted 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 and Policy Measures to strengthen policies

and regulatory frameworks for Sustainable Development of Coastal, Marine tourism and Mining Activities towards Aquatic Biodiversity and Environmental Conservation in Kenya

### *1.3 Objectives of the Policy Measures*

The Objectives and Purpose of the proposed Policy Measures is to strengthen regulatory frameworks for Sustainable Coastal, Marine Tourism and Mining Activities Towards Conservation of Aquatic Biodiversity and Environment Management. The measures will support the implementation of the Kenya Master Plan on Coastal and Marine Tourism, Oil, Gas and Mineral Exploration and Mining, designed as game changer for the sector, to clearly Steering Sustainable Socio-economic Development; Aquatic Biodiversity and Ecosystem Conservation and Protection and Empowerment of Coastal Communities

### *1.4 Methodology and Approach Development of the Policy Measures*

The policy measures were developed with support of a national consultant recruited by AU-IBAR, under the provisions of the Swedish aquatic biodiversity project. The Consultancy was tasked with the following: -

- 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;
- Support the national consultative workshop; and
- Develop a national masterplan for sustainable coastal, marine tourism and mining (oil, gas and minerals) activities in Kenya;

In line with the terms of reference, the Consultancy was tasked with: -

- Facilitation of a National Consultative workshop;
- Identify Priority issues and actions for sustainable coastal, marine tourism and mining activities;
- Develop Policy guidelines and regulatory measures to strengthen environmental sustainability and aquatic biodiversity conservation in the development of coastal and marine tourism in Kenya;
- Develop Policy guidelines and regulatory measures to strengthen environmental sustainability and aquatic biodiversity conservation in mining activities, including oil and gas exploration in Kenya;

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 Develop the Policy Measures included:

- Detailed briefings with the Senior Fisheries Officer and the Aquatic Biodiversity Expert, and other Relevant personnel at AU-IBAR;
- 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
- Identification of information repository relevant to the subject within Ministries, Departments and Agencies (MDAs);
- 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);

- 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;
- 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;
- On the basis of the outcomes of the national consultative workshop, priority issues and actions were then identified for the development of the Policy Measures 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.

## 2. Review of the Sectors, Role in Socio-Economic Development and Impacts on Aquatic Biodiversity and Environment

### 2.1 Coastal and Marine Tourism

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.

With a 640km coastline (excluding creeks and embayments), Kenya boasts an idyllic coastline, with stretching kilometres of soft white sand fringed by palm trees, and 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 rookery 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. It 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 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).

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).

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 due to boat activities;
- Solid waste management and especially with regards to plastics and marine debris, discharge of oil-laden waste water from hotels and municipalities,
- Competition for maritime space, and maritime disputes among others with small scale fisheries.
- Unequitable tourism benefit sharing with locals especially on earning from Marine protected areas (MPAs)

### 2.1.1 Policy Objectives and Strategic Policy Actions for Coastal Marine Tourism (CMT) Sector

Policy objective	Strategic Policy Actions
1. To increase public awareness & information sharing on Sustainable Coastal and Marine Tourism	<ul style="list-style-type: none"> <li>• Conduct proper information packaging targeting all stakeholders (Newspaper, Seminars, workshops, Publications);</li> <li>• Conduct regular capacity building workshops;</li> </ul>
2. To strengthen ocean governance frameworks	<ul style="list-style-type: none"> <li>• Develop Ocean governance policies with best practices and regular updates</li> <li>• Facilitate participation in regional and international processes and enforce existing laws and regulations</li> <li>• Promote participation in regional and international processes, increase enforcement actions and Promote voluntary compliance</li> </ul>
3. To strengthen compliance and Enforcement Mechanisms on environmental protection and health laws, guidelines and regulations (with special attention to marine debris and plastics use and disposal guidelines)	<ul style="list-style-type: none"> <li>• Enact and enforce sound plastic use and disposal regulations and guidelines;</li> <li>• Steer towards adoption of Circular Economy on use of plastics;</li> <li>• Engage in regional and international collaboration to curb transboundary marine debris driven by the ocean currents and waves;</li> <li>• Enact an interagency and multi-sectoral collaboration and approach to enforcement of legislations and prosecution of infringements;</li> <li>• Coordinate the roles of all agencies interfacing on the management of coastal and marine ecosystems to ensure policy coherence and optimum resource protection;</li> <li>• Speedy domestication of ratified conventions, treaties into national legislations by all tiers of government;</li> <li>• Properly identify climate change drivers (Human and Natural Scenarios); and</li> <li>• Adhere to strict Environmental Impact Assessments (EIA) when considering activities such as mariculture within coastal waters;</li> </ul>



<p>4. To improve knowledge and knowhow in the Coastal and Marine Tourism Sectors</p>	<ul style="list-style-type: none"> <li>• Enact the integration of local community indigenous knowledge in decision making</li> <li>• Engage and incorporate the community in decision making organs while promoting Eco-tourism, and tourism involving heritage sites among others;</li> <li>• Enact capacity building workshops and seminars with increased levels of collaboration &amp; cooperation from communities, local governments, county government and national government levels;</li> <li>• Promote sustainability and inclusivity for aquatic biodiversity conservation and ecosystems;</li> <li>• Build capacity, share knowledge and ensure community participation and management of coastal and marine ecosystems;</li> </ul>
<p>5. To Restore and Conserve Coastal and Marine Ecosystems to Healthy / functional States (Mangroves, Coral Reefs; Kaya Forests; Seagrass Beds etc.)</p>	<ul style="list-style-type: none"> <li>• Conduct awareness campaigns on the importance of healthy ecosystems;</li> <li>• Conduct mangrove rehabilitation and seedling planting and awareness campaigns;</li> <li>• Introduce afforestation programs for non-mangrove forests along the coastal strip;</li> <li>• Enhance the sustainable utilization and management of coastal and mangrove forests with special attention paid to Kaya Forest Resources</li> <li>• Enforce control and management of forest fires</li> <li>• Enforce existing laws and regulations on corals and existing laws and regulations regarding destructive fishing and other human activities on seagrass beds</li> <li>• Engage and enforce a wider basin management approach to mitigate and address impacts of upstream activities with special attention to the major river systems: Athi-Galana-Sabaki River and Sagana-Thika-Tana River systems;</li> <li>• Promote informed participation in conservation efforts and conduct capacity building, training and multi-stakeholder packaged information dissemination;</li> <li>• Promote business concepts to drive new opportunities provided by the Blue Tourism</li> <li>• Prepare and implement a harmonized Marine Spatial Plan and Update the existing Integrated Coastal Zone Management Programme;</li> <li>• Promote actions to protect and preserve land masses that help defend coastal areas and communities from the impacts of oceans (with special focus on Coastal erosion and Protection);</li> </ul>
<p>6. To Reduce and Mitigate against Marine Pollution (Solid and liquid waste management) and Coastal infrastructure degradation</p>	<ul style="list-style-type: none"> <li>• Enforce and promote compliance MALPOL, with emphasis on Ballast waste water management, and compliance with antifouling paint standards;</li> <li>• Deploy early warning systems for preparedness and responses to adverse weather conditions;</li> <li>• Promote ideal architecture and build a resilient infrastructure that will withstand the effects of climate change;</li> </ul>
<p>7. To enhance Co-Management in the Sustainable Utilization and Management of Coastal and Marine Resources</p>	<ul style="list-style-type: none"> <li>• Provide incentives for monitoring &amp; co-management of resources with emphasis on all-inclusive mobilization / facilitation of resources from government and stakeholders for compensation purposes</li> <li>• To enhance participation of the community in project cycle</li> <li>• Establish security posts &amp; involve community in policing activities with fast-tracking of development of a Maritime Risk Strategy.</li> <li>• Enhance collaboration &amp; cooperation among the Ministries, Departments and Agencies (MDAs)</li> </ul>
<p>8. To Strengthen Information and Data base, Collaborations in Research and Development Coastal Marine Tourism Sector in Kenya</p>	<ul style="list-style-type: none"> <li>• Strengthen Research (institutions and academia) and encourage capacities for research (including funding and infrastructural support);</li> <li>• Support and promote research and cross-sectoral capacity enhancement in the conservation, protection and management of coastal and marine resources;</li> <li>• Encourage coordination and synergies among the research institutes, universities and other agencies;</li> <li>• Use research to direct evidence-based decision making and policy development;</li> </ul>

### **2.1.2 Existing Policy documents and Legislative Frameworks**

- Africa Integrated Maritime Strategy 2050
- African Charter on Maritime Transport Safety and Security 2016
- African Convention on the Conservation of Nature and Natural Resources 1968 (Rev. 2003)
- Ban on Single Use Plastic 2020
- Convention for the Protection Management & Development of the Marine and Coastal Environment of the East African Region with its Protocols 1985
- Djibouti Code of Conduct (JEDDAH Amendments)
- East African Community Vision 2050
- Environmental Management and Coordination Act 1999 (Rev 2012)
- Fisheries Management and Development Act No. 35 Of 2016
- Forest Conservation and Management Act 2016
- Global Program of Action for the Protection of the Marine Environment From land-based Activities 1995
- International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (BWM Convention).
- International Convention on Civil Liability for oil Pollution Damage 1992
- International Convention on oil pollution preparedness, response & cooperation 1990
- International Convention on the Control of Harmful Anti-fouling Systems on ships 2001
- International ship and Port Facility Security (ISPS Code)
- Kenya Coast Guard Services Act 2018
- Kenya Government Bottom-up Economic Transformative Agenda (BETA)
- Kenya Shipping Act of 2015
- Kenya Vision 2030
- Merchant Shipping Act 2009
- National Mangrove Ecosystem Management Plan 2017 - 2027
- National Museums and Heritage Act 2006 Cap 216 (Rev 2012)
- National Oceans and Fisheries Policy 2008
- National Policy on Culture and Heritage 2009
- National Sustainable Waste Management Bill 2019
- Physical Planning Act 2012
- Plastic Bag Ban for Secondary Packaging 2017
- Plastic Bag Control and Management Regulations 2018
- Rotterdam Convention on the Prior Informed Consent Procedures for Certain Hazardous Chemicals and Pesticides in International Trade 1998
- Tourism Policy 2006
- UNESCO World Heritage Convention of 1972
- Wildlife Management and Conservation Act 2013

### **2.2 Oil and Gas Exploration and Production Sector**

Kenya's estimated fiscal oil, gas and mineral revenues are ≈US\$9bn annually, calculating to about 3.4% of Kenya's \$264 billion GDP (2022 estimate). The mining sector (oil, gas, minerals) sector though contributing only ~1% to GDP, 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. 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. Continued efforts to explore and extract oil and gas from Kenya's oil blocks in Lamu requires proper planning and enactment of regulations at early stages. Encouraging, efforts were made by government to clean up operations in the other minerals sector to make it more transparent and attract more investments

including the titanium ore (Base Titanium) which 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. Kenya's oil discoveries though small, are likely impact on the environment if not well planned, with sound policies and systems in place before the expansion of the sector.

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 during drilling and dredging;
- Disturbance and/or destruction of underwater

heritage sites; habitat loss and degradation; loss of breeding and spawning habitats;

- Potential of oil spills, degradation of water quality (suspended sediments);
- Gas flares and contamination and bioaccumulation of toxic/hazardous material;
- Disruption fishing and recreation (snorkeling, diving, sport fishing) activities especially in near shore coastal water;
- Disruption navigation routes; competition for maritime space;
- Unequitable benefit sharing especially with regards to outsourcing (foreign) of technical/professional jobs; and outsourcing oil and gas exploration contracts.

### 2.2.1 Policy Objectives and Strategic Policy Actions for Oil and Gas Sector

Policy objective	Strategic Policy Actions
1. To ensure that there is good planning in the use of the Ocean space, with clear policies to critical habitats	<ul style="list-style-type: none"> <li>• Establish a robust inter-agency &amp; multi-sector Marine Spatial Plan Workgroup and Develop a Robust on MSP</li> <li>• Map and identify living aquatic resources and their habitats for long-term sustainability</li> <li>• Conduct Location-specific baseline data (for species, habitats.), Map-out Species migratory routes, Census</li> <li>• Fast-track domestication and implementation of international conventions related to biodiversity conservation (CBD, CITES etc.)</li> </ul>
2. To ensure that developments in the sector comply with all environmental protection and health laws, guidelines and regulations	<ul style="list-style-type: none"> <li>• Develop and enact an environment friendly oil &amp; gas Exploration &amp; Mining Policy (including ecofriendly infrastructural design;</li> <li>• Enforce the integration of biodiversity conservation plans into the business plans in the oil and gas sector;</li> <li>• Enforce existing legislation including EMCA 1999 (with clear polluter pay principle procedures);</li> <li>• Ensure that all oil industry companies operate with global industry best practices and standards;</li> <li>• Enhance surveillance of the operating areas to increase compliance and maintain biodiversity;</li> <li>• Ensure proper environmental impact assessment on offshore projects and review of environmental impact assessment reports;</li> <li>• Upward review of defaulters' penalty for violating policies and regulations;</li> <li>• Manage, maintain, enforce and periodically review and update the National Oil Spill Response Contingency Plan and maximize Kenya's marine pollution response capability;</li> <li>• Enforce and enhance ship inspections to guarantee seaworthiness and enhance collaboration between relevant Regulators;</li> <li>• Conduct public awareness campaigns on ship source and land-based oil/chemical pollution;</li> <li>• Promote transition from fossil fuel to green energy sources by ships and enhance utilization of by-products of oil &amp; gas exploration and production;</li> <li>• Regularly review Policies and guidelines;</li> </ul>

<p>3. To ensure strict Environmental and Social Impact Assessment of oil and gas exploration</p>	<ul style="list-style-type: none"> <li>• Enact Sound Environmental and Social Impact Assessments before permits are issued for oil and gas activities, with a sound approved and verifiable decommissioning plan for field wells, before installation and operations commence;</li> <li>• Develop appropriate Stakeholder Engagement Plans/mechanisms to comprehensively identify current and potential social impacts</li> <li>• Establish a compensation fund/authority and enact advance implementation on Access and Benefit Sharing; and compensation schemes based on proper valuation of the ecosystems, and the goods and services derived thereof;</li> <li>• Secure sensitive habitats and ecosystems, cultural/heritage sites, Large Marine Ecosystems (LMEs) and seascapes (including seamounts) to steer-off oil and gas exploration and exploitation activities;</li> <li>• Integrate indigenous knowledge and stakeholder participation/ inputs in environmental planning and protection strategies/measures;</li> </ul>
<p>4. To ensure enhanced response to environmental pollution arising from oil and gas exploration, production and Transport;</p>	<ul style="list-style-type: none"> <li>• Enhance technical training skills in oil &amp; gas industry through curricula training in local institutions, TVETs and Universities to producing skilled labour for all nodes in the industry;</li> <li>• Develop /Acquire advanced (best practice) technology to mitigate pollution;</li> <li>• Strengthen regulatory Agencies and enhance inter-agency approach to promptly address oil spills and pollution while ensuring fast-responses to reported occurrences;</li> <li>• Enhance monitoring, control and surveillance of entire industry and of actively operating areas /fields; performance of plants e.g. Floating Production Storage and Offloading (FPSO) platforms; Integrity checks of bunkering ships, barges, pipelines and other equipment and installations</li> </ul>
<p>5. To Encourage and Enhance Research &amp; Development (R&amp;D) and innovation for novel / local solutions to oil and gas pollutions</p>	<ul style="list-style-type: none"> <li>• Increase funding and infrastructural support for R&amp;D and Innovation research and development for environment friendly engineering practices;</li> <li>• Establish Innovation Centres for development of local solutions to manage and conserve Aquatic Biodiversity while incorporating indigenous knowledge;</li> <li>• Support enhancement of capacity and requisite technical knowledge in communities;</li> </ul>
<p>6. To encourage Data and Information Sharing while protecting Innovation and Intellectual property rights</p>	<ul style="list-style-type: none"> <li>• Develop a national intellectual policy and promote, protect, and enforce laws on intellectual property</li> <li>• Develop comprehensive data policy and enrich / update existing databases (Species distribution, status, occurrence);</li> <li>• Develop inter-agency data sharing protocols with advocacy for open source data access platform/repository;</li> <li>• Inter-Agency and Multi-Agency approach to enforcement of data and information rights e.g. for exit ports;</li> <li>• Establish / strengthen inter-agency border management committee and enhance community policing on marine resources</li> </ul>

### 2.2.2 Existing Policy documents and Legislative Frameworks

- AU, 2019. Africa Integrated Maritime Strategy (AIMS 2050)
- AU-IBAR, 2019. Africa Blue Economy Strategy. Nairobi, Kenya
- Constitution of Kenya (COK), 2010
- Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region and Related Protocols, 1985
- Convention on Biological Diversity (CBD), 1992
- Convention on International Trade in Endangered Species of Wild Fauna and Flora, 1975
- Convention on the Conservation of Migratory Species of Wild Animal (CMS), 1979
- Convention on Wetlands (Ramsar convention (1976)
- Fisheries Management and Development Act No. 35 of 2016
- Government of Kenya, 2017. State of the Coast Report II: Enhancing Integrated Management of Coastal and Marine Resources in Kenya. NEMA, Nairobi.

- International Convention for the Prevention of Pollution from Ships (MARPOL) 1973/1978
- International Union for Conservation of Nature (IUCN) RedList Project
- Kenya Climate Change Act, No. 11 of 2016 (Amendment 2023)
- Kenya Copyright Act Cap 130, 2001
- Kenya Energy Act, No. 1 of 2019
- Kenya Environmental Management and Coordination Act 1999 (Rev. 2016)
- Kenya ICT policy 2019
- Kenya Industrial Property Act No. 3 of 2001 (Rev. 2012)
- Kenya Integrated Coastal Zone Management (ICZM) Policy, NEMA, 2007
- Kenya Intellectual Property Bill, 2020
- Kenya Land Act No. 6 of 2012
- Kenya Land Laws (Amendment) Act No. 28 of 2016
- Kenya Maritime Zones Act Cap. 371 of 1989.
- Kenya Merchant Shipping Act No. 4 of 2009
- Kenya National Oceans & Fisheries Policy, 2008
- Kenya Natural resources map (<https://maps-kenya-ke.com/kenya-natural-resources-map>)
- Kenya Nuclear Regulatory Act No. 29 of 2019.
- Kenya Occupational Safety and Health CAP. 514, of 2007
- Kenya Petroleum Act No. 2, 2019
- Kenya Regulatory Impact Assessment for Marine Fisheries (Access And Development) Regulations, 2022
- Kenya Science, Technology and Innovation Act No. 28 of 2013
- Kenya Technical and Vocational Education and Training (TVET) Act, 2013
- Kenya Trade Marks Act. Cap. 506 of 1983 (Rev. 2009)
- Kenya Vision 2030
- Kenya Water Act, 2016 (No. 43 of 2016)
- Kenya Wildlife Conservation and Management Act, 2013
- KWS Protected Area Planning Framework - Planning Manual 2nd Ed. 2007
- Nagoya Protocol on Access and Benefit-sharing, 2014
- Sessional Paper No. 01 of 2020 on Wildlife Policy
- United Nations Law of the Sea, 1982

## 2.3 Mineral Mining and Extraction Sector

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. Notwithstanding, Kenya produces a number of metallic minerals including titanium, gold and iron ore, with export statistics 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. 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. Therefore, 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.

However, reading from established mining countries globally, the impacts of extensive mineral without proper regulations can spell doom for species, habitats and ecosystems due to massive environmental degradation often difficult to mitigate or reverse. For example, open cast mining has been associated with disruption of families and communities due to displacement, and often leaving large quarries and unrehabilitated environment behind. Furthermore, pollution from dust and smoke, for both opencast and underground mines are wide, ranging from acid mine drainage and decimation of aquatic resources. Furthermore, communities may be exposed to high levels of toxic chemicals used in the processes of mining and refining of ores e.g. the mercury poisoning in artisanal gold mining (Minamata disease case). Notably, the presence of unregulated (or poorly regulated) mining (both artisanal and industrial spells doom for habitats and ecosystems due to run-away pollution and environmental degradation, with serious implications for health, at species, habitats, ecosystems and community levels. The situation is compounded by lack of alternative livelihoods and health facilities / structures thus deepening poverty in the already poor, vulnerable and marginalized communities.

Additionally, numerous key issues, spanning across illegal mining, over-exploitation, lack of (poor) compensation structures, poor access to technology especially in the artisanal mining, low involvement of locals in offshore exploration and mining, information/data (in)availability as well as cultural and, health and safety concerns. Specifically, the key Challenges highlighted include: -

- Inadequate skilled manpower to regulate, monitor and enforce compliance to the provisions of the Minerals and Mining Act/ regulations;
- Illegal mining of manganese, sand, building stones along the coastal beaches and dunes
- High level of infringements / non-compliance compounded by the lack of capacity to enforce standards and regulations in the line Ministry;
- Low level of education and awareness/ sensitization among local communities; and/ or poor implementation of land-owner's compensation and resettlement;
- Poor revenue sharing between National Government /counties /community;
- Physical land alteration and poor rehabilitation of degraded lands, Environmental disruption and biodiversity loss; and conflicts on community heritage sites including kayas;
- Poor management of mining activities resulting in increased erosion, storm-water runoff and sedimentation deposition onto seagrass beds and coral reef habitats;
- Abandonment of mines, structures in mined sites often rendering the land unusable;
- Pollution from dust emissions, oil spills and other chemicals;
- Poor mine design, mine-waste management and lack of mine closure / decommissioning and rehabilitation implementation;
- High poverty levels, low social equity, use of child-labour and gender issues (inclusion & parity) and poor remuneration of labourers;
- Drug and substance abuse; social ills (including prostitution) and general breakdown of family and community structures in mining areas;
- Lack of access to financing, markets and technology for small scale miners;
- Intrusion of sea water into ground water making access to clean drinking water difficult for local communities
- Lack of fund allocation (or low funding) for remediation environmental degradation in closed / abandoned mines and environments, especially in limestone mining.

### 2.3.1. Policy Objectives and Strategic Policy Actions for Mineral Mining Sector

Policy objective	Strategic Policy Actions
1. To Achieve full compliance with regulations & guidelines for sustainable extraction and mining of minerals	<ul style="list-style-type: none"> <li>• Enhanced enforcement of the Mining Act with regular Monitoring &amp; Evaluation (M&amp;E), Control audits/ and Inspections;</li> <li>• Enact and enforce severe penalties for infringements;</li> <li>• Make adequate financial provisions &amp; allocation to facilitate effective audits and inspections;</li> <li>• Enhance community sensitization and formalize of artisanal mining activities backed by education and awareness on the importance of environment friendly mining and ecosystems conservation;</li> <li>• Inclusion of sand and other unregulated sand minerals into the Mineral in schedule I of the Mining Act 2016</li> </ul>
2. To achieve an acceptable balance between mining and environmental conservation for sustainable ecosystem services.	<ul style="list-style-type: none"> <li>• Enhanced enforcement of ESIA/EIA including the Environmental Mitigation and Monitoring Plan (EMMP), scheduled Rehabilitation and Biodiversity conservation Plans;</li> <li>• Enact policies for formalization and training of artisanal miners;</li> <li>• Enact full schedules for Mine waste management Plan;</li> <li>• Enact policies for multi-agency approach to conservation of marine ecosystems during offshore mineral exploration and mining;</li> </ul>
3. To ensure that accrued mining benefits are maximized for greater socio-economic development	<ul style="list-style-type: none"> <li>• Enact and enhance policies for community integration in Blue Economy process development &amp; minerals mining and extraction;</li> <li>• Enact Sensitization / enforcement of Children's Act and Gender Constitutional requirement, with severe penalties for abuse /infringements;</li> <li>• Conduct wide sensitization and engagement of communities to enhance participation, ownership and decision-making especially by vulnerable and marginalized groups for equity and inclusion)</li> <li>• Create policy structures for adequate provisions and allocation of resources to facilitate the implementation of policies and regulations for Socio-economic empowerment</li> <li>• Enact and enforce specific policies to protect the vulnerable population and children within the mining communities for improved livelihoods.</li> </ul>
4. To ensure fair & equitable compensation and benefit sharing within the mineral value chain beyond the CSR boundary.	<ul style="list-style-type: none"> <li>• Conduct wide community engagement and establish implementation of benefit sharing framework e.g. Community Development Agreements (CDA);</li> <li>• Integrate mine land owners in the Blue Economy dialogue for mineral/land compensations while aligning all CDAs to Africa, EAC and National BE strategy;</li> <li>• Implement the Revenue/benefit sharing formula between National Governments, County Governments and Communities at the proposed 70:20:10 ratios, with upward revision to give more benefits to communities;</li> </ul>
5. To Strengthen the Artisanal Mining Sector and Mitigate Impacts of Artisanal mining on Aquatic Biodiversity, and Environment and achieve Zero harm or lose of property	<ul style="list-style-type: none"> <li>• Enact legislation to mainstream formalization of artisanal mining operations in order to support livelihoods and entrepreneurship in communities with the BE;</li> <li>• Establish structures for formation and gazettelement of Artisanal Mining Committees (similar to BMUs) in order to improve management of artisanal Miners;</li> <li>• Conduct sensitization/enforcement of Children's Act and gender constitutional requirements (two thirds rule).</li> <li>• Develop and enact adequate financial and human capacity in artisanal mining for Environmental Conservation, Rehabilitation and Management;</li> <li>• Develop capacity for Health and Safety in mining, with continuous audits and inspections to improve conditions.</li> <li>• Provide funds for capacity building in H&amp;S and incentives for environmentally sound mining and Best Practice in H&amp;S</li> </ul>
6. To minimize disruption and degradation of marine ecosystem from sea water mining for sustainable blue economy.	<ul style="list-style-type: none"> <li>• Conduct expansive research to provide information on the impact of various sea water mining activities for decision making and policy development;</li> <li>• Enact sound funding provisions to support research for science-based data and information to support environment friendly activities in the BE.</li> <li>• Conduct mainstream Research and Academic institutions, and activities in sea water mining.</li> </ul>

Policy objective	Strategic Policy Actions
7. To Strengthen offshore exploration and mining regulations and Policies for healthy Coastal and Marine biodiversity for Sustainable BE.	<ul style="list-style-type: none"> <li>• Develop marine exploration and mining spatial Plans, Strategy and enact policies to strengthen regulation and legislation in the sector;</li> <li>• Enforce adherence to and continuous improvement of the exploration and mining standards.</li> </ul>
8. To Establish a Metadata Base for Data and Information Sharing, Development of Disaster Resilience and Achieve acceptable Balance/ Harmony between Mining, Heritage and Preservation of Culture	<ul style="list-style-type: none"> <li>• Conduct Geological mapping and Mineral exploration and develop a data sharing structures for BE</li> <li>• Enhance Collection, Collation and Documentation of useful data and information relevant to sustainable mining and enhance of local communities' awareness;</li> <li>• Enact and strengthen information Sharing for enhanced and Effective Decision Making.</li> <li>• Conduct mapping-out of Sensitive and vulnerable ecosystems / biodiversity hotspots and enact mechanisms to safeguard geological/natural disasters.</li> <li>• Develop disaster resilience plans and provide resources for Mapping of disaster Vulnerability in coastal and marine Zones.</li> <li>• Develop disaster resilience management and response guidelines and with strict implementations;</li> <li>• Conduct Mapping, Documentation and gazettelement of heritage sites</li> </ul>

### 2.3.2 Existing Policy documents and Legislative Frameworks

- Kenya Children's Act No. 29 of 2022
- Kenya County Government Act 2012.
- Kenya Disaster Management Act 2005
- Kenya Disaster Risk Management Bill No. 14 of 2021.
- Kenya Environmental Management and Coordination Act 1999 (Rev. 2016)
- Kenya Health and Safety Policy 2014-2030.
- Kenya Integrated Coastal Zone Management (ICZM) Policy, NEMA, 2007
- Kenya Lands Act No.6 of 2012.
- Kenya Mining & minerals Policy 2016.
- Kenya Mining Act No. 12 of 2016.
- Kenya National Disaster Risk Management Policy 2017.
- Kenya National Land Policy 2009.
- Kenya National Museums and Heritage Act Cap 216 (Rev. 2009)
- Kenya National Policy on Cultural Heritage 2009
- Kenya National Social Protection Policy 2011
- Kenya Occupational Safety and Health Act, 2007
- Kenya Physical and Land Use Planning Act, 2019.
- Kenya Science, Technology and Innovation Act of Kenya 2013.
- Kenya State of the Coast Report, 2018
- Kenya Treasury-Finance Act.
- Kenya Vision 2030.
- Kenya Work Injury Benefit Act (WIBA), 2007
- The Constitution of Kenya 2010.



### 3. Conclusions and Recommendations

Coastal and Marine Tourism, and the associated tourism sector exert huge pressure on the sustainability of the supporting habitats, ecosystems and resources, with serious impacts and degradation of critical marine flora & fauna, and disturbance of marine mammals, and unequitable tourism benefit sharing among others. Therefore, there is a need to increase public awareness & information sharing; strengthen ocean governance frameworks, compliance and enforcement mechanisms, restoration and conservation of habitats and ecosystems; reduce and mitigate against marine pollution including plastics, enhance resource co-management and strengthen research, information sharing and collaborations. To achieve the above, there is a need to ensure relevant packaging of information to different cadres of stakeholders; conduct regular capacity building workshops; develop sound ocean governance policies with best practices; promote participation in regional and international processes, increase enforcement actions and voluntary compliance including MALPOL; enact and enforce sound plastic use and disposal regulations and guidelines while steering towards adoption of circular economy; enforce ESIA and EIA processes with wider basin management approach, and enforce sustainable utilization and management of natural resources with special attention mangroves and Kaya forest Resources, and strengthen research (including institutions and academia) and capacity for research (including funding and infrastructural support) among others

In the oil and gas exploration and production sub-sector, major policy gaps exist in the areas of spatial-temporal plans for the ocean space, with no clear policies to critical habitats; lack/low compliance with regulations; lack of proper

enforcement for ESIA oil and gas exploration; poor response to pollution from oil and gas spills/leaks, low research and innovation capacity for sustainable sector, and lack of data and Information sharing and infringement on Innovation and Intellectual property rights. The proposed strategic policy actions include establishment of a robust inter-agency & multi-sector working group to develop and regularly update the Marine Spatial plans; Map and identify aquatic (flora and fauna) resources and habitats/ecosystems for long-term formulation of sustainable use; Fast-track domestication and implementation of international conventions related to biodiversity conservation; enactment of environment friendly oil & gas exploration & mining policy; Enforce existing legislation e.g. EMCA 1999 (including ESIA/EIA); and ensure operation of oil industry companies at global industry best practices and standards; Manage, maintain, enforce and periodically review and update the National Oil Spill Response Contingency Plan and maximize Kenya's marine pollution response capability; Promote transition from fossil fuel to green energy sources in the sector; Establish a compensation fund/authority and enact advance implementation on Access and Benefit Sharing; and compensation schemes; Enhance technical training skills in oil & gas industry through curricula training; Enhance monitoring, control and surveillance of entire industry and of actively operating areas /fields; performance of plants e.g. FPSO platforms; Increase funding and infrastructural support for R&D and Innovation; Develop a national intellectual policy among others

Lastly, the Mineral mining and extraction sector is challenged by Low compliance with regulations & guidelines for sustainable extraction and mining of minerals; Imbalance between mining and environmental conservation; Lack of equitable benefit sharing and compensation schemes;

Unregulated artisanal mining sector (including salt, gold etc. mining) with serious degradation of marine ecosystem; Weak offshore exploration and mining regulations and Policies for healthy Coastal and Marine biodiversity for Sustainable BE, and Absence of a data and information sharing platform to support harmony between mining, heritage and conservation.

The proposed Strategic Policy Actions include enhanced enforcement of the Mining Act with regular Monitoring & Evaluation (M&E), Severe penalties for infringements; Formalization of artisanal mining activities; Inclusion of sand and other unregulated sand minerals into the Mineral in schedule I of the Mining Act 2016; Enhanced enforcement of ESIA/EIA including the Environmental Mitigation and Monitoring Plan (EMMP); Enact policies for multi-agency approach to conservation of marine ecosystems during exploration and mining; Enact and enforce specific policies to protect the vulnerable population and equitable establish equitable benefit sharing frameworks e.g. Community Development Agreements (CDA); Aligning all CDAs to ABES, EAC-BES and Kenya National BE strategy; Enact sound funding provisions to support research for science-based data and information to support environment friendly BE; Develop sound marine exploration and mining spatial Plans highlighting key biodiversity hotspots; Develop disaster resilience plans, management and response guidelines and with strict implementations; and mapping, documentation and gazettement of heritage sites among others.



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