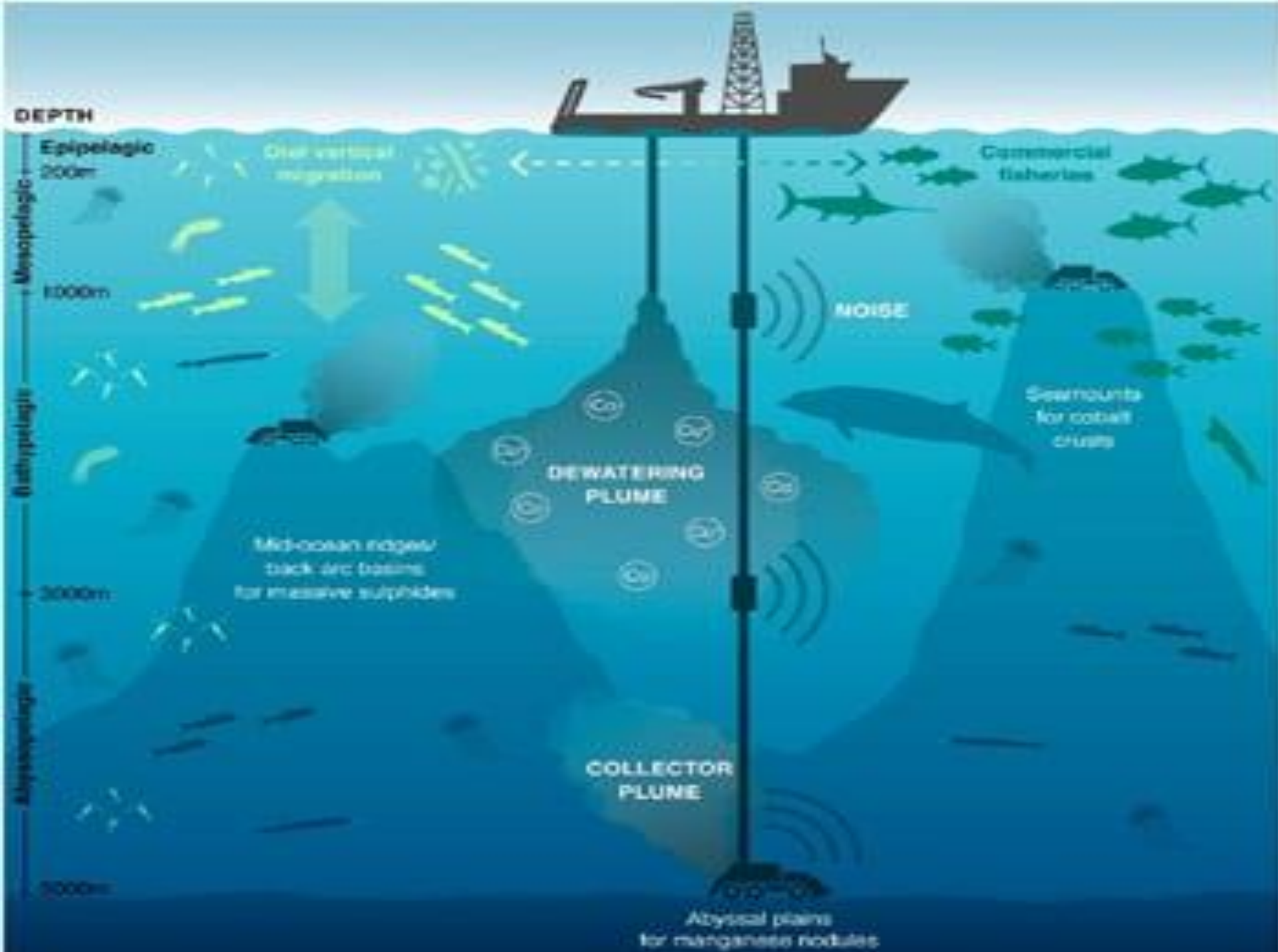


Coastal Mining & Extractives

Presentation

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Outline

- ▶ Background and Context
- ▶ Contribution of Coastal and offshore Mining and Extractives
- ▶ Blue Economy Initiatives
- ▶ Opportunities
- ▶ Challenges
- ▶ Governance framework
- ▶ Conclusions and Recommendations

Intro. Coastal&Offshore

Mining

- ▶ Mining generally involves digging a pit, progressively deeper as the ore, environmental, technical considerations, consents and economics allow, then extracting the required minerals.
- ▶ Mineral mining on land has been ongoing for centuries, however offshore mining has started recently. This has been driven by the rising price of minerals extracted from land, high demand and high level of exploitation on land, which has caused depletion for some minerals.

Intro. Coastal&Offshore Mining

- ▶ There is now growing research on the economic potential of the blue economy in mining as a result of recent exploitation of the seabeds which has led to discovery of the rich deposits of polymetallic nodules, cobalt crusts and massive sulphide deposit among others.

Coastal and Offshore Minerals and Extractives

- ▶ Salt
- ▶ Titanium
- ▶ Limestone
- ▶ Sand
- ▶ Gemstones
- ▶ Gypsum
- ▶ See detail table ...

1.Salt

- ▶ One of the earliest minerals -14th and 15th century
- ▶ used salt bowl for extraction
- ▶ Was from around Gongoni, north of Malindi
- ▶ In 1917, an estimated 472,305 pounds of salt were exported from Gongoni to Mombasa for 3 rupees per Mkanda (105 pounds).
- ▶ The average collector could manage two mikandas a day (Sutton, 1994)).
- ▶ Mining has been around
- ▶ .

2. Titanium

- ▶ Titaniferous sands in the coastal areas of the Western Indian Ocean has been present for long time, but, nothing much happened earlier
- ▶ Mining of Titanium in Kenya was initially done by Tiomin, a Canadian company, in Kwale County which was later acquired by Base Titanium in 2010.
- ▶ Currently Kwale operation has depleted most of the titanium reserves making the operation to end in the year 2023 (Base Titanium).
- ▶ The Kwale Operation's original mine life was 13 years, running up until 2025. However, the mine life was later reduced to 2023 due to higher mining rates and the Wet Concentrator Plant (WCP) expansion

Titanium...

- ▶ To address the reduced mine life, Base commenced an exploration programme in the area outside of the existing mining lease area, including around the North Dune, to identify additional resources that could be economically mined.
- ▶ This area has a reasonably sized resource, with potential for large scale mining. It is expected that mining in the North Dune will increase the Life of Mine (LOM) a further 4 to 4.5 years; and Base titanium has currently applied for the extension of their exploration license by NEMA for a period of 4 years.

3. Limestone

- ▶ Exploitation is widespread
- ▶ Governed by local variation in the limestone texture, composition and demand for the material.
- ▶ Used for cement manufacturing and for lime manufacturing.
- ▶ + In addition, for building stone.
- ▶ Extracted by opencast mining through blasting before crushing, grinding and shipping.

4. Sand

- ▶ Mainly along river beds, inland dunes, sand pits and on beaches. Sand is mostly used for construction. It is a commodity whose demand is almost insatiable due to the increasing population that demands construction. Sand mining in Kenya has been of high contribution to construction for urbanisation in the coastal towns of Malindi, Lamu, and Mombasa among others. Sand is harvested by loaders who scoop the sand using shovels into lorries used to transport the sand to various destinations. The Tana River county sand harvesting bill 2016, clearly stipulates the conditions to be met to ensure sustainable sand harvesting in Tana River county. These conditions include; the hours of sand harvesting and transportation, the sale of sand and licensing provisions. Sand harvesting in Tana River is only allowed on river beds as harvesting sand on riverbanks is prohibited.

5. Gemstone

- ▶ Mining of gemstones is mostly done small-scale by artisanal miners since it is usually scarce and widely spread out .Gemstones at the coast of Kenya are mostly mined through opencast mining which is a method that involves digging minerals from the ground. The miners track the gemstone vein from which the mineral is extracted. The dug soil containing the gemstones can also be sieved to separate the gemstones from other stones. After mining, the gemstones are valued and sold.

6. Gypsum

- ▶ **Gypsum:** Gypsum is mined using an open cast method after accessing the gypsum ore. The extractions are then dried, separated, crushed to desired sizes and then transported to cement factories. According to the Kenya Mining Investment handbook of 2016, Gypsum in Kenya's coastal areas, is found in Kilifi and Tana river.

Location of minerals	Types	
Subsurface soluble minerals and fluids	Petroleum (oil and gas) Frasch sulphur Salt	Potash Geothermal energy Freshwater springs
Surficial deposits	Sand and gravel Lime shells Gold Platinum Tin Manganese nodules	Titanium sands, zircon, and monazite Iron sands Diamonds Precious coral Barite Phosphorite
Subsurface bedrock deposits	Coal Iron ore	
Extracted from sea water	Salt Magnesium Magnesium compounds Bromine Fresh water	Heavy water Potassium salts Calcium salts Sodium sulphate Uranium

Kenya Coast Estimated Figures, (KNBS,2020)

Mineral	Value of Exports Ksh Millions (2019)
Stone, sand and gravel	769.6
Salt	3,870.7
Titanium ores and concentrates	13,852.5

Contribution of Min & Extractives

- ▶ Estimated annual economic value of goods and services in the marine and coastal ecosystem of the blue economy in the WIO is > US\$22 billion
- ▶ Kenya's share slightly > US\$4.4 billion
- ▶ Kenya's real GDP in the year 2019 was Ksh 5,049 billion
- ▶ Mining Contributed >0.7%. (Ksh 35.3 b)
- ▶ Govt Plan is to push this to about 10% by 2030

Direct Contributions

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Direct Contributions ...

- ▶ Exports
- ▶ Employment Creation
- ▶ Revenue to Coastal Counties
- ▶ Infrastructure development
- ▶ Tax contribution
- ▶ Increased Manufacturing
- ▶ Royalties
- ▶ FDI

1. Exports

- ▶ Mining is a good contributor of Kenya's Exports. The following value was derived from mining of some minerals found at the coast of Kenya in KSH millions as of the year 2019. An example of exports from the coast of Kenya include products from Kaysalt, a salt manufacturing company which exports to Tanzania, Uganda, Rwanda, Burundi, DR Congo, North Malawi and South Sudan.

2. Employment Creatuion

- ▶ According to the Malindi Public inquiry Audit report of 2006, Local communities have received direct employment from companies and organisations involved in this sub-sector.
- ▶ The Salt industry in Kilifi employs over 1,100 workers directly from the community thereby reducing the levels of unemployment among the locals.
- ▶ Increased employment implies increased cash flow as well as improved purchasing power of products in the mining locality.

3. Revenue for Coastal Counties

- ▶ Mining companies also generate revenue to their counties.
- ▶ Tana River county which collected revenue from gypsum related operations amounting to Ksh. 3.607 million, in the year 2016 (Tana River CFSP, 2016).
- ▶ Through licensing and other forms of taxation, the National government has also benefited from this additional source of National revenue.

4/5. Infrastructure Devt & Tax Contribution

- ▶ **4. Infrastructure development:** Through exploration or exploitation of minerals and extractives, coastal communities have immensely benefited from infrastructural development especially the electricity, road and rail transport and telecommunication, particularly in the areas adjacent to the mining areas.
- ▶ **5. Tax contribution:** Mining companies are taxed at 30% unless they are a branch of a foreign company in which case the tax rate is 37.5% (Deloitte, 2018). This means that foreign mining companies at the coast like Base titanium are taxed more compared to local mining companies therefore contributing more to Kenya's tax revenue.
- ▶ Gemstones and other precious metals (such as gold and silver) are subject to royalties at 5%. (Stevens, 2017).

6/7. Increase Manufacturing & Royalties

- ▶ ***Increased manufacturing in the Country:*** Increase in Coastal mining has significantly contributed to the increase in the manufacturing sector in Kenya. Most of the salt manufacturing companies are situated in the Kenyan north coast namely: Kensalt Ltd, Kurawa Industries Ltd, Malindi Salt Works, Krystalline Salt Ltd and Kemu Salt Packers Production Ltd. The country's production meets domestic demand with the excess being exported to neighboring countries (Rasowo et al., 2020).
- ▶ ***Royalties:*** According to the ministry of mining and petroleum, the royalties made by the government for some of the minerals mined at the coast of Kenya were based on the following 2013 rates ; Titanium - 10%, Gemstones - 5%, Industrial minerals - 1%, Cement mineral levy 140/= per tonne.

8/9. FDI + Other

- ▶ **8. Foreign direct investments:** Some of the companies that are involved in mining at the coast are of foreign nationalities, one big example being Base titanium which is of Australian nationality, resulting in foreign exchange to the economy.
- ▶ **9. Other Benefits:** Other benefits include the fact that Minerals and extractives have become an alternative to the overexploited terrestrial mining resources. Equally, related programs have promoted environmental awareness through rehabilitation programs

Indirect Contributions

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Indirect Contributions ..

- ▶ Community support initiatives
- ▶ Community and Environmental Programmes

Formation of Community Support Initiative

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

Community and Environmental Programs

- ▶ With CSR fund, Base Titanium for instance, has partnered with other organizations like 'Cotton on Group' from Australia and 'Business for development' in order to promote the agricultural sector in the community.
- ▶ The platform formed as a result is the 'Business Partnerships Platform' whose aim is to promote cotton and potato growing in Kwale by equipping farmers with skills and training for cotton farming.
- ▶ Contribution by Base titanium is the contribution towards county health infrastructure is through construction of the blood bank building in Msambweni which was launched in December 2018.
- ▶ Kensalt Company provides education scholarships to local students.

Blue Economy Initiatives

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Blue Economy Initiatives ...

- ▶ In order to provide guidelines on the exploitation and management of international waters, the United Nations Conference established the United Nations Convention on the Law of the sea (UNCLOS)
- ▶ UNCLOS establishes the International Seabed Authority (ISA) with authority to process applications, monitor activities as well as offer licences for the exploitation of resources in the international waters.

Blue Economy Initiatives

Recognizing that the threats to the productivity and integrity of the coastal and marine environment due to pollution and habitat degradation are not confined to national boundaries, the governments of the Western Indian Ocean region signed the Nairobi Convention in 1985.

This Convention offers a vital regional platform for the protection, management and development of the marine and coastal environment in the Eastern and Southern African region (Nairobi Convention Secretariat, 2009).

In November 2018, the first Blue Economy conference on the sustainable Blue Economy, was held in Nairobi, Kenya. The conference facilitated discussions on sustainable extraction of Coastal and offshore minerals

Opportunities

- ▶ Kenya can tap into the valuable resources in the deep sea like cobalt-rich ferromanganese crusts, polymetallic manganese nodules and polymetallic sulphides . Deep-seabed mining is capital intensive requiring complex infrastructure, appropriate technology and skills. This will be possible if Kenya partners with private sector investors and developed countries having the skills and financial muscle to be able to exploit this resource

Challenges ...

- ▶ Low Budgetary allocations
- ▶ Low technological devts
- ▶ Inadequate Research
- ▶ Lack of tech. Personnel
- ▶ Informal, Small scale and illegal
- ▶ Rudimentary techniques
- ▶ Low prices due to lack of concrete ss chain

Challenges

- ▶ Inadequate comprehensive and clear mining policies
- ▶ Gender discrimination
- ▶ Inadequate rehab actions
- ▶ High cost of Exploration
- ▶ Displacement of people
- ▶ Geo-political nature of Maritime boundaries
- ▶ Potential Env. Hazards as a result of mining

Governance framework

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Policy framework ...

- ▶ The Mining and mineral Sessional Paper No.7 of 2016
- ▶ formulated to provide for frameworks, principles, and strategies for exploration and exploitation of minerals in Kenya for socio-economic development of the country.

Policy framework

- ▶ Provides for; regulations of the mining sector, concession management and mineral rights allocation, enhanced collection of geological data and information, development of legislation for access to land for mining activities, health, safety and environmental regulation in mining, the fiscal regime, mineral promotion and value addition, maximising benefits from mining, mineral benefit sharing, local equity participation, artisanal and small-scale mining, and gender, youth and inclusiveness in mining.

Legal Framework ...

- ▶ The Mining Act 2016
- ▶ Water Act 2016
- ▶ Occupational Safety and Health Act 2007;
- ▶ Mining (Local Equity Participation) Regulations, 2012; and
- ▶ Radiation protection Act, Cap 243, (Revision 2012)

Legal Framework (UNCLOS)

- ▶ Deep Sea Mining regulation and Management
- ▶ *UNCLOS Article 136—Common Heritage of Mankind*
- ▶ *UNCLOS Article 137.2—Legal Status of the Area and Its Resources*
- ▶ *UNCLOS Article 145—Protection of the Marine Environment*

Institutions ...

- ▶ Ministry of Mining
- ▶ Directorate of Mines
- ▶ Directorate of Mineral Management and Regulations
- ▶ Directorate of Geological Surveys
- ▶ Directorate of Mineral Promotion and Value Addition
- ▶ Directorate of Mine Health, Safety and Environment
- ▶ Directorate of Resource Surveys and Remote Sensing
- ▶ Directorate of Corporate Affairs, Geo-data Centre and Minerals Certification Laboratory
- ▶ Internationally accredited Mineral Certification Laboratory and Geo-Data Bank
- ▶ National Mining Corporation, Mineral Audit Agency
- ▶ Mineral Audit
- ▶ National Mining Corporation

Institutions..

- ▶ National Mining Institute
- ▶ Mineral Rights Board
- ▶ Ministry of Energy
- ▶ Ministry of Environment and Natural Resources (MENR)
- ▶ National Environment Management Authority (NEMA)
- ▶ Directorate of Occupational Safety and Health Services (DOSHS)
- ▶ Kenya National Commission on Human Rights (KNCHR)
- ▶ County Governments
- ▶ The Kenya Chamber of Mines (KCM)
- ▶ Association of Artisanal and Small-Scale Miners (ASSM)
- ▶ National Land Commission
- ▶ Kenya Chamber of Mines
- ▶ State Department of Environment and Natural Resources

Institutions (ISA)

- ▶ **Internationally, there is the International Seabed Authority (ISA).** This was established in 1982 by UNCLOS and is an autonomous intergovernmental body with 167 members. The ISA is responsible for the mineral resources and the marine environment in the Area. The ISA considers applications for exploration and exploitation of deep-sea resources from contractors, assesses environmental impact assessments and supervises mining activities in the Area.

Gaps- policy, Legal & Inst framework

- ▶ Harminization
- ▶ Appropriate policy gaps
- ▶ Regulations ??
Ambiguous defn of Community
- ▶ Inst Overlaps
- ▶ National Legislation ??

Conclusions & recommendations

- ▶ Although mining has taken place in Kenya for a very long time, its contribution to GDP is still very small, accounting to about 0.7% of GDP. There is need to carry out more exploration and exploitation particularly in the blue Economy.
- ▶ The mining policy takes a holistic approach to the mining sector ensuring that all major issues are addressed. The Mining Act of 2016 on the other hand represents a modern, well laid out legislative structure. However, there are many missed opportunities given the slow implementation of the policy and the mining law. There also exists some ambiguities in the mining Act 2016, which require urgent attention. These include eligibility and restrictions within license class provisions; taxation is not expressly addressed except to note that mineral rights holders are under obligation to pay taxes.

END



