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RESEARCH BRIEF 5/2023

Security Institute for Governance and Leadership in Africa

SIGLA @ Stellenbosch

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Security of subsea infrastructure off the East African littoral

Introduction

Africa's thirty-eight littoral states have direct access to the oceans, providing cheaper imports and exports of goods, direct access to submarine data cables and the maritime domain with its huge potential of subsea resources. Conversely, the continent's sixteen landlocked states have no national and direct access to maritime trade or to enablers of global trade and communication such as harbours and subsea communication cables.[1] Fourteen of these landlocked countries rank low in the Human Development Index which could be indirectly linked to the lack of such direct access to the oceans. Nine of these landlocked states, situated mainly along the Great Rift Valley, depend on mainly East African coastal (transit) states to provide access to the maritime regions of the Western Indian Ocean to gain and maintain sustainable access to the global economy.

The stability of states also affects the security and safe access to the global commons via the maritime domain. The main sources of potential instability in Africa could be attributed to democratisation, political regime type, population structure, repeat violence, regional instability, as well as slow economic growth with the associated poverty and inequality. An inability to guarantee vital maritime access due to instability in East Africa poses a great risk to installed infrastructure as well as the region's future development, economic growth and international participation. The discussion below briefly outlines some security matters on subsea infrastructure off the African eastern littoral.

Discussion

The United Nations (UN) Sustainable Development Goal 9 (SDG 9) points to quality infrastructure for people while Agenda 2063 for Africa aspires to offer world class infrastructure across Africa to serve

[1] UNCLOS article 125 does however make provision for the right of access to and from the sea by decreeing the freedom of transit through the territory of transit states.

the people. The aim of SDG 9 is inter alia to develop quality, sustainable and resilient regional and transnational infrastructure and to significantly increase access to information and communications technologies to provide universal as well as affordable access to the internet in least developed countries (some located in East Africa) by 2020. Aspiration 2 of Agenda 2063 envisions improved connectivity through newer and bolder initiatives to link the continent by rail, road, sea and air, developing regional and continental power tools and ICT.

Sub-sea infrastructure is critical in delivering in Agenda 2063's aspirations. The importance of protecting subsea infrastructure was highlighted on 26 September 2022 when a series of clandestine bombings occurred in the Baltic Sea near Bornholm, in Denmark. The target of the bombings was the Nord Stream 1 and Nord Stream 2 gas pipeline on the seabed between Russia and Germany, providing gas to Europe. Seabed attacks are not the only point of concern – landward instability can also potentially impact infrastructure at sea where liminality helps us better understand subsequent offshore developments. The instability in the Cabo Delgado region that also spilled offshore in Northern Mozambique was deemed such a threat by the French oil company, TotalEnergies. They now plan to commission a deepwater floating liquefication plant that will be capable of extracting and processing natural gas and act as an export terminal at sea. Consequently, most of the work will now be performed by "foreigners" and will have a negative impact on the region which clearly demonstrates how liminality could impact economic development and regional security. African economies are therefore also vulnerable to real or perceived interferences with offshore industries.

One vital subsea infrastructure component that requires protection is subsea communication cables. A comprehensive outline of the current location of undersea cables along Africa's East coast reveal thirteen cables along various landing points. This should equate to better connectivity of Africa to the global economy by providing heightened access to international markets and fostering trade and investment opportunities. This in turn allows African businesses to access global markets. Subsea communication cables bring better services to Africans, but conversely also harbours vulnerabilities to physical interferences.

Subsea communication cables and most of the underwater infrastructure along the African East Coast are essential for promoting economic growth, improving access to education and healthcare, and fostering social connectivity in Africa. In the Western Indian Ocean (WIO), the general connectivity density of African countries is low. This lowers redundancy and heightens the risk if any interferences should occur. In the northern WIO around the Horn of Africa, the density of cables has grown significantly, but are more exposed to threats given the shallow seas and ongoing landward volatility from insurgencies and internal armed conflict in Somalia, Yemen and Sudan. These threats require more attention to craft ways and means that lower subsea infrastructure vulnerabilities.

Threats to submarine cable security could be placed into three categories: (1)human threats which include accidental threats such as fishing, anchoring and dredging as well as deliberate threats such as sabotage, terrorism and crime; (2) natural threats which include seaquakes, tsunamis and underwater currents; and (3) external threats which include electricity grid problems, state failure and operator problems. The Cabo Delgado and Nord Stream insecurity activities are classified as human deliberate threats to subsea infrastructure and resulted in heightened security measures. Although it remains difficult to counter accidental human insecurity threats, natural threats as well as external security threats, human interferences cannot be ignored.

On a global level, the responsibility for protection of subsea cables is rooted in international law as have been addressed in several conventions such as the 1884 Convention for the Protection of Submarine Telegraph Cables, the 1907 convention respecting the laws and customs of war on land,

and the 1982 UN Convention on the Law of the Sea (UNCLOS). UNCLOS has several articles which relate to or govern submarine cables and underwater infrastructure.[2] At present, several additional initiatives are underway to strengthen regimes on subsea infrastructure security.

Greater resilience of the local subsea cable system is required. Consideration should be given to not only classifying subsea cables as critical infrastructure, but also treat it as such. Furthermore, the strengthening of public-private cooperation is also crucial, as well as the adoption of a comprehensive and principled-based policy agenda to address growing complexity, interconnectedness and multi-actorness.

Concluding remarks

As noted in the 2021 UNODC regional stakeholder engagement on the protection of submarine cables, the security of such cables is not only a political issue, but also holds economic and social repercussions. This necessitates cooperation between governments and the private sector in an environment made conducive by positive regulatory regimes. It is also a matter that African countries bordering the WIO must include in their maritime security strategies. Underwater infrastructure along the East Coast of Africa is not risk immune – whether intentional and human, or not. The technology to target and have a significant impact is easily accessible on the open market. Any failure to have basic protection of underwater infrastructure along East Africa in place through smart partnerships and agreements will have dire consequences for all African countries – coastal and landlocked.

Further reading:

Understanding Submarine Cable Networks within a Global Context of Maritime Governance | LinkedIn

SubCableNews: News for the submarine cable market

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[2] UNCLOS articles 3, 21, 33, 57, 58 and 79 relate to the specific duties in the various maritime zones, article 87 on the freedom of the high seas, articles 112, 113, 114, and 115 on the right to lay submarine cables and pipelines and the damage thereof being a punishable offence.