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Security Constraints Threatening the Utilization of Maritime Resources in the Context of the Indian Ocean

By

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Abstract

The purpose of this article is to investigate security constraints threatening the utilization of maritime resources in the context of the Indian Ocean and implications on peace in the region. The contention of the study is that the Indian Ocean has huge economic value and potential in terms of exploration of offshore gas and oil, short and deep-sea shipping, marine aquatic products, aquaculture and fisheries, blue biotechnology and ocean renewable energy. However, it is faced with a myriad of security threats, such as illegal, unreported and unregulated fishing, transnational organized crime, environmental maritime crimes, among. The research objective was to assess the implications of maritime security constraints on the utility of the Indian Ocean blue economy. The study adopted a cross-sectional research design together with a phenomenological approach to achieve thick description on the concerns of the study. The targeted populations were security agencies operating in the area and the business community or investors since they were the key stakeholders in the development of the blue economy. To obtain the sample for study, cluster sampling and stratified random sampling was applied to proportionately select primary respondents, whereas purposive sampling technique was utilized to select key informants to obtain a sample of 384. Primary data was collected using questionnaires and interview schedules. SPSS (Version 24) software was used to compute descriptive statistics and inferential statistics. Thematic analysis was also used to analyze qualitative data from open-ended questions and presented along quantitative data. The results from questionnaire and tools were triangulated to obtain a thick description. The findings of the study revealed that Indian Ocean had huge blue economy potential in terms of provision of livelihoods to the coastal people in addition to the investment opportunities to several onshore and offshore businesses, such tourism, transport, mineral exploration, among others. However, this potential is faced with a myriad of security issues, such as large sea area, sophisticated piracy networks and illegal, unreported, and unregulated fishing.

Keywords: Horn of Africa, Maritime Resources, Maritime security, piracy, blue biotechnology and Indian Ocean

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Background to the Study

Ingraining security governance in the ongoing discourse on blue economy remains an obscure target in spite of the central role that it plays in ensuring that maritime resources are protected and exploited. Emerging literature from research and practice demonstrates that for the blue economy to thrive, there is need to protect maritime resources since doing so is central to maintaining the biodiversity of the ecosystem (United Nations, 2019). Maritime security enhances the economic growth and development for countries thereby midwifing sustainable blue economy. However, the exploitation of blue economy has been hampered by maritime security constraints, such as high sea piracy and low sustainability on the exploitation and usage of maritime (Chapsos & Malcolm, 2017). These maritime security constraints have reduced the general utility of the blue economy to contribute to national development. Sound protection of maritime resources requires strong security governance to unlock this underutilized development potential. Notably however, there was limited empirical data that could demonstrate the link between maritime security and utility of the blue economy.

Though the blue economy continues to receive scholarly attention, the focus has been on bolstering economic growth (Wenhai et al., 2019), sustainability of ocean governance and climate change (Voyer et al., 2018a). There is little reflection on security despite calls from early writers on this phenomenon. For instance, Brits and Nel (2018) were of the view that maritime security should be strengthened to enhance the utilization of the blue economy. Strengthening maritime security could involve effective coordination of various security actors, forming strong partnership and the integration the local communities in security issues. Surprisingly there has been little scholarly reflection on the operationalization of security of blue economy in most nations (Chapsos & Malcolm, 2017). As a result, it appears that the interplay between maritime security and the exploitation of the blue economy has not received comprehensive scholarly attention. Where attempts have been made to unravel the missing link in the resourcefulness of the blue economy, existing researches tend to focus on the interdependence between blue economy and marine activities, thus discounting the place and relevance of the maritime security (Voyer et al., 2018b). The contribution of maritime security to the sustainable utilization of the blue economy resources hence remains obscure.

Maritime security and blue economy have been defined variously by authors in academic literature. Even though there is lack of consensus on the definition of the blue economy, it is largely described as economic activities associated with the oceans and seas and encompasses a wide range of sectors, including: fisheries and aquaculture, maritime transport, coastal tourism, among others (Wenhai et al., 2019). Though there is no single consensus on their definitions, there is growing scholarship on their centrality to growth of economies and more particularly for the realization of the 2030 Agenda for long-term development and the Sustainable Development

Goals (Walters, 2016). Maritime security is defined as the absence of threats that relate to the maritime domain, such as trafficking of narcotics, illicit goods and people, Illegal, unreported and unregulated (IUU) fishing activities, arms proliferation, maritime piracy, accidents, disasters, and terrorism (Bueger & Edmunds, 2020). These factors are thought to present security challenges that have the capacity to derail efforts in the exploitation of blue economy (Sarker et al., 2019). For example, the possibility of maritime terrorism presents fear of high insecurity that could prevent individuals and organization from using water resources for improved livelihoods (Chapsos & Malcolm, 2017). As such, the link between maritime security and economic development has not been contested (Bueger, 2015). Therefore, given the role and place of maritime security in enhancing the exploitation of the blue economy, the current study sought to empirically find out the interconnections between maritime security and utility of the blue economy.

Many studies have been undertaken in the developed countries, such as the United States and Australia, on the necessity of maritime security in tapping into the utility of the blue economy. For instance, Voyer et al. (2018a) stated that maritime security enhances the resourcefulness or value of the blue economy through the protection rights of maritime resources, navigation routes and provision of oceanographic data for action-oriented management, which is critical for the optimum utility of the blue economy. Protection of rights of the maritime resources would enable countries to invest in maintaining the biodiversity of water resources, in addition to sustainable use of the oceans and lakes (Kelliher & Phillips, 1999). Accordingly, this would benefit governments and local communities through the provision of sources of revenue and employment opportunities. The present study was interested in establishing the relationship between the security of the maritime domain and the utility of the blue economy.

The state of the maritime security in Bangladesh as reported by Failler et al. (2017) forced the country to increase her capability in relation to conducting patrols in the national maritime zones to realize a long-term blue economy. Therefore, it is possible to infer that countries are continuously improving their maritime security capabilities with intentions of preventing overt and covert security issues to the domain. As countries seek various mechanisms of improving their preparedness to detect and possibly prevent modern threats to the maritime domain owing to the significant influence of maritime security in the resourcefulness of the blue economy, this area of research continues to attract a substantial growth in scholarship. This necessitated the need for empirical studies to establish the implications of maritime security the utilization of the blue economy resources.

Studies conducted in South Africa point to the maritime boundary disputes with her neighbors (Mozambique and Namibia) which continue to delay the search and exploitation of ocean sea-bed natural resources, such as gas and oil (Van Wyk, 2015). On maritime disputes, Egede and Apaalse (2019) notes that countries spend huge number of resources to resolve cases in international bodies, thus leaving unexploited resources. Maritime security studies in African countries (for example, Cote D'Ivoire and Ghana) point to weak maritime security management as evidenced by delimitation of ocean boundaries. However, these studies are limited in explaining how maritime disputes influence the partnership in maritime security operations and how this could influence the utility of the blue economy. The study sought to address this gap.

In East Africa, studies indicate the presence of confluences of maritime security constraints, particularly on maritime disputes. Given the positioning of East Africa, Kenya and Tanzania continue to exploit the benefit of the ocean economy, such as through the Ports, fishing and exploration of natural resources. However, this has come with a cost as countries, such as Tanzania, Djibouti and Somalia continue to bear the brunt of Sea Pirates in the Indian Ocean (Morabito, 2017; Sterio, 2017). For instance, the Somalia Pirates have wreaked the ocean economy of the East Africa region, where this has discouraged among others, ocean tourism activities, fishing, and exploration of natural resources (Kamau, 2018; Naidu, 2021). The maritime insecurity continues to affect the blue economy fortunes for the communities surrounding Indian Ocean, particularly in the regions of South Asia and East Africa. The current study sought to unravel the manner in which sea pirates affected the utility of the blue economy along the Kenyan Coast in the Indian Ocean.

Climate change as a consequence of consumption patterns continues to affect the state of the oceans in terms of sea biodiversity. Importantly, the Food and Agriculture Organization as cited in Upadhyaya (2014), found that 660-820 million people across the globe relied on the blue economy for their livelihoods. To safeguard livelihoods of these people, there was need to boost the state of the blue economy by protecting the ocean ecosystem and biodiversity. Despite the criticality of maritime sustainability, there was little scholarship on how maritime security could be enhanced by among others, involving coastal communities as a way of ensuring sustainability in the usage of natural resources.

In Kenya, the debates on the maritime security appear to concentrate on the maritime dispute between Kenya and Somalia. Many studies done in Kenya have majorly concentrated on myriad of constraints facing the ocean activities and what could be done to ameliorate the situation (Charo, 2021; Mboce & McCabe, 2021). The present maritime state of security is caused by poor partnerships between the blue economy state actors and the investors in Kenya's Coastal regions (Saeed & Saeed, 2020). Though these studies (Kiswaa, 2020; Njue, 2020) concentrated on the state of the blue economy in Kenya, their scope was narrow since they only appeared to focus on the performance of the blue economy resources, thus negating the maritime security perspective. The current study examined the nexus between the security of the maritime domain and the utility of Kenya's Indian Ocean blue economy.

Statement of the Problem

The Indian Ocean is faced with a myriad of security threats, such as IUUF, transnational organized crime, environmental maritime crimes, disasters in both maritime and land spaces. According to (Sarker et al., 2019) this is caused by the ocean's huge economic value and potential in terms of exploration of offshore gas and oil, short and deep-sea shipping, marine aquatic products, aquaculture and fisheries, blue biotechnology and ocean renewable energy.
Studies conducted on the interplay between the security of the maritime domain and the blue economy have focused on the use of blue economic natural resources which are limited in explaining the nexus between the security of the maritime domain and the utility of the blue economy. Furthermore, (Tschirg, 2005) argues that the scope of the existing studies is narrow since their focus seems to be on policing of the seas while other studies tend to concentrate on maritime security challenges, which discount the aspect of the blue economy.

Notably, there was paucity of empirical evidence in mainstream literature on how to establish effective maritime security coordination mechanisms and partnerships to harness the utility of the blue economy while ensuring active involvement and empowerment of coastal communities. There seems to be limited understanding of the critical role of effective maritime security despite its centrality in realization of the utility of blue economy. The current study sought to establish influence of maritime security on the utility of the blue economy with specific focus on the Indian Ocean.

Objective of the study

1.To assess the influence of maritime security constraints on the utility of the Indian Ocean blue economy.

Literature Review

The current literature has documented several maritime security constraints and how they affect the utility of the blue economy in terms of marine safety, defense and governance. Drawing on the constraints of the blue economy in Bangladesh, Hussain et al., (2017) noted that poor spatial planning affected the utility of the blue economy. In addition, the study findings indicated that integration of the maritime security in the conservation efforts and protection of biodiversity was low. Low maritime security affects the overall utility of the blue economy since investors are discouraged from investing their funds. However, the study concentrated on the constraints of the blue economy and negated the aspect of security constraints in the maritime domain, which also affect the performance of the blue economy. This study sought to examine the nexus between community involvement as a maritime security initiative and the utility of the blue economy in Lamu County, Kenya.

Duarte (2016) conducted a study on the maritime security in Brazil's South Atlantic. The study stated that the failing U.S. control in the area had opened many maritime security challenges, such as sea piracy that required the Brazilian Army to upscale their marine defense and safety capability. Furthermore, the author contended that for the blue economy to succeed in South Atlantic in terms of energy and resources, it required Brazil to increase her marine capability to thwart threats to the maritime activities. However, the study concentrated on the extent to which the development of the blue economy had necessitated the need for maritime defense, but it was limited in explaining how maritime security is critical for the expansion of the blue economy. Given the dearth of literature, the current study delved into the implications of security constraints in the maritime domain on the utility of the blue economy in Lamu County, Kenya.

Potgieter (2018) conducted a study on risks and challenges in South Africa's Ocean economy. The study noted that blue economy activities were not sustainable in terms of the exploitation and the use of maritime resources owing to the existing security threats, such as piracy and ocean dumping. Moreover, the study noted that although South Africa has a large sea area, the current state of the ocean economy was not stimulating the desired economic growth even though it is a critical contributor to Gross Domestic Product (GDP) due to the mentioned security issues bedeviling the maritime domain. Despite the limitations, the study was silent on the prerequisites of performance of the blue economy. More significantly, the study drew little attention on maritime security which is seen as the main factor that may constraint exploitation and overall utility of blue economy. As literature suggests there can be no development without security (Tschirg 2005). The

current study sought to examine the implications of maritime security constraints on the utility of the blue economy in Lamu County, Kenya.

Hastings and Phillips (2015) delved into the maritime piracy business as a constraint to the development in Africa. The study noted that institutions to prevent piracy in Africa were weak, which in turn advanced illicit activities. In addition, the study noted that sophisticated piracy networks in West Africa and Somalia had taken cues and borrowed ideas on what was done in the formal economy, such as regulation of oil business in terms of production, processing, distribution, and transportation. Although the study indicated the constraint of maritime piracy businesses and the networks they enjoyed in the former economy, the study was limited in demonstrating how this slows down the legitimate exploitation of the blue economy resources. Given the noted gap, the current study explored the implications of maritime piracy business networks on the utility of the blue economy in Lamu County, Kenya.

Hamad (2016) empirically established that the EAC faces many security constraints in the maritime domain. Some of the greatest impediments to the resourcefulness of the blue economy in the EAC include: Kenya – Somalia maritime border dispute, IUUF, armed ship robberies, piracy, among others. The existence of these constraints was attributed to lack of stringent policies to regulate the maritime activities in the region. However, the study failed to indicate how these maritime security constraints had slowed down the exploitation of the blue economy resources and only focused on institutional level gaps in terms of maritime security policies and strategy. The current study sought to establish the implications of maritime piracy business networks on the utility of the blue economy in Lamu County, Kenya.

Mboce and McCabe (2021) focused on the capacity building in the security of the maritime domain in Kenya and the constraints to the ocean economy. The study noted that Kenya faces many maritime security constraints, such as limited Maritime Domain Awareness Structures, drug smuggling, IUU fishing, and unsustainable marine resource exploitation. In addition, the study established that institutional, legal and policy framework complexities in Kenya had derailed effective maritime governance. However, there was little reflection on the interlinkages between the maritime security complexities and the resourcefulness of the blue economy in Kenya, which the current sought study to demystify.

Research Methodology

The study adopted a cross-sectional research design together with a phenomenological approach to achieve thick description on the concerns of the study. The targeted populations were security agencies operating in the area and the business community or investors since they were the key stakeholders in the development of the blue economy. To obtain the sample for study, cluster sampling and stratified random sampling was applied to proportionately select primary respondents, whereas purposive sampling technique was utilized to select key informants to obtain a sample of 384 participants. Primary data was collected using questionnaires and interview schedules. SPSS 24 software was used to compute descriptive statistics and inferential statistics. Thematic analysis was also used to analyse qualitative data from open-ended questions and presented along quantitative data. The results from questionnaire and tools were triangulated to obtain a thick description.

Findings and Interpretations of the study

Information was sought on the influence of maritime security constraints on the utility of the Indian Ocean blue economy. Data was collected via a Likert Scale and the findings are presented in Table 1 below.

Table 1: Maritime Security Constraints

Security Constraints	1	2	3	4	5	Mean	S.D.
The threat of environmental degradation on the utility of the blue economy	8.7%	25.1%	22.8%	15.3%	28.1%	3.3	1.34
There is low maritime security cooperation in the utilization of the blue economy	10.2%	12.6%	23.4%	34.7%	19.2%	3.4	1.22
There exist terrorism threats in the utilization of the blue economy	23.1%	4.2%	12.6%	31.1%	29.0%	3.4	1.51
Current maritime security policies and strategies have made the blue economy less effective	8.7%	31.7%	11.4%	17.7%	30.5%	3.3	1.41
Space planning hinders in the utilization of the blue economy	14.1%	29.6%	10.2%	17.4%	28.7%	3.2	1.47
Low integration stare-non-state maritime security in the utilization of the blue economy	10.5%	13.2%	12.0%	25.4%	38.9%	3.7	1.37
The large sea area in the utilization of the blue economy	4.8%	5.4%	17.7%	26.9%	45.2%	4.0	1.13
Insufficient number of maritime security personnel in the utilization of the blue economy	0.9%	14.4%	24.3%	27.2%	33.2%	3.8	1.09
Maritime piracy business is a maritime security constraint that hinders the utilization of the blue economy	2.7%	16.2%	24.3%	20.7%	36.2%	3.7	1.19
Institutions to prevent piracy in in the utilization of the blue economy	2.7%	14.4%	25.1%	21.3%	36.5%	3.1	1.12
Sophisticated piracy networks hinder the effectiveness of the blue economy	4.8%	18.3%	17.7%	31.4%	27.8%	3.6	1.21
Illegal, unreported and unregulated fishing negatively affects the resourcefulness of the blue economy	10.2%	15.6%	20.7%	23.1%	30.5%	4.0	1.25
Limited maritime domain awareness structures are the weakest link in the utilization of the blue economy	3.3%	6.0%	27.8%	35.6%	27.2%	3.8	1.02
Average	**8.0%**	**15.9%**	**19.2%**	**25.3%**	**31.6%**	**3.6**	**1.26**

Source: Researcher (2022)

Table 1 above presents results on various statements concerning various maritime security constraints. Analysis of the collected data indicate that most (28.1%) of the respondents strongly agreed that the threat of environmental degradation had reduced the effectiveness of the blue economy, followed by 25.1% who disagreed, 22.8% neutral, 15.3% agreed, and finally 8.7% who strongly disagreed. Many (34.7%) agreed that there was low maritime security cooperation, followed by 23.4% who indicated neutral, 19.2% agreed, 12.6% disagreed and 10.2% strongly disagreed. Additionally, 31.1% who agreed that there existed the threat of terrorism, followed by 29.0% who strongly agreed, 23.1% strongly disagreed, 12.6% were neutral, whereas 4.2% disagreed. Similarly, majority (30.5%) strongly agreed that current maritime security policies and strategies had made the blue economy less effective, 31.7% disagreed, 17.7% agreeing, 11.4% were neutral, while 8.7% strongly disagreed. Moreover, 28.7% strongly agreed that planning spaces along Kenyan Indian Ocean hinders effectiveness of the blue economy, 29.6% disagreed, 17.4% strongly agreed, 10.2% neutral, while 14.1% strongly disagreed. Equally, most (38.9%) strongly agreed that there was low integration of maritime security in the protection of the blue economy zones, 25.4% agreed, 12.0% were neutral, 13.2% disagreed, and 10.5% strongly disagreed.

Further to the above, many (45.2%) strongly agreed that the large sea area predisposed the maritime domain to security limitations, 26.9% agreed, 17.7% were neutral, 5.4% disagreed, and 4.8% strongly disagreed. Likewise, most (33.2%) strongly agreed that there was insufficient number of maritime security personnel in Kenya's blue economy zones, 27.2% agreed, 24.3% were neutral, 14.4% disagreed, and 0.9% strongly disagreed. Additionally, the highest percentage (36.2%) strongly agreed that maritime piracy business was a maritime security constraint that hindered the utilization of the blue economy, 20.7% agreed, 24.3% were neutral in their response, 16.2% disagreed, 2.7% strongly disagreed. Equally, 36.5% strongly agreed that institutions to prevent piracy in the blue economy were weak, 21.3% agreed, 25.1% stated neutral, 14.4% disagreed, and 2.7% strongly disagreed. Besides, most (31.4%) agreed that sophisticated piracy networks hindered the effectiveness of the blue economy, 27.8% strongly agreed, 17.7% stated neutral, 18.3% disagreed, and 4.8% strongly disagreed. Similarly, many (30.5%) strongly agreed that illegal, unreported and unregulated fishing negatively affected the resourcefulness of the blue economy, 23.1% agreed, 20.7% stated moderate, 15.6% disagreed, and 10.2% strongly disagreed. Notably, majority (35.6%) agreed that limited maritime domain awareness structures are the weakest link in the utilization of the blue economy, 27.2% strongly agreed, 27.8% were neutral, 6.0% disagreed, 3.3% strongly disagreed.

A computed mean of 3.6 affirms that maritime security constraints largely influence the utility of the blue economy. This is further supported by more than half (56.9%) of the respondents who agreed and strongly agreed. Maritime security constraints are generally challenges associated with traditional and modern threats to the maritime domain. The modern security challenges faced in the maritime domain, coupled with the vastness of the oceans, further exacerbate the influence of maritime security constraints on the utility of the blue economy. Threats such as environmental degradation as evidenced in the findings may lead to ocean acidification which is thought to reduce onshore and offshore economic activities perhaps due to marine pollution that damages ocean ecosystems.

As evidenced from the findings 71 % were of the view that the large sea area predisposed the maritime domain to security limitations. The vastness of the sea, presents vulnerabilities that

can be exploited by a number of other actors who pose far more serious threats to the blue economy. Arguably, due to the vastness of the sea, many sections remain unmanned providing opportunities for criminal activities. For example, terrorists may exploit the vastness of the sea to unleash terror to the entrepreneurs in the blue economy eliciting fear that may inhibit exploitation of the resources in the blue economy. Similarly, other illegal activities such as smuggling of goods that may lead to negative competition thus affecting the business at seas may also be experienced. These plus other factors may derail efforts in exploiting the blue economy.

In line with this view, Stilp (2021) observed that the vastness of oceans provides hiding spots for illicit activities, making surveillance difficult. Furthermore, expanding onshore activities, like aquaculture, research, tourism, and recreation, have increased the demand for maritime security. As the blue economy grows, it strains available resources, hindering efforts to secure extensive coastal areas and combat maritime crimes effectively. These challenges not only undermine the safety and security of maritime operations, but also impede investment, trade, and sustainable development within the blue economy. This information was corroborated from a key informant from the Kenya Coast Guard:

> There are many challenges that the maritime domain faces. One of the notable challenges is the vast sea area that the maritime security agencies cannot patrol because of stretched resources to do so. This requires a multi-agency approach to mitigate as threats have evolved from traditional to modern ones (Kenya Coast Guard personnel 19, 2022).

The direct quote above states that there are many challenges that the maritime domain faces. One of the notable challenges is the vast sea area that the maritime security agencies cannot patrol because of stretched resources. This implies that the agencies may not have enough personnel, equipment, or funding to cover all areas effectively, leaving certain parts of the maritime domain vulnerable to security threats. Therefore, there could be areas of the maritime domain that are not being patrolled, which creates a security risk. Result on the vastness of the sea resonates with the views of Bond (2019) who stated that the expansive coastal strip provides one of the conspicuous challenges to the maritime domain. Because of such a limitation, state security agencies perhaps cannot adequately patrol Lamu coastal strip that stretches 130 kilometers long.

From the quote, contemporary limitations to the blue economy have also emanated from modern threats, such as ocean dumping and unsustainable use of marine natural resources. This finding is in line with Philip, Odote, and Kibugi (2020) who affirmed that present threats, ranging from piracy and illegal fishing to maritime terrorism and environmental degradation, have confounded efforts to effectively utilize and sustainably exploit marine resources. As evidenced by 60 % of the participants, existence of terrorism is a factor that threatens the blue economy. Reflecting on terrorism as a security threat, it is important to acknowledge that Kenya has been a consistent target for terrorism, likely attributed to its proximity to Somalia, a known hub for al-Shabaab.

According to (Worall, 2018) this group has increased in their sophistication over time by acquiring technologically advanced vessels and weapons to aid in their felony This has increased the scope and area of operation in committing their illegal acts. The International Chamber of Commerce (ICC) and International Maritime Bureau (IMB) cites a total of 52 piracy cases for

Somalia, Kenya and Tanzania in 2012 of which 49 cases were committed off the coast of Somalia and Kenya. Two significant piracy incidents were reported in the year 2017; the hijacking of MT Aris-13 tanker and Asayr 2 in mid-March and April respectively off the coast of Somali (OBP, 2017). This enduring threat not only poses immediate security concerns but also significantly impacts the utilization of the blue economy in the region. The persistent threat hampers maritime activities, discourages potential investors, and necessitates heightened security measures, thus hindering the full realization of the economic potential that the blue economy holds for Kenya.

To mitigate the risk of vastness of the sea to the maritime sector, the quote affirms the need for a multi-agency approach. This means that different agencies, such as the Navy, Coast Guard, and Police, need to work together to patrol the maritime domain. This may perhaps help to ensure that all areas of the maritime domain are being monitored and that the security risk is reduced. This is in line with the views of Kiswaa (2020) stated that concerted efforts among various professionals is central to solving most security constraints facing the maritime domain in a holistic manner.

This argument is not startling given that state security agencies largely handle the physical security aspects, such as combating piracy and IUU fishing, while environmental scientists, who are considered experts on matters relating to the maritime domain, undertake environmental impact emanating from blue economy activities. It is possible to argue that the complexity of the maritime sector poses security issues that may require comprehensive solutions so as to tackle them. For instance, the vastness of Kenya's coastal strip means that security agencies, such as the Coast Guard Services, may need more resources to combat illegal onshore and offshore activities as more personnel and surveillance vessels must be deployed to cover the large area and provide real time information for the purpose of judicious action. This assertion has further been highlighted in literature by Stilp (2021) who revealed that prevalence of illegal maritime activities, such as IUU fishing, as a result of the growth of human use of oceans remains the biggest threat to the marine ecosystem which is critical in supporting the blue economy. This observation underlines the importance of collaboration and partnership as discussed in objective one and two and three of this study. Accordingly, expansiveness of the ocean calls for complementarity and in knowledge and resources as well as proper coordination in security service provision. It is important to acknowledge that Kenya still faces the challenge of sea piracy and terror attacks at the coastal region in particular (see, Bond 2019; Philip *et al.*, 2020) involving trusted partners would help her fight this menace.

The increasing coverage of the blue economy beyond the traditional offshore blue economy activities, such as gas and oil exploration and exploitation, is an attraction to sea criminals, such as pirates as demonstrated by 36.5% of the respondents who strongly agreed. This study is of the view that recognition of onshore activities, such as port activities, necessitated the need for construction of critical infrastructure, such as the Lamu Port and the LAPSSET project, so as to take advantage of the blooming utilization of the blue economy activities. Although these projects were anticipated to open-up business opportunities for investors and the local people, evidence by Philip *et al.* (2020), among others, cast doubts on the security around key infrastructure.

Notably, there have been cases of illicit activities, such as IUU fishing as reported by 30.5% of the respondents who were in strong agreement. IUUF is estimated to cost the global

economy up to $23.5 billion annually (Voyer et al., 2018). Furthermore, it undermines the sustainability of fisheries, deprives coastal communities of their livelihoods, and distorts markets. Other activities that have taken advantage of the expanding maritime include drug/narcotic movement, small arms/light weapons smuggling and proliferation, among others (Voyer *et al.,* 2018). To this end, it is possible to infer that presence of weapons in Kenya's coastal region may have promoted illicit activities, such as piracy to an extent that it has become complex to protect all the shipping vessels using Kenyan waters, either as transit zones or to dock from attack (see, Otieno 2019). As a consequence, it is possible to argue that the government lost revenue that such vessels could have remitted as port fees, taxes, and other revenue for the Kenyan government. Although there are no local statistics, data provided by the International Maritime Bureau as cited in Desai and Shambaugh (2021) approximates that maritime Somalia piracy results in an annual economic impact of $16 billion. This encompasses financial losses attributed to theft, ransom payments, shipping delays, elevated insurance expenses, and expenses for anti-piracy measures. A Key Informant had the following to say:

> In the expansive maritime domain, the challenges of maintaining security are pronounced. The persistent threat of piracy, coupled with the payment of ransoms, establishes a detrimental cycle that impedes the full realization of the oceans' potential. This not only deters potential investors but also hampers economic development within this vast and vital sphere (NPS 29, 2022).

From the above verbatim, it is possible to infer that the expansive nature of the maritime domain presents significant challenges in maintaining security. The mentioned threat of piracy, compounded by the payment of ransoms, creates an adverse cycle that obstructs the optimal utilization of the oceans. This not only discourages potential investors but also hinders economic development within this vast and crucial sphere. From the above quote, this study makes an argument that expanding blue economy and the vastness of Kenya's coastal strip portends profound maritime security challenges that may bring forth challenges and risks to the functioning of the blue economy. Notably, Lamu has been a hot spot of terror and piracy attacks for a significant amount of time (see, Holla, 2021). This has translated into losses running into billions of dollars as ships have to take more precaution or reroute to safer ports, thus incurring extra fuel costs. Following the surge in piracy off of the Horn of Africa between the years 2005 and 2015, Somali pirates alone are believed to have received around $340 million in ransom payments (Desai & Shambaugh, 2021). These happenings have hindered the profitability of utilizing the blue economy and disenfranchised investors, thus leading to less investments which has the potential to slow down direct and indirect creation of jobs.

As a consequence of endemic attacks to the maritime domain, it is possible to infer that the concerned security agencies are perhaps forced to implement various preventative measures, including naval patrols and the presence of armed security on ships navigating through areas plagued by piracy and/or terrorism. To that end, this study argues that monitoring and surveillance costs re-direct resources from crucial functions that could have benefitted if at all the expansion of the blue economy could have been preceded by maritime security management. As highlighted in the excerpt, long coastal lines pose significant threats to the security of the maritime domain.

In an endeavor to patrol the Indian Ocean waters, countries, such as Kenya, have limited capabilities in terms of resources, both human and financial. This assertion emanates from the verbatim has also been discussed by Bhuyan *et al.* (2021) who stated that immensity of the ocean length poses the greatest constraint to maritime security since most countries are characterized by inadequate maritime defense capabilities, including limited resources and personnel. Additionally, Bennett *et al.* (2021) posed that the interconnection of global trade and the increasing reliance on maritime transportation make the domain an attractive target for criminal activities. To that end, this study deduces that vastness of the oceans creates a breeding ground for modern threats, such terrorism, piracy, and transnational crime, since those committing such crimes are not apprehensive of the being arrested.

Analysis of the collected data found that the threat of environmental degradation poses a profound risk to the utility of the blue economy as supported by majority (43.4%) of the respondents who strongly agreed and agreed. In contrast, 15.3% were neutral, whereas a quarter (25.1%) and 8.7% of the respondents disagreed and strongly disagreed with the statement. Notably, degradation of the environment creates ecological risks and reduces the health of the ocean ecosystem to the extent that offshore benefits cannot be realized (see, World Bank 2017). For instance, environmental degradation decreases fish stocks, increases coastal erosion, and damages coral reefs. As a result of this, the maritime sector cannot generate ideal number of direct and indirect employment and investment opportunities. This means that the full potential of the marine resources is not utilized so as to improve the wellbeing of the people as the sustainable use of marine natural resources should benefit both current and future generations, which is the core objective of an effective blue economy. However, ocean dumping may have greatly contributed to environmental degradation through the disposal of waste materials into the ocean leading to habitat destruction, pollution, increased risk of diseases, among others (see, UNEP, 2012). To this end, it instructive to note that sea dumping and/or pollution have a negative impact on fisheries, tourism, and other activities that rely on healthy marine ecosystems. Decline in tourism activities, for instance, may lead to job losses and reduced revenue for the sub-national and the national governments. In line with this view, an informant had the following to say:

> Ocean dumping has been one of the biggest threats to marine ecosystem. There is lack of adequate biodiversity in the oceans, which has affected sea animals. As a consequence, there is little regeneration of sea biodiversity. This has affected fisheries sector and by extension tourism activities as indigenous sea animals are near extinct (Fisheries personnel 23, 2022).

The above quote emphasizes the significant impact of ocean dumping on the marine ecosystem. It highlights the adverse consequences, such as the depletion of biodiversity in the oceans, resulting in a decline in sea animal populations and limited regeneration of marine life. Notably, decline in the biodiversity of the ocean may result to the reduction of fish stocks that coastal people depend to earn a livelihood, thus negatively influence their well-bring which goes against the tenet of the blue economy; To improve the well-being of the people (see, Bond, 2019). Furthermore, dwindling biological diversity of the seas is likely to work against the welfare of the tourism sector since diminishing of indigenous sea animals may not realize the intended

tourism numbers. This result relates with the perspective of Obiene *et al.* (2022) who stated that reduced biodiversity as a result of environmental detriment occasioned by ocean dumping has the potential to cause great harm to the marine ecosystem and thereby affect fisheries and tourism. Notably, the diminishing sea life, such as those of dolphins and whales, which are the key tourist attractions may work against the tourism sector, thus negatively influencing the utilization of the blue economy resources.

This study makes inference from the excerpt that tourists visit coastal places partly because they want to experience the tranquility of sea life. However, shrinking sea life has somewhat dispirited tourists from visiting (see, Desai & Shambaugh, 2021). In itself, declining statistics on maritime visitations has negative outcomes on the blue economy as may be seen from the number of offshore tourism establishments, such as those dealing in sea diving, which close because of dwindling ocean biodiversity, thus leading to job losses/cuts. This is in line with the perspective of IMO (2019) report, which underlined that reduced sea activities (such as those of sea diving and skating) due to deteriorating ocean biodiversity as result of sea dumping and pollution have profound influence on both the livelihoods of the coastal people and the utility of the tourism sector in addition to other forms of commercial activities that pertain to marine natural resources. It is the view of this study that ocean dumping is a precursor of decreasing biodiversity of the marine natural environment, which has led to declining fish stocks, plankton and microorganisms, coral reefs and even led to public health concerns for the coastal communities that depend on the Indian Ocean as an important source of water for their domestic use. Taken together, reduced marine life may affect the food security of the local population, whereas contaminated/polluted water negatively influences their health environmental security, which underlines the need for people to live in a healthy environment. It also includes the ability to be protected from natural disasters and other environmental hazards.

Notably, the negative effect of ocean dumping, such dumping of plastic waste into the oceans on sea animals since they (plastics) decompose very slowly, breaking into tiny pieces (microplastics), which can enter the marine food chain and become incredibly damaging to sea life. Subsequently, the elimination of most of the sea creatures may lead to negative climate regulation since marine organisms, such as plankton, contribute to climate regulation by absorbing carbon dioxide and producing oxygen. Their decline can affect the ocean's ability to act as a carbon sink, potentially exacerbating climate change impacts.

This result has been illuminated in literature by Thi *et al.* (2021) who stated that ocean dumping of plastic waste is one the leading causes of climate change as microplastics ingestion kill marine organisms by disrupting seafloor ecosystems and create obstacles for bottom-dwelling organisms. This can lead to changes in species composition and reduce biodiversity in affected areas. Biodiversity loss resulting from plastic pollution can have economic consequences. For example, the decline of marine life due to the ingestion of plastics can impact fisheries, leading to reduced catches and economic losses for fishing communities (see UNEP, 2012). To ameliorate this maritime security constraint, Aldosari (2019) emphasized the need for strict policies and regulations to deter ocean dumping, particularly increased production of plastics during the COVID-19 pandemic.

In relation to the low maritime security cooperation, more than half (53.9%) of the respondents strongly agreed and agreed, which affected utilization of the blue economy, 23.4% indicated neutral, whereas 12.6% and 10.2% disagreed and strongly disagreed in that order. Low

maritime security cooperation with other organizations or countries is a limitation to the utilization of the blue economy since a country, on her own, may not have all the capability to thwart threats that are posed to the maritime sector. In adequate cooperation means that the blue economy is not supported through safeguarding of navigation routes, which is a crucial input in the transportation of goods and services.

Notably, countries need to cooperate with other countries since they may not have all the maritime security capabilities so as to be to tackle emerging threats and challenges to the sector. Thus, it is the reasoning of this study that maritime security cooperation may cure challenges associated with inadequate resources, such as naval vessels, surveillance capabilities, and personnel, as well as technological gaps, outdated equipment, and budgetary constraints that are central to maritime security management (see, UNEP, 2012). Maritime security defense is a function of state security agencies, such as the Coast Guard, Kenya Navy, among others. Their core obligation is to wade off intrusion in the Indian Ocean. For instance, sea piracy and deep-sea IUU fishing were as a result of runaway cases maritime defense limitations, which led to the formation of the Kenya Coast Guard to thwart such incidences. Reflecting on the earlier arguments made by the study on sea vastness, this study remarks that state security agencies may require technical support and assistance to undertake certain maritime security functions since countries must work closely to control and manage threats to the maritime sector as one country cannot work in isolation since oceans provide shared opportunities and challenges. This necessitates security agencies in Kenya, such as the Coast Guard, to cooperate with other countries and organizations, such as IMO.

Although it was established from the first objective that there is significant sharing of information among security agencies so as to improve the utilization of the blue economy, there are security issues that appear to hamper cooperation in the maritime sector. This study notes that distrust, competition interests, and resource constraints could be notable issues that bedevil maritime security cooperation, either among state agencies or with the non-state actors (see Otieno, 2019). Based on the foregoing, it is important to note low maritime security cooperation for different countries means that there is little sharing of information and intelligence on maritime security threats, which can perhaps help countries to better understand the threats they face and to take steps to mitigate those threats. Notably, the lack of cooperation in the maritime sector may have resulted from lack of sound formal agreements or treaties on maritime security cooperation. This, therefore, means that countries, on their own, are unable to decisively deal with the threat of piracy and terrorism. Notably, Kenya still grapples with the challenge of border disputes, which has emerged as an impediment to maritime security cooperation. Lamu borders with the Federal Republic of Somalia, where there have been prevalent terror-related attacks and piracy, which has partly been exacerbated by the diplomatic standoff between Kenya and Somalia (Wanzetse, 2021).

Based on the foregoing, this study takes the view that lack of adequate maritime security cooperation is likely to bring unprecedented security issues to the maritime sector in the county of Lamu. This was also highlighted by Shay (2021) who stated that the diplomatic standoff between Kenya and the Federal Republic of Somalia may have encouraged infiltration of arms and terrorists at the border points, leading to the tension between the two countries. Furthermore, this study argues from the premise that military action, alone, cannot cure the maritime security in the area since the security issue has moved from the military domain to include additional

diplomatic and constabulary roles. Put differently, Kenya cannot eliminate or even reduce threats to the maritime zone she shares with the Federal Republic of Somalia since it is a shared bilateral responsibility that can only be doable if the two nations are willing to work towards it. Notably, threats to the maritime sector cross multiple maritime jurisdictions, which necessitates the need for more regional alliances and arrangements. Regrettably, this has not been the case in the coastal strip of Lamu as recounted by an informant who had the following to say:

> Insufficient maritime security cooperation negatively influences the blue economy as seen from border disputes that worsen the problem, breeding distrust and hindering joint efforts. This fragmented approach leaves sea areas vulnerable to piracy, illegal fishing, and trafficking, causing economic losses and compromising the well-being of coastal communities (Kenya Coast Guard officer 24, 2022).

The verbatim highlights the profound influence of low maritime security cooperation on the blue economy. The reference to border disputes underscores how these disagreements exacerbate the issue by fostering distrust and impeding the collaborative endeavors of pertinent organizations. This absence of efficient coordination renders maritime zones susceptible to a range of risks, including piracy, illicit fishing, and trafficking, leading to economic setbacks and jeopardizing the welfare of coastal communities. It is therefore possible to argue that presence of maritime security challenges has profound effect on the safety of the properties and people. This reduced investor confidence, which is central to capital accumulation in the blue economy and provision of employment opportunities to the people and coastal communities in particular. This evidence resonates with Kia (2021) who underlined the place of cooperation as an ingredient of circumventing some of the challenges that may be brought by geopolitics as cooperation promotes safer and secure shipping by improving maritime domain awareness, developing common standards, and coordinating responses to incidents, which in turn expands economic activities and investment in the blue economy.

It is the interpretation of this study that power relations and balance of power is likely to play a big role in maritime security cooperation. Although the interests of a country are seen important in the international system, it is important for countries to cooperate so as to able to achieve maritime security intended goals (see, World Bank, 2017). This may not only improve the security of the maritime domain but also enhance the economic interests of the cooperating countries. Furthermore, no single country can achieve maritime security goals because of the nature of the seas, for instance as transport routes, suggesting that as a country prospers so would the threats to the maritime sector increase likewise. This resonates with the views of Winther and Su (2020) who emphasized the need for maritime cooperation as a way of not only protecting the safety of people and vessels, but also for safeguarding the future of oceans through sustainable exploitation of natural marine resources that are key to the utilization of the blue economy.

Shifting to maritime piracy, the study noted that maritime piracy business hindered the utilization of the blue economy given that majority (56.9%) of the respondents strongly agreed and agreed. On the contrary, close to a quarter (24.3%) had a moderate opinion, while 16.2% and 2.7% disagreed and strongly disagreed respectively. A mean of 3.7 communicates that maritime piracy business is a security constraint that hindered the utilization of the blue economy. Sea piracy is one of the leading factors that derail onshore activities, such as sea transportation,

exploration and exploitation of marine resources, such as seabed mining. Notably, sea piracy disrupts trade by making it more difficult and expensive to transport goods, which may lead to higher prices for consumers and businesses, and it can also discourage investment in trade. Moreover, piracy brings an increased risk of violence, endangering the lives of those who work and travel in the maritime domain, including crew members, tourists, and fishermen. Tragically, piracy incidents have resulted in the loss of lives, with pirates resorting to extreme measures, including the killing of crew members or passengers. In line with view, a participant had the following to say:

> Piracy in high seas not only disrupts maritime trade and deters investments in the blue economy but also poses a safety risk to seafarers and coastal communities. The threat of violence and loss of life is a significant concern, as pirates engage in violent activities that endanger crew members and passengers (IMO officer 34, 2022).

The above verbatim underlines the multifaceted impact of piracy in high seas on various aspects of the maritime domain. It emphasizes how piracy disrupts maritime trade and acts as a deterrent to investments in the blue economy sectors. Based on the data from the excerpt, this study portends that piracy increases the cost of maritime trade by forcing ships to take longer routes, hire armed guards, or pay ransoms. When ship crews have intelligence on the possible attacks by pirates, they may be forced to wait in ports until the threat of piracy has passed, thus incurring extra costs. At worst case scenarios, pirates may kill or injure crew members and seafarers during attacks, still cargo or even destroy ships. This result agrees with UNODC (2019) which found that there were 754 crew members taken hostage and 13 killed in piracy incidents in 2019. To that end, it is possible to argue that these disruptions are likely to make maritime trade more expensive and less reliable, which can deter businesses from investing in the blue economy sectors. This evidence resonates with the views of UNODC (2019) found that piracy in Southeast Asia cost the global economy an estimated $1.5 billion in addition to having a negative impact on tourism, fishing, and other maritime industries in the region.

From the above discussion, it is possible to argue that maritime piracy is often associated with a decline in economic opportunities. Piracy disrupts trade, leading to increased prices for consumers and businesses, subsequently discouraging investments in trade and resulting in limited job opportunities and economic growth. Moreover, the damage caused to property deters further investments and adversely affects investor confidence. The climate of fear and insecurity created by piracy hampers business operations, travel, and work, leading to reduced tourism and economic activities. Additionally, piracy diverts resources away from vital development priorities like education and healthcare, negatively impacting a country's long-term economic prospects. Addressing piracy is essential for fostering a conducive environment for economic growth and prosperity in affected regions.

In summary, maritime security constraints significantly influence the utility of the blue economy. There is a notable agreement among respondents regarding the existence of maritime defense cooperation, and inadequacies in current maritime security policies and strategies. Issues such as low integration of maritime security treaties and the vastness of the sea area were identified as key challenges. Notably, the presence of maritime piracy, insufficient personnel,

and illegal, unreported, and unregulated fishing were highlighted as key security issues negatively affecting the utility of the blue economy. Notably, the study found that high sea piracy was one of the security constraints were discouraging investments in the blue economy since piracy creates a climate of fear.

Conclusions

The study concluded that maritime security constraints influence the utility of the blue economy. Safety challenges, limited integration of maritime security, piracy, illegal fishing, and weak maritime domain awareness structures emerge as critical obstacles. These findings stress the importance of addressing these constraints through robust security measures, capacity building, and the strengthening of institutions. The statistical analysis confirms the statistical significance of these associations, underlining the urgent need for comprehensive strategies to overcome maritime security challenges and ensure the sustainable development of the blue economy.

Recommendations

The study recommended the need to enhance safety measures, such as strengthening maritime defense collaboration with foreign countries to mitigate safety concerns and create a conducive environment for blue economy activities. Investing in advanced technologies, surveillance systems, and maritime domain awareness structures can improve security capabilities and minimize security limitations. Additionally, strengthening institutions and legal frameworks to combat piracy and illegal fishing activities is crucial for protecting blue economy resources. Collaborative efforts among state actors, international organizations, and relevant stakeholders are vital to effectively address maritime security constraints and ensure the sustainable development of the blue economy.

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References

Aldosari, K. R. (2019). Marine safety and pollution prevention from oil spills in the Arabian Gulf: a comparative study of applicable international and regional conventions.

Aly, M. N., Hamid, N., Suharno, N. E., Kholis, N., & Aroyandini, E. N. (2021). Community Involvement and Sustainable Cave Tourism Development in Tulungagung Region. *Journal of Environmental Management & Tourism*, *12*(2), 588-597.

Atakpa, D. (2018). Blue economy in a nutshell. *Project: Blue Economy*.

Bateman, S. (2016). Managing maritime affairs: The contribution of maritime security forces. In *International Order at Sea* (pp. 261-282). Palgrave Macmillan, London.

Belhabib, D., Sumaila, U. R., & Le Billon, P. (2019). The fisheries of Africa: Exploitation, policy, and maritime security trends. *Marine Policy*, *101*, 80-92.

Bennett, N. J., Blythe, J., White, C. S., & Campero, C. (2021). Blue growth and blue justice: Ten risks and solutions for the ocean economy. *Marine Policy*, *125*, 104387.

Bhuyan, M. S., Islam, M. N., Ali, M. M., Rashed-Un-Nabi, M., Alam, M. W., Das, M., ... & Mustary, S. (2021). Blue Economy Prospects, Opportunities, Challenges, Risks, and Sustainable Development Pathways in Bangladesh. *Global Blue Economy*, 147-194.

Bond, P. (2019). Blue Economy threats, contradictions and resistances seen from South Africa. *Journal of Political Ecology*, *26*(1), 341-362.

Brits, P., & Nel, M. (2018). African maritime security and the Lomé Charter: Reality or dream? *African Security Review*, *27*(3-4), 226-244.

Bueger, C. (2015). What is maritime security? *Marine Policy*, *53*, 159-164.

Bueger, C., & Edmunds, T. (2020). Blue crime: Conceptualising transnational organised crime at sea. *Marine Policy*, *119*, 104067.

Chapsos, I., & Malcolm, J. A. (2017). Maritime security in Indonesia: Towards a comprehensive agenda? *Marine Policy*, *76*, 178-184.

Charo, A. M. (2021). Role of Maritime Policies and Strategies in Shaping the Maritime Security Threats in Kenya. *African Journal of Empirical Research*, *2*(1), 115-131.

Childs, J. R., & Hicks, C. C. (2019). Securing the blue: political ecologies of the blue economy in Africa. *Journal of Political Ecology*, *26*(1), 323-340.

Childs, J. R., & Hicks, C. C. (2019). Securing the blue: political ecologies of the blue economy in Africa. *Journal of Political Ecology*, *26*(1), 323-340.

Desai, R. M., & Shambaugh, G. E. (2021). Measuring the global impact of destructive and illegal fishing on maritime piracy: A spatial analysis. *Plos one*, *16*(2), e0246835.

Dinarto, D. (2017). Indonesia's Blue Economy Initiative: Rethinking Maritime Security Challenges. *RSIS Commentary*, (206).

Duarte, É. (2016). Brazil, the Blue Economy and the maritime security of the South Atlantic. *Journal of the Indian Ocean Region*, *12*(1), 97-111.

Egede, E. E., & Apaalse, L. (2019). Dispute concerning delimitation of the maritime boundary between Ghana and Cote D'Ivoire in the atlantic ocean-lessons from another maritime delimitation case arising from the African region. *Ind. Int'l & Comp. L. Rev.*, *29*, 55.

Failler, P., Hussain, M. G., Karim, A. A., Alam, M. K., & Drakeford, B. (2017, November). Opportunities and Constraints of Blue Economy Development in Bangladesh. In *International Workshop on Blue Economy Dialogue* (pp. 22-23).

Hamad, H. B. (2016). Maritime Security Concerns of the East African Community (EAC). *Western Indian Ocean Journal of Marine Science*, *15*(2), 75-92.

Hastings, J. V., & Phillips, S. G. (2015). Maritime piracy business networks and institutions in Africa. *African Affairs*, *114*(457), 555-576.

Holla, A. B. (2021). Fractured Ties: Power Competition and Politics Influencing Security Strategies of Kenya and Somalia in the Horn of Africa Region. *Traektoriâ Nauki*, *7*(06), 1010-1015.

Hussain, M. G., Failler, P., Al Karim, A., & Alam, M. K. (2017). Review on opportunities, constraints and challenges of blue economy development in Bangladesh. *Journal of Fisheries and Life Sciences*, *2*(1), 45-57.

Hussain, M. G., Failler, P., Karim, A. A., & Alam, M. K. (2018). Major opportunities of blue economy development in Bangladesh. *Journal of the Indian Ocean Region*, *14*(1), 88-99.

Kamau, E. N. (2018). *Effects of Globalization on Regional Security in East Africa: a Case Study of East African Community* (Doctoral dissertation, university of nairobi).

Kia, Z. (2021). Ecotourism in Indonesia: Local community involvement and the affecting factors. *Journal of Governance and Public Policy*, *8*(2), 93-105.

Kiswaa, S. (2020). *Challenges Facing Blue Economy Resource Management In Africa, A Case Study Of Kenya* (Doctoral dissertation, University of Nairobi).

Malcolm, J. A., & Murday, L. (2017). Small islands' understanding of maritime security: the cases of Mauritius and Seychelles. *Journal of the Indian Ocean Region*, *13*(2), 234-256.

Mboce, H. N., & McCabe, R. (2021). Kenya: From 'Sea-Blind'to 'Sea-Vision'. In *Capacity Building for Maritime Security* (pp. 163-198). Palgrave Macmillan, Cham.

McCabe, R. (2019). Policing the Seas: Building Constabulary Maritime Governance in the Horn of Africa–The Case of Djibouti and Kenya. *African Security*, *12*(3-4), 330-355.

Mishra, A. (2019). India-Africa Maritime Cooperation: The Case of Western Indian Ocean. *ORF Occasional Paper*, *221*.

Morabito, G. (2017). Maritime Piracy: Beyond Economic Concerns and Private Business Interests: An Interview with Giacomo Morabito. *Georgetown Journal of International Affairs*, 43-46.

Naidu, G. V. C. (2021). Security vulnerabilities in South Asia and the Indian Ocean. In *Terrorism, Security and Development in South Asia* (pp. 251-266). Routledge.

Njue, N. S. (2020). *Influence of maritime security on exploitation of blue economy resources along Kenya's coastal region* (Doctoral dissertation, Africa Nazarene University).

Njue, N. S. (2020). *Influence of maritime security on exploitation of blue economy resources along Kenya's coastal region* (Doctoral dissertation, Africa Nazarene University).

Nombo, B. C. (2020). *Challenges Of Sustainable Maritime Security In Africa: A Case Of The Tanzania-Malawi Dispute* (Doctoral dissertation, University of Nairobi).

Obiene, S., Shilabukha, K., Muga, G., Ojwang, L., & Owuor, M. A. (2022). Understanding of Sustainable Development Goals among communities living adjacent to mangroves in Kenya. *Western Indian Ocean Journal of Marine Science*, (1/2022), 59-73.

Otieno, F. O. (2019). *Counterterrorism strategies and performance of the national police service in managing terrorism in Lamu County, Kenya Fredrick Okoth* (Doctoral dissertation, MMUST).

Otto, L. (Ed.). (2020). *Global Challenges in Maritime Security: An Introduction*. Springer Nature.

Philip, O., Odote, C., & Kibugi, R. (2020). Integrating Marine Spatial Planning in Governing Kenya's Land-Sea Interface for a Sustainable Blue Economy. *Law Env't & Dev. J.*, *16*, 178.

Potgieter, T. (2018). Oceans economy, blue economy, and security: notes on the South African potential and developments. *Journal of the Indian Ocean Region*, *14*(1), 49-70.

Saeed, S., & Saeed, K. (2020). *Challenges and prospects of interagency coordination in promoting and sustaining Africa's blue economy: case study of Kenya; 2010-2018* (Doctoral dissertation, University of Nairobi).

Sarker, S., Hussain, F. A., Assaduzzaman, M., & Failler, P. (2019). Blue economy and climate change: Bangladesh perspective. *Journal of Ocean and Coastal Economics*, *6*(2), 6.

Shay, S. (2021). Al Shabaab from local to regional and global terror threat. *Journal of Central and Eastern European African Studies*, *1*(3), 21-41.

Singh, R. (2019). India's Maritime security and policy: an imperative for the blue economy. In *India in South Asia* (pp. 269-289). Springer, Singapore.

Sterio, M. (2017). *Prosecuting Juvenile Piracy Suspects: The International Legal Framework*. Routledge.

Stilp, N. (2021). Towards Consolidating the Pacific Maritime Security Program for the Future: A Critical Analysis. *Sea Power Centre Australia 2021 Annual*, *81*.

Tella, O., Ogunyemi, O., Ogunleye, O., & Akinwumi, I. (2020). Information sharing and the blue economy: Empirical evidence from Nigeria. Marine Policy, 116, 103857.

Upadhyay, D. K., & Mishra, M. (2020). Blue economy: Emerging global trends and India's multilateral cooperation. *Maritime Affairs: Journal of the National Maritime Foundation of India*, *16*(1), 30-45.

Van Wyk, J. A. (2015). Defining the blue economy as a South African strategic priority: toward a sustainable 10th province? *Journal of the Indian Ocean Region*, *11*(2), 153-169.

Voyer, M. A., Quirk, G., McIlgorm, A., Azmi, K., Kaye, S. B., & McArthur, M. (2017). The Blue Economy in Australia: conceptualising the Blue Economy, its relationship with maritime security and its role in Australian oceans governance.

Voyer, M., Schofield, C., Azmi, K., Warner, R., McIlgorm, A., & Quirk, G. (2018). Maritime security and the blue economy: Intersections and interdependencies in the Indian Ocean. *Journal of the Indian Ocean Region*, *14*(1), 28-48.

Wanzetse, W. W. (2021). *The Role of the Media in Resolution of International Conflict: a Case Study of the Kenya-somalia Maritime Dispute* (Doctoral dissertation, University of Nairobi).

Wenhai, L., Cusack, C., Baker, M., Tao, W., Mingbao, C., Paige, K., ... & Yufeng, Y. (2019). Successful blue economy examples with an emphasis on international perspectives. *Frontiers in Marine Science*, *6*, 261.

Winther, J. G., & Su, J. (2020). Global Ocean Governance and Ecological Civilization: Building a Sustainable Ocean Economy for China.

World Bank. (2017). The potential of the blue economy: Increasing long-term benefits of the sustainable use of marine resources for small island developing states and coastal least developed countries. Washington, DC: World Bank Group.

Zheng, S., & Xia, Y. (2021). Private Security Companies in Kenya and the Impact of Chinese Actors. *Available at SSRN 3859591*.