

EFFECT OF COMMUNITY INVOLVEMENT ON THE UTILITY OF THE BLUE ECONOMY OF THE INDIAN OCEAN

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ABSTRACT

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. There is considerable amount of literature on the place and relevance of community involvement in the management of the blue economy. Provision of opportunities to the local people is essential in curbing rebellion of blue economy projects. Thus, involvement of coastal communities is at the heart of maritime security. 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.

Keywords: *Economic Value, Community Involvement, Blue Economy, Maritime Security Management and livelihoods.*

INTRODUCTION

The contribution of the blue economy in the development of countries cannot be overemphasized considering tax revenues accrued by governments from blue economy as well as its role in creating direct and indirect employment (Okofor-Yawood, 2020). 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). 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.

Problem Statement

Aly et al. (2021) argued that participation or involvement of coastal communities is a key enabler of the development of the cave tourism in Tenggar Cave, Tenggarrejo Village, Tulungagung region Indonesia. The study noted that involvement of the coastal communities enhances the social license for the development of the tourism sector. However, the study did not detail how community participation or involvement was central to maritime security and how lack of the involvement could deteriorate the security in the blue economy zones. To ameliorate this dearth on the existing body of evidence, this study sought to draw the nexus between community involvement and the utility of Indian Ocean's blue economy in Lamu County, Kenya.

LITERATURE REVIEW

Hedin and Ranängen (2017) conducted a study on the importance of community involvement in Swedish's extract industries. The study noted that the need for the mining industry to be cognizant of the expectations of the community since this is essential in obtaining the social license to work in the mining regions. This suggests that the lack of the social license can create resentment from the local communities, thus hampering the effective operations of the industries. For instance, the study found that communities can be involved through corporate social responsibility (CSR) activities. However, the study largely focused on the mining industry in Sweden and how corporations can obtain social license to operate, rather than how this can affect the state of security in mining areas if communities are negated. The current study attempted to elucidate the relationship between community involvements through amount others, CSR activities and the utility of the Indian Ocean's blue economy in Lamu County, Kenya.

Campbell et al. (2021) focused the transformation of Blue Economy into Blue Communities as a means to enhancing and growing the well-being of the coastal communities. The study noted that re-orienting and expanding marine aquaculture is essential for not only the social, environmental, and cultural well-being of communities, but also alongside growth of the local economy. However, the study appeared to focus on the empowerment of the coastal communities compared to involving them in the ongoing or completed blue economy programmes and projects. The current study sought to fill this knowledge gap by examining the nexus between community involvement through among others, CSR activities and the utility of the Indian Ocean's blue economy in Lamu County, Kenya.

Phelan et al. (2020) stated that integration of the host communities into eco-tourism is critical in the sustainable use of water-related resources, such as oceans and lakes. For instance, through the participation of

the host communities in maritime activities, the local people are able to get a source of livelihood. Sustainable use of blue economy resources is critical for the host communities since it offers the previously missing sources of livelihoods. However, the study limited the involvement of the coastal communities in terms of access to markets, hospitality skills and waste management, rather than elucidating the connection between involvement of the Coastal communities and enhancement of ecotourism, which is one aspect of the blue economy. This study attempted to describe the relationship between community involvements through amount others, ecotourism and the utility of the Indian Ocean's blue economy in Lamu County, Kenya.

Okafor-Yarwood et al. (2020) studied the interrelationships among the culture, economy, and eco-system conservation in Africa. The study noted the place of coastal communities has been eroded overtimes and replaced with multinational corporations. Moreover, the study found that negation of the coastal community in the blue economy had affected the sustainability of the maritime initiatives since the perspective of the local people is annulled. However, the study concentrated on the institutional objectives of community involvement during the post COVID-19 recovery period rather than the implications of community exclusion of inclusion in the blue economy interventions. The current study sought to draw the nexus between community involvement and the utility of Indian Ocean's blue economy in Lamu County, Kenya.

Praptiwi et al. (2021) delved into the role of tourism for countries transforming into the blue economy. The study noted that blue economy offers coastal communities' alternative livelihoods since dependency on declining maritime resources was not sustainable. In addition, the study noted that tourism, alone, is not a sustainable alternative for the coastal communities, suggesting that other forms of complementary means of livelihoods are needed to sustain the local people. This study sought to explore the nexus between community involvement as a maritime security initiative and the utility of the blue economy in Lamu County, Kenya.

METHODOLOGY

Cross-sectional survey research design was adopted to investigate the effect of community involvement on the utility of Blue Economy. Since mixed methods approach was applied in data collection and analysis, quantitative data was triangulated with qualitative data using a phenomenological approach. The focus of the research was in Lamu County since there is rapid expansion of the maritime activities, such as new port construction and its operations, LAPSET corridor linkage to the new port, deep-sea diving, exploration of seabed natural resources, boating, fishing, among others. It is instructive to note that the LAPSET project affects the local people of Lamu County, suggesting that the blue economy activities in the region are critical to informing the rationale of the study. The study targeted the business community or investors since they were the key investors in the development of the blue economy. Furthermore, the study targeted local leadership in the County of Lamu, activist groups and community leaders. This cluster of respondents offered details on the state of community involvement and how their involvement or the lack thereof influenced the maritime security and the eventual effect on the blue economy. Primary data was solicited using questionnaires and interview guides for key informants (KIs). Interviews for key informants were conducted through the face-to-face and telephone approaches.

Data triangulation used in the study provided numeric and narrative data. SPSS version 24 was used to analyze quantitative data. The quantitative data yielded descriptive statistics (measures of central tendencies and measures of dispersion) and inferential statistics (linear regression analysis and Pearson correlation analysis). Descriptive statistics provided information on the trends and patterns of the data, while inferential statistics provided information on the statistical significance of the relationships between and among variable or the lack thereof. Thematic analysis was also used to analyze qualitative data or the sections of the data which were collected from the open-ended questions, where this data was presented along quantitative data. The qualitative data was presented along the quantitative data in prose form. Figures and tables provided visualization of the data.

FINDINGS

The study objective was to establish the effect of involving coastal communities on the utility of the Indian Ocean blue economy. To address this objective, respondents who took part in this research work were provided with statements that described the coastal community inclusion practices by maritime security actors and inclusion practices by blue economy investors and were required to rate them on 5-point Likert scale. Data collected under this study objective was described using percentage, standard deviation, and mean. The findings of the study were summarized in Table 1.

Table 1: Coastal Community Involvement

Community Involvement	1	2	3	4	5	Mean	S.D.
Coastal communities are constantly involved in the blue economy activities, such as tourism, shipping and transportation	3.6%	23.1%	21.9%	12.9%	38.6%	3.6	1.30
Local communities are satisfied with the level of their involvement in of the blue economy activities	9.0%	39.2%	14.1%	10.2%	27.5%	3.1	1.40
Blue economy investors constantly seek social license to operate in the region by undertaking CSR activities, such as educational scholarships, road maintenance	5.7%	33.5%	24.3%	11.4%	25.1%	3.2	1.29
Local communities are employed in the blue economy activities, such as hospitality jobs	10.8%	22.8%	29.6%	14.7%	22.2%	3.1	1.29
Maritime security actors involve local communities in the blue economy intelligence gathering	20.4%	24.6%	22.2%	18.9%	14.1%	2.8	1.34
The expectations of the coastal communities in the blue economy are met by the state and non-state actors	6.9%	36.5%	24.9%	15.0%	16.8%	3.0	1.21
Coastal communities are empowered through training to take advantage of expanding blue economy	17.1%	28.4%	30.5%	14.1%	9.9%	2.7	1.19
The well-being of the coastal communities in the blue economy has increased in the recent past	16.5%	27.8%	21.0%	15.0%	19.8%	2.9	1.37
The community-based ecotourism has increased the relevance and sustainability of the blue economy resources	8.4%	23.7%	26.0%	21.3%	20.7%	3.2	1.25
The hospitality skills of the local communities have expanded the utility of the blue economy	6.3%	31.1%	15.3%	21.3%	26.0%	3.3	1.32
Blue economy offers coastal communities with alternative livelihoods	11.1%	17.1%	15.6%	34.7%	21.6%	3.4	1.30
Coastal communities take part in decision making, such as mineral exploration and exploitation on the use of the blue economy resources	6.9%	22.2%	24.6%	17.4%	29.0%	3.4	1.30
Average	10.2%	27.5%	22.5%	17.2%	22.6%	3.1	

Source: Researcher (2022)

Table above presents results on the involvement of the coastal communities in the blue economy activities.

From the table, results indicate that most (38.6%) of the respondents strongly agreed that coastal communities are constantly involved in the blue economy activities. In contrast, many (39.2%) disagreed that local communities are satisfied with the level of their involvement in of the blue economy activities. Similarly, majority (33.5%) disagreed that blue economy investors constantly seek social license to operate in the region by undertaking CSR activities. To a moderate extent (29.6%), results indicated that local communities are employed in the blue economy activities. The biggest percentage (24.6%) of the respondents disagreed that maritime security actors involve local communities in the blue economy intelligence gathering in addition to 36.5% who disagreed that the expectations of the coastal communities in the blue economy are met by the state and non-state actors.

Furthermore, majority (30.5%) of the respondents were moderate in relation to the empowering of coastal communities through training in order to take advantage of the expanding blue economy. Additionally, most (27.8%) disagreed that the well-being of the coastal communities in the blue economy had increased in the recent past. To a moderate extent, most (26.0%) stated that the community-based ecotourism had increased the relevance and sustainability of the blue economy resources. Conversely, majority (31.1%) disagreed that the hospitality skills of the local communities had expanded the utility of the blue economy. On the other hand, many (34.7%) agreed that the hospitality skills of the local communities have expanded the utility of the blue economy, whereas most (29.0%) strongly agreed that coastal communities take part in decision making on the use of the blue economy resources.

Overall, the computed mean of 3.1 indicates that involvement of coastal communities influences the utility of the blue economy to a moderate extent as illustrated by a mean of 3.1. Additionally, 39.8% of the respondents strongly agreed and agreed on the participation of the local communities in the blue economy. The involvement of coastal communities in the blue economy integrates their participation, engagement, and contribution to various aspects of economic activities and decision-making processes related to the sustainable use and management of marine resources (Voyer & van Leeuwen, 2019). This involvement encompasses the participation of community members in activities such as fishing, aquaculture, tourism, marine conservation, coastal development, and other related sectors.

Participation of the local communities in various activities related to the blue economy increases local support and promotes the effectiveness of many maritime activities. This can perhaps be attributed to the role that local people take part in the day-to-day running of activities associated with the exploitation and eventual usage of the marine natural resources. Furthermore, involvement of the local persons living in the blue economy zones is thought to increase the health of the marine environment, which is essential in the sustainable exploration and exploitation of marine natural resources. Arguably, local communities depend on the blue economy for their survival and they are seen as the custodian of the resources for sustenance of their livelihood.

Therefore, involving them would add value to security of the blue economy. On the other hand, negating local communities from the mainstream blue economy activities is likely to lead to resentment or aggravation of the local people, which may potentially translate into overt or covert natural resource related conflict. From the maritime security perspective, involvement of the local communities is critical to reducing threats to maritime security and the associated constraints since the local people are conversant and privy to the terrain of the area. With this knowledge, it is important to involve them in undertaking patrols and collecting actionable intelligence that could help in mitigating against traditional and emerging/modern threats to the maritime domain, such as sea trafficking, ocean dumping, IUU fishing, among others. This evidence was corroborated by a key informant who recounted:

“Working with local communities in the maritime domain enhances the capability of state security agencies, private security and investors to reduce security gaps along the coastline by strengthening monitoring and surveillance through regular sea patrols as this reduce illegal fishing, protects the coastal

ecosystem and sustainable exploitation of fisheries.” (NGO Personnel 56, 2022).

The provided verbatim above emphasizes the importance of engaging with local communities in the maritime domain to enhance the effectiveness of state security agencies, private security, and investors in addressing security challenges along the coastline. Working closely with local communities enables state and private security to management security affairs and perhaps achieve law and order by strengthening monitoring and surveillance activities through regular sea patrols. Notably, the intimate knowledge of the coastal areas by the local people enables security players to mitigate issues, such as illegal fishing, marine environmental pollution, among others. As a result, there is increased likelihood to protect coastal ecosystem, which is crucial in the long-term utilization of the blue economy. The participation of the coastal communities may improve maritime security outcomes since native people are likely to pass information to the law enforcement on the common criminal activities and the routes used by perpetrators of crime within the purview of maritime security (Voyer & van Leeuwen, 2018).

Notably, local communities undertake complementary roles in maritime security management when they are involved in the identification of security gaps as they possess innate knowledge when strange happenings take place, such as illegal fishing. These actions are thought to improve maritime security and the preservation of marine resources in particular. This approach aligns with the goal of achieving a more sustainable and secure maritime environment. Finding from the verbatim by (NGO, 56, 2022), agrees with the view of Charo (2021) who contended that the involvement of local communities is important in enhancing sustainable use of marine natural resources, since local communities possess valuable traditional knowledge and practices that have been developed over generations, providing insights into sustainable resource management and conservation. Their deep understanding of local ecosystems and their reliance on marine resources make them key stakeholders in ensuring their sustainable use. It should also be recalled ownership was a key factor in responsive cooperation, therefore, involving the stakeholders and for this aspect, local community will nurture commitment that would help oversee security issues for effective management. It is the view of this study that coastal communities are active maritime security players if they are integrated into the security architecture so as to form a comprehensive framework that anticipates threats, collects actionable intelligence, and uses native knowledge of the oceans to mitigate risks.

From the excerpt, it is evident that co-opting local communities into the maritime security domain is thought to increase the capability of various public and private security organization in anticipating and responding to threats that may affect blue economy. This basically means that indigenous coastal populations have traditional knowledge of the onshore and offshore activities, signifying that their involvement may bring new/indigenous perspective, yet important input in the management of maritime affairs, such as marine eco-tourism (Voyer & van Leeuwen, 2018). For instance, their familiarity with the coastal ways of life and terrain means that they can help state security agencies and investors with crucial information to prevent threats to the blue economy activities. This finding is relatable to the views of Ayilu (2023) who affirmed that coastal communities are beneficial to the security agencies’ monitoring and undertaking surveillance of Kenya’s Indian Ocean Coastline. To that end, it is instructive to note that integrating local people into blue economy activities perhaps reduces the security gaps left by core security providers owing to their familiarity to the coastal ways of life. This assertion aligns with the views of Bennett *et al.* (2020) who highlighted that community policing initiatives originates from local people since as natives, they know the security dynamics of the blue economy zones or when something is not normal. Consequently, Voyer *et al.* (2018) stressed that their involvement is said to not only reduce threats to the maritime domain, but also increase support, which is central to upscaling the resourcefulness of the blue economy. This evidence is congruent with the Collaboration Action Theory, which reinforces the place and relevance of stakeholder involvement in security related matters as one entity may not possess all the skills or technical know-how in resolving endemic threats to societies.

More than half (51.5%) of the respondents strongly agreed and agreed that coastal communities were constantly involved in the blue economy activities. On the flip side, 21.9% indicated a moderate perspective, whereas 23.1% and 3.6% disagreed and strongly disagreed respectively. There are a number of blue economy activities that local people participate in, such as marine transport, tourism, fisheries, seabed extractive activities, among others. As it relates to the maritime security, coastal communities may take part in community policing, intelligence gathering, monitoring and surveillance, and provision of early warnings and reporting on unusual activities. When local/surrounding communities take part in maritime security management blue economy activities, they not only feel as part of the larger maritime community, but they also make a living, which uplifts their livelihoods. Being part of the local activities means that coastal communities have access to alternative sources of living as fishing and small-scale farming, alone, may not sustain their families. Thus, accessing direct and indirect employment opportunities means that indigenous coastal populations are able to fend for their families and perhaps live as law-abiding citizens as they do not have to use illegal means to earn a living. This is the core objective of the blue economy which entails advancement of the well-being of the people while at the same time ensuring that there is a reduction of ecological scarcities, that is degradation of ecosystems and environmental risks (see, UNEP, 2012). In contrast, negating local communities from the maritime domain may create natural resource related conflicts, which can potentially reduce the resourcefulness of the blue economy. In line with this assertion, a participant had the following to say:

“It is important to involve local community as a way of not only tapping into their skills and knowledge of the surrounding, but also as a way of reducing conflict with them. Also, participation of the local people in the blue economy activities enables them make a living, which boosts their standards of living” (Investor 16, 2022).

The above verbatim seems to point to the necessity of integrating local people in various activities related to the blue economy. It further elucidates that involving local communities in the blue economy is crucial for tapping into their skills and knowledge while reducing conflicts. By engaging local residents, the blue economy can benefit from their expertise and traditional knowledge, leading to more informed decision-making and sustainable resource management. Moreover, the participation of local people in blue economy activities elevates their self-esteem as they feel part and parcel of their own environment. Noting that the security system is a social system, and through collective interest, the integration of community members in security issues would help sanction behaviours that would be protective rather than destruction to the blue economy (Stepa, 2015). Furthermore, a secure blue economy provides them with livelihood opportunities, ultimately improving their living standards. This highlights the dual benefits of involving local communities: enhancing the sustainability of marine resources and promoting socio-economic development in coastal areas. Evidence from the verbatim resonates with the perspective of Teshome *et al.* (2021) who stated that co-opting native communities into various blue economy projects or programmes enables the implementers to leverage on local experience and knowledge, which is thought to enhance realization of desired results. Importantly, involvement of the native population in resource utilization is key in mitigating against conflicts related to the usage of natural resources. This also agree with Winther and Su (2020) sharing natural resources with the local population helps to prevent possible conflicts associated with natural resource utilization. Reduction of natural resource-based conflicts is a key enabler of safety of persons and economic assets that are crucial in creating ideal environment so as to expand maritime zones (onshore and offshore). In turn, this may spur growth of businesses, which will ultimately add to the existing direct and indirect employment opportunities.

Additionally, this study takes the standpoint that integrating native populace into the maritime security may help to conserve the bio-diversity of the marine environment since local people are the true owners of the maritime domain and as such, they can augment existing scientific knowledge on conservation of the environment. One of the ways in which involvement of the local population enhances blue economy is

educating/training them on the need to shun illegal marine wildlife trafficking, such as turtle meat, and outlawed extraction of charcoal, timber, and minerals (Collins, 2022). Notably, sustainable use of the marine natural resources translates into more social, environmental, and economic opportunities for the native populations. For instance, expansion of onshore and offshore activities has the potential to enable local populations to earn a living, while at the same time this may enlarge marine resource rights and institutionalize equal access to maritime resources and opportunities. This evidence agrees with a study done by Okafor-Yarwood *et al.* (2020) who stated that integrating local population in the conservation and sustainable use of marine natural resources uplifts the livelihoods in addition to the entrenching marine resource rights and regulation that are aimed at conserving the biodiversity of the oceans. Additionally, the result in this section agrees with the coordination theory which underlines the need for various stakeholders to be involved in order to accomplish desired goals.

The study sought to establish the satisfaction of the local communities in terms of their involvement in the blue economy activities. Analysis of data indicated that nearly half (48.2%) of the respondents were dissatisfied with the level of participation in blue economy activities, where this was also affirmed by a mean of 3.1, which indicated that most of the responses were clustered around the mean, signifying moderate engagement satisfaction levels by local communities. Moderate engagement of the local communities could be attributed to partial involvement of the local population in maritime activities, such as fisheries and tourism. The high levels of dissatisfaction can perhaps be attributed to the lack of adequate employment opportunities of the coastal people in addition to the perceived negative environmental and social impact of maritime activities. Since local people have the knowledge and experience of the geography of the coastal region, it is imperative that they are involved meaningfully in maritime security management activities, which is a key enabler of the blue economy (see, Atakpa, 2018). Distorted involvement has a high likelihood of leading to resentment of the local population to the investment in the blue economy. Thus, their participation in the local activities that relate to marine natural environment or ecosystem should be guaranteed in order to boost their gratification and happiness index. To that end, integrating various portions of local people into the blue economy can arguably influence the utilization of the blue economy in a meaningful manner. A local fisherman had the following to say:

“Currently, most of the local persons, such as fishermen are not happy in the manner with which they are treated in terms of being involved in various activities around the ocean, such as tourism. They are sometimes negated from conservation efforts of the ocean biodiversity, yet they have traditional knowledge on how it is supposed to be done. Involving local people will improve the relations between blue economy initiatives and the people” (Fisherman 16, 2022).

The above verbatim speaks of the frustration of local populations, particularly fishermen, over their limited involvement in various marine activities, including tourism, and their exclusion from conservation efforts. Despite having valuable traditional knowledge about the ocean and its biodiversity, they feel neglected and excluded. The excerpt emphasizes the importance of involving local people in blue economy efforts to improve the relationship between blue economy efforts and coastal communities and bridge the gap. Notably, the quote reinforces the need to involve indigenous populations since this is crucial in integrating their perspectives and fostering more inclusive and mutually beneficial approaches that support sustainable practices.

Findings from the quote are in line with the views of Kibuthu (2020) who underlined the centrality of involving local population in blue economy activities and any other events related to the exploration and exploitation of the marine natural resources. From the evidence in the verbatim, it seems that low involvement of the native people in the blue economy has left many of them disenfranchised and disconnected to the maritime operations. As a result of their negation, the utilization of the blue economy may miss on the cultural and historic knowledge, which is crucial in addressing contemporary maritime security challenges, such as

ocean dumping. In parallel, this lowers the extent to which marine environment is meeting the nutritious and food security of the coastal people. This assertion agrees with Arbow (2019) who affirmed that distorted participation of the local people means that most of them are detached from blue economy and/or maritime activities, such as conservation of the marine ecosystem. This often pushes them to the periphery in terms of their engagement in blue economy activities. Due to low engagement, the verbatim above is suggestive that aboriginal population may engage in activities that are thought to increase threats to the maritime domain because of lack of adequate opportunities to sustain their livelihoods. This evidence is in line with the views of Winther & Su (2020) who stated that involvement of the coastal indigenous population is essential in not only creating a good rapport with blue economy investors, but also engaging them in meaningful economic activities that can enable them make a living, thus dissociate from engaging in activities that could potentially add to the threats facing the maritime domain.

Additionally, the result in this section agrees with the Collaboration Action Theory as cited in Bax *et al.* (2022), who stated that integrating homegrown populations into the maritime domain is important in building sustainable coastal blue economy since they share valuable experiences, intimate knowledge, and understanding that can perhaps be integrated into maritime securities so as to enhance ocean safety and governance. Successful ocean governance is likely to create a safer environment for the blue economy to flourish, which is the cornerstone of increasing investment, eventually creating employment opportunities.

The study sought to establish the extent to which Corporate Social Responsibility (CSR) activities enabled blue economy investors to operate in the Lamu County's Coastal Strip. A mean of 3.2 and response of 24.3% suggested that blue economy investors moderately sought the social license to operate in the region by undertaking CSR activities. CSR entail activities that enable organizations to be socially and environmentally accountable to those that are affected by the company's actions. Those who are affected by the actions of blue economy entities are mostly indigenous populations whose wellbeing must be factored into the planning and implementation of activities related to the maritime domain. For instance, seabed exploration and exploitation of marine natural resources, such as gas and oil, ought to take into account the environmental consequences of such activities. When sea mining and tourism companies are environmentally responsible to the health of the local population, there is optimum functioning of the maritime domain in contrast to the contrary where native populations may protest investment overtures.

As a means to gain social license to operate, most of the investors in the maritime domain often undertake CSR activities, such as building of hospitals and schools, maintaining of roads and bridges, among others. However, data revealed that most of the companies/organizations operating in the blue economy zones have done little in terms of CSR initiatives. Consequently, this negatively affects the blue economy since most of the homegrown populations feel left out of mainstream economic activities associated with the utilization of marine natural resources. As a consequence of disenfranchising local people, investors may not benefit from the indigenous knowledge on an array of areas, such as tourism or fishing. This assertion was also corroborated by a key informant who stated:

“Investors in the blue economy zones rarely undertake CSR activities as a way of paying back to the community. This discourages local people from supporting blue economy projects who often feel left out of the key resources that are traditionally their birthright.” (Local leader 61, 2022).

The above postulation speaks to the manner in which local population is negated by those involved in the blue economy, particularly through corporate social responsibility (CSR) initiatives. It further highlights how the lack of CSR activities by investors in the blue economy zone is having a negative impact on investor-community relations. The lack of CSR commitment has discouraged locals from supporting blue economy projects, creating a sense of alienation from the resources they traditionally consider to be their birthright. This suggests that local communities may feel deprived of their resources without benefiting.

The possibility of sabotaging investors efforts in different ways including criminal activities may be heightened to drive away investors who are not benevolent to the community. The expectations that investors should contribute to community welfare and development in exchange for using local resources is not unfounded. This quote underscores the importance of responsible and inclusive practices by investors in the blue economy to foster positive relationships, address local concerns and distribute benefits equitably within their communities. Evidence emanating from the quote is relatable to the perspective of Winter (2021) who contended that one of the ways in which blue economy operators give back to the society is through social responsibility and accountability to the native people.

Furthermore, Winter & Su (2017) pointed out that when the expectations of the local people are not met, there is likelihood that they may not fully support blue economy activities. As a result of this, they may sabotage blue economy projects, such as aquaculture and fisheries, either by refusing to purchase services and products from non-indigenous business owners. Ultimately, this is likely to reduce the motivation for blue economy investments, leading to reduced creation of new jobs that are intended to cure existing investment and unemployment gaps.

The quote signifies that the lack of local support presents possible barriers that can hinder the realization of desired goals, such as responsible exploration and exploitation of marine resources. This finding has been emphasized by Shah and Ramesh (2022) who underscored that CSR activities are crucial in making positive contributions to address the needs of weak communities, such as restoration or preservation of the marine environment where most of the local people depend for livelihoods. To this end, it possible to argue that despite the resources in the Indian Ocean, the coastal communities remain to be among the poorest in Kenya (World Bank, 2017). This could partly be attributed to low respect for CSR initiatives. Over and above, result from the quote agrees with the Collaboration Action Theory on the necessity of creating strategic synergies with stakeholders (local communities are important stakeholders) in order to increase buy-in and support from those affected by actions of organizations (Whisnant & Vandeweerd, 2019).

Notably, participation of the coastal communities in maritime security management brings important insights that law enforcement agencies may leverage to protect marine resources or even increase the safety of maritime zones since indigenous populations possess crucial information on the weather patterns of the oceans and may report unusual activities. Consequently, this may create trust and cooperation, thus leading to more coastal people taking part in maritime security management. This may increase the likelihood of indigenous population getting direct and/or indirect employment for improved standards of living.

In relation to the employment, a mean of 3.1 infers that local communities were moderately employed in the blue economy activities. Employment of the indigenous population in the blue economy activities, such as fisheries and tourism or even maritime researchers, business intelligence, and informers, is an important way of entrenching their participation/involvement in the sustainable exploration, exploitation, and regeneration of the marine natural resources. Native people can be coopted into environment conservation activities, such as ocean cleaning, tree planting, collection of oceanographic data, among others. Provision of job opportunities for the local communities enhances regeneration of the marine natural ecosystem as defined by balanced economic social, and ecological aspects.

Moderate job opportunities for the local people indicates that their place has not been properly articulated by investors and state agencies that control various blue economy initiatives. As a result of this biased approach, there are perhaps tendencies by various players not to use the input and perspective of the local people in designing and implementing blue economy projects. This possibly scales down the extent to which such projects are successful. This postulation was stated by a key informant in the verbatim below:

“Local communities are not properly integrated into the planning and implementation of maritime security management which is an enabler of the blue economy initiatives in terms of employment. This affects

the effectiveness of blue economy projects.” (Local fisherman 23, 2022).

The above cited quote shows poor community involvement in the planning and implementation of blue economy initiatives, particularly with respect to employment opportunities. It is in the view of this study that although concerns have been raised on the educational attainment of the coastal people, their participation in maritime security affairs may be improved by providing them with necessary skills through training so that they can be integrated successfully. Arguably, inclusion of local knowledge into policies contribute to locally relevant that could help achieve long-term, sustainable goals (see Ohajunwa, 2022). Accordingly, local knowledge is sensitive to local realities in a way that can support implementation of security strategies more than global ideologies that are presented as scientific facts that are not sensitive to local context (see, Smalley cited by Ohajunwa, 2022).

This has the implication that integrating local security knowledge through participation of local communities can enhance security of the blue economy. In contrast, lack of inclusiveness may negatively impact the overall effectiveness of blue economy projects. By excluding local communities from meaningful participation and employment, the potential benefits and success of this initiative are jeopardized. It further emphasizes the importance of involving local communities in decision-making processes, providing employment opportunities and ensuring their active participation in the development and management of blue economy projects.

Furthermore, it is crucial to provide on-the-job and off-the-job training to the coastal communities so as to ensure that they possess necessary skills and competencies to undertake various roles relating to maritime security management, such as patrols and CCTV monitoring. Such integration not only increases the effectiveness of efforts, but also contributes to the empowerment and well-being of the communities involved. Result from the quote seem to agree with Yet *et al.* (2022) who asserted that conceptualization, planning, and implementation activities by blue economy players largely negates indigenous populations. When local people are involved through employment opportunities, World Bank (2017) underlined that they can substantially contribute to the success of blue economy projects since they have intimate understanding of their surroundings, thus able to suggest the most salient solutions for project success. To that end, the success of the blue economy increases the likelihood of tourism, mining, shipping, among others, which are key enablers of job creation as service providers and/or suppliers. Consequently, this may increase their standards of living and contribute to the economic growth and development of the country.

As highlighted in the quote, however, indigenous populations are often left out of many maritime security management and blue economy initiatives, which confounds the achievement of blue economy goals. This finding is in line with the views of Lubchenco and Haugan (2023) who stated that lack of adequate employment opportunities for indigenous population negatively impact the utility of the blue economy in terms of inadequate support from local people who are the most crucial blue economy stakeholders. Empirically, the quote speaks to the standpoint of Hoerterer *et al.* (2020) who underscored the necessity of developing collaborative practices with blue economy stakeholders, such as local fishermen, for improved utilization of the blue economy in the Indian Ocean. Notably, evidence from the quote is relatable to the constructs of Collaboration Theory, which underlines the need to involve various players/stakeholders in the blue economy initiatives as a way of circumventing inherent challenges that hinder achievement of intended results (Zaucha & Kreiner, 2021).

In terms of intelligence gathering by the local community, (45.0%) of the respondents strongly disagreed and strongly disagreed that maritime security actors were involved local communities in the blue economy intelligence gathering in addition to 22.2% who indicated neutral. On the contrary, 33.0% (18.9% and 14.1%) agreed and strongly agreed on the involvement of the local communities in gathering of intelligence. A mean of 2.8 signifies that local communities were at the periphery in terms of intelligence gathering. In the purview of maritime domain, collection of intelligence entails gathering crucial information on the threats to the

maritime domain. With the evolution of maritime threats, from traditional (for instance, piracy) to modern ones (for example, ocean dumping), it is important for blue economy players/stakeholders to continuously reflect on security issues, such as terrorism that may potentially affect the blue economy's utility. Absence of such threats is what defines maritime security. When the ocean economy is free of security threats, it thrives as indicated through provision of more economic opportunities for the coastal communities, investors, and the country at large through government taxes.

From analyzed data, it was evident that local communities are somewhat negated from collection of intelligence. This can perhaps be connected to the national security sensitivity of the information in addition to lack of adequate skills by Coastal population to collect high value and actionable intelligence. Subsequently, low usage of the local knowledge in maritime management may increase the number of challenges and threats to the maritime industry since state law enforcement agencies may not, on their own, for instance understand common illegal activities and routes used by criminals. As a result of increased threats to the maritime sector, there is a likely decline in the utility of the activities that are related to the ocean economy. However, the local communities could act as informers that would provide information that could be used for security purpose. Reflecting on the role of community policing or neighborhood watch, local communities would be alert to any intruders that would threaten the blue economy environment. Therefore, although they lack contemporary knowledge and skills in intelligence gathering, security is epiphenomena and can still benefit from indigenous knowledge

In terms of empowerment of the coastal communities, 14.1% and 9.9% agreed and strongly agreed that coastal communities were empowered through training to take advantage of the expanding blue economy, many (30.5%) were neutral, while 28.4% and 17.1% disagreed and strongly disagreed in that order. A mean of 2.7 affirms that coastal communities were largely not empowered through training to take advantage of the expanding blue economy. Community empowerment encompasses deliberate efforts by local organizations in improving the capability of indigenous populations to increase the control over their livelihoods or lives. Since maritime security is a key enabler of the blue economy, it is crucial to build capacities of the local people to manage threats that may pose risks to the sector.

This cannot take place if the capability of the local persons is not enhanced by training, affirmative action, among others. When native populations are offered direct or direct employment or even integrated into decision-making in terms of project identification and execution, there is higher probability of not only increasing success rate, but also reducing tension from the locals. Higher success rate for blue economy initiatives as a result of empowering coastal communities is thought to enhance the utility of the blue economy, while the inverse is also true. This evidenced was corroborated by a leader from the county government as highlighted below:

“The level of empowerment to the Coastal communities is still low, which in turn has affected the benefits accrued from blue economy activities. Greater involvement of the local people in enhancing maritime security means higher utility of the blue economy.” (Lamu County Assembly Member 46, 2022).

The above verbatim contextualizes the low levels of empowerment in coastal communities in maritime security management, which consequently hinders the benefits of blue economy activities. The quote suggests that greater engagement and empowerment of local communities can increase the overall benefits and effectiveness of the blue economy. This will support the sustainable development and use of marine resources if coastal communities are actively involved, empowered and given meaningful roles in decision-making and sharing the benefits from blue economy initiatives. Equitable distribution of benefits is posed to reduce agitation of the locals, thus creating a safer and ideal setting for businesses to thrive. This may provide employment opportunities to the people and help in improving their standards of living.

This is consistent with the idea of United Nations (2017) that greater engagement and empowerment of local communities may lead to better outcomes and a more equitable distribution of benefits in the blue economy sector, which will increase indigenous support, thus leading to the expansion of economic opportunities that offer direct and indirect employment. Additionally, findings from the verbatim are in line with the views of Riddick *et al.* (2021) who stated that low empowerment of coastal communities disproportionately disadvantages them, which means that they do not adequately benefit from blue economy initiatives.

Notably, the verbatim seems to suggest that when indigenous people are not benefiting from the ocean economy, threats to the maritime domain are thought to increase, whereas low levels of threats are directly associated with higher utility of the blue economy. To ameliorate the challenge as noted in the evidence from the quote, training the indigenous populations on various blue economy initiatives could inspire them start income-generating activities or get employment in fisheries and tourism sectors (see Arbow, 2019), which could act as a protective factor to the blue economy. Similarly, Rossi (2022) observed that without adequate skills so that they can take charge of their lives, local people may perhaps not contribute much to the blue economy as they remain passive actors compared to being active players. This may stifle any information flow from the community to security agents, an omission that could put the blue economy at risk given the emerging issues.

Equally, Touri *et al.* (2021) reinforced the place of stakeholder empowerment through collaborative action so as to increase the contribution of the coastal communities in the utility of the blue economy. It is the view of this thesis that coastal people should be integrated into the maritime security management because of their indigenous and intimate knowledge of the Indian Ocean. Where they lack appropriate skills, coastal communities should be empowered through training pending their incorporation into maritime security management. This is particularly true because maritime security is the enabler of the blue economy, meaning that the blue economy can only be utilized in the absence of maritime security threats.

Data revealed that the community-based ecotourism had moderately increased the relevance and sustainability of the blue economy resources as supported by more than half (52.0%) of the respondents who strongly agreed and agreed. Notably, 26.0% were neutral, whereas 23.7% and 8.4% disagreed and strongly disagreed. A mean of 3.2 affirms that the community-based ecotourism had moderately increased the relevance and sustainability of the blue economy resources. Community-based ecotourism is a form of tourism that emphasizes the development of local communities and allows for native people to have considerable control over, and involvement in, its development and management, and a major proportion of the benefits remain within the community. Thus, incorporating local people into best environmentally responsible practice can perhaps enhance the sustainability of the tourism resources. From the results, it is possible to infer that involvement of the coastal people has perhaps minimized negative impact on the environment, meaning that the present generation may be able to achieve social equity and perhaps improve their well-being while at the same time tackling environmental risks that bedevil the maritime zone. Less threats to the maritime domain as a precursor and enabler of the blue economy, is likely to create an ideal setting for investment opportunities that will generate direct and indirect jobs for the coastal communities (see, Voyer *et al.*, 2018). In view of the foregoing, it is possible to state that participation of local people in environmentally friendly practices, such as water and energy conservation is likely to promote environmental protection. In line with this view, a participant had the following to say:

“Involving local people in ecotourism is important in inculcating a culture that supports environmentally friendly practices of preserving natural resources in the ocean. Additionally, this approach increases their participation and ownership of community tourism.” (KAM 21, 2022).

The above verbatim text emphasizes the importance of engaging local people in ecotourism as a means of fostering a culture that encourages eco-friendly practices that conserve the natural resources of the sea. This is

important in reducing the amount of pollution, which may damage marine ecosystems and habitats. This study recalls that maritime security is the absence of maritime threats, both traditional and contemporary. Notably, it was elaborated that sea pollution and dumping are some of the existential threats to the marine biodiversity. Based on this foregoing, environmentally friendly practices are likely to offer a lifeline to the health of the ocean. Ultimately, this will sustainably provide livelihoods to the present and future generations in the fishing and tourism sectors. To this end, it is possible to argue that participation of the indigenous coastal population in eco-tourism activities inculcates a sense of environmental protection, which is central to the utility of the blue economy.

Reflecting on absence of maritime security threats as a precursor of utilizing the blue economy, this study infers that integration of the local people into the maritime security architecture of solving contemporary challenge of environmental pollution will not only protect the environment, but also elevate the place of the native populations as custodians of protecting their environment. This perspective agrees with the views of Samal and Dash (2022) who accentuated the importance of integrating local communities in environmentally friendly practices as a means to promoting sustainable use of marine natural in a responsible and equitable manner. Notably, environmental sustainability goals go a long way in supporting efforts to reverse the effects of climate change and ultimately ensuring food security. A food secure population is able to take part in nation-building efforts by offering services as maritime sector employees or suppliers or even contractors.

Furthermore, the finding on the participation of local communities in ecotourism development processes is in line with Kia (2021) who stated that engaging native coastal communities may result into accessing opportunities, such as self-governance and working collaboratively with other stakeholders in planning and management process, especially on issues affecting their well-being. This will not only solve socio-cultural challenges, such as discrimination, conflict, and inequality, but also provide a lifeline for coastal people to earn livelihoods by working in the maritime sector as stewards, security personnel, engineers, among other professionals. Ultimately, this will have a trickle-down effect on the utilization of the blue economy by encouraging growth and development of the sector.

In terms of provision of alternative livelihoods, most (56.3%) of the respondents strongly agreed and agreed that blue economy offered coastal communities with alternative livelihoods. In contrast, 15.6% were moderate in their response, whereas 17.1% and 11.1% disagreed and strongly disagreed respectively. A mean of 3.4 suggests that the blue economy largely provided coastal communities with alternative livelihoods. Alternative livelihood entails interventions that reduce the prevalence of activities deemed to be environmentally damaging by replacing them with lower impact livelihood activities that provide at least equivalent benefits. It is important to note that the blue economy does not operate in isolation since it is preceded by maritime security.

Thus, it is crucial to involve local people in maritime security management, for instance in the provision of security services or as informers owing to their native knowledge on common illegal activities and the mechanisms that criminal use to evade law enforcement. As a result of their involvement in security management, this study hypothesizes that incidents of lawlessness may reduce as they report incidences that are thought to pose risks to the maritime sector. Reduced threats to the sector are likely to increase incentives and motivations for blue economy investments, leading to more revenue not only for the business-owners, but also to the nation at large. Furthermore, the thriving blue economy enterprises may offer novel employment opportunities to the coastal people, thus affording them alternative means of livelihood, away from small-scale farming and fishing (see, Voyer *et al.*, 2018).

Based on the foregoing, it is possible to infer that the blue economy has been instrumental in the provision of substitute means of earning an income for coastal communities. For instance, there is decline in over-reliance on agriculture and fishing to other means of income, such as service sector in the tourism industry. The increase in tourist visits may upscale the incentives for native population to be engaged in work related to

the tourism sector, including trades, personal service, hotels, and restaurants. Greater focus on these activities has perhaps increased the utility of the blue economy. This evidence was triangulated by a key informant from the County Government of Lamu as cited below:

“Owing to the role of the coastal people in maritime security, the blue economy continues to provide alternative sources of income and by extension livelihoods to our people. Unlike before when coastal people relied on small scale agriculture and fishing, there is a shift to the service sector as a result of increasing visit by tourists made possible by maritime security management that integrates local people.” (Lamu County Executive Committee Member 59, 2022).

The above excerpt underlines the crucial role that maritime security management plays in ensuring that the blue economy is viable for blue economy utilization. Reflecting on the role of maritime security in the ocean economy, this study noted that integrating indigenous population into the maritime security framework is likely to tackle challenges bedeviling the blue economy, such as climate, piracy, and IUU fishing. As a result of reduced threats to the blue economy, this study notes that the blue economy has a high likelihood of offering direct and indirect employment opportunities to the coastal people. This assertion resonates with Voyer *et al.* (2018) who underlined that low risk and uncertainties in the blue economy as a result of active maritime security management ensures that various businesses and activities, such as sea gas and oil exploration, tourism, renewable energy, shipping, among others, are offering alternative means of living to the coastal people who have for a long time relied on fishing and smallholder agriculture.

The verbatim further elucidates that maritime security management has been successful as a result of involving local people. This may be suggestive that their blending into the maritime security structure to understand roles, such as monitoring and surveillance, reporting of unusual activities, crisis response and assistance, among others, led to a decline in the threats in the utilization of blue economy (see United Nations, 2017). Subsequently, this increased the number of tourists because of safety and tranquility. Hence, it is possible to argue that growth in tourism may have played a key role in diversifying the livelihoods of the coastal people as they can perform a number of roles in the tourism sector, ranging from stewards to tour guides. Conversely, presence of risks and uncertainties to the sector was likely to discourage tourists, leading to low coastal visitations and ultimately low employment opportunities. This change highlights the potential of the blue economy to generate new employment and income-generating activities, thereby contributing to the economic well-being of coastal communities. This finding is in line with the view of Bennett *et al.* (2022) who stated that participation of the coastal people in the protection of natural marine resources is likely to provide other means of earning a living for the coastal communities by offering alternative sources of livelihood, such as service provision in the tourism industry.

In summary, results highlight important aspects related to the involvement of coastal communities in the blue economy activities. It is evident that there is a range of perspectives on the level of satisfaction among local communities regarding their participation in the blue economy. There is also a lack of consensus on the extent to which blue economy investors engage in corporate social responsibility activities and the degree of employment opportunities provided to local communities. The findings indicate that the hospitality skills of local communities play a role in enhancing the utility of the blue economy. Additionally, the majority of respondents believe that coastal communities should have a voice in decision-making processes related to the use of blue economy resources. Overall, the results suggest the importance of further improving and involving coastal communities to enhance the overall effectiveness and benefit of the blue economy for these communities.

CONCLUSION

The results suggest that a significant proportion of respondents strongly agreed that coastal communities are constantly involved in the blue economy activities. However, many respondents disagreed that local

communities are satisfied with the level of their involvement in the blue economy. Additionally, a considerable number of respondents disagreed that blue economy investors constantly seek social license to operate through corporate social responsibility (CSR) activities. In terms of employment, the results imply that local communities are moderately involved in the blue economy activities. On the other hand, a significant percentage of respondents disagreed that maritime security actors involve local communities in intelligence gathering related to the blue economy. Furthermore, a considerable number of respondents disagreed that the expectations of coastal communities in the blue economy are met by state and non-state actors.

Regarding empowerment through training, the findings suggest a moderate level of agreement among respondents. Similarly, there was a moderate level of disagreement regarding the increase in the well-being of coastal communities in the blue economy. The results also imply that community-based ecotourism has moderately increased the relevance and sustainability of the blue economy resources.

In terms of the utility of the blue economy, there was disagreement among respondents regarding the expansion of utility through the hospitality skills of local communities. However, a significant proportion of respondents agreed that coastal communities participate in decision-making processes related to the use of blue economy resources. Overall, the computed mean of 3.1 indicates a moderate influence of coastal community involvement on the utility of the blue economy. The results suggest that the level of involvement and satisfaction of coastal communities, as well as their empowerment and well-being, have implications for the utility of the blue economy in Kenya's Lamu County. The results also show a significant association between the involvement of coastal communities and the utility of the blue economy in Kenya's Lamu County, as the p-value (P) was found to be 0.004 ($P < 0.05$).

RECOMMENDATION

Although the involvement of coastal communities in the blue economy showed a moderate influence on its utility, further efforts are needed to maximize their potential. The study recommends that policymakers and stakeholders focus on empowering coastal communities through targeted training programs and skill development initiatives. This can enhance their capacity to actively participate in the various sectors of the blue economy. Moreover, ensuring their meaningful involvement in decision-making processes, particularly regarding the use and management of blue economy resources, can foster a sense of ownership and enable sustainable development. Incorporating traditional knowledge and local practices into policies and strategies can also optimize the utilization of coastal community resources and promote their socio-economic well-being.

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