

Community-Centered Approach to Integrated Coastal Management Strategy for Sustainable Development of the Blue Economy in Mtwara Region, Tanzania

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ABSTRACT

This article explores the potential of the Blue Economy and its application for sustainable development, focusing on the Mtwara region in Tanzania. It begins by examining the definitions, drivers, and future trends of the Blue Economy. The study is guided by three primary objectives: assessing current coastal resources and ecosystems in Mtwara, evaluating the effectiveness of existing Integrated Coastal Management (ICM) initiatives, and analyzing policy and governance frameworks related to coastal resource management in Tanzania. The research methodology includes a review of governance frameworks across major Blue Economy sectors and semi-structured interviews to uncover insights, challenges, and policy implications. Guided by the Social-Ecological Systems (SES) framework, the article emphasizes the interconnectedness of human activities and natural processes, essential for sustainable development. The article is structured into sections: background on the Blue Economy, foundational perspectives, discussion, and conclusion.

Keywords: Blue economy, Community-Centered Approach, Integrated Management Strategy, Sustainable Development

PART I: INTRODUCTION AND BACKGROUND TO THE STUDY OF BLUE ECONOMY

As defined in the Charter on Maritime Security and Safety and Development in Africa (Lomé Charter), the term *blue economy* encompasses economic activities from marine and aquatic spaces in oceans, coasts, seas, rivers, lakes, groundwater, wetlands, floodplains and associated water resources (UNEP, 2013). Further, the African Union defines a blue or ocean economy as “sustainable economic development of oceans using such techniques such as regional development to integrate the use of seas and oceans, coasts, lakes, rivers and underground water for economic purposes, including, but without being limited to fisheries, mining, energy, aquaculture and maritime transport, while at the same time protecting the sea to improve social well-being (UN-Habitat, 2018). African governments are progressively adopting a blue or ocean-centric economic approach as a means to foster economic growth, aiming to enhance human welfare and promote social equity, all while notably mitigating environmental risks and ecological scarcities.

Hence, this article delineates the concept of a sustainable blue or ocean economy, encompassing efforts geared towards fostering economic expansion, promoting responsible production and consumption, ensuring social inclusivity, preserving or enhancing livelihoods, and maintaining the environmental sustainability of aquatic, marine, and coastal regions. In Africa, the 2050 Africa's Integrated Maritime Strategy, ratified by the African Union in January 2014, serves as a guiding framework, refining the continent's efforts towards realizing an integrated and multifaceted blue or ocean economy.

During the Seventeenth session of the African Ministerial Conference on the Environment, convened in Durban, South Africa, from November 14th to 15th, 2019, it was highlighted that the African continent boasts a rich abundance of aquatic resources and vast interconnected oceans. The African lake zones span approximately 240,000 km², while its transboundary river basins cover around 64 percent of the continent's land area (AMCEN/17/6, AU, UNEP, 2019). With a coastline stretching over some 26,000 km, Africa's maritime domain holds immense significance for commercial, environmental, developmental, and security purposes. The continent hosts more than 100 ports, 52 of which facilitate container and transnational trade. It is estimated that Africa's maritime economy contributes to approximately 90 percent of its overall commerce (Sustainable Blue Economy Conference. (2018)). The outcome document also estimated that there would be an additional US\$2 billion available annually for African economies if the fisheries sector were to be managed sustainably.

Numerous African governments have recognized the paramount significance of the Blue or Ocean economy as the emerging economic frontier for generating employment and income opportunities for their populations. In Tanzania, while the Blue Economy is a novel concept, it stands as a top priority. However, as reported by Benson James Lyimo (2021), Tanzania faces challenges such as inadequate capacity for marine resource management and delays in aquaculture development, which impede the growth of the Blue Economy in the country. Mtwara region, situated in Tanzania, is one of the 20 regions on the mainland, bordered by Lindi region to the North and the Indian Ocean to the east, while separated from Mozambique by the Ruvuma river to the South. According to the 2012 national Census, the region is home to an estimated population of 1,270,854, primarily comprised of the Makonde people, the Yao, and the Makua people. The predominant occupation among the inhabitants of Mtwara is agriculture, with approximately 92 percent of the population engaged in farming, while a significant portion is involved in fishing as well (The Planning Commission Dar es Salaam/Regional Commissioner's Office Mtwara, 1997). Integrated Coastal Management (ICM) involves the coordinated and sustainable development of coastal areas, taking into account various economic, social, and environmental factors. Implementing ICM for sustainable Blue Economy development in Mtwara region using a Community-Centered Approach would involve conducting a comprehensive assessments of the region's coastal resources, including; fisheries, aquaculture potential, tourism opportunities, and environmental conditions. This involves scientific studies as well as local knowledge and traditional ecological knowledge.

The article employs a mixed-methods approach, amalgamating both qualitative and quantitative research methodologies to thoroughly explore the economic empowerment of coastal communities in the Mtwara region. Qualitative research entails conducting key informant interviews with local authorities, policymakers, and stakeholders, alongside household surveys utilizing questionnaires to evaluate the influence of Blue Economy activities on their economic empowerment. Through data analysis, correlations and patterns within the quantitative data will be identified. The results will furnish insights into the efficacy of current strategies, areas lacking in policy, and the level of awareness among the local populace. Thematic content analysis will be employed for qualitative data analysis, while descriptive

statistics will be used for analyzing quantitative data. Yilmaz suggests that opting for quantitative data analysis enables researchers to employ pre-constructed standardized instruments or predetermined response categories, accommodating varying perspectives and experiences from participants. On the other hand, qualitative data analysis allows participants to articulate their experiences of a phenomenon in their own language. These two design methods were selected as they were deemed more suitable for the study.

Theoretical Framework

This article utilizes the Social-Ecological Systems (SES) theory to understand outcomes in a social-ecological system. The major proponent of the SES theory is Elinor Ostrom. (Ostrom, E. (1990). In her 1990 publication titled- "*Governing the Commons*," Ostrom and her colleagues initiated the collection of empirical data concerning the variables and institutional structures that were most effective in facilitating cooperation among individuals and resolving social dilemmas within common-pool resource systems. The concept of SES has transformed into a widely recognized field of study, concentrating on the interconnected relationships between social and environmental dynamics, and examining how these connections impact the attainment of sustainability objectives across various systems, levels, and scales. The Ostrom's Social-Ecological Systems (SES) framework is one theoretical framework that is relevant for the study of Integrated Coastal Management for sustainable Blue Economy development in the Mtwara region, particularly from a Community-Centered perspective. The SES framework considers the interactions between social and ecological systems within a particular geographic area, such as coastal regions. It emphasizes the interconnectedness of human activities and natural processes, recognizing that sustainable development requires the integration of social, economic, and environmental considerations. According to Ostrom, E. (1990), a Community-Centered Approach within the SES framework involve active engagement with local stakeholders, including fishermen, farmers, government agencies, NGOs, and indigenous communities. By incorporating local knowledge, values, and preferences into decision-making processes, this approach can enhance the resilience and sustainability of Blue Economy initiatives while promoting social equity and community well-being. In the context of Mtwara's Blue Economy development, the SES framework provides a holistic understanding of the complex dynamics at play, including the interactions between local communities, marine ecosystems, economic activities, and governance structures. It helps to identify key drivers of change, feedback loops, and potential trade-offs between different objectives.

PART II: REVIEW OF THE LITERATURE

The review of literature was done on various previous academic publications; institutional reports and expert opinions regarding the Integrated Coastal Management for sustainable Blue Economy development in Mtwara region using a Community-Centered Approach. Accordingly, the review was on done based on three parts, thus; a) Current State of Coastal Resources and Ecosystems in the Mtwara Region, b) Effectiveness of Existing Integrated Coastal Management (ICM) Initiatives and c) Policy and Governance Frameworks for Coastal Resource Management in Tanzania.

a. The Current State of Coastal Resources and Ecosystems in the Mtwara Region

The ocean, spanning 70 per cent of our planet's surface, plays a crucial role in humanity's well-being and sustainability. Ocean's health and the sustainable management of its diverse resources are of paramount importance. Serving as a vital link, the ocean connects us all, facilitating over 80 per cent of global trade volume by sea and fostering various economic activities that sustain livelihoods and promote societal prosperity. The Blue Economy is categorized into five main sectors; Biotechnology, Renewable Energy,

Coastal and Maritime Tourism, Aquaculture and Mineral Resources, and integrates other sectors such as fishing, transportation, offshore oil and gas extraction, and ship construction and repair (UNCTAD's SG, 2021).

As outlined in Africa's policy handbook on the Blue Economy, Blue Economy within the African context encompasses both aquatic and marine environments, such as oceans, seas, coasts, lakes, rivers, and underground water. It spans various productive sectors, including fisheries, aquaculture, tourism, transportation, shipbuilding, energy, bioprospecting, and underwater mining, along with associated activities. Africa's maritime jurisdiction extends over approximately 13 million square kilometers, covering territorial seas and Exclusive Economic Zones (EEZ). Moreover, the continent possesses around 6.5 million square kilometers of continental shelf, with Customary International Law stipulating jurisdiction solely over the seabed.

Notably, thirty-eight out of the fifty-four African states are coastal states, as clearly articulated in the policy handbook. The continental approach to unlocking the resource potential of Africa's Blue Economy is based on the acknowledgment that enhancing the productivity of healthy freshwater and ocean ecosystems offers a pathway for fostering aquatic and maritime-based economies. This strategy aims to facilitate growth, both economically and socio-politically, benefiting not only islands and coastal nations but also landlocked states that rely on these shared natural resources. Africa's Blue Economy holds a central position within the Africa Union's Agenda 2063, being unanimously hailed as Africa's future and recognized as a key driver for socioeconomic transformation. To underscore its significance, the AU has adopted the Africa Union 2050 Africa's Integrated Maritime Strategy (AU 2050 AIMS) to mobilize concerted efforts toward the Blue Economy. Additionally, July 25th has been designated as the *African Day* for championing the 2015-2025 Decade of Seas and Oceans, emphasizing the ongoing commitment to this vital cause.

The aquatic and marine territories of Africa have become a frequent subject of political discussion, with its natural resources being largely underutilized until now. However, there is a growing recognition of their potential to contribute to inclusive and sustainable development. According to Martínez-Vázquez, R.M., *et al* (2021), coastal regions, encompassing coastal habitats, coastal watersheds, islands, and nearshore marine environments, are witnessing a rising concentration of human populations and associated infrastructure (Coastal Resources Center, University of Rhode Island et al., 2005-2006). Within these areas, a major challenge to development stems from the absence of strong governance institutions capable of managing the complex array of interconnected issues crucial for fostering sustainable development and maintaining ecosystem health. Consequently, numerous research studies and programs have been initiated and implemented worldwide, focusing on empowering coastal communities.

Tanzania has a coastline covering 1,424 kilometers consisting of important bio-diverse assets such as; estuaries, watersheds, mangrove forests, beaches, coral reefs and seagrass beds and rare species of wildlife all of which are threatened (Lyimo, B.J. (2021). According to Lyimo, the Tanzanian Blue Economy encompasses a wide range of sectors, including maritime transport, fishing, aquaculture, tourism, shipbuilding and repair, maritime education and training, marine cargo logistics, maritime law, safety and security, marine salvage, international shipping, transport, energy, bio-prospecting, offshore mining, marine biotechnology, blue data, aqua-business, cargo consolidation, marine insurance, bunkering, ship handling, port agency, port-related services, water sports, as well as marine and maritime governance.

According to a study on Empowering Coastal Communities through sustainable utilization of Blue Economy resources utilizing a case of Mtwara region, Tanzania; the findings established that; the

respondents who participated in the study demonstrated a strong understanding of the blue economy resources available in Mtwara. They highlighted the expansive Indian Ocean, along with lakes, rivers, and dams. Additionally, they noted the diverse biodiversity within the blue economy, encompassing various species such as fish, anthropods, seaweed, sea grasses, mangroves, corals, as well as oil and gas deposits. This observation aligns with Chakraborty's (2022) findings, which emphasized that the richness of life in oceans and seas constitutes a significant aspect of sustainable development across economic, social, and environmental dimensions. This biodiversity offers opportunities for economic exploitation by mankind. The results indicate that residents of the Mtwara region are aware of the significant economic potential held by marine resources, recognizing the transformative impact it can have on their lives. A majority emphasized the importance of conducting "*harvesting of living aquatic resources*" in an environmentally sustainable manner, underlining the importance of sustainable fishing practices for the communities.

According to Ibrahim, H.D. (2018), to realize the complete potential of the Blue Economy in Mtwara region and generally in Africa, various factors must be taken into account. These encompass sustainable management and preservation of marine resources, the establishment of effective governance frameworks, capacity enhancement, technology exchange, infrastructure investment, and fostering collaboration among governments, private sector entities, and local communities. Additionally, according to a briefing Paper for the World Ocean Summit 2015, published by the Economist Intelligence Unit. (2015), asserts that; prioritizing social inclusivity, safeguarding the rights of coastal communities, and tackling environmental issues are indispensable for ensuring the sustained success of Africa's Blue Economy in the long run.

b. The Effectiveness of Existing Integrated Coastal Management (ICM) Initiatives

The second objective of this article aimed at examining the effectiveness of the existing Integrated Coastal Management (ICM) initiatives. According to Salim Mohammed and Julius Francis (2005), Integrated Coastal Management (ICM) refers to the systematic management approach aimed at accommodating various needs within the coastal and marine environment, encompassing biodiversity conservation and sustainable utilization. This framework enables the participation and benefits of all stakeholders, including governmental bodies, non-governmental organizations (NGOs), diverse economic sectors, and local communities. Typically, ICM programs are structured around coordinating bodies or committees composed of representatives from all sectors engaged in coastal development. Further, this definition is broadened by the Commission of the European Communities terming Integrated Coastal Zone Management (ICZM) as a dynamic, multi-disciplinary and iterative process to promote sustainable management of coastal zones (Commission of the European Communities, 2001). It covers the full cycle of information collection, planning (in its broadest sense), decision making, management and monitoring of implementation. ICZM uses the informed participation and co-operation of all stakeholders to assess the societal goals in a given coastal area, and to take actions towards meeting these objectives. ICZM seeks, over the long-term, to balance environmental economic, social, cultural and recreational objectives, all within the limits set by natural dynamics

Integrated Coastal Management (ICM) initiatives aim to address the complex challenges facing coastal areas by integrating environmental, economic, and social considerations into coastal planning and management. Evaluating the effectiveness of existing ICM initiatives involves assessing their impact on various aspects of coastal ecosystems and communities. Evaluating the effectiveness of existing ICM initiatives involves assessing their impact on various aspects of coastal ecosystems and communities. For instance, Beeharry Y. *et al.* (2013), states that; evaluation of ICM strategies considers ecosystem health and socio-economic benefits. One of the primary goals of ICM initiatives is to promote the health and

resilience of coastal ecosystems. Evaluating effectiveness in this area involves monitoring indicators such as water quality, biodiversity, habitat integrity, and the prevalence of pollution. Positive outcomes might include improvements in water clarity, increased populations of key species, and reductions in pollution levels. Similarly, effective ICM initiatives also considers delivering socio-economic benefits to coastal communities. This includes improving livelihoods for coastal residents through sustainable fisheries management, tourism development, and enhancing coastal infrastructure. Assessing effectiveness in this area involves measuring changes in income levels, employment opportunities, and the overall quality of life for coastal residents.

For instance, Mwanguni, S.M.; Mwandotto, J. and Ong'anda, H. (2024) made a critical analysis of Integrated Coastal Zone Management in Kenya and established that; Significant strides have been achieved in advancing the adoption of the Integrated Coastal Zone Management (ICZM) process since its initiation in 1994 in Kenya. Commencing with the training and characterization of a designated pilot site, along with the implementation of small-scale demonstration projects to showcase the advantages of ICZM, the process has now expanded to encompass additional coastal areas of concern. These demonstration projects have engaged numerous stakeholders in the ICZM process and established a foundation for future endeavors. The involvement and support of the International Union for Conservation of Nature (IUCN) further bolster this effort, advocating for the expansion of ICZM experiences to other sites, marking progress in the ICZM process. Initial efforts were focused on initiating the identification of coastal issues, facilitating informed discussions, and enhancing dialogue regarding the urgent challenges in coastal management nationwide.

Effective ICM initiative entails active community engagement and participation. Meaningful engagement of local communities is critical for the success of ICM initiatives. Effectiveness is evaluated by measuring the extent to which local communities are involved in decision-making processes, the level of awareness and understanding of coastal issues among community members, and the degree to which local knowledge is integrated into management plans. Cicin, S and Knecht, R.W (1998) evaluated the effectiveness of ICM. Several researchers have evaluated the role of ICM in Blue Economy studies and made several observation or findings. For instance, Daniel Sabai (2024) examined the role of Integrated Coastal Management (ICM) approach in the protection of coastal and marine resources in Tanzania, by engaging coastal resource users and practitioners in focus group discussions and interviews, while at the same time complementing his data obtained with documented sources. Sabai, D. (2024) states that; the Integrated Coastal Management (ICM) approach enjoys broad favor and adoption in coastal regions because of its advantages in encouraging robust community involvement and addressing local resource utilization challenges in a coordinated manner. This approach is prevalent among nation-States situated along the Indian Ocean, encompassing countries such as Madagascar, Seychelles, Mozambique, Kenya, Tanzania, and South Africa.

Sabai D. (2024) notes that; in Tanzania, the Integrated Coastal Management (ICM) approach was embraced and implemented in the mid-1990s with the aim of fostering the sustainable stewardship of coastal and marine resources, notably mangroves, fisheries, and coral reefs, while discouraging detrimental practices like overfishing, mangrove deforestation, and dynamite fishing. Sabai, D. (2021) finds that; numerous benefits have been recognized following its implementation in coastal areas of Tanzania, including; Dar es Salaam, Tanga, Pwani, Mtwara, and Lindi. First, the integration of the ICM approach influenced the formulation of policy in Tanzania in 1999. In this case, the ICM policy offered broad range of directives regarding the management and governance of coastal and marine resources,

outlining the stakeholders and strategies for executing ICM-focused initiatives within the Country. Secondly, the ICM advocated and fostered the implementation of environmental education programs, particularly in primary and secondary schools situated in coastal regions (Sabai, D. 2024). These programs involved the integration of environmental topics into the school curriculum. The initial efforts were undertaken by the Tanga Coastal Development Programme in the late 1990s. Since then, similar school greening initiatives have been launched in various other coastal areas to educate students about environmental conservation. Thirdly, the implementation of the ICM strategy and policy has also prompted the creation of coastal land use plans. In 2005, the Kinondoni Integrated Coastal Area Management (KICAMP) oversaw the drafting of a land use plan for the localities of Mbwani, Kunduchi, and Ununio (Ibid). Fourth; the implementation of the ICM strategy spurred the development and initiation of alternative income sources in coastal areas, aiming to alleviate pressure on the utilization of coastal fisheries, mangroves, and other marine resources. The expectation was that by introducing alternative income opportunities to local communities, primarily engaged in unsustainable practices, their dependency on coastal and marine resources would diminish, leading to the rejuvenation and regeneration of affected ecosystems.

As a result of the ICM, between 2002 and 2005, revolving fund schemes were implemented in Dar es Salaam, facilitating various income-generating endeavors such as poultry farming, urban vegetable cultivation, small-scale trading enterprises, and food vending. Initial funding was provided by the Swedish Development Agency (SIDA) in partnership with the Government of Tanzania. Borrowers participating in this program were expected to repay their loans on a weekly basis at mutually agreed upon affordable rates (Kinondoni Integrated Coastal Area Management Programme, (2004). Finally, ICM initiatives opened opportunities for women to participate actively in the management of Coastal and Marine resources.

The implementation of the ICM approach created opportunities for Tanzania's women to take on diverse roles in the management of coastal resources. Presently, women are at the forefront of guiding ecological restoration initiatives aimed at safeguarding the coastal ecosystem. According to a study conducted by Sabai D. (2019), women are increasingly assuming leadership roles within various groups, Community-Based Organizations (CBOs), and Non-governmental Organizations (NGOs) directly engaged in coastal and marine resource management. Evaluating the effectiveness of existing ICM initiatives requires a comprehensive and multidisciplinary approach that considers environmental, economic, social, and governance dimensions. It also requires ongoing monitoring and evaluation to track progress towards stated goals and objectives and to identify opportunities for improvement. Sabai D. (2023) concludes that; the effectiveness of ICM initiatives need to be judged based on their ability to achieve long-term sustainability of coastal resources and communities. This requires monitoring and adaptive management to ensure that management strategies remain effective in the face of evolving challenges and changing socio-economic conditions.

c. Policy and Governance Frameworks for Coastal Resource Management in Tanzania

Coastal resource management in Tanzania is governed by various policies and frameworks aimed at ensuring sustainable utilization, conservation, and equitable distribution of coastal resources. The first national policy is the National Ocean Policy which provides a strategic framework for the sustainable management of ocean and coastal resources. It outlines principles, goals, and strategies for the integrated management of coastal zones, including conservation, sustainable use, and equitable benefit-sharing. The United Republic of Tanzania -Vice President's Office (2023) outlines the existing policy, legal and

institutional framework for the sustainable utilization of Blue Economy resources. These policy and governance frameworks offers direction for safeguarding marine ecosystems and facilitating the growth and administration of distinct sectors within the Blue Economy. Both the Blue Economy Policy of the Revolutionary Government of Zanzibar and the National Blue Economy Policy of Tanzania Mainland, along with their implementation strategies, create opportunities for the adoption of Marine Spatial Planning (MSP) as a management instrument to advance the objectives of a sustainable blue economy.

Tanzania has a fisheries policy. The National Fisheries Policy of 2015 governs the management and conservation of marine fisheries resources. It addresses issues such as fishing licenses, gear restrictions, quotas, and enforcement mechanisms to ensure sustainable fishing practices and safeguard fish stocks (URT-2015). The 2015 National Fisheries Policy aims to address the government's and other stakeholders' objectives of responding to micro and macroeconomic shifts and tackling challenges encountered by the fisheries sector. It emphasizes the sustainable and rational utilization of abundant fisheries resources while maximizing available opportunities and benefits. Key focus areas include resource management and regulation, understanding the fisheries resource base, effective resource utilization, processing and marketing, applied and strategic research, extension services, training, and information dissemination. Additionally, the policy underscores the development of aquaculture, fostering inter- and cross-sectoral collaboration, regional and international cooperation, and the integration of cross-cutting and cross-sectoral policies.

The other policy framework is discussed above and it relates to the Integrated Coastal Zone Management (ICZM) Policy. The ICZM approaches aim to balance competing interests and address multiple uses of coastal resources through integrated planning and management. Tanzania has adopted ICZM principles to coordinate various stakeholders, manage conflicts, and promote sustainable development along the coast. As part of international commitment, Tanzania is a signatory to various international agreements and conventions related to marine and coastal resource management, such as the United Nations Convention on the Law of the Sea (UNCLOS) and the Convention on Biological Diversity (CBD). These agreements provide frameworks for cooperation, capacity-building, and shared responsibility in addressing global marine conservation challenges. Sabai, D. (2023) asserts that; these policy and governance frameworks provide a comprehensive approach to coastal resource management in Tanzania, emphasizing sustainable development; ecosystem conservation and community participation. Effective implementation, enforcement, and periodic review of these policies are essential to ensure the long-term health and resilience of Tanzania's coastal ecosystems and the well-being of coastal communities.

PART III DISCUSSION

The Article utilized a sample size of 30 respondents from Mtwara region of which 28 respondents responded positively indicating a response rate of 93.33 per cent. They were drawn from varied strata comprising of civil government agencies, conservation organizations, academia, security agencies, lobby groups, fishermen, financial institutions and also recreational organizations. The Article research focused on assessing the level of awareness of the Blue Economy resources, among the respondents in Mtwara region. The findings indicate a statistically significant knowledge of the awareness among the respondents of the Blue Economy resources, strategies for harnessing the Blue Economy and also a demonstration of knowledge and understanding of the policies and frameworks governing the sustainable utilization of Blue Economy resources.

Using a Likert scale to measure the perception of the respondents on issues related to commerce and trade, the findings reveal a strong agreement among the respondents (weighted mean=2.50, which indicated; *a strong agreement with the prescribed statement indicating adequate capacity of knowledge on commerce and trade*) knowledge and capacity in commerce and trade in Blue Economy related activities. The respondents highlighted issues related to insufficient capacity in technology to effectively harness the economic potential of the Blue Economy in the region under study.

According to the findings established by this article, lack of modern technology presented a key constraint to the sustainable utilization of the Blue Economy resources. Due to technological constraints, the types of fishing vessels utilized by fishermen face limitations in accessing the Exclusive Economic Zone (EEZ). The majority of vessels capable of navigating ocean depths belong to other nations, transporting resources back to their respective countries. Tanzania, like many African nations, faces a shortage of suitable fishing gear. Consequently, these countries are confined to coastal fishing and cannot venture beyond three nautical miles. This leads to heightened fishing pressure in coastal waters. The lack of advanced technology, coupled with primitive fishing vessels and gear, severely hampers the exploitation of the Exclusive Economic Zone (EEZ).

Majority of the respondents identified the ICM strategy as one national policy available in Tanzania for the sustainable utilization of Blue Economy resources. The ICM strategy was implemented between 2002 and 2005, entailing implementation of revolving fund schemes among individuals in Dar es Salaam, hence, facilitating various income-generating endeavors such as poultry farming, urban vegetable cultivation, small-scale trading enterprises, and food vending. Findings established from the interviews conducted reveal that harmful practices emanating from human activities have been the key challenges threatening Blue Economy resources.

According to one of the respondents interviewed, *“as a result of heightened demand for food and fuel has resulted in the widespread adoption of destructive methods for resource exploitation, including the use of dynamite, dragnets, seine nets, poison, and other harmful fishing practices in our ocean”*. This is particularly the case in areas such as in Mikindani Bay in Mtwara. Another respondent remarked that; *“the effects of human pressure on coastal environments and resources are observable across entire Mtwara coastal region. Generally, there is unregulated population growth, which includes migration from inland areas, which has led to a significant increase in settlements in unplanned regions. Many of these areas lack fundamental social services, including sanitation facilities, thereby resulting in pollution of coastal waters”*. Another respondent reported of conflicts among Blue Economy resource users. The respondent remarked that; *“there are emerging conflicts between tourist destinations and fishing zones. For instance, there is a cold fight between the fishermen and the management of Chumbe Coral Park”*. These findings establish the key thematic issues of ICM which can be summarized as; uncontrolled population growth; Destructive resource; exploitation practices; Uncontrolled coastal resource exploitation; Conflicts between coastal resource users and pollution of coastal waters in Mtwara region.

PART IV: CONCLUSION

This Article made an assessment of the potentials of the Blue Economy and how they could be harnessed for sustainable development by utilizing a Community-Centered Approach in Mtwara region in Tanzania. Guided by three objectives the article made an assessment of the current state of coastal resources and ecosystems in the Mtwara region. The article has established that; the coastal resources are exemplified by the expansive Indian Ocean, along with lakes, rivers, and dams, as well as a diverse biodiversity within

the blue economy, encompassing various species such as fish, anthropods, seaweed, sea grasses, mangroves, corals, as well as oil and gas deposits. The second objective aimed at; examining the effectiveness of existing Integrated Coastal Management (ICM) initiatives in the Mtwara region. The findings indicate a significant level of awareness of the ICM strategy and its implementation in the Mtwara Coastal region. The ICM strategy is a holistic approach which provides a framework for harmonizing sectoral management decisions and provides a comprehensive management of coastal resources and environment. The objective of the National Integrated Coastal Environment Management Strategy (NICEMS) is to enhance the decision-making process involved in managing the coastal zone and its resources. This is achieved by offering necessary guidance on resource utilization and ensuring fair and appropriate allocation of resources. The strategy aims to empower resource users, particularly local coastal communities, by providing them with a greater role in the management of their resources. Its overarching aim is to; conserve, safeguard, and foster the development of Tanzania's coastal resources for present and future generations, thus ensuring food security and supporting economic growth.

The third objective entailed investigating the policy and governance frameworks related to coastal resource management in Tanzania. The findings indicate that the Integrated Coastal Management (ICM) is the most popular strategy that aims to balance environmental conservation, social development, and economic growth in coastal areas. The article utilized the Social-ecological systems (SES) theory proposed by Elinor Ostrom in understanding the outcomes in a social-ecological system.

REFERENCES

1. African Ministerial Conference on the Environment Seventeenth session. (2019). *Advancing the sustainable blue (ocean-based) economy in Africa*. Durban, South Africa. AMCEN/17/6,AU, UNEP
2. Beeharry Y., Makoondall-Chadee, T., Bokhoree, C. (2013). *Policy Analysis for Performance Assessment of Integrated Coastal Zone Management Initiatives for Coastal Sustainability*. New Delhi. University of Technology, Mauritius
3. Chakraborty, S. K. (2022). *Ocean Ecosystem and Its Multidimensional Eco-functionality and Significance*. In: *The Palgrave Handbook of Global Sustainability*. Palgrave Macmillan
4. Cicin-Sain, B., Knecht, R.W. (1998). *Integrated Coastal Management Concepts and Practices*. Washington D.C. Island Press
5. Commission of the European Communities. (2000). *Communication from the Commission to the Council and the European Parliament on Integrated Coastal Zone Management: A Strategy for Europe*. Brussels. COM (2000) 547 final
6. Economist Intelligence Unit. (2015). *The Blue Economy: Growth, Opportunity and a Sustainable Ocean Economy*. Briefing Paper for the World Ocean Summit 2015.
7. Ibrahim, H.D. (2018). *The Maritime Commons*; Digital Repository of the World Maritime University. World Maritime University Dissertations
8. Kinondoni Integrated Coastal Area Management Programme, (2004). *Phase One- Final Report*, Dar es Salaam.
9. Lyimo, B.J. (2021). *Blue Economy Growth and United Republic of Tanzania Economy*. Arusha. Olva Academy
10. Martínez-Vázquez, R.M., Milán-García, J. de Pablo Valenciano, J. (2021). *Challenges of the Blue Economy: evidence and research trends*. Environ Sci Eur 33, 61 (2021). Available online at; <https://doi.org/10.1186/s12302-021-00502-1> Accessed on 15/2/2024

11. Mohammed, S. Francis, J. (2005). *An Evaluation of Coastal Zone Management Practices in the Eastern African Region*. A report commissioned to the Western Indian Ocean Marine Science Association (WIOMSA) by IUCN-Eastern Africa Regional Office, under Contract No. EARO/76163-000/859
12. Mwanguni, S.M.; Mwandotto, J., Ong'anda, H. (2024). *Integrated Coastal Zone Management in Kenya*. SEACAM. Available online at; <http://hdl.handle.net/1834/7116> Accessed on 19/2/2024
13. Ostrom, E. (1990). *Governing the commons: the evolution of institutions for collective action*. Cambridge University Press
14. Sabai D. (2019). *Factors that determine adoption of Scientific Indicators in Community based-monitoring of Mangrove Ecosystem in Tanzania*. Transylvania Review of Systemic and Ecological Research. Vol. 21. No. 1. Pp. 184-220.
15. Sabai, D. (2021). *Analysis of the Challenges of Integrated Coastal Management in the Eastern Coast of Tanzania*. Article of the Geographical Association of Tanzania. Vol. 41. No.1 pp.119-135
16. Sabai, D. (2024). *The Role of Integrated Coastal Management Approach in the Protection of Coastal and Marine Resources in the Eastern Coast of Tanzania*. Dar es Salaam. University of Dar es Salaam.
17. Sustainable Blue Economy Conference. (2018). *The Nairobi Statement of Intent on Advancing the Global Sustainable Blue Economy*. Nairobi-Kenya.
18. The Charter was adopted in Lomé on 15 October 2016, by the African Union Extraordinary Summit of Heads of State and Government on Maritime Security and Safety and Development in Africa
19. The Planning Commission Dar es Salaam/Regional Commissioner's Office Mtwara, (1997). *Mtwara Region Socio-Economic Profile*. Dar es Salaam. The Planning Commission Dar es Salaam/Regional Commissioner's Office Mtwara
20. The United Republic of Tanzania -Vice President's Office (2023). *Guidelines for the Development of Marine Spatial Plan (MSP) in the United Republic of Tanzania*. Available online at; <https://www.vpo.go.tz/uploads/publications/en-1698335508-MSP%20GUIDLINE.pdf> Accessed on 19/2/2024
21. UNCTAD's SG, (2021). *UNCTAD15 pre-event: Harnessing the benefits of the ocean economy for sustainable development*. Barbados. UNCTAD 15 Conference.
22. UN-Habitat. (2018). *UN-Habitat Background Paper on Blue Economy and Cities*. Nairobi, UN-Habitat
23. United Nations Economic Commission for Africa. (2014). *Unlocking the Potential of the Blue Economy: Are African Small Island Developing States ready to embrace Opportunities*. Addis Ababa. United Nations Economic for Africa
24. URT-(2015). *National Fisheries Policy of 2015*. Dar es Salaam. Ministry of Livestock and Fisheries Development