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Maritime Security in Ghana's Blue Economy: Exploring Socio-Economic Realities and Governance

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Abstract

Ghana's maritime security is considered within a broader context of coastal livelihoods, economic vulnerabilities, and environmental factors. The article examines how socio-economic structures and local realities interact to shape both the risks and opportunities in Ghana's maritime security landscape. Drawing on an extensive review of academic literature, policy reports, industry analyses, as well as relevant statistical data and primary field data, the article interrogates the interplay among economic activities in the various sectors of Ghana's blue economy with a focus on the fisheries sector. It examines how factors like youth unemployment and gender inequalities influence security outcomes, particularly with challenges such as illegal, unreported and unregulated (IUU) fishing and resource-based conflicts. The study highlights how regulatory frameworks and foreign investment strategies intersect with local priorities, oftentimes generating tension over environmental sustainability and social justice. By mapping these socio-economic dynamics across local, national, and regional levels, the paper advances a nuanced and holistic understanding of Ghana's maritime security environment, advocating for a Blue Justice approach.

Keywords: Blue Economy, Maritime Security, Socio-Economic Dynamics, Coastal Livelihoods, Ghana

Introduction

The concept of the blue economy has gained significant prominence across Africa as coastal and maritime resources are increasingly recognised for their potential to drive sustainable economic growth, enhance food security, and create employment opportunities (Appiah et al., 2023). Ghana's maritime domain, encompassing a vast coastline and rich marine biodiversity, forms a critical component of the country's development aspirations (Karakara et al., 2025). However, realising the promise of the blue economy requires a nuanced understanding of how socio-economic realities, environmental pressures, and governance frameworks intersect to shape maritime security (Edu-Afful & Osei-Tutu, 2023). This dynamic plays a decisive role in shaping the maritime security environment, influencing both the risks faced by coastal populations and policymakers' strategic priorities.

Studies have underscored the tensions that arise as blue economy initiatives, such as port expansion, industrial fisheries, and foreign investment, collide with traditional livelihoods and environmental sustainability concerns (Agyeman & Nyarko, 2019; Okafor et al., 2020). In Ghana, the socio-economic challenges linked to maritime security include youth unemployment, poverty, rural-to-urban migration, and gender disparities (Asamoah, 2023), which often exacerbate vulnerabilities to IUU fishing, maritime crimes, and resource-based conflicts. These issues are not unique to Ghana but reflect broader continental patterns where blue economy governance must navigate the competing priorities of economic growth, social justice, and ecological preservation (Karakara et al., 2025).

By offering a thorough socioeconomic analysis of Ghana's maritime security environment, the paper contributes to the expanding body of research on African blue economies. It examines how local realities, economic activity, and policy frameworks interact to shape the maritime space using an explicitly interdisciplinary approach that draws from political ecology, institutional theory, development studies, and security analysis. It draws attention to the experiences of coastal communities juggling the conflicts between laws intended to advance national economic interests and to sustain their livelihoods. The study also examines the impact of foreign investments and global market forces, examining how these external influences interact with regional socioeconomic structures. It examines key economic sectors, including artisanal, semi-industrial, and industrial fisheries, that directly affect coastal livelihoods and security outcomes. It further investigates the social factors, such as youth unemployment, livelihood issues, and gender inequalities, that mediate community vulnerabilities and resilience within these sectors. The field research encompassed the

Central Region (Apam, Elmina and Abandze) and communities within the Western Region (Sekondi-Takoradi, Dixcove), the Volta Region (Keta) and the Greater Accra Region (Tema).

The study draws on a focused body of academic literature, government reports, and national, regional and continental maritime policy documents to frame Ghana's blue economy and maritime security within broader African debates on governance, sustainability and justice. The methodology section elaborates on these sources and their specific roles in the analysis. This review serves two functions: first, it establishes the theoretical framework by combining Political Ecology and Institutional Theory to situate Ghana's maritime security challenges within a broader African context of blue economy governance, environmental sustainability and socio-political transformation. Second, it provides macro-level empirical foundations by compiling data on fish stock depletion, IUU fishing, demographic trends such as youth unemployment, and the economic contribution of the fisheries sector, which are later triangulated with findings from fieldwork. Although the focus is on Ghana, the findings have implications for other coastal West African states confronting similar intersections of economic development, social equity, and maritime governance.

The article aims to inform policymaking processes that integrate socio-economic realities within maritime security strategies, advance equitable blue economy development, and promote inclusive dialogue among government actors, industries, and coastal communities. To understand how national and regional institutions and strategies address the complexities arising from the intersection of socio-economic and security dynamics, governance and policy frameworks are evaluated. Through case studies that illustrate local effects and community reactions, the article offers empirical support while pointing out both opportunities and conflicts in the administration of Ghana's maritime domain.

By highlighting the significance of striking a balance between the objectives of social justice, environmental sustainability, and economic growth, the discussion brings together the findings. To enhance maritime security and promote fair blue economy growth, the analysis highlights the importance of inclusive governance, community empowerment, and coherent policy frameworks. The article concludes with a summary of the key ideas and recommendations for future research, policy initiatives, and innovative concepts in Ghana's blue economy. With socioeconomic realities and sustainable governance at the core of maritime security strategies, it urges collaboration among various stakeholders at all levels.

To guide this study's inquiry into the complex interplay of socio-economic realities, governance, and maritime security in Ghana's blue economy, the following research questions are posed:

- How and why do socio-economic conditions in Ghana's coastal communities shape maritime security risks and opportunities?
- In what ways do institutional and governance arrangements mediate and influence these socio-economic and security dynamics?
- How can a Blue Justice lens inform more equitable and sustainable blue economy governance in Ghana?
- How do external pressures, such as climate change and globalisation, intersect with local socio-economic and governance factors to impact maritime security and blue economy outcomes?

These questions underpin a detailed examination of Ghana's maritime governance landscape, which is further contextualised through a refined conceptual and theoretical framework presented in the next section. This paper is organised into key sections: Following this introduction, Section 2 presents a refined conceptual and theoretical framework that grounds the study, focusing specifically on fisheries within the blue economy. Section 3 details the methodology and data sources used in the empirical investigation. Section 4 offers a comprehensive analysis of the socio-economic, institutional, and environmental dimensions influencing maritime security in Ghana's fisheries sector. The discussion in Section 5 follows and synthesises the findings within broader theoretical perspectives and highlights imperative governance and policy reforms. Finally, the conclusion integrates some policy recommendations and outlines the study's contributions to theory, practice, and future research. Against this backdrop, the following section details the interdisciplinary methodology and comprehensive data sources employed to examine these complex interactions within Ghana's maritime sectors, providing the empirical foundation for the analysis to follow.

Methodology and Data Sources

This study employs an interdisciplinary qualitative research design drawing primarily from political ecology, institutional theory, and development studies to interrogate the complex, interwoven dynamics among socio-economic realities and maritime security in Ghana's Blue Economy (Ayilu, 2023; Andrews and Siakwah, 2020). This approach is essential for mapping the interplay among economic activities, policy frameworks, and local livelihood sustenance across local, national, and regional levels (Foli et al., 2022; Ayilu, 2023). Drawing on diverse data sources allows for a robust triangulation of findings that link local realities to national governance structures.

Data Triangulation and Sources

Data for this investigation were triangulated from two main sources to ensure comprehensive findings:

Literature and Policy Review (Secondary Data)

The foundation of the analysis rests on an extensive review of academic publications (journal articles, book chapters, dissertations), government reports and policy documents. This review serves two functions: 1) establishing the theoretical framework (Political Ecology, Institutional Theory), and 2) sourcing macro-level quantitative data on fish stock depletion, IUU fishing estimates, demographic trends (youth unemployment), and economic contributions of the fisheries sector.

Source type	Key documents	Function in the study
Academic literature	Peer-reviewed journal articles, book chapters and dissertations on political ecology, institutional theory, IUU fishing and blue economy governance.	Establish the theoretical framework (Political Ecology, Institutional Theory) and situate Ghana within wider debates on maritime security, IUU fishing and fisheries sustainability.
National laws & regulations	Ghana Maritime Security Act, 2004 (Act 833) (Ghana, 2004); Ghana Fisheries Regulations, 2010 (L.I. 1968) (Ghana, 2010); Fisheries Management Plan of Ghana, 2022–2026 (Ghana Fisheries Commission & Ministry of Fisheries and	Define the formal governance framework for maritime security and fisheries management, including institutional mandates, spatial zoning (e.g., IEZ), compliance tools and sanctions.

	Aquaculture Development, 2022); Fisheries and Aquaculture Act, 2025 (Act 1146) (Ghana, 2025).	
National strategies & reports	National Integrated Maritime Strategy (NIMS) (Ghana, 2016); Ministry of Fisheries and Aquaculture Development reports, including Fisheries and Aquaculture Sector Development Plan (MoFAD, 2019); Ghana Maritime Authority reports (GMA, 2018).	Provide national policy priorities on maritime safety, blue economy development and inter-agency coordination, and offer macro-level statistics on maritime trade and fisheries.
Regional & continental frameworks	ECOWAS Integrated Maritime Strategy (EIMS) (ECOWAS, 2022); African Union's 2050 Africa's Integrated Maritime Strategy (AIMS 2050) (African Union, 2012); International Chamber of Commerce (ICC) reports on piracy and maritime crime (ICC, 2013).	Situate Ghana within regional and continental responses to maritime crime and IUU fishing, and provide comparative indicators on insecurity, trade disruption and governance gaps.
Statistical and sectoral data	Ghana Statistical Service's statistical releases and sector newsletters (GSS, 2024); Thematic Report on Capture Fisheries (GSS, 2024); Ministry of Fisheries and Aquaculture Development and Fisheries Commission statistical bulletins (MoFAD & Fisheries Commission, 2019, 2023).	Supply macro-level quantitative data on fish stock trends, IUU fishing estimates, youth unemployment, and the fisheries sector's contribution to GDP, employment and food security.

Qualitative Field Research (2022-2025)

Primary data were collected through semi-structured interviews and focus group discussions (FGDs) conducted predominantly between late 2022 and early 2023. Additional data collection took place in the final quarter of 2025 to supplement initial findings and to gather updated insights. The field research encompassed the Central Region (Apam, Elmina and Abandze) and communities within the Western Region (Sekondi-Takoradi, Dixcove), the Volta Region (Keta) and the Greater Accra Region (Tema). Participants were selected purposively to capture diverse perspectives relevant to the study's focus. Semi-structured interviews were conducted with artisanal fishers to explore livelihood challenges and experiences of resource conflicts. Women processors and traders were engaged to examine gendered roles within fisheries value chains and constraints to market access. Community leaders, including executives from Fishermen's Associations, Canoe Owners Associations, and Traditional Authorities, provided insights into governance structures and customary tenure systems. Additionally, researchers, fisheries officers, local community leaders, and representatives of

fishermen's associations were interviewed. This broad and targeted sampling strategy aimed to gather nuanced insights into livelihood security, resource management conflicts, and the local impacts of policy frameworks and foreign investment.

Ethical Considerations

This study adhered to ethical protocols, by not including identifying titles, to ensure the dignity, confidentiality, and voluntary participation of all respondents. Informed consent was obtained prior to data collection, with participants fully apprised of the study's objectives, their rights, and assurances of anonymity. Throughout the research process, attention was given to safeguarding vulnerable populations, including women and marginalised groups.

Gender-sensitive Approach

The research design employed a gender-sensitive approach to capture nuanced differences in experiences and access across gender lines. Participant selection aimed for balanced representation of men and women involved in various fisheries-related roles, including fishing, processing, and local governance. Data collection instruments included gender-focused questions to explore how gender roles influence resource access, decision-making, and livelihood outcomes. This approach ensured that gendered power dynamics and inequalities were explicitly considered in the analysis.

Limitations

While the study employed qualitative methods, some limitations should be noted. The purposive sampling strategy, while effective for depth, limits the generalisability of findings beyond the study areas. Additionally, data collection spanning multiple years may reflect temporal shifts that could influence participants' perspectives. Potential biases, including respondent recall bias and researcher subjectivity, were mitigated through careful triangulation and reflexivity, though they cannot be entirely ruled out.

Analytical Approach

The data analysis involved thematic content analysis of the qualitative interview transcripts, categorising responses based on the theoretical framework (e.g., themes related to 'power dynamics')

for Political Ecology, and 'coordination gaps' for Institutional Theory). Secondary data was synthesised to quantify the scale of issues (IUU fishing, youth unemployment) and contextualise the qualitative findings within the broader national landscape. The juxtaposition of the two data types allows for a robust, evidence-based argument that connects local realities to national security priorities. Using this theoretical base, the next part of the article places the blue economy in the context of Ghana's national development goals. It focuses on the specific socio-economic weaknesses and governance problems that are unique to Ghana's maritime environment. With this methodological framework established, the paper proceeds to a conceptual and theoretical exploration of the blue economy, situating Ghana's maritime challenges within a broader scholarly and policy context.

Conceptual and Theoretical Framework: What is the Blue Economy?

The blue economy, broadly defined, encompasses the sustainable and long-term use of ocean and aquatic resources to foster economic growth, enhance livelihoods, and preserve marine ecosystems (Spalding, 2016). It differs from traditional exploitative ocean economies by focusing on development that is fair to all and good for the environment (Silver et al., 2015). While it offers transformative potential, the concept remains fluid and contested, embodying a range of socio-economic, environmental, and governance priorities that vary by context and stakeholder interests. This section situates the study within key theoretical frameworks, political ecology, sustainable development, and institutional theory, that shed critical light on the power dynamics, policy challenges, and sustainability imperatives underlying Ghana's blue economy.

The blue economy in Africa includes fisheries, aquaculture, maritime transport, coastal tourism, renewable ocean energy, and marine biotechnology. Africa's blue economy encompasses diverse sectors such as fisheries, aquaculture, maritime transport, coastal tourism, renewable ocean energy, and marine biotechnology. While the blue economy is often recognised as a broad and evolving concept, there is ongoing debate about its precise definition and scope, reflecting its multifaceted nature and the varying priorities among stakeholders.

Grounded in new policy goals aimed at sustainable development (Okoye and Sankey, 2015, the Blue Economy is actively promoted as a strategy to achieve several Sustainable Development Goals (SDGs), such as economic growth, food security, and climate adaptation. (Okafor-Yarwood et al., 2020). However, scholars such as Yeboah and Santha criticise prevailing models for emphasising macroeconomic benefits at the expense of social inclusion and ecological justice, which may

marginalise small-scale fishers and vulnerable coastal communities (Yeboah, 2022; Santha, 2023). Literature underscores the imperative of incorporating 'blue justice' principles that prioritise equitable access, benefit distribution, and governance reforms to address historical injustices (Dube and Tekwa, 2025; Croft, 2024). Ghana's blue economy, primarily based on fisheries and port operations, continues to be a battleground between industrial growth and artisanal livelihoods. Research demonstrates that industrial fishing and infrastructure development can undermine traditional livelihoods and exacerbate resource conflicts, heightening social vulnerabilities, especially among women and youth (Oloko et al., 2025). Community-based governance and inclusive policy mechanisms have been suggested to foster sustainable and equitable blue economies in Ghana (Karakara et al., 2025).

This study employs a combination of theoretical perspectives, political ecology, sustainable development theory, and institutional theory, to analyse the blue economy and its governance in Ghana and West Africa (Görg et al., 2017; Ertör & Hadjimichael, 2020; Nogueira et al., 2023; Cobbinah & Finn, 2023; Ansong et al., 2021; Li et al., 2025). The Political ecology offers a critical perspective for analysing the blue economy as a socio-political domain influenced by power dynamics, environmental transformations, and governance frameworks (Görg et al., 2017; Ertör and Hadjimichael, 2020). This framework reveals the intersection of economic and environmental policies with local resource claims, frequently perpetuating inequalities and conflicts regarding marine resources in Ghana and West Africa.

The Sustainable Development Theory, encompassing the triple bottom line approach, is essential for articulating the blue economy's objectives of achieving economic viability, social equity, and environmental sustainability (Nogueira et al., 2023). In the African context, it is augmented by justice-oriented perspectives that emphasise the necessity for inclusive growth and resilience enhancement (Cobbinah and Finn, 2023).

The Institutional Theory is used to evaluate the efficacy of governance frameworks, legal mandates, and multi-level stakeholder engagement in the management of Ghana's maritime resources (Ansong et al., 2021). It highlights the complexities stemming from overlapping institutional roles, coordination difficulties, and enforcement shortcomings in blue economy governance (Li et al., 2025).

By combining these perspectives, this study is able to interrogate not only the normative aspirations of the blue economy but also the structural barriers, lived experiences, and opportunities for more

equitable and sustainable outcomes in the region. While the interdisciplinary combination of political ecology, sustainable development, and institutional theory illuminates the broader contours and contested dynamics of the blue economy in Africa, it is crucial to ground these perspectives in the specific realities of Ghana. The integration of these theoretical insights allows for a nuanced analysis attuned to Ghana's unique socio-political, environmental, and institutional landscapes. By contextualising the study within Ghana's coastal and maritime governance, the following section critically applies these frameworks to local practices, policies, and power relations that shape blue economy outcomes in the country. Grounding our analysis in these interdisciplinary perspectives paves the way for a nuanced investigation of how blue economy principles intersect with Ghana's specific socio-political and environmental realities, setting the stage for the following section that delves into the local context.

Ghana-Specific Context and Theoretical Integration

Ghana's blue economy represents a microcosm of broader regional and global maritime challenges. Here, aspirations for economic development converge with complex social hierarchies, environmental vulnerabilities, and fragmented governance arrangements, producing a distinctive confluence of opportunities and risks. This section integrates the theoretical insights outlined previously with detailed empirical evidence from Ghana, highlighting how industrial expansion, artisanal livelihoods, gender dynamics, and policy frameworks collectively shape maritime security outcomes.

As Ghana seeks to leverage its extensive maritime resources for economic development, academics such as Ameyaw and Lawer (2017; 2019) are increasingly emphasising the tensions and contradictions that emerge from unequal access, competing stakeholder interests, and governance difficulties. Ayilu et al. (2023) and Owusu (2020), have recorded the threats posed by the expansion of industrial fisheries to artisanal fishers' access to traditional fishing grounds, thereby intensifying livelihood insecurities and potential resource conflicts. Ayilu (2023) also looked into how port development negatively affects fishing communities, showing how it displaces people and harms the environment, which makes people more vulnerable (Ayilu, 2023). Edu-Afful and Osei-Tutu (2023) underscore the gendered dynamics of blue economy participation in Ghana, highlighting the enduring inequalities women encounter in obtaining capital, technology, and decision-making opportunities, despite their significant contributions to post-harvest and marketing endeavours. This gender analysis is essential for comprehending the overarching social dynamics that influence maritime governance

and resource sustainability. In 2022, the Ghana MoFAD introduced significant policy reforms.² Despite these reforms, there are still gaps in implementation, such as unclear roles, competition between agencies, and not enough resources to enforce the rules (Asumda, 2023).

Understanding Ghana's Blue Economy

Ghana's blue economy is made up of many different sectors, such as the fisheries, port and tourism sectors, that not only help the country grow, but also affect the social, economic, and security conditions of coastal communities. This section goes into great detail about the three fisheries sectors. It discusses their significance to the country's economy, how they affect people, the environment, and the conflicts and synergies among them. More recent quarterly estimates show that the fishing subsector's nominal GDP hit about GH¢2.2 billion in Q1 2025, representing 2.6% of agricultural output and exhibiting growth exceeding other agricultural sub-sectors (GSS, 2025). Ghana possesses a vibrant marine fisheries sector and a rich multi-species fishery, positioning it as one of the productive fishing countries in the Gulf of Guinea (Quagraine and Chu, 2021). The fisheries sector is important to national food security as it supplies 60% of the national animal protein requirement (Hasselberg et al., 2020). Ghana's per capita fish consumption stands at 28 kg (Asiedu et al., 2023), higher than the African and global per capita consumption of 10.5 kg and 20.2 kg, respectively (OECD, 2021). Additionally, the fisheries sector in Ghana secures a gendered livelihood employment for 3.5 million Ghanaians (MoFAD, 2022), of which more than 47% are women in the post-harvest sector (Chambon et al., 2024).

The sector's contribution to Ghana's Gross Domestic Product (GDP) was 1.5 % in 2015 (Asiedu et al., 2015). Between 2019 and 2020, it decreased to 1.1% (GSS, 2023). This decline could largely be attributed to unsustainable fishing practices that drive overexploitation of resources and threaten their economic returns. The Ministry of Fisheries and Aquaculture recognises its marine fisheries industry as three sectors: the artisanal (the in-shore canoes and small boats which are not motor powered and belong to locals), the semi-industrial (both large and small motor-powered boats which are owned by Ghanaians) and the industrial sector (which is made up of two sub-sectors: trawl and the industrial tuna fisheries (these are both Ghanaian-owned and foreign vessels) (Ghana Fisheries Commission, 2025). Each sector has its own dynamics, resources, and respective social and economic dynamics.

² The Ghana Ministry of Fisheries and Aquaculture Development (MoFAD), drafted the National Blue Economy Strategy to reflect national priorities, is grounded in science and experience, and aligns with Ghana's sustainable development goals. The development of an initial cabinet memorandum that proposed the establishment of a Blue Economy Commission and strategy for Ghana.

Understanding the national context is essential for appreciating the role played by Ghana's diverse blue economy sectors. Among these, fisheries serve as a vital livelihood source and constitute a primary focus of this study.

Artisanal Fisheries

Artisanal fisheries are Ghana's largest source of jobs related to fishing, directly supporting about two million people in coastal areas (Doku et al., 2018). The annual production from the artisanal sector is about 170,000 MT (Fisheries Commission, 2020). Historically, artisanal fishers adapted their fishing gear to the seasonal patterns of fish abundance to maximise harvest (Akyeampong, 2007). This sector usually needs a lot of workers and uses small wooden boats, mostly canoes, and simple fishing gear like nets, traps, and hooks. Artisanal fishermen fish close to shore and go after a wide range of fish species, such as sardinella, anchovies, and demersal fish. In this sector, women are heavily involved in post-harvest activities like processing fish, salting them, smoking them, and getting them to market (Edu-Afful and Osei-Tutu, 2023). These gendered roles demonstrate the critical socio-economic functions artisanal fisheries fulfil within coastal communities. Women's involvement in post-harvest activities such as processing, preserving, and marketing fish ensures continuous value addition along the supply chain, supporting household incomes and local economies (Britwum, 2009; Edu-Afful & Osei-Tutu, 2023). Moreover, the entrepreneurial activities within the fisheries sector drive rural employment and empower women through financial independence and participation in community decision-making, illustrating that artisanal fisheries are foundational to both food security and socio-economic stability in Ghana's coastal regions.

Artisanal fishers play an important role, but they face a lot of problems. They contribute to livelihoods and the economy not only through the capture of fish but also via a complex network of interconnected roles. While men are predominantly responsible for catching and landing fish, women play crucial roles in processing, preserving, and marketing fish, as well as financing fishing activities. These activities add value to fresh fish, support household nutrition and food security, generate income and employment, and enable the distribution of fish to distant markets long after peak seasons. Indeed, the sector sustains livelihoods, empowers women in decision-making and trade, and reinforces community cohesion within coastal societies (Hen Mpoano, 2019; Environmental Justice Foundation, 2019; Fisheries Commission, Ghana, [n.d.]).

For example, fish stocks are declining because of overfishing and habitat destruction (Danquah et al., 2021; Atta-Mills et al., 2004; Asiedu et al., 2021), and the artisanal sector has to compete with industrial fleets, some of which engage in predatory fishing near-shore. They also have limited access to markets and capital, and their infrastructure for storage and transportation is not good enough (Ayilu et al, 2023). These problems make both the economy and the community less stable. The sector is also sensitive to changes in the climate, such as changes in ocean temperature and fish migration patterns that affect how many fish are available to catch.

Semi-industrial Fisheries

Between the artisanal and fully industrial fisheries sectors lies the semi-industrial fishery sector, which plays a unique and increasingly important role in Ghana's blue economy. Semi-industrial fisheries operate with larger boats and more advanced gear than artisanal fishers but remain smaller in scale and often locally owned, serving as a critical intermediary that bridges small-scale coastal fishing and capital-intensive commercial operations. Ghana's semi-industrial sector comprises about 224 registered semi-industrial vessels with wooden hulls of LOA from 8 to 40 meters and powered by on-board engines up to 400 HP (Ghana Fisheries Commission and the Ministry of Fisheries and Aquaculture Development, 2022). Collectively, they operate from Tema, Takoradi, Mumford, Apam, Axim, and New Takoradi due to the availability of appropriate berthing facilities in these landing sites (Ghana Fisheries Commission and the Ministry of Fisheries and Aquaculture Development, 2022). Semi-industrial vessels are multi-purpose vessels; they could operate both purse seine. The estimated annual production from the semi-industrial sector is 11,000 MT (Ghana Fisheries Commission and the Ministry of Fisheries and Aquaculture Development, 2022).

From a maritime security perspective, semi-industrial fisheries represent a significant surveillance point and stakeholder group. They tend to target commercially valuable species such as tuna, mackerel, and demersal fish and contribute significantly to domestic fish supplies and export earnings (Gyimah, 2021). Many fishermen, crew members and related workers, such as fish processors and traders, rely on the semi-industrial fishery sector for their economic livelihoods. Due to labour-intensive operations, the sector offers more job opportunities than purely industrial fleets, but at a scale that better supports resource sustainability and market integration than purely artisanal fishing. Semi-industrial fisheries, however, confront several difficulties. They are in a grey area of governance, frequently subject to more regulatory oversight than artisanal sectors but less than industrial fleets (Finegold et al., 2010; Asumda, 2023; Ameyaw, 2017). This position occasionally

leaves the industry vulnerable to disputes over resource access and fishing rights from both industrial operators competing in offshore zones and artisanal fishermen who face encroachment into nearshore areas (Ameyaw, 2017). Furthermore, the increased fishing capacity of semi-industrial vessels strains fish stocks, raising sustainability issues and necessitating focused management measures (Doku et al., 2018). It is important to acknowledge the semi-industrial fishery sector's distinct position and socioeconomic significance. Economic results and maritime security can be improved by implementing customised policies that include semi-industrial fishermen in national fisheries governance, give them access to capital and technology, and guarantee fair resource distribution. Supporting their role as intermediaries allows for a more balanced and sustainable fisheries sector, contributing to Ghana's inclusive blue economy.

Industrial Fisheries

The industrial fishery sector comprises steel vessels with LOA from 35 m and above (Ghana Fisheries Commission and the Ministry of Fisheries and Aquaculture Development, 2022), fitted with inboard engines of over 600HP (Ghana Fisheries Commission and the Ministry of Fisheries and Aquaculture Development, 2022). They operate mainly from Tema and Takoradi due to the deepwater features of those ports (FCWC, 2021). Although the artisanal sector employs more people than the industrial fisheries in Ghana, the latter is a big part of the export market and the country's income. The industrial trawl fishery comprises 76 registered vessels, of which 19 vessels (ref) are operational. They are licensed to operate the bottom trawl gear beyond the 30m depth and target demersal species with an annual catch of about 37,507 MT (Ghana Fisheries Commission and the Ministry of Fisheries and Aquaculture Development, 2022).

Large trawl vessels, including those owned by foreigners and those that are joint ventures to catch high-value species for processing in the country and export to other countries (EfD Initiative, 2019). The industrial fleet brings in money and helps the economy grow, but it also poses environmental and socio-economic risks (Gyesi, 2019). Industrial fishing puts more stress on marine ecosystems, which can lead to overfishing, catching non-target species, and damage to benthic habitats (Arthurton and Koranteng, 2005; Afoakwah et al., 2018). This industrial expansion, often supported by foreign investment, creates power imbalances over resource access, directly aligning with the core tenets of political ecology (Acheampong, 2020; Ayelazuno and Mawuko-Yevugah, 2019). Consequently, conflicts often arise between industrial operators and semi-industrial and artisanal fishers regarding

access to fishing grounds, which erodes social cohesion and traditional marine tenure rights (Seto, 2017; Interviews, 2023).

Additionally, the existence of illegal fishing activities by certain industrial fleets, including IUU fishing, exacerbates the challenges of resource management and the enforcement of maritime security (Yakubu, 2022). To deal with these problems, we need better rules, clearer licensing, and stronger frameworks for participatory governance. Having outlined the major fisheries sectors, the study continues to examine the socio-economic roles and vulnerabilities of coastal communities dependent on these fisheries. Having established this contextual foundation, the study next examines the methodological approach underpinning our empirical investigation into these multifaceted dynamics shaping Ghana's maritime domain.

Socio-Economic Vulnerabilities within the Fisheries Sector

Ghana's maritime security landscape is shaped by an intricate interplay of socio-economic vulnerabilities, institutional complexities, and environmental challenges. This section unpacks these overlapping dimensions to reveal how they collectively influence the sustainability and equity of the blue economy, with a focus on the fisheries sector.

Fisheries form a vital part of the socio-economic fabric in Ghana's coastal communities, providing direct and indirect livelihoods to millions, including fishermen, processors, traders, and associated service providers (Koomson, 2021). The artisanal fisheries sector is especially important for food security and income generation, with women playing key roles in post-harvest processing and trade (Kimani et al., 2021). These fisheries significantly contribute to local economies by supporting household subsistence and broader community welfare (Allison, 2024; Asif, 2020).

However, these communities face significant vulnerabilities that undermine their resilience and long-term sustainability. Persistent poverty, unemployment, and limited access to capital and formal markets restrict economic opportunities (Koomson, 2021; Mozumder et al., 2018). High youth unemployment drives some into precarious or illicit activities, including illegal fishing and maritime crimes such as armed robbery and stowaways (Hamza, 2024; Tachie-Menson et al., 2022). Gender inequality further compounds these challenges, limiting women's participation in decision-making and resource access, thus hindering their economic empowerment (Ahinsah Wobil, 2024).

Environmental pressures, including overfishing, pollution, and climate change-driven shifts in fish migration, exacerbate these socio-economic difficulties by reducing fish stocks and causing income volatility. Additionally, institutional weaknesses such as fragmented governance, poor enforcement, and exclusion from policy dialogues limit fair distribution of blue economy benefits (Bhagarathi, 2024). Despite its central role in Ghana's economy and development, the fisheries sector remains vulnerable, highlighting critical areas for intervention to strengthen blue economy initiatives and maritime security outcomes.

Economic Insecurities

Many coastal communities still have high levels of poverty and economic instability, even though they have a lot of marine resources. Seasonal changes, falling fish stocks, and rising costs of fishing gear and fuel make it difficult for fisher-led families to keep a steady income. This economic instability is made worse by weak market connections and a lack of access to credit and social safety nets (Sumaila, 2020).

Overfishing, pollution, coastal erosion, and climate change are all harming marine ecosystems (Ahmed and Tamin, 2025). These threats worsen poverty effects by making resources less available, increasing competition and reducing the availability and viability of jobs that are dependent on the sea (Baffour, 2024). For example, fishers in Elmina³ and Apam⁴ say they have to go farther out to sea to catch fish, which is more dangerous and expensive, or they have to stop fishing altogether, as it becomes increasingly less lucrative (Interviews 2025). These (kinds of) stressors make community dwellers more vulnerable and less able to deal with stress (Ayesu-Danso, 2023).

Environmental stressors indirectly affect poverty by damaging coastal farmland and freshwater sources, which are important for food security in the home (Dundee et al., 2025; Baffour, 2024). In a lot of cases, poverty is linked to a lack of access to healthcare, low levels of education, and bad infrastructure, which keeps communities stuck in cycles of deprivation. To address the issues of poverty in coastal areas, there needs to be a combination of sustainable resource management, social

³ Elmina is a historic coastal town located in the Central Region of Ghana, known for its rich cultural heritage and its pivotal role in West African trade history. It is home to Elmina Castle, the first European-built trading post in sub-Saharan Africa, established by the Portuguese in 1482. The town's economy heavily depends on artisanal and marine fisheries, making it a critical site for studying coastal livelihoods and fisheries management in Ghana.

⁴ Apam is a small fishing town also situated in Ghana's Central Region, recognised for its vibrant artisanal fishing community. It is less renowned internationally compared to Elmina but remains economically and socially important for local fisheries and coastal livelihoods. Apam has historical architecture including a modest fort dating back to the 1600s, reflecting its role in regional trade and maritime activities.

protection policies, economic diversification, and infrastructure development that fits the needs of each coastal area.

Gender Inequalities in Coastal Livelihoods

In coastal communities, the manner of coexistence among men and women is essential for all resources, job opportunities, and politics. While women contribute significantly to the fisheries sector, especially in processing, marketing, and financing, they generally have limited ownership of or direct access to fishing vessels due to prevailing social and cultural norms, as well as institutional barriers (Adjei & Chan, 2023). Ownership and control over fishing inputs like vessels typically remain male-dominated, although some women do own or finance canoes indirectly through trading proceeds. These dynamics reflect persistent gender inequalities in asset control and decision-making within artisanal fisheries in Ghana (Adjei and Chan, 2023). For instance, in interviews, many (female) fish processors mention they do not have direct access to fishing vessels or formal fishery permits, which means they can only perform complementary tasks instead of primary ones, although they are sometimes financiers and fundraising agents in coastal communities (Interviews, 2025; Interviews, 2023).

Gender inequities are ingrained in Ghanaian coastal communities, evident within households through unequal labour responsibilities and centralised control over essential resources. Generally, women are mainly involved in post-harvest activities like processing fish, smoking fish, and selling fish (Edu-Afful and Osei-Tutu, 2023). Women play key roles in the fisheries value chain; nevertheless, female perspectives are frequently overlooked in formal resource governance and marine policy-making, which are largely controlled by males (Lentisco and Lee, 2015); According to Gruber (2010), this pertains not only to representation but also affects the efficacy and fairness of communal resource management, since essential viewpoints and requirements remain unacknowledged.

Empirical research from Ghana demonstrates that women's participation in co-management programs and local fisheries organisations significantly enhances community sustainability and resource governance (Chuku et al., 2022). In particular, studies on estuarine shellfish fisheries along Ghana's coast highlight how women's active involvement in harvesting, processing, and trading is central to the socio-economic viability of these fisheries, underscoring the importance of empowering women in management roles to ensure the long-term resilience and equitable benefit-sharing within fisheries (Agbekpornu et al., 2021).

Systemic impediments, including restricted access to financing, technology, and training, together with cultural norms that inhibit mobility and leadership, persistently hinder their empowerment (Omweri, 2024). Moreover, women's experiences overlap with wider socio-environmental concerns. Disruptions to fish populations and coastal ecosystems caused by climate change disproportionately impact women due to their dependence on nearshore and estuarine fisheries and their socio-economic vulnerabilities. Women have embraced innovative livelihood diversification options, such as small-scale aquaculture and alternative income-generating activities, demonstrating their resilience while underscoring the necessity for supporting policies that tackle gender-specific vulnerabilities (Adam et al., 2022).

Legislative measures and NGO-led projects designed to enhance women's engagement in Ghana's blue economy demonstrate encouraging inputs. These encompass gender-sensitive capacity development, enhancing women's access to fisheries financing, and establishing venues for their participation in governance discussions (Siles et al., 2019). Achieving sustainable and equitable coastal development necessitates transcending mere practical concessions to women, advancing instead towards transformational strategies that confront systemic disparities and foster gender justice (Resurrección et al., 2019).

The Ghanaian coastal fishing industry illustrates the intricate relationship between gendered labour, power dynamics, and environmental transformation. Enhancing women's influence and integration in resource governance is imperative for promoting gender equity and achieving more effective, inclusive, and sustainable results in the blue economy.

The Effects of Unemployment on Young People in Coastal Areas

Youth unemployment is one of the most important social and economic problems in Ghana's coastal areas. It has a big impact on problems with maritime security. Studies indicate that a significant percentage of coastal youth aged 15 to 35 are either unemployed or underemployed, encountering restricted opportunities in both formal and informal sectors (EFD Initiative, 2019). Some of the reasons for high youth unemployment are low levels of education, few opportunities for vocational training, differences between men and women, and the mechanisation of some blue economy activities, which lowers the demand for hands (Ayilu et al., 2023).

Young men and women have few good job options, which makes it easy for them to be left out of society. Disaffected youth frequently engage in precarious or illicit maritime activities, including IUU fishing, piracy, smuggling contraband, and participation in drug trafficking (and other trafficking) networks. These crimes not only threaten the long-term viability of resources but also contribute to larger instability by damaging the credibility of law enforcement and making communities more vulnerable (Appiah et al., 2023).

The Socio-economic and Cultural Context and the Resilience of the Community

Understanding the opportunities and challenges of the blue economy and how they directly affect maritime security requires an understanding of the socioeconomic circumstances of Ghana's coastal communities. A complex web of demographic, economic, social, and cultural factors affect how coastal populations interact with the sea and the governance structures that surround it. Many of these populations rely on marine resources for their livelihoods. This section examines these facts in detail by reviewing demographic profiles, income and diversification strategies, youth unemployment, poverty, gender inequality, migration, and the social and political elements that influence the strengths and weaknesses of communities. The sociocultural makeup of coastal communities has a major influence on their participation in blue economy activities and maritime security, in addition to economic and demographic factors. The fundamental social structure that regulates fishing rights, seasonal closures, and the preservation of vital habitats is made up of traditional knowledge, customary marine tenure systems, and community-based resource management techniques (Anokye, 2022). These traditional systems of governance promote resource use that benefits the environment, fosters interpersonal relationships, and aids in problem-solving. However, their power is becoming less apparent due to state interventions, industrial growth, and changes in the global market, which frequently causes confusion about who is in charge.

The ability of a community to cope with social and economic shocks, such as resource depletion or climate-related events, is strongly correlated with social capital, trust, and collective action mechanisms. Strengthening these social institutions can aid in their adaptation and improve the effectiveness and inclusivity of maritime governance environments. The socio-economic realities described above are tightly intertwined with a range of maritime security challenges that affect both livelihoods and governance, which the subsequent section explores.

Maritime Security Challenges Linked to Socio-Economic Factors

Ghana's maritime security problems are complex and have many causes. They are deeply connected to social and economic conditions and the changing blue economy. This part goes into more detail about important topics like IUU fishing, maritime crime, resource conflicts, environmental degradation, and the effects of foreign investment and global markets. It combines real-world data with insights from personal research to shed light on the complicated issues that these problems are based on.

One of the biggest and most long-lasting threats to Ghana's marine resources is IUU fishing. Research suggests that IUU fishing in the Gulf of Guinea constitutes approximately 40 per cent of total catches, resulting in significant depletion of fish stocks and jeopardising food security and livelihoods (Okafor-Yarwood, 2019). My field research in several coastal communities in the Western Region indicated that many artisanal fishers believe that licensing policies favour industrial fleets, especially foreign-owned vessels, which frequently operate with little oversight (Interviews, 2025). The socio-economic factors are clear: fishing communities with high rates of poverty and youth unemployment force young fishers to fish without permits to stay alive. Informal networks make it easier to get unlicensed boats and illegal gear, even though the law says you can't. One leader of a fishing community said that when resources are scarce, as many as 60 per cent of young fishers may engage in illegal fishing activities. This is more about being desperate for money than being a criminal. (Interviews, 2023).

This illegal behaviour starts a cycle that keeps going. Depleted fish stocks make legal artisanal fishing less possible, which forces more people to turn to illegal activities, which makes ecological damage worse. The effects go beyond fisheries to include maritime security in general, since enforcement agencies have a hard time keeping an eye on such large areas of water with so few people and resources. To effectively address IUU fishing, enforcement must be complemented by community involvement and economic alternatives. Community-led monitoring initiatives, bolstered by mobile reporting technology, have demonstrated potential in improving compliance and fostering trust

between fishers and authorities, underscoring the essential function of participatory governance⁵ (Environmental Justice Foundation, 2021; Go Blue, 2023).

Maritime Crime: Socio-Economic Aspects and Regional Impacts

Maritime crime, including illegal fishing activities, piracy, and trafficking and smuggling, poses a significant threat to the socio-economic well-being of Ghana's coastal communities and the broader West African region (Tachie-Menson et al., 2022). These activities undermine fisheries' sustainability, disrupt livelihoods, and reduce revenue essential for local and national economies. Beyond immediate economic losses, maritime crime fuels insecurity and governance challenges, hampering efforts to harness the blue economy for sustainable development (Tachie-Menson et al., 2022). Addressing maritime crime is therefore critical not only to protect economic interests but also to ensure social stability and regional cooperation.

From a socio-economic perspective, unemployment among coastal youth and their exclusion from social networks exacerbate recruitment into maritime crime syndicates (Mensah, 2025). In interviews conducted in fishing towns such as Dixcove (Yakubu, 2022; Interviews, 2022), numerous young men in Sekondi-Takoradi and Dixcove expressed dissatisfaction with their restricted opportunities and recounted instances of peers engaging in smuggling or stowing away as a pathway to a "better life" (Interviews, 2023; Interviews, 2022). Many young people involved in maritime crimes are often formally illiterate and are driven by necessity and the pressure of the need to make a livelihood, rather than personal conviction. This underscores that insecurity at sea is deeply rooted in broader socio-economic challenges.

Law enforcement agencies have problems with limited jurisdiction, corruption, and a lack of resources, which offenders take advantage of (Agyekum et al., 2024; Asomah, 2021). The EIMS and joint naval patrols have made security better through regional cooperation, but long-term social and economic programmes are still essential. Addressing these complex challenges requires effective maritime governance and policy frameworks, which are critically assessed in the following section.

⁵ The DASE mobile application in Ghana and Liberia enables artisanal fishers to record and geotag photos and videos of illegal fishing, submitting them to authorities; fishers report that its use has had a deterrent effect on illegal activities and strengthened their role in governance, illustrating how community reporting supports compliance and shared oversight.

The Usalama Baharini mobile application in Kenya connects coastal communities directly with the Kenya Coast Guard Service, allowing fishers to anonymously report suspicious or illegal activities at sea; project partners explicitly describe it as a community watch tool that improves communication, trust and collaboration between fishers and law enforcement.

The complex socio-economic realities, institutional fragmentation, and growing environmental pressures outlined in the section underscore the multifaceted nature of Ghana's maritime security challenges. These intertwined factors highlight the urgent need for coherent and integrated governance mechanisms that can navigate competing interests while fostering sustainable and equitable development. As the next section explores in greater depth, understanding Ghana's maritime governance landscape, characterised by overlapping mandates, coordination challenges, and evolving policy frameworks, is essential to unpacking how these socio-economic and environmental dynamics are addressed in practice and how they shape the prospects of the blue economy.

Maritime Governance and Policy Landscape

Ghana's maritime landscape is a dynamic mix of ecological richness, economic activity, and complex governance arrangements. Ghana's maritime governance and blue economy development occur within a multifaceted and dynamic governance framework aimed at unifying various stakeholders, policy areas, and transnational responsibilities. This section looks at the institutional and policy framework that affects Ghana's maritime security and blue economy. It focuses on important national policies, coordination between agencies, stakeholder participation, cooperation at the regional and international levels, governance issues, and chances for better management. The analysis utilises various examples and case studies to clarify the impact of governance structures on socio-economic results and maritime security effectiveness. Anchored by the National Integrated Maritime Strategy (NIMS), Ghana seeks to advance maritime security, environmental stewardship, and blue economy growth through a framework that emphasises national ownership, social inclusion, partnerships, accountability, and sustainability. However, the operationalisation of these principles encounters hurdles in clarifying leadership roles, synchronising enforcement, and resourcing critical maritime institutions.

The Ghana Maritime Security Act (Act 833, 2004) (Ghana Maritime Security Act, 2004) provides the legislative framework for ensuring the safety and security of Ghana's maritime domain. It establishes the GMA to enforce maritime laws, coordinate maritime activities, and promote maritime safety in territorial waters and the Exclusive Economic Zone. The Act integrates multiple agencies, including the Ghana Navy, Marine Police, Fisheries Commission, and Coast Guard, under a coordinated command structure to address maritime threats such as piracy, illegal fishing, and

smuggling. By emphasising inter-agency collaboration and enforcement, the Act supports Ghana's commitment to upholding maritime security within a rule-based governance system.

The NIMS, launched in 2023, articulates a comprehensive national framework to foster sustainable maritime governance and a thriving blue economy. The strategy's vision is to ensure a safe and secure maritime space by 2040 that contributes significantly to national economic growth, social development, and environmental sustainability. NIMS integrates key sectors, fisheries, port operations, offshore oil and gas, maritime tourism, and environmental protection, under six strategic objectives that include strengthening maritime governance, enhancing maritime safety and security, promoting capacity building, and encouraging regional and international cooperation (CEMLAWS, 2023). The strategy represents a shift towards a multidimensional approach that balances economic security, environmental stewardship, and social inclusion, aligning with global Sustainable Development Goals.

Regional and International Cooperation Initiatives

Because maritime security problems cross borders, Ghana is involved in regional and continental governance structures. Ghana is part of the ECOWAS Integrated Maritime Strategy (EIMS). Ghana is also in line with the African Union's Agenda 2063 Blue Economy Strategy, which aims to connect economic growth in the maritime sector with social and environmental development in all member states. Ghana is a member of the Gulf of Guinea Commission (GGC), which makes it easier to work together to manage shared resources and follow regional security rules. It collaborates with entities like the International Maritime Organisation (IMO) and the UN Office on Drugs and Crime (UNODC) on a global scale. It also works with the U.S. through AFRICOM. These partnerships often work on building capacity, providing technical help, and using technologies like satellite-based vessel tracking systems to improve maritime governance. However, differences in how countries govern, their national priorities, and their budgets make it hard for policies and operations to work together across the region. For sustainable regional maritime governance, continuously important to strengthen political will and share resources fairly.

In Ghana's maritime landscape, inclusive governance is increasingly aimed at engaging a diverse array of stakeholders, especially local coastal communities, artisanal fishers, women's groups, and the private sector. For example, community-based fisheries management committees have been given the power to keep an eye on fishing activities, report violations, and help plan for coastal resources.

Such bottom-up initiatives improve compliance and lower resource conflicts by including local knowledge and priorities in governance (Interviews, 2025). Women's groups involved in fish processing and marketing have advocated for greater recognition and support in policy development, promoting gender-sensitive governance that acknowledges distinct livelihood roles and challenges. Public-private partnerships (PPPs) give the private sector a big role in building ports, processing fish, and improving tourism infrastructure along the coast. These projects provide economic growth and skilled workers, but they also need strong government oversight to ensure fairness and fewer negative social and environmental effects.

The discussed complexities and coordination challenges inherent in Ghana's maritime governance framework in this section set the stage for examining how these institutional dynamics play out on the ground, influencing the lived experiences of coastal communities and the efficacy of maritime security efforts, which are discussed in the next section.

Empirical Evidence and Case Studies

This section presents detailed empirical evidence from case studies that illuminate the tangible impacts of Ghana's maritime governance arrangements and socio-economic conditions on fisheries management, resource conflicts, and community resilience. Through these localised narratives, the intricate linkages between policy, practice, and sea-based livelihoods come into sharp focus.

Case Study 1: Elmina's Artisanal Fisheries: Handling Resource Demand and Industrial Expansion

The conflicts between artisanal fishing and the growth of industrial fishing are best illustrated by Elmina, a historic coastal town in the Central Region. In Elmina, artisanal fishermen rely largely on nearshore waters for a variety of species that support local markets and household incomes. Fish stocks have been severely depleted in recent years due to increased industrial trawler activity offshore, some of which are licensed under joint ventures with foreign companies (Damoah, 2019).

Fishermen's serious concerns about diminishing catch and losing access to traditional fishing grounds were made clear to me during my fieldwork in Elmina. The lack of meaningful consultation in licensing decisions and inadequate enforcement were bemoaned by local fishermen's associations. In

spite of these obstacles, residents have set up fisheries management committees to keep an eye on illicit activity and promote fairer resource distribution. This case emphasises how significant it is to include artisanal fishermen in legal frameworks and strengthen enforcement in order to protect their means of subsistence and promote ethical industrial growth.

Strengthening coordinated enforcement mechanisms and integrating artisanal fishers, especially women and youth, into formal governance platforms is crucial. Policymakers should prioritise inclusive community engagement, invest in capacity-building, and develop livelihood diversification programmes aimed at reducing pressure on fisheries and mitigating conflict.

Case Study 2: The Greater Cape Three Points: Empowerment and Sustainability in Community-Based Fisheries Management

Collaborative fisheries management models have demonstrated potential in improving social cohesion and resource sustainability in the Western Region. The proposed community marine protected areas (MPAs) cover the Greater Cape Three Points area.⁶ The development of this MPA represents a co-management approach, wherein local fisherfolk, community leaders, and traditional authorities are integral to decision-making, planning, and conservation efforts (Owusu and Andriese, 2020). The Ghanaian Cabinet approved the establishment in October 2025, and it is currently in the final stages of gazetting and formally announcing it.

Such models combine traditional ecological knowledge with scientific monitoring, fostering inclusive governance structures. Women and young people play active and meaningful roles in governance through fisheries cooperatives and MPA committees, empowered by targeted capacity-building and education initiatives. Community-led patrols and educational campaigns have contributed to improved fish populations, increased compliance with conservation regulations, and the empowerment of marginalised groups. This case exemplifies how community stewardship, backed by multi-stakeholder collaboration and legal recognition, can effectively reduce resource conflicts and enhance socioeconomic resilience.

⁶ The Greater Cape Three Points straddle the Ahanta West and Nzema East districts of the Western Region, where fishing is controlled or temporarily restricted to allow for stock recovery, have been established through collaborations between local governments, non-governmental organisations, and fisheries authorities. This initiative is led by Ghana's MoFAD and the Fisheries Commission, with significant support from non-governmental organisations such as Hen Mpoano, and international partners including the U.S. Agency for International Development (USAID) and the University of Cape Coast's Centre for Coastal Management.

State and development partners should scale community-based MPA models, embedding gender and youth inclusion as core principles. Supporting legal recognition of local governance arrangements and facilitating multi-stakeholder collaboration will be key to sustaining these gains and advancing blue economy goals.

These case studies highlight the persistent challenges, such as industrial encroachment and illicit fishing and simultaneously reveal promising pathways through community-based co-management and inclusive governance models, offering valuable lessons for fostering a just and sustainable blue economy.

Discussion

This study reveals the profound and contested interconnections between Ghana's blue economy and maritime security through intertwined socio-economic, institutional, and environmental dimensions. The blue economy's promise of sustainable development is tempered by persistent challenges, entrenched youth unemployment, gender inequality, poverty, and fragmented governance, which collectively imperil both livelihoods and marine ecosystems. The complex nexus of artisanal fisheries, industrial expansion, and escalating environmental stress disrupts traditional maritime security, demanding governance responses that are not only innovative but also actively inclusive and adaptive.

Theoretically, applying political ecology, institutional analysis, and sustainable development frameworks exposes deeply rooted power asymmetries that marginalise coastal communities, especially women and youth, while impeding equitable resource governance. Empirical evidence from Ghana's coastal villages challenges prevailing victim narratives, highlighting artisanal fishers' agency and adaptive strategies amid precarious legal and ecological conditions, including participation in illicit yet survival-driven practices such as IUU fishing. These findings underscore the need for nuanced governance approaches that reconcile enforcement with socio-economic realities, recognising that simplistic repression risks exacerbating exclusion and undermining resilience.

Climate change amplifies these vulnerabilities: marine heatwaves, shifting fish distributions, and habitat degradation further strain ecological and human systems whose capacities for adaptation remain uneven. Moreover, tensions persist where conservation imperatives overshadow social justice,

calling into question “win-win” blue economy narratives that too often marginalise those dependent on marine resources for survival.

The governance landscape is complicated by overlapping mandates, elite capture, and uneven institutional coordination that hinder coherent and inclusive maritime governance. Persistent external threats, including piracy, trafficking, and transnational security challenges, add layers of complexity necessitating multisectoral, multilevel governance innovation.

While the study’s scope, focused on select coastal communities and time frames, limits broad generalisability, it enriches the understanding of how local realities and global forces coalesce in shaping Ghana’s maritime security. Crucially, it points to future research priorities around marine spatial planning, traditional authority roles, and regional governance collaboration within West Africa’s evolving blue economy.

Ultimately, this research frames Ghana’s blue economy as a work-in-progress case, and it is also a field of power, resistance, and possibility, where transforming governance into a vehicle for justice, sustainability, and resilience is imperative. The challenge ahead lies in investing in integrated strategies that balance economic growth with social equity and environmental stewardship, ensuring that security, livelihoods, and ecosystems are harmonised for Ghana’s maritime future and that of Africa and the world.

Conclusion

Ghana’s blue economy sits at a critical juncture where the promise of sustainable development confronts the entrenched realities of socio-economic disparity, environmental fragility, and fractured governance. This study exposes the enduring power asymmetries that marginalise coastal communities, especially women and youth, and reveals how these disparities are woven into the fabric of maritime security challenges. The persistence of fragmented institutions and competing interests threatens to unravel efforts toward a dedicatedly inclusive and resilient blue economy.

Yet, this narrative is not one solely of vulnerability; it is also of agency and adaptation. As demonstrated through detailed empirical evidence, artisanal fishers encounter complex and precarious lifeways, balancing survival within unclear regulatory frameworks. The emerging Blue

Justice paradigm demands that governance reforms go beyond superficial fixes, seeking instead to dismantle systemic inequities, embed inclusive participation, and nurture ecological and social sustainability.

The future of Ghana's maritime domain, and by extension its blue economy, depends on transformative approaches that reconcile economic ambitions with justice and ecological stewardship. Success lies in embracing governance that is not only integrated and multi-scalar but also rooted in the lived realities of those whose lives and livelihoods depend on the sea.

This study, thus, challenges and admonishes policymakers, scholars, and practitioners to envision and enact a blue economy where security, equity, and sustainability are mutually reinforcing pillars of maritime governance. In doing so, it offers a roadmap for Ghana and similarly situated coastal countries to achieve a just, prosperous, and resilient maritime future in Africa and the world largely.

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Declaration of Interest Statement

The author has reported no potential conflict of interest.

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