

**ASSESSING THE PERFORMANCE OF THE KENYA COAST GUARD SERVICE IN
ENHANCING MARITIME SECURITY IN HOMA BAY COUNTY, KENYA**

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**A thesis submitted in partial fulfilment of the requirements for the award of the degree of
Master of Science in Governance, Peace and Security in the Department of Governance,
Peace and Security Studies, School of Humanities and Social Sciences of Africa Nazarene
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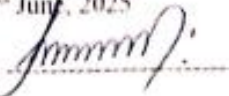
DECLARATION

I declare that this document and the research that it describes are my original work and that they have not been presented in any other university for academic work.

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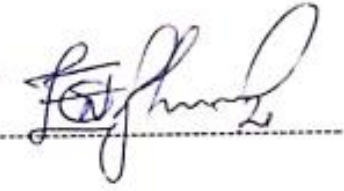
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DEDICATION

I dedicate this research to my cherished family. My compass during this trip has been your unfailing love, unrelenting support, and unending encouragement. Your belief in me gave me the courage to continue when I felt doubtful. Your understanding, tolerance, and sacrifice have fueled my tenacity and resolve. Your presence in my life is greatly appreciated, and I dedicate this work to you out of love and gratitude.

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ABSTRACT

Maritime security has become increasingly significant in the monitoring and regulating of maritime operations. This underscores the need to assess the performance and effectiveness of the Kenya Coast Guard Service (KCGS) in ensuring maritime security, particularly in Homa Bay County, Kenya. To achieve this aim, the study was guided by the following specific objectives: to examine the activities undertaken by the KCGS in ensuring maritime security; to assess the effectiveness of these activities; to evaluate the legal framework governing the KCGS, and to identify the challenges faced by the KCGS in maintaining maritime security in Homa Bay County, Kenya. Co-management Theory and Institutional Theory guided the study. It adopted a mixed method research design focusing on a sample size of 128 participants from a target population of 273 in Homa Bay County, selected using Yamane's sampling method. Data was gathered through questionnaires and in-depth interviews, collecting qualitative and quantitative data. Quantitative data was analysed using SPSS v27 software to present the results in tables, while qualitative data was analysed thematically to identify emerging themes. This mixed-methods approach provided a more comprehensive understanding of stakeholder perspectives by capturing measurable trends and deeper contextual insights. The use of triangulation enhanced the validity and reliability of the findings. In particular, qualitative interviews facilitated exploring subjective experiences and institutional challenges that could not be captured through structured questionnaires alone. Integrating both forms of data bolstered the robustness of the conclusions drawn, ensuring that the results reflected the diverse views and realities of the respondents within the selected population. The study found that the Kenya Coast Guard Service is actively involved in maritime security, with its activities in Homa Bay County including surveillance, coastal defence, and policy leadership. Additionally, the study identified challenges such as insufficient funding, corruption, limited equipment, lax enforcement, and minimal community involvement that hinder the service's efficacy. Although respondents acknowledged the value of current legislative frameworks, they also pointed out deficiencies in inter-agency collaboration and training. The need for greater awareness, inclusive participation with local communities, and improved institutional accountability was also emphasised. A more organised and well-resourced strategy prioritising capacity training, policy adherence, and active community participation is vital to bolster maritime security and improve the operational efficiency of the KCGS.

DEFINITION OF TERMS

Activities: In this study, activities refer to the maritime security programs in Homa Bay County, which include, among other things, conservation efforts, directing and providing guidance on the movement of items and people, policy leadership, coastal defence, and coordination of partner departments.

Cooperation: Cooperation implies working together to achieve maritime security objectives.

Effectiveness: Effectiveness implies the degree to which KCGS's activities are successful in maritime security in Homa Bay County.

Legal Framework: The legal framework refers to the principles that guide decisions concerning maritime security in Homa Bay County, Kenya.

Sustainability: Sustainability refers to the ability of maritime security programs and activities to exist constantly and continue to work in the future.

Maritime: Maritime refers to anything related to the sea or ocean, encompassing its ecosystems, resources, and human interactions.

Guard Service: Guard Service refers to a governmental or organisational body responsible for enforcing laws and ensuring security within a specific jurisdiction, particularly concerning maritime activities.

Maritime Security: Refers to measures and strategies for protecting the maritime environment from threats such as illegal fishing, pollution, and maritime crime.

Marine Resources: Marine resources refer to natural resources found in the ocean, including fish, minerals, and other biological entities, which are utilised for economic purposes.

Performance: Performance refers to how an entity fulfils its responsibilities, achieves established goals, and exhibits the required level of job knowledge, attitude, and behaviour from staff.

ABBREVIATIONS/ACRONYMS

AfDB	African Development Bank
AMTC	African Marine Transport Charter
ANU	Africa Nazarene University
AU	African Union
BMU	Beach Management Units
BPU	Border Police Unit
EAC	East African Community
EEZ	Exclusive Economic Zone
EU	European Union
FAO	Food and Agriculture Organisation
GDP	Gross Domestic Product
IGOs	Intergovernmental Organizations
IMO	International Maritime Organisation
ISCOS	Intergovernmental Standing Committee on Shipping
IUUF	Illegal, Unreported and Unregulated Fishing
KCGS	Kenya Coast Guard Service
KMA	Kenya Maritime Authority
KN	Kenya Navy
KRA	Kenya Revenue Authority
MDA	Maritime Domain Awareness
MSP	Marine Spatial Planning
MWs	Megawatts
NACOSTI	National Commission for Science, Technology and Innovation

NEMA	National Environment Management Authority
NGAO	National Government Administration Officers
PPPs:	Private Public Partnerships
RABITs	Raid Border Intervention Teams
RECs:	Regional Economic Communities
SAR	Search and Rescue
SDGs:	Sustainable Development Goals
SMEs:	Small and Medium Enterprises
SPSS	Statistical Package for Social Sciences
TC	TransCanada Corporation
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNEP	United Nations Environment Programme
UPDF	Uganda Peoples' Defence Forces
WB	World Bank

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter outlines the study's background, including the problem statement, the purpose of the study, and the research objectives and questions. Additionally, the chapter discusses the study's significance, scope, delimitations, limitations, and assumptions. It also presents the theoretical and conceptual frameworks.

1.2 Background of the Study

Maritime security is a shared governmental responsibility that involves multi-agency collaboration to combat illegal activities at sea, ensure safe navigation routes, and promote national and global interests (Bueger, 2014). As the name suggests, maritime security spans many threats, including terrorism, piracy, drug trafficking, smuggling of illicit goods, illegal fishing, and maritime accidents (Handa, 2021). Despite ongoing efforts to address these issues, challenges such as piracy and unregulated fishing remain persistent, hindering global maritime trade and contributing to violence and instability on land and at sea (Egede, 2018; Handa, 2021). Key factors driving maritime insecurity in the 21st century include poverty, resource conflicts, and the complex, fragmented nature of territorial boundaries.

Maritime security has been acknowledged as focusing on limiting deliberate damage via destabilisation, disruption, and extremism. Maritime security has also caught the attention of international relations and diplomacy perspectives (Handa, 2021). Most nations globally have also adopted various formidable maritime security policies. Maritime security promotes development and economic growth (Charo, 2021). As such, governments must develop naval forces to protect the interests of their maritime territories (Bueger, 2014). Additionally, deliberations on socio-

economic factors contributing to maritime insecurity are crucial in understanding the connection between the blue economy and maritime security.

It is imperative to recognise that there is an excellent prospect for progress from marine resources if governments worldwide update their developmental models to include maritime security (Alharthi & Hanif, 2020). Therefore, such kinds of development must always take maritime security and safety into account. Fairbanks, Boucquey, Campbell, and Wise (2019) state that the marine economy is more significant than just feeding the world. It can also unite the world, give it much-needed energy resources, improve living standards for people, and increase the lifespan of communities by giving the population the resources to manufacture pharmaceuticals. However, according to Kiswaa (2020), several challenges impact maritime security, such as terrorism, piracy, inadequate monitoring and evaluation of fish stocks, outdated infrastructure, insufficient statistical data, and illegal fishing.

Globally, Lindley, Techera, and Webster (2019) noted that advancing maritime security requires protection from a range of minor attacks and problems such as piracy, terrorism, drug trafficking, robbery at sea, human trafficking, and contraband. Protecting shipping against terrorists, for instance, is a relatively new requirement. The issues of marine pollution loom over all aspects of sea use. Furthermore, marine food is being harvested at an alarming rate, putting in doubt the sustainability of this industry (McCabe, 2019). In light of these difficulties, African governments should stop removing development models from other organisations, such as the Bretton Woods institutions, and instead create models appropriate for their unique circumstances (Dada, 2020). These models must aim to conserve aquatic and marine resources as well as exploit them.

A United Nations Conference on Sustainable Development report highlights the importance of integrating economic and trade activities with conservation and sustainability efforts in managing maritime domains (Egede, 2018). This approach guides the understanding of the implications for the blue economy. Maintaining maritime security is crucial for economic growth and development, besides guaranteeing human security aspects such as food security, safe employment opportunities, and sustainable livelihood (Charo, 2021). Therefore, this implies that maritime insecurity, such as illicit trade or unregulated fishing, among others, hurts the benefits of the blue economy.

Major players in Africa's fishing and marine industries include Morocco, South Africa, Namibia, Mauritania, Seychelles, and Senegal (Okafor-Yarwood et al., 2020). Fish is a worldwide commodity that brings in around 140 billion US dollars annually. A market share like this bodes well for African nations looking to boost their economies. Nonetheless, the continent continues to face difficulties with maritime security. The 2020 World Bank (WB) report states that West Africa has 35 international borders with high porosity. Because of this, they are particularly susceptible to threats like drug and human trafficking, light and minor arms trafficking, and recent acts of terrorism (Aniche, Moyo & Nshimbi, 2021). However, national security and economic policies are not always the source of maritime border security issues, and border organisations typically lack the necessary resources, training, and equipment (Bala & Tar, 2021). Some regional boundary points, particularly farther from the capital, lack adequate infrastructure, such as scanners and detection devices.

In Africa, the maritime domain is a critical economic lifeline underpinning food security and trade sovereignty. Most import and export activities rely on maritime routes (Charo, 2021). In addition to their economic value, maritime domains, particularly fisheries, are vital for African

food security (Handa, 2021). Therefore, any interruption in fish access will significantly threaten food security and economic stability across the continent. According to a study by Patricio et al. (2022), the ability to effectively manage marine resources has been severely hampered by a lack of office space, marine border monitoring and control personnel facilities, and inadequate communication channels in West Africa. A lack of understanding of local agreements and national constituent laws regarding effective maritime security management worsens these issues. Employees stationed in the frontier regions of Mali and Niger, for example, have expressed dissatisfaction over inadequate logistics and training to perform their jobs efficiently (Tar & Bala, 2019). People in Mali have voiced their displeasure with the Tessalit Nine Region's subpar working conditions and lack of logistical support. Due to their large geographic areas, these two nations make patrolling extremely challenging, necessitating ongoing employee training and better working conditions.

In Kenya, the Indian Ocean and Lake Victoria provide a significant economic opportunity for numerous people (Handa, 2021). Despite this potential, these prospects have been undermined by maritime security challenges such as piracy, unregulated fishing, marine contamination, and overexploitation of maritime resources. The nature of these security challenges results in maritime security becoming the nation's emerging priority (Charo, 2021). As such, the country has since introduced security laws focusing on border control. Given the upsurge of fishing and overexploitation of maritime resources, Kenya has recognised inland waters as essential sources of economic insecurity and opportunities (Charo, 2021). Lake Victoria represents a crucial element in Kenya's blue economy. As such, it is vital to examine the nature of maritime security with a focus on Homa Bay County and explore the measures set up by the National and County governments, among other players, in addressing obstacles to maritime security.

It is crucial to acknowledge that Kenya possesses marine resources that are expected to strengthen its economy, unlike many other nations with maritime borders. Among the resources are coral reefs, fish, oil and gas, oceanic minerals, and pharmaceuticals (Kiswaa, 2020). Marine resources are the abundance of biological and non-biological resources in the seas and oceans. Resources like fish, molluscs, and marine plants are essential for economic activity and food security. Furthermore, non-living resources such as minerals, oil, and gas beneath the ocean floor are also considered marine resources. Seagrass beds, mangroves, and coral reefs are additional essential elements that support coastal livelihoods, increase biodiversity, and provide ecological services like carbon sequestration. Key marine resources in Kenya's coastal region include seaweed, tuna, and a variety of shellfish, which are valuable for domestic consumption and export markets.

Kenya's maritime security agencies were restructured to conform to the changing operational environment following the government's adoption of new international and regional maritime security frameworks due to the ongoing manifestation of maritime threats. In response, Kenya established the KCGS in 2018 as a centralised maritime law enforcement organisation to improve maritime governance. Established in 2018 by Kenya Gazette Notice No. 11, this maritime law enforcement organisation can operate in territorial waters to enforce maritime security and safety, control pollution, and stop the illegal trafficking of goods, drugs, firearms, and ammunition (Charo, 2021). Additionally, it can protect marine resources, such as fisheries and archaeological or historical sites or artefacts, search and rescue, port and coastal security, and prosecute maritime offenders (Njiru, Mutungi & Ochieng, 2020). As a new organisation establishing itself in a field lacking a fully committed and efficient maritime law enforcement agency, KCGS is confronted with difficulties.

Homa Bay County is situated in the southern part of Kenya's Nyanza Region, along the southern shores of Lake Victoria, Africa's largest freshwater lake. It shares its borders with Migori, Kisii, Nyamira, Kericho, and Kisumu counties (Handa, 2021). The county's economy is heavily dependent on agriculture and fisheries, with fishing serving as a vital economic activity and a primary source of livelihood for many residents. As of 2013, the county had 151 landing beaches overseen by 133 Beach Management Units. The most commonly caught fish species include Tilapia, Nile perch, and silver sardines (commonly known as *omena*). A report by the County Government of Homa Bay indicated that over 12,000 tons of fish were caught annually, generating approximately Ksh. 9 billion in revenue. In 2012, Lake Victoria also contributed 76,710 tons of fish, valued at around Ksh. 7 billion (Handa, 2021). Homa Bay County accounts for over 50% of Kenya's fish production. Given the county's critical role in the fishing industry, addressing the gaps in managing maritime security and understanding the economic importance of fishing activities is essential. This study aims to provide insights into these issues for Homa Bay, Kenya, and the broader East African region.

Homa Bay County, well known for its coastline, has a total area of 3,183.3 square kilometres (Gikemi, 2022). However, the county still faces aquatic security threats despite the KCGS's presence. The establishment of KCGS in 2018, intended to complement existing maritime security agencies, has amplified challenges in the maritime environment. These challenges stem from independent operational and tactical planning encouraged by maritime security agencies, which has led to conflicts and overlapping roles (Njiru et al., 2021). Additional difficulties include a lack of resources, a culture of incompatibility among the many security agencies that have joined to form the service, intelligence failures, and the incapacity to handle globally organised groups (Charo, 2021). The KCGS is still in its infancy and faces challenges in carrying out its mandate

due to a lack of platforms and personnel. The agency faces significant difficulties meeting tactical and operational demands due to the enlarged maritime jurisdiction and heightened maritime threats (Charo, 2020). Some of KCGS's responsibilities as a new agency on maritime security matters are also represented in the mandates of other agencies before KCGS's establishment (Njiru et al., 2020). This study, therefore, aims to determine the effectiveness of KCGS in enhancing maritime security in Homa Bay County, Kenya.

1.3 Statement of the Problem

From 2008 to 2020, Kenya experienced a range of marine security risks including illegal fishing and drug trafficking. The nation's economy and tourism industry were impacted by the significant decline in cruise liner visits from 35 to nearly zero due to piracy (Njiru et al., 2021). Kenya still faces a variety of maritime risks, including piracy. Because of the ongoing threats, the government adopted new regional and international security frameworks. It encouraged the nation's marine security agencies to be reorganised to better suit the changing operating landscape (Charo, 2020). As a result, the nation established the Kenya Coast Guard Service in 2018 to strengthen maritime governance and act as the primary maritime law enforcement organisation.

A crucial component of national security is maritime security, especially in areas where waterways play a significant economic role. Bueger and Edmunds (2017) assert that a coordinated strategy encompassing law enforcement, stakeholder engagement, and legal frameworks is necessary for effective maritime governance. However, operational and structural issues hinder the efficacy of maritime security agencies in many developing nations (Vreÿ, 2013). Strong security is required because illegal fishing, smuggling, and environmental risks make Kenya's inland waters, including Lake Victoria, more susceptible. KCGS was created to address these issues, although little is known about its effectiveness in its day-to-day operations. According to

Klein (2020), sufficient funding, inter-agency collaboration, and flexible legal frameworks are essential for maritime security organisations' success.

Kenyan maritime security is a significant concern, especially in areas like Homa Bay County, where smuggling, illegal fishing, and environmental degradation threaten national security and economic activity (Charo, 2020). KCGS was created to improve maritime security, but it is unclear how well it will carry out its mission because of institutional, legal, and operational issues. A lack of resources, coordination with other agencies, and regulatory restrictions may hamper its capacity to counter maritime threats effectively. Furthermore, there is a paucity of empirical research evaluating the effectiveness of KCGS in protecting Kenya's inland waterways, especially Lake Victoria. By highlighting significant obstacles, prospects, and areas where policies need to be improved to improve security, this study aimed to assess how well KCGS is doing its part to maintain maritime security in Homa Bay County.

1.4 Purpose of the Study

This study aimed to assess the effectiveness of the Kenya Coast Guard Service in enhancing maritime security with a special focus on Homa Bay County, Kenya.

1.5 Objectives of the Study

1.5.1 General objective

The primary objective of the study was to assess the effectiveness of the Kenya Coast Guard Service on maritime security in Homa Bay County, Kenya.

1.5.2 Specific Objectives

The study was guided by the following objectives that sought:

- i. To examine activities undertaken by the Kenya Coast Guard Service in enhancing maritime security in Homa Bay County, Kenya.

- ii. To assess the effectiveness of the activities undertaken by the Kenya Coast Guard Service in enhancing maritime security in Homa Bay County, Kenya.
- iii. To evaluate the legal framework guiding the Kenya Coast Guard Service in enhancing maritime security in Homa Bay County, Kenya.
- iv. To identify challenges the Kenya Coast Guard Service faces in enhancing maritime security in Homa Bay County, Kenya.

1.6 Research Questions

- i. What activities are undertaken by the Kenya Coast Guard Service to enhance maritime security in Homa Bay County, Kenya?
- ii. How effective are the activities undertaken by the Kenya Coast Guard Service in enhancing maritime security in Homa Bay County, Kenya?
- iii. To what extent is the legal framework guiding the Kenya Coast Guard Service in enhancing maritime security in Homa Bay County, Kenya?
- iv. What challenges does the Kenya Coast Guard Service face in enhancing maritime security in Homa Bay County, Kenya?

1.7 Significance of the Study

The importance of the research findings and strengths in filling in knowledge gaps or introducing new information is what Harrison, Reilly, and Creswell (2020) define as significance. Policymakers, the general public, and academics can all benefit from the study. This research aims to persuade decision-makers to create pertinent and appropriate maritime security policies. The study results will support conservation initiatives, address illegal, unreported, and unregulated fishing (IUUF) practices, establish regulatory bodies, find new and suitable technology, and support research and training. Residents of the lakeshores in Homa Bay County and other Kenyan coastlines will also find the study vital as they will learn about enhanced maritime security in their

area, current job opportunities, maintaining and protecting the maritime environment, working with government and private stakeholders, and how the marine resources can help them expand from small to large scale by bringing people together and creating organizational bodies for trading and negotiating partnerships. As an illustration, the groups of fishermen or seafarers.

The academic community will gain from having a resource for information about Coast Guard Services and maritime security in Africa, particularly in Kenya, for their upcoming research. Most of the literature focuses on international cases with little effort to analyse how different maritime strategies can be used to improve marine resource security, which this study aims to fill. There is a dearth of information on marine resources security in Kenya, particularly inland marine resources. Therefore, to advance maritime security, this study will provide information on maritime areas, including coastal and port areas.

1.8 Rationale of the Study

National security must include maritime security, especially in areas like Homa Bay County with large bodies of water. To protect Kenya's territorial waters, stop illicit activities like smuggling and IUUF, and guarantee adherence to maritime and environmental regulations, the KCGS was founded. Nevertheless, there are questions about how well it will carry out these duties despite its mandate. This research is essential for several reasons. It first evaluated the effectiveness of KCGS operations, providing insight into how well its operations are securing the marine area. Second, it assessed the legal structure that oversees KCGS, looking for any holes that might compromise its efficacy.

The study also examined challenges that KCGS faces, especially when working with other agencies like the Kenya Maritime Authority (KMA), Kenya Revenue Authority (KRA), and the National Environment Management Authority (NEMA). Because Homa Bay County is home to primary maritime operations like cage fish farming and transportation, knowing KCGS's role in

this context helped to understand how security interventions affect environmental and economic sustainability. The study also helped develop policy recommendations to improve KCGS's efficiency, ensuring a safe and regulated maritime environment. This study provided a comprehensive understanding of maritime security issues and solutions by concentrating on stakeholders, including Beach Management Units (BMUs), KCGS staff, Border Police Unit (BPU), and county government representatives. Policymakers, members of the maritime sector, and the local community that depends on Lake Victoria's resources will all gain from the findings.

1.9 Scope of the Study

According to Bell, Bryman, and Harley's (2022) hypothesis, the study's scope establishes the parameters within which the research is conducted. This study aimed to evaluate how well KCGS provides maritime security. The study's variables include the type of activities conducted, their efficacy, the legal structure that governs the KCGS, and the challenges facing the KCGS in maritime security. Beach management units, KCGS employees, BPU, junior National Government Administrative Officers, Kenya Police, NEMA, County Government officers, KRA, KMA, and caged fish farmers were the only groups whose data were collected for this study. The study was conducted in Homa Bay County using a descriptive research design.

The study additionally used semi-structured questionnaires. Homa Bay County was chosen as the study area because of its strategic location along Lake Victoria's shores, a critical hub for Kenya's inland maritime activities. The region experiences a wide range of maritime security concerns, including illegal fishing, smuggling, safety violations, and environmental degradation, making it a relevant and practical setting for assessing the effectiveness of KCGS. Additionally, Homa Bay hosts various stakeholders in the maritime ecosystem, such as Beach Management Units (BMUs), cage fish farmers, and regulatory bodies, offering a diverse sample for data collection. The study took place between November 2024 and May 2025.

1.10 Delimitation of the Study

According to Creswell and Clark (2017), delimitation is a factor that the researcher can influence but can also impact the study's findings. The study's scope was restricted to KCGS's efficacy in Homa Bay County's maritime security. Additionally, the study was restricted to the county's maritime security stakeholders.

1.11 Limitations of the Study

A limitation is an element of a study that the researcher has no control over. A researcher cannot manipulate it to facilitate the study (Bell et al., 2022). The researcher could only observe situations in which respondents may attempt to conceal sensitive information. The difficulty was lessened by promising the respondents that the information they provided would remain confidential. Only the researcher had access to the data, and no identifiers, such as names, would connect the participants to any specific information. Furthermore, the respondents' schedules were sometimes too hectic to respond to the questions. To overcome the constraint, the researcher scheduled meetings with the participants to avoid such situations.

1.12 Assumptions of the Study

According to Azungah (2018), the researcher must make certain assumptions about the study to solve the research problem. As with other targeted populations, this study was predicated on KCGS granting the researcher access to their personnel and facilities. Moreover, the study assumed that participants would give truthful responses. Additionally, the study assumed that participants would be reachable and eager to provide accurate information. Additionally, the study assumed that the KCGS follows established maritime security procedures in Homa Bay County and functions within the current legal framework. Furthermore, it was anticipated that the opportunities and difficulties noted in this study would mirror more general patterns influencing maritime security in Kenya's inland waterways. Additionally, the study assumed that the chosen

stakeholders, such as government organisations, BMUs, and KCGS staff, have the necessary training and expertise to offer trustworthy data and information on maritime security.

1.13 Theoretical Framework

Creswell and Clark (2017) describe a theoretical framework as a structured set of interconnected variables, definitions, and propositions that systematically understand a phenomenon by outlining the relationships between variables. This study was grounded in the Co-management theory as its primary framework, complemented by the Institutional Theory to strengthen the analysis.

1.13.1 Theory of Co-Management

Noble's (2000) Theory of Co-management served as the study's compass. Normative and objective gains are its two fundamental tenets. The Theory of Co-management refers to a governance approach where different stakeholders, typically the government and local communities, share responsibility and authority over resource management. It is commonly applied in natural resource management, fisheries, forestry, wildlife conservation, and public administration. Regarding topology, natural resource management is typically divided into four categories: open-access, state, community, and private management. It is a typical aspect of managing natural resources. According to Johnsen and Soreng (2018), public and private stakeholders should be involved in this management.

The core of the Co-management Theory's definition is the division of responsibilities between other state agencies and marine users. It claims that, compared to many other models, this management style is more cost-effective and efficient (Cucuzza, Stoll & Leslie, 2021). It is strongly advised for the security and management of the maritime economy because indigenous knowledge is essential to any study. When paired with government data, it helps create better laws and policies for the sector (Cucuzza et al., 2021). The legitimacy of law enforcement derives from

the local population. In the coming years, the maritime economy movement aims to revolutionise the marine and inland water industries (Pearson & Dare, 2019). Besides meeting safety standards for both people and the environment, the business model for this economy should be capable of encouraging investment in people, the environment, society, and other enterprises while making a profit.

Co-management philosophy is a governance strategy that stresses shared accountability and decision-making between local resource users and government agencies (Pearson & Dare, 2019). It is frequently used to improve sustainability, inclusivity, and efficiency in managing natural resources, including fisheries and maritime security. In co-management, local communities, business organisations, and government officials work together to create and carry out policies, guaranteeing that management choices are based on indigenous knowledge and scientific understanding (Pearson & Dare, 2019). More stakeholder participation is encouraged by this strategy, which enhances compliance, resource conservation, and dispute resolution.

Noble's (2000) Theory of Co-management offers a crucial framework for examining how well KCGS improve maritime security in Homa Bay County. Fundamentally, co-management highlights the shared obligations between state organisations and marine users, including businesses and local communities (Cucuzza et al., 2021). This cooperative strategy fits nicely with maritime security's intricacies, where state resources and local expertise must cooperate. Pursuing normative and objective gains is one of the fundamental tenets of co-management (Cucuzza et al., 2021). According to this framework, building relationships that are advantageous to all parties involved is just as crucial to the efficient management of maritime resources as upholding legal requirements. For example, KCGS' partnership with local fishermen in Homa Bay may improve resource efficiency. Local fishermen can give KCGS vital information since they are frequently

the first to notice illicit fishing activities or security risks. This collaboration increases the overall efficacy of maritime security initiatives while lowering the expenses related to enforcement and surveillance.

Developing strong policies requires incorporating local knowledge. By integrating community perspectives and official data, KCGS can develop better-informed strategies to tackle the unique issues encountered in Homa Bay. Better decisions are made as a result, and KCGS's law enforcement operations are also given more legitimacy. Local communities are more likely to comply with regulations when they feel valued and included, which promotes the collaborative atmosphere necessary for efficient maritime governance. Additionally, the co-management approach promotes the participation of private and public stakeholders. Establishing a thorough framework for maritime security depends on this multifaceted engagement. Such an approach could involve collaborations with the private sector, non-governmental organisations, and the County Government of Homa Bay, all of which support a more robust maritime economy.

Co-management can potentially transform Homa Bay's maritime industry entirely in the future. It urges creative approaches supporting sustainable development while addressing pressing and emerging security issues (Pearson & Dare, 2019). KCGS can promote investment in local communities and a thriving maritime economy by upholding safety standards for people and the environment. This all-encompassing strategy meets the current and future generations' needs while aligning with the larger objectives of sustainable resource management. In conclusion, the study of KCGS in Homa Bay using Noble's Co-management theory emphasises the value of cooperation, local expertise, and stakeholder involvement in boosting maritime security. This framework guarantees that community and environmental interests are prioritised in managing Kenya's

priceless maritime resources, supporting efficient law enforcement and a sustainable maritime economy.

Although the Co-management Theory promotes cooperation in resource governance, there are several challenges when applying it to this investigation into KCGS's ability to maintain maritime security. First, the scope of shared decision-making with local stakeholders is constrained by KCGS's hierarchical command structure, which functions as a law enforcement agency. Additionally, complex issues such as illegal fishing, border violations, and smuggling are integral to maritime security and call for enforcement-based solutions rather than negotiated governance. Co-management can improve collaboration between KCGS and local actors such as caged fish farmers and BMUs. Still, its efficacy is limited by operational and legal mandates that put national security concerns ahead of stakeholder participation. As a result, although co-management provides valuable insights for stakeholder engagement, its applicability to law enforcement-driven maritime security is still limited, which permits the introduction of the Institutional Theory as described below.

1.13.2 Institutional Theory

The Institutional Theory, introduced by John Meyer and Brian Rowan in the late 1970s, examines how organisations align and interact with their external environments, including public, state, national, and global contexts. This theory provides insights into the enduring elements of social structures, such as norms, rules, routines, and systems, and how these elements are recognised as authoritative guides for social behaviour (Handa, 2021). It also explores how social structures are disseminated, internalised, implemented, and maintained within society (Handa, 2021). Consequently, institutional theory helps elaborate and illuminate the rules and requirements to which organisations are expected to conform.

In organisational studies, Institutional Theory is a paradigm that looks at how formal laws, conventions, and cultural beliefs, or institutions, influence how people and organisations behave. Lounsbury, Miller, Fisher, and Zhao (2017). It implies that by establishing norms and expectations that direct decision-making, institutions give social life stability and purpose. Organisations frequently adapt to institutional pressures through processes like normative isomorphism (aligning with professional standards), mimetic isomorphism (adopting practices from successful organisations), and coercive isomorphism (adapting due to legal or regulatory mandates), according to Zhao et al. (2017). These processes aid in the explanation of why businesses in comparable settings typically adopt similar practices and structures.

Institutional Theory has been extensively used in several disciplines, such as economics, environmental governance, and public administration. Peters (2019) extended the theory by classifying institutions into three pillars: regulative, which comprises rules and policies that require compliance; normative, which refers to social and professional standards; and cultural-cognitive, which encompasses shared beliefs and values. Institutional Theory studies have demonstrated that firms want legitimacy within their institutional environment and efficiency (Coates, Trudgett, & Page, 2023). For instance, studies of law enforcement organisations have shown how legal requirements and bureaucratic structures impact policing tactics, frequently resulting in inflexible operational frameworks.

Several academic fields, such as public administration, law enforcement, and government, have used Institutional Theory. Chiu (2018) expanded the theory to include economic institutions, contending that institutional frameworks significantly influence economic growth by promoting or preventing productive activity. According to Lok (2019), governance systems tend to establish inflexible operational frameworks over time, underscoring the influence of institutional norms and

regulations on political decision-making. Studies on law enforcement have revealed that legal requirements and bureaucratic structures impact policing tactics, frequently resulting in standardised procedures that might not always be flexible enough to meet changing security threats. Although Institutional Theory has its merits, it has been criticised for focusing too much on continuity and stability while frequently ignoring how institutions evolve and respond to changing situations. According to Burdon and Sorour (2020), organisations can propel institutional change through deliberate initiatives rather than by being passive actors reacting to institutional influences. Likewise, Jeong and Kim (2019) presented the idea of institutional entrepreneurship, emphasising how people and institutions can question and transform current institutional frameworks. These criticisms imply that although institutional theory might help understand stability, it could require other frameworks to depict the processes of institutional innovation and change more accurately.

Institutional theory offers a crucial framework for comprehending intricate governance, regulation, and stakeholder interaction dynamics when examining how well KCGS maintains maritime security in Homa Bay County. This theory highlights how formal and informal institutions influence how organisations and individuals engaged in maritime security behave. Fundamentally, Institutional Theory asserts that organisations function within a structure characterised by standards, conventions, and expectations (Coates et al., 2023). In the case of KCGS, this framework comprises several laws, regulations, and unofficial procedures that affect how it operates. The study can reveal how external factors, such as national and international maritime laws, influence KCGS's operations and strategies in Homa Bay by placing the organisation within this institutional framework.

The importance of power dynamics among the different stakeholders involved in maritime security is also highlighted by Institutional Theory. The intricate relationships between KCGS, local communities, governmental organisations, and other players shape operational effectiveness. Examining the distribution and use of power within this framework will highlight the opportunities and difficulties KCGS has in carrying out its mission. Conflicts may result when stakeholders have different priorities or power disparities prevent productive collaboration. Institutional Theory also makes it possible to examine the difficulties KCGS faces due to institutional limitations. These could include inconsistent policy implementation, resource constraints, or bureaucratic roadblocks. Determining these limitations will show how they affect KCGS's capacity to enforce maritime security successfully. Furthermore, analysing KCGS's responses to these difficulties will demonstrate its flexibility and fortitude in a limited setting. Conversely, the identification of opportunities to improve KCGS's efficacy is encouraged by Institutional Theory. By encouraging cooperation between interested parties and using existing connections, KCGS can establish collaborations that enhance the results of maritime security. Examining fruitful collaborations with international organisations, NGOs, or local communities can highlight best practices and creative strategies that improve institutional efficacy.

1.14 Conceptual Framework

According to Harrison et al. (2020), a conceptual framework is a visual representation that outlines a study's independent and dependent variables. It summarises these variables and demonstrates how they interact, as illustrated in Figure 1.1.

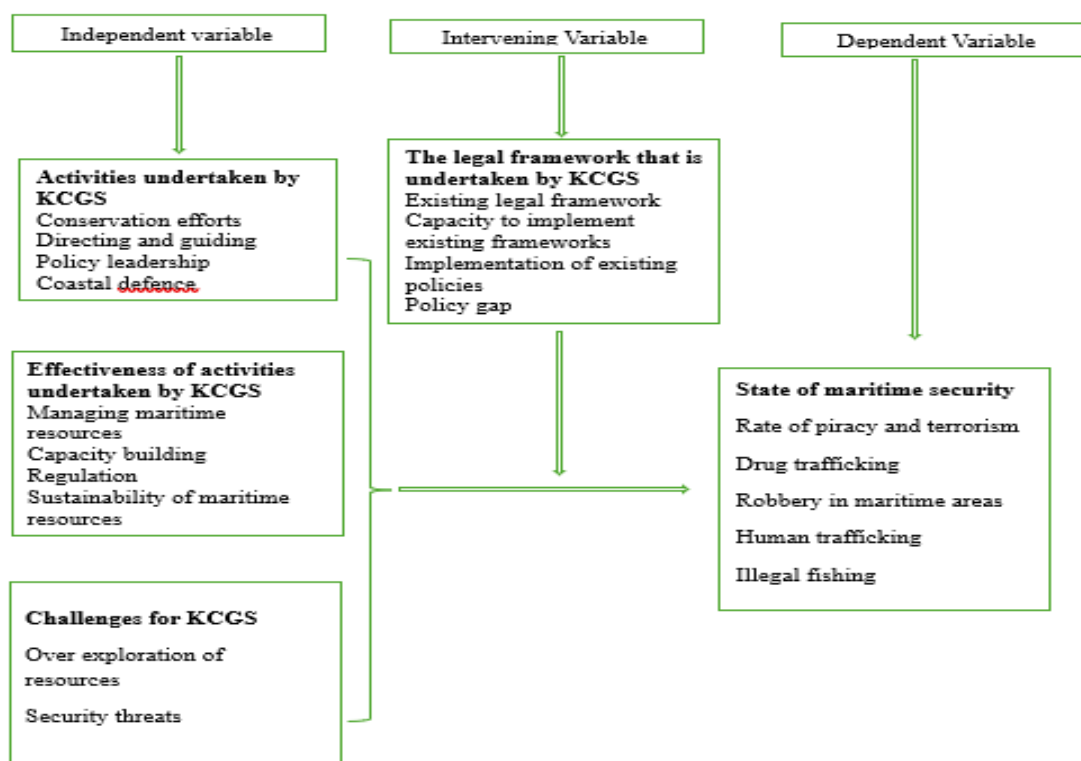


Figure 1.1: Conceptual Framework

Source: Author (2025)

The conceptual framework of this study identifies several key independent variables that influence the dependent variable, which is the maritime security level in Homa Bay County. The first independent variable is the activities undertaken by KCGS. They include a range of operational functions such as patrolling, surveillance, enforcement of maritime laws, and engaging with the community to enhance maritime security. These activities are essential for creating a safe maritime environment. The second independent variable, the effectiveness of activities undertaken by KCGS, evaluates how successfully these operations achieve their intended objectives. It involves assessing outcomes such as reducing illegal activities at sea, response times to incidents, and the overall impact on maritime safety in the region.

Finally, the challenges faced by KCGS represent another independent variable. They include identifying the obstacles that may hinder the effectiveness of KCGS operations, such as resource constraints, insufficient training, issues with inter-agency coordination, and socio-economic factors that affect maritime security. Additionally, an important intervening variable is the legal framework governing KCGS. It encompasses the laws, regulations, and policies that define the operational mandate and authority of the KCGS. The strength and clarity of this legal framework are vital in enabling the KCGS to carry out its responsibilities and ensure compliance with national and international maritime laws.

The dependent variable in this framework is the level of maritime security. This variable reflects the overall state of security in the maritime environment of Homa Bay County, incorporating indicators such as incidences of maritime crime, the safety of maritime resources, the enforcement of laws, and community perceptions of safety. The level of maritime security is influenced by the effectiveness of KCGS activities and the various factors outlined in the independent variables.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter examines related works that have already been written about the subject by different academics, writers, and analysts with a focus on general and empirical literature. The effects of maritime security and the factors influencing it are the subject of a vast and growing body of research worldwide. The proposed investigation summarises the literature, identifies knowledge gaps, and discusses the empirical literature review based on the study's specific objectives.

2.2 Review of Literature

2.2.1 Maritime Security

Although no universally accepted definition of maritime security exists, it raises awareness of new problems by mobilising people to address marine concerns. Therefore, it can be described as a multi-agency operation that aims to promote national and international interests, provide safe passage, and stop illicit operations at sea. Over time, maritime security has expanded to include a broader range of tasks and functions, tackling contemporary non-conventional challenges and moving away from a limited concentration on state naval actions to project national maritime might. This evolution includes using soft power tools to shape the strategic operational environment (Bueger, 2017). As scholars understand, maritime security encompasses conventional and non-traditional threats within the maritime domain (Charo, 2021). Historical works such as *The Influence of Sea Power on History, 1660- 1783*, and *The Influence of Sea Power on the French Revolution and Empire, 1793-1812*, highlight the maritime industry's strategic significance in shaping national strategies and naval dominance (McCabe, 2019). These works underscore the importance of sea power in securing command of the seas, essential for both military and

commercial control, while emphasising its integration with land-based strategies to amplify power and influence.

Command of the sea refers to controlling the Sea Lines of Communication (SLOCs) to support military or commercial objectives. As articulated in “*Some Principles of Maritime Strategy*,” maritime strategy stresses that naval operations should prioritise achieving national goals (Africa Centre for Strategic Studies, 2016). In the modern context, sea power is increasingly focused on maintaining maritime order, which is vital for global security and economic prosperity, particularly in light of globalisation and the interconnected global trading system (Charo, 2021). The oceans serve as a source of wealth, a medium for trade and communication, and a life-sustaining resource, all threatened by environmental degradation, overexploitation, and climate change, necessitating greater efforts to safeguard their contribution to human development.

Ensuring good order at sea highlights the importance of maintaining safe and secure access to maritime resources for nations and the global community. Maritime security encompasses legislative, executive, judicial, military, and policing efforts to address threats and ensure stability in the maritime domain (Charo, 2021). Rather than a universally defined concept, maritime security is often context-specific, shaped by current and potential threats and the measures required to counter them (Handa, 2021). It is a multifaceted concept, intertwining elements such as human security, the blue economy, sea power, and maritime safety (Benkenstein, 2018). The core objectives of maritime security according to Egede (2018) include facilitating uninterrupted trade, protecting maritime professionals, preventing collisions, safeguarding ocean resources, and addressing environmental and climate-related challenges while ensuring the safety of coastal communities and seafarers.

Some scholars advocate integrating civilian roles into maritime security by involving coastal communities and engaging multiple stakeholders across onshore and offshore agencies (McCabe, 2018). To guarantee a stable and secure maritime domain, this could be further improved by connecting stakeholders and coastal communities into an integrated security regime (Charo, 2021). The fundamental goal of maritime security is to create a safe and stable environment that can support economic growth. However, because most of the insecurity issues in the maritime domain cut across national borders, the maritime domain itself has grown to be a platform offering the broadest range of non-military maritime concerns (McCabe, 2018). These concerns are compelling and only call for cooperation among the various regional and global powers.

Maritime security cannot be viewed as a straightforward phenomenon that can be ensured by a single coastal state or group due to the nature and dynamics of maritime threats (Bueger, 2017). These theoretical conceptualisations confirm that maritime security is still a contentious idea whose focus varies by state or geographical area (Charo, 2021). Additionally, it is a vague and wide-ranging concept that fails to explain how maritime threats are connected for a globally coordinated response to maritime issues, making it insufficient to prioritise threats (McCabe, 2018). These worries led to the modern understanding of maritime security as a concept combining laws, rules, actions, and operations to protect the maritime domain.

2.2.2 Maritime Boundary Disputes

Managing maritime borders involves a variety of stakeholders, including shipping companies, port authorities, maritime institutions, multinational corporations, and regional and international organisations. It also involves government agencies like customs, immigration, police, the armed forces, the Ministry of Agriculture, drug enforcement agencies, and product regulatory agencies (Charo, 2021). Therefore, maritime boundary disputes make maritime space governance more difficult, impede maritime security cooperation, and increase the risk of regional

instability. Two significant maritime boundary disputes with neighbouring states, which have some bearing on access to ocean resources and the ability to take advantage of such opportunities, complicate coastal maritime governance in Kenya (McCabe, 2018). Migingo Island on Lake Victoria is the subject of a second dispute with Uganda, and the first is with Somalia over the maritime boundary, which includes the continental shelf in the Indian Ocean beyond 200 nautical miles (Charo, 2021). A Memorandum of Understanding signed in 2009 over an area of the Indian Ocean that is approximately 100,000 km² and that both countries claim is part of their maritime territory was the subject of Somalia's 2014 dispute (McCabe, 2018). The International Court of Justice (ICJ) acknowledged that it had the authority to decide on Somalia's application in February 2017 after dismissing Kenya's preliminary objections.

The ICJ decision may impact the disputed area, which is said to have natural gas and oil reserves (McCabe, 2018). Kenya has reportedly already granted rights to several companies to explore and exploit hydrocarbons. Since independence, the Kenyan Navy has maintained its sovereignty over the EEZ borderline along the latitude parallel by actively patrolling this disputed area (McCabe, 2018). Somalia's claim will probably be weakened because it lacks ships and has not patrolled the region. A more thorough examination of how approaches to maritime governance have been affected and influenced by the rise in Somali-based piracy is made possible by understanding both states' intricate maritime political and spatial geography.

2.2.3 The Coast Guard Services

Given the large number of government organisations that operate at sea, it is critical to clarify the role and duties of the Coast Guard. One of the institutional safeguards for a maritime state's sovereign rights at sea is the Coast Guard. The CG is a naval unit that helps damaged and stranded vessels in distress on or near its coasts and keeps an eye on adherence to national maritime rules (Sunko, Mladineo, Kovačić & Mišković, 2024). The CG is a maritime agency created to

uphold the rules and laws to safeguard the coastal state's interests, stop illicit trafficking, and respond to maritime emergencies (Sunko et al., 2024). The Coast Guard is a component of the armed forces in more developed countries, both militarily and economically, in the case of a military conflict. Comprising operational and stationed forces, the CG is a military-civilian organisation whose objectives include the protection of interests in the waters governed by the coastal state, maritime traffic monitoring, and maritime assistance (Sunko et al., 2024). Smaller nations, such as Croatia, have coast guards primarily focused on law enforcement, maritime security, fishery monitoring, economic zone control and protection, jurisdiction enforcement, search and rescue (SAR) operations at sea, and maritime security.

In times of peace, the CG is the most effective system for accomplishing the state's economic, security, and diplomatic goals. It systematically manages and defends the coastal state's maritime interests, considering the intricacy and extent (Sunko et al., 2024). Its duties are separated into three categories: combat, conflict, and peacetime. Performing SAR operations, overseeing maritime traffic safety and security enforcement, keeping an eye on the state border at sea, and maintaining navigational channels are among the duties during peacetime. Coast guards are organised differently around the world. However, there are three broad models of coast guards: the classic CG model, maritime police forces without a CG, and maritime nations with a border service but no CG or maritime police forces. With the concurrent development of the CG and the navy, the "American" form of CG organisation is the most complete (Sunko et al., 2024). The "British" concept calls for establishing an organisation to oversee the CG system, which includes enlisting the help of volunteer rescue groups and specialised ships (Sunko et al., 2024). The Royal Post, the Royal National Lifeboat Institution, the Ministry of Defence, and the CG are among the organisations put in place.

The Royal Navy of the United Kingdom's maritime patrol forces handle the most difficult assignments within the CG. Under the "naval coast guard" concept, the navy has organisational units whose primary responsibility is safeguarding the interests and rights of the coastal state (Sunko et al., 2024). If circumstances permit, additional Navy units will participate as needed. State administration agencies working with the navy mostly carry out tasks in territorial seas, internal waters, and marine port areas (Sunko et al., 2024). While data gathering and processing are done at the operations centre of the competent navy, naval ships are directly responsible for stopping, inspecting, tracking, and apprehending ships that break the regulations.

Countries may choose to establish their coast guard services for various reasons. Political and constitutional constraints in Kenya limited the Kenyan Navy's ability to enforce maritime laws or conduct criminal investigations (McCabe, 2018). A key role of the Coast Guard is maintaining a clear separation between military operations and civilian law enforcement, preventing the military from becoming entangled in domestic or international political issues, a principle most nations uphold (Charo, 2021). Additionally, traditional naval operations only comprise a small portion of African security forces' obligations (McCabe, 2018). Most of its mission set is coastal and pertains to law enforcement, environmental protection, and maritime safety duties within a country's territorial seas and EEZ.

Recognising gaps in Kenya's coastal governance, the government announced in April 2016 that various agencies, including KRA, Kenya Navy, National Police Service, Kenya Ports Authority, and Kenya Wildlife Service, would enhance coordination to implement a "whole-of-government approach" to maritime security (McCabe, 2018). In 2017, President Uhuru Kenyatta established the Blue Economy Implementation Committee, led by General Samson Mwathethe, Chief of Defence Forces (Charo, 2021). The committee's mandate included coordinating maritime

investments and advising the government on policies to maximise profits from blue economy activities.

One of the committee's significant recommendations was creating a coast guard service (McCabe, 2018). It marked a shift from "sea blindness" to recognising the critical importance of secure and well-managed coastal areas for enhancing maritime security and harnessing the blue economy's potential. In September 2017, Parliament passed the Kenya Coast Guard Bill to establish the Kenya Coast Guard Service. This bill aimed to create a centralised maritime law enforcement agency to address various criminal activities, as the Kenya Navy lacked the operational and legal capacity to fulfil this role independently, relying instead on the support of a small Maritime Police Unit (Charo, 2021). According to the bill, the Coast Guard would have the authority to arrest maritime offenders and transfer them to the National Police Service for prosecution.

The KCGS was formally launched in November 2018, with its headquarters in Mombasa. The service comprises a surveillance vessel, civilian professionals appointed by the Public Service Commission (PSC), and personnel from the Army, Police, and the National Intelligence Service (NIS) (McCabe, 2018). Its responsibilities include enforcing maritime security, preventing pollution, ensuring sanitation, apprehending offenders, and protecting marine resources, such as fisheries (Charo, 2021). The KCGS's mandate covers a range of issues, including IUUF, piracy, drug and human trafficking, border disputes, contraband smuggling, sand harvesting, coral reef destruction, and marine pollution caused by toxic waste or oil spills (McCabe, 2018). Practical activities include coastal patrolling, intelligence sharing, inspecting vessels for licenses, and intercepting suspicious activities.

President Kenyatta emphasised that maritime security is foundational to the blue economy, citing the estimated annual loss of KSh10 billion in revenue from criminal activities at sea. The creation of the KCGS demonstrates the link between sustainable blue economic growth and effective maritime governance (McCabe, 2018). The Coast Guard prevents illegal fishing, drug and human trafficking, and unauthorised exploitation of Kenya's marine resources (Charo, 2021). It aims to protect the nation's fish stocks from foreign vessels and ensure Kenya fully benefits from its ocean resources (McCabe, 2018). The rise of piracy in the Indian Ocean influenced the development of coastal governance in Kenya and Djibouti, leading to innovative public-private partnerships, legislative reforms, and new institutions and policies (Charo, 2021). International actors have provided varying levels of support to strengthen these governance approaches, initially as part of efforts to address piracy. Following the decline in piracy in 2012, these efforts expanded to address broader maritime security challenges, including combating illegal fishing, maritime trafficking, and sustainable management of marine resources (McCabe, 2018). These initiatives highlight the importance of long-term capacity building and collaborative governance to secure and develop the maritime domain.

2.3 Empirical Literature

Studies conducted in the same field focusing on the four study objectives and carried out by other researchers locally, regionally, and internationally are reviewed in the following section.

2.3.1 Activities in Ensuring Maritime Security

Ensuring marine security involves protecting maritime resources, preventing illegal activities such as piracy and smuggling, and ensuring safe navigation. These activities include naval patrols, surveillance systems, law enforcement operations, and international cooperation to safeguard maritime borders and trade routes. Murphy et al. (2021) postulated that conservation is one of the activities in ensuring maritime security when reviewing a framework for improving

maritime resources management. The study captured 154 participants from countries across the globe, including Brazil, Indonesia, Costa Rica, Fiji, Malaysia, and Panama. Conservation efforts of marine wildlife and ecosystems have to begin with involving the local communities by the concerned parties because they are the most vested in the well-being of these systems. The authors made the case, supported by data gathered from various secondary sources, that local communities depend on marine ecosystems and wildlife for their livelihood and are therefore aware of environmental changes. They became aware of their surroundings as a result. It is safe to say that any economy must have accessible and reasonably priced resources for development.

According to Sumaila et al. (2020), individuals, vehicles, and goods must comply with the established laws in both the country of entry and the country of departure based on findings from a study conducted across 143 countries globally. It indicates that border management policies, which the designated authorities must follow, have been put in place to guide and direct the movement of people and goods between nations. They added that borders can be drawn along ethnic lines or in areas of economic influence, in addition to being defined by geographic distance. Regarding cooperation and coordination, European Union (EU) countries, for instance, with external land and/or maritime borders can call on border security aid from other EU countries within the framework of the Coast Guard Agency and European Border, previously the European Agency for the Management of Operational Cooperation at the External Borders of the Member States of the European Union (known as Frontex and established in 2004).

Berket and Ryse (2021) argued that the newly formed European Border and Coast Guard Agency (still known as Frontex) performs risk analyses and assessments in addition to contributing to the creation of standardised training standards. Raid Border Intervention Teams (RABITs), which are groups of border guards from other EU nations that can be gathered at an external

Schengen border to help a member state experiencing border security problems, are another service the organisation can offer to member states. Furthermore, the EU's 1990 Dublin Convention and 2003 Dublin II Regulation allow for faster extradition between member states and cross-border surveillance and hot pursuit.

The importance of coastal defence in the evolution of maritime operations was highlighted by Nicholls et al. (2019). According to the study, smaller and weaker navies have historically found coastal defence particularly alluring. For example, the United States (US) developed minefields, built small vessels for coastal operations, and built a coastal defence network along its eastern seaboard to express its national identity. It is how the mobile and offensive components of sea warfare complement the stationary coastal defence component, each having what the other does not; the distinction is essential, necessary, and unchangeable. If anything, the effects of the new technologies of the industrial age heightened this curiosity in the United States and around the world.

Multifaceted asymmetric threats have grown in the 21st century and still affect the maritime sector, according to Jennings' (2020) study in the United States Army. States should therefore create a comprehensive maritime security strategy derived from a comprehensive maritime strategy that establishes a link between maritime domains and onshore practices that support each other. Since it is a "contestable" concept, it must be conceived to address issues about the nation's security and success in the strategic functional condition. A region's geopolitical and geoeconomic requirements must also be considered when protecting the strategic infrastructure necessary to integrate previously isolated areas and increase interconnectivity from maritime threats. It indicates that the planned maritime security response must consider the seas' deeply transcontinental, interconnected, and systemic aspects.

According to Ndehedehe (2019), the demand for resources in Africa has increased significantly due to the continent's expanding population. Therefore, additional marine resources from our oceans and inland water bodies could supplement those in Africa. For instance, gas, oil, or alternative sources like wave and tidal energy. For example, Sweden's Sea-based has agreed with Ghanaian renewable developer TransCanada Corporation (TC) Energy to design, build, and install a 100-Megawatt (MW) wave energy project off the coast of Ada Foah. It will improve the nation's utilisation of ocean resources.

According to Isaacs and Witbooi (2019), safeguarding fisheries' resources is crucial to maintaining maritime security, based on their study in South Africa. According to data released by the Food and Agriculture Organisation (FAO), the study noted that fish accounts for 15% of the protein consumed by over four billion people. Additionally, it was estimated that there may be up to 10,000 species of unidentified fish in our maritime environment that could one day be helpful to humans for their nutritional, cosmetic, medicinal, and bioenergy needs. Ten years ago, Africa's reserves received 24 billion US dollars from the fishing and marine industries. It was responsible for approximately 1% of Africa's GDP and 9% of global catch. In 2015, fish catch increased to 11 million tons, with half coming from wild captures. It represented five per cent of the world's fish production. In 2017, Africa had a favourable balance of payment in the fishing industry, amounting to over a billion US dollars.

Charo (2021) noted that the problem of role overlaps and duplication has surfaced in Kenya concerning KCGS's jurisdiction, which is restricted to territorial waters (24 nautical miles) under KCGS sections 8 and 9, even though the majority of maritime crime takes place in the Exclusive Economic Zone (EEZ). Similar to most African navies, ships have been sent abroad on diplomatic missions, including port visits, exercises, and training, to demonstrate the "navy" function of

foreign policy. These only scratch the surface of what the Navy is capable of. However, most of the Kenya Navy's (KN) mission is coast guard-related. It pertains to constabulary duties, such as protecting the environment, stopping IUUF, and fulfilling maritime safety requirements that arise in Kenya's territorial waters and the EEZ. However, the KN's secondary responsibilities have been transferred to KCGS, and the Navy can only carry out these coast guard duties outside of Kenya's territorial waters.

2.3.2 Effectiveness of the Activities in Enhancing Maritime Security

Various institutions' maritime activities aim to boost the expansion of the maritime industry, which gains ecological, economic, and social benefits from the maritime ecosystem, according to Bennett et al. (2021). The modern world continues to see a rise in complex asymmetric threats that affect the maritime sector. Because of the contemporary security environment, states now consider maritime threats from a non-traditional and non-strategic standpoint. When the lines between state and non-state action are blurred, a country must comprehend the essential elements of maritime security in a non-traditional manner. In a setting where maintaining good order at sea has been seen to affect human development and the growth of maritime security directly. It is also vital to comprehend the distinctions and similarities of security words. The continuous performance of maritime operations that safeguard the water's four attributes, as a resource, a mode of transit, a repository of knowledge, and a source of dominance, is essential to maintaining good order at sea or any other maritime resource.

According to a study by Lindley, Percy, and Techera (2019) in Australia, political will and leadership in several challenging and likely situations are necessary for a state to develop capacity in the field of maritime security, which is closely related to national security. Developing maritime security capabilities requires a highly engaged, pragmatic leader with a keen understanding of politics. Actions will therefore be motivated by opportunities to utilise the maritime domain as a

vital and strategic area. By considering maritime space as one of the crucial areas of the state's safety, good leadership will support the creation and implementation of plans and regulations to improve the relationship between the inland and maritime domains.

Bond (2019) asserts that maritime security aims to promote the expansion of the maritime sector, which gains social, economic, and ecological advantages from the maritime ecosystem in South Africa. Globally, navigators are creating strategies to address the intricate, challenging, and multifaceted problem of maritime security. An essential element of maritime security is leadership. Motivational statements are frequently included in speeches, laws, and other legislation that state leaders use primarily to express their political will. Therefore, their adoption and adherence to these intentions will be the test. For these reasons, effective leadership requires strong political will. A leader with strong political will is more likely to take actions that are viewed as appropriate and powerful. Fundamentally, political will and instrumental competence in leadership are essential for the state's existence, including maritime resources.

According to Karani and Failler (2020), inadequate funding for state agencies created to address maritime issues is why the African continent is falling behind in traceability. It is time for states to provide subsidies to Small and Medium Enterprises (SMEs) in the seafood industry, and it is never too early to begin conservation efforts. Small-scale fisheries that lack structures are more likely to be marginalised by the government and financial institutions because they will not have access to financial accounting services or credit lines. Because they pay little in taxes, they will not receive many social benefits. They will ultimately cause climate change by overusing marine ecosystems. Urbanisation, population growth, and climate change impact aquatic and marine life.

According to Ntola and Vrancken (2018), states, IGOs, and Regional Economic

Communities (RECs) have recognised the value of maritime security and have already created plans to better utilise, harness, and conserve it in the future. The four African members of the Indian Ocean Commission are currently working on a maritime action plan. The three African nations with the most sophisticated maritime strategies are South Africa, Mauritius, and the Seychelles. The Sustainable Development Goals (SDGs) of the United Nations (UN) have also strongly emphasised maritime security. According to some, there has not been any noteworthy advancement or new, tough idea concerning maritime security issues up to this point. The Indian Ocean Commission is the source of an initiative known as the Vanilla Islands, which the Seychelles, Comoros, Madagascar, Mayotte, and Reunion adopted. Its primary goal is to promote these nations to the outside world, focusing on utilising marine wildlife resources.

According to Yamkela (2020), if properly executed, the African Marine Transport Charter (AMTC) and the AU's 2050 AIMS could revolutionise Africa's ports and shipping sector for the benefit of all of East Africa. The East African Community (EAC) is the primary political and economic entity, and maritime transportation is covered by Articles 95–105 of the Treaty. Promoting port development and shipping is East Africa's strategy for maritime security. Constructing and improving their ports is an excellent illustration of how this creates employment opportunities that empower the local population in Madagascar. It is worth noting that the region faces several technical challenges related to maritime security, including a shortage of shipping vessels, a restricted capacity for international trade, cargo delays at ports, and the need to make port operating costs competitive to discourage traders from choosing to dock their goods elsewhere (Charo, 2020).

2.3.3 Legal Framework for Ensuring Maritime Security

Maritime security and its advancement are influenced by international law. The foundation of international law is that an international community comprises sovereign, independent states.

No supra-state organisation, global government, or organisation sits atop nations. Since a supra-state body has the authority to enforce the provisions of international law, the global community, in this case, independent and sovereign states, submit to or bind themselves to it. Due to their voluntary acceptance of international law as a set of guidelines governing their interactions, these sovereign and independent states are bound by it. People, cars, and goods must follow the laws set forth for both the entry and exit countries, according to an observation made by Zabin et al. (2018). It indicates that border management policies have been executed to guide and direct the flow of people and goods between nations. Additionally, Zabin et al. (2018) pointed out that borders can be drawn within ethnic lines or areas of economic influence in addition to being confined to geographic separation.

According to Abhyankar (2018), nations' special interests are acknowledged by the United Nations Convention on the Law of the Sea (UNCLOS). It aims to strike a balance so that no state or group of states is disadvantaged at the expense of another while chartering the rights that coastal and landlocked nations have over their maritime resources. The African Union's Agenda 2063 also marks the beginning of the continent's journey toward independence in its development program execution and thought processes. Modern times' agenda aims to develop Africa's marine resources and foster reciprocity-based partnerships.

To help states, RECs, and IGOs develop maritime resources in Africa, the AU, the African Development Bank (AfDB), the United Nations Environment Programme (UNEP), and other organisations have begun to sponsor these entities (Kiswaa, 2020). International, regional, and bilateral cooperation has been formed due to this approach, which is being modelled globally and has even led to the creating of Public-Private Partnerships (PPPs). According to a UN report, fish is currently a staple food for over 275 million people, with an average consumption of 10.5 kg per

person annually. Ironically, of the 13 countries that consume the most fish, eight are landlocked, and seven are developing, according to the FAO. It explains why the African Leaders for Nutritional Initiative supports initiatives addressing nutritional well-being. To achieve everyone's interests, international organisations need to operate within the current legal frameworks.

Kenya was the first nation to host the blue economy conference in December 2018, according to Amuhaya and Degterev (2022). Kenya's first blue economy summit hosting demonstrates Africa's commitment to maritime security. The continent is prepared to assist researchers, activists, legislators, and business executives who are genuinely eager to investigate, advance, and implement novel approaches to attain sustainable development and the sustainability of marine resources.

2.3.4 Challenges in Maritime Security

Even though developing nations, particularly those in Africa, have the most abundant resources globally, 46% of their populations still live in extreme poverty, according to Leal et al. (2019). By 2050, Africa's population is expected to have doubled, making up 25% of the global human population, according to Leal et al. (2019). The expansion of the middle class in Africa has not coincided with widespread structural changes in many of its economies. As evidenced by the many Africans risking their lives to cross the Mediterranean into Europe for employment, unemployment is still a significant issue on the continent. Every year, 42 billion US dollars are obtained unlawfully and without paying taxes from the continent from illegal logging and fishing. Therefore, maritime resources may allow developing countries to engage their youth only if they are conserved and prudently utilised. However, there is a lack of research focusing on how effective management of these maritime resources, particularly through institutions like the KCGS, can create sustainable employment opportunities for youth.

According to Belhabib et al. (2019), unregulated fishing in West Africa alone costs the

continent's economy an estimated 2.5 billion US dollars annually. Additionally, it is depriving the coastal population of essential protein for their diet. Many nations in the region have established maritime administrations within their transportation ministries or established independent organisations with the authority to perform such duties due to the need for efficiency. Agencies like the International Maritime Organisation (IMO) regulate the shipping industry and minimise pollution in the maritime environment. The Intergovernmental Standing Committee on Shipping (ISCOS), the primary shipping body in the subregion, is responsible for setting shipping policy. Despite these efforts, a significant gap exists in understanding how effective marine resource management can directly contribute to local food security and economic resilience in coastal communities.

According to Assis et al. (2021), African marine life, like in other parts of the world, is endangered, whether found in the deep sea or near the coast. The main problem is that overfishing is causing fish stocks to decline rapidly, which negatively disrupts the food chain. Coral reefs, vital to various marine life and habitats like the declining mangroves, have also been harmed by human activity. Adding value to the products ensures even more returns, with estimates of additional revenue in the 24 billion US dollars range. Large pelagic fish, sardines, shellfisheries, and cephalopods can be categorised as fish. Aquaculture offers numerous advantages, including ensuring food security for individuals, generating jobs, and giving the government much-needed foreign exchange from exports. In the agricultural community, fishing is the continent's largest agricultural export by volume, but it only contributes 6% of GDP in revenue. Sierra Leone and Seychelles are two nations that rely heavily on fishing, with fishing-related incomes of 110 and 24 per cent, respectively. The seaweed trade flourishing in Tanzania offers yet another chance to increase the use of marine resources. However, there remains a significant gap in understanding

how effective governance and management of marine resources can enhance the sustainability of these sectors while supporting local economies.

According to Torell et al. (2020), as Africa looks to the future and its growing energy needs, more and more policymakers are considering nuclear energy while neglecting the abundant and safe tidal or wave energy sources. The study also argues that it is crucial to recognise that policymakers need to be more creative in recognising the potential of marine resources and the amount of energy that can be extracted from such endeavours. A comprehensive approach that sees land and sea policies as two sides of the same coin is required to address energy shortages. The sure way to make marine resources a sustainable economic model for the future and to bring it into line with the global trend of greening economies and industries is to raise awareness and educate the public about the issue. It implies that using safe, clean, conservative methods can benefit marine resources. Despite these insights, a notable gap exists in understanding how effective marine resource management can contribute to coastal communities' energy security and economic development.

According to Yates and Bradshaw (2018), Ghana is leading the way in implementing wave technology to boost maritime security and its blue economy. TC's Energy has a contract with Sea-based to develop 100 MW of wave energy. There aren't many of these initiatives worldwide, and this one is a pioneer on the continent. Ghana is also working on another project that will use wave energy. An estimated 1000 MW of energy will be produced. Despite Africa's abundance of mineral and gemstone resources, it should be highlighted that, in terms of revenue generated, the continent's oil and gas exports accounted for about 62% of all exports from 2007 to 2016. Most of the gas and oil exported came from sea mines. Africa is home to about 30% of the world's mineral wealth, many of which originate in marine environments. Africa provides 8% and 7% of the

world's oil and gas. However, there is a significant gap in understanding how the effective management of marine resources, particularly through initiatives like wave energy, can further enhance economic development and maritime security in other African coastal nations.

According to Zeng et al. (2018), natural gas reserves continue to increase yearly. Coastal states in Africa accounted for 7.5% of global natural gas production in 2015. Many natural gas deposits have been found off the coast of East Africa in the past 10 years. Such a pattern increases the potential of marine resources. The world appears to be aiming for a future devoid of fossil fuels, but expanding natural gas reserves could potentially close the much-needed energy gap in Africa. Six hundred twenty-five million people on the continent do not have access to electricity. However, there is a critical gap in understanding how the sustainable management of these natural gas resources can be integrated with maritime security initiatives to improve energy access while protecting marine ecosystems.

According to McCabe (2019), Kenya can use Marine Spatial Planning (MSP) to address strategic issues. The MSP uses the maps to identify the various locations of plants, animals, and minerals that may be present in a given area. The maps also indicate the various species' habitats within a given area. As they carry out the government's mandate, they seek to accomplish the objectives of those in authority. For marine resources, they are essential. However, a significant knowledge gap exists regarding how well-executed MSP can combine biodiversity conservation, sustainable resource use, and maritime security considerations.

According to Kiswaa (2020), Kenya is vulnerable to all maritime threats because of its geostrategic location. These days, the security forces' primary and secondary roles are informed by the most prevalent non-traditional maritime threats. The security forces, particularly the navy, have had to quickly adjust to the challenges of asymmetric threats due to the threat of terrorism.

As a result, the Navy now conducts intelligence-led operations within Kenya's maritime space. The navy's actions against asymmetric threats rely on accurate intelligence because of the country's geostrategic location, which keeps the sophisticated and unpredictable asymmetric threats from exploiting the vulnerabilities on land and at sea. The Navy now operates in a dynamic and wide-ranging atmosphere, and the difficulties associated with maritime intelligence have affected how different maritime operations are carried out. However, a critical gap exists in understanding how effective maritime security strategies can be integrated with resource management to enhance overall maritime safety and security.

2.4 Summary and Research Gap

The literature review in this study indicates insufficient information on the effectiveness of KCGS on maritime security in Homa Bay County, Kenya. Most of the literature concentrates on global cases with little attempt to analyse how various maritime strategies and institutions can be used to improve maritime resources security, which this study aims to fill. For instance, McCabe (2019), Aniche et al. (2021), Tar and Bala (2019) mainly focus on challenges facing maritime security, such as seafood, which is increasingly being over-harvested, and this puts in doubt the sustainability of this industry. One of the steps taken to address this is the establishment of institutions that deal with maritime security; however, the activities and effectiveness of such institutions are not analysed.

There is also little information on the various maritime areas, including coastal and port areas, that are used to advance maritime resources security (Njiru et al., 2020; Charo, 2021). There is also no literature on institution-specific coordination in marine areas to achieve marine resources security, which will be covered in this study. Furthermore, research conducted by Pisacane et al. (2018) has shown that the marine economy's various sectors are impacted by insufficient legislation, which fails to consider the interdependencies between these several quarters and other

economic sectors. For example, neither tourism nor transportation laws ever consider energy harvesting from the ocean. The study aims to close the gaps in the literature on maritime security by examining how well the KCGS performs maritime security in Kenya's Homa Bay County.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The methodology entails research design, study site, target population, study sample, data collection, data analysis, and legal and ethical considerations. The research was conducted using both qualitative and quantitative methods. Key informant interviews and a questionnaire were employed for data collection and analysis.

3.2 Research Design

According to Newman and Gough (2020), a research design directs the overall research approach by offering an organised framework that aligns with the study's goals. To thoroughly grasp the research problem, this study used a mixed-method research design that integrates quantitative, qualitative, and policy analysis methodologies. According to Dzwigol (2019), a mixed-method approach enables the triangulation of data sources, which improves the findings' depth and dependability. Without changing or affecting the study's focus, the quantitative component employed a descriptive survey design to methodically gather and examine numerical data, allowing for an accurate assessment of essential characteristics.

3.3 Research Site

Harrison et al. (2020) describe a research site as a specific area where the target population resides, defined by physical boundaries. This study took place in Homa Bay County, Kenya, which has a population of 1,131,950, according to the 2019 National Census and spans an area of 3,154.7 square kilometres. Lake Victoria, a critical resource for the country, provides a livelihood for many residents, particularly fishermen who rely on fishing for survival and farmers who depend on agriculture for income. Given that Homa Bay County hosts the KCGS satellite camp and plays a significant role in Kenya's inland maritime resources, this location was ideal for the study. The findings contributed to enhancing maritime security and improving the residents' livelihoods.

Additionally, Homa Bay County has been identified as one of the underserved inland maritime areas, further justifying its selection as the focus of this research.

3.4 Target Population

Population entails the subjects of objects or units a researcher seeks to study and make an inference about (Pandey & Pandey, 2021). The study targeted the stakeholders in maritime security in Kenya. The targeted population is captured in *Table 3.1*.

Table 3.1: Target Population

Group	Population
BMU	141
Senior National Government Administration officers	10
KCGS	16
Junior NGAO	40
KPS	40
County Government Officers	20
KRA	6
KMA	2
Cage fish farmers	6
Total	293

Source: Homabay County Offices

3.5 Sample Size and Sampling Method

According to Creswell and Clark (2017), a sample size is a smaller representative group drawn from the target population used to produce the necessary statistics for the study. Confidence level, population variance size, population size, cost, and budgetary constraints are among the factors considered (Creswell & Creswell, 2017). Yamane's (1967) formula was applied to

determine the sample size. The following is how the formula is expressed:

$$n = \frac{N}{1 + (N)e^2}$$

Where;

n = the sample size

N = the size of the population

e = the error of 5 percentage points

$$n = 293 / 1 + 293(0.05)^2 = 128$$

Therefore, from the population size of 293, the respondents were 128, allocated proportionately for every stratum. A stratified random sampling was employed to select the 128 respondents. From the 293-population size, it implies that for every two respondents, the researcher picked one respondent, that is, $293/128 = 2.3$. The summary of the stratified sampling is presented in *Table 3.1*.

Table 3.2: Sample Size Estimation

Departments	Population	Sample Size
BMU	141	62
Senior NGAO	10	4
KCGS	16	7
Border Police Unit	8	3
Junior NGAO officers (chiefs and assistant chiefs)	40	17
KPS	40	17
NEMA	4	2
County Government officers	20	9
KRA	6	3
KMA	2	1
Cage fish farmers	6	3
Total	293	128

Source: Author, 2024

Finding the precise method to choose the sample's entities is known as a sampling procedure (Creswell & Clark, 2017). Therefore, the strategy researchers employ to guarantee an

equal chance of unit selection within a population that constitutes a sample size is known as a sampling procedure. It implies that every member of a population must have an equal chance of being chosen to be included in a sample, regardless of how homogeneous or heterogeneous the population is. Stratified random sampling was used to accomplish this, and the researcher grouped the respondents according to their organisations, as indicated in Table 3.1 above.

3.6 Data Collection Instruments

Primary data was gathered through questionnaires. The tools were tested for validity and reliability during the piloting phase, as described in the following subsections. Data collection methods are the procedures a researcher uses to gather the information and data needed to address the research questions. A structured questionnaire and key informant interviews were the primary instruments used in this study to gather data from primary sources. A structured questionnaire created by the researcher served as the primary tool. The survey included closed-ended and open-ended questions to support the study's goals.

The questionnaire was organised into five sections: the first section gathered general information about the respondents, while the subsequent segments focused on specific research objectives. Section two addressed the first objective, section three related to the second objective, section four covered the third objective, and section five focused on the fourth. Each section covered questions that guided the researcher in gathering the appropriate responses that helped address the related research objectives. This combination of question types facilitated the collection of quantitative and qualitative open-ended data and responses while allowing respondents to provide detailed feedback. In addition to the structured questionnaire, the study incorporated key informant interviews to obtain further insights from the management of the targeted institutions. The key informant interviews were conducted with each participant to get qualitative information that complemented the quantitative data collected through the

questionnaire. These interviews captured expert perspectives on the roles, challenges, and practices of the institutions involved in maritime security and resource management.

3.7 Pilot Test

Following approval from Africa Nazarene University (ANU) to carry out this research, 22 respondents from Kisumu County who were not involved in the final study participated in a pilot test. Before collecting data on a large scale, the pilot project evaluated the questionnaire's reliability, relevance, and clarity. To ensure that the feedback received was pertinent to the main study, the 22 respondents were carefully chosen to reflect the traits of the target demographic concerning their positions in maritime security. As suggested by Hertzog (2008), piloting with 10% of the research population finds a balance between getting insightful feedback and preventing needless resource use.

Respondents were prompted to complete the questionnaire in a pilot test setting comparable to the real study. Respondents were encouraged to ask questions that were unclear, ambiguous, or hard to grasp, and encouraged to share their thoughts. The researcher also evaluated the comprehensiveness and appropriateness of the response options. Following data collection, SPSS was used to evaluate the responses to find any discrepancies, ambiguities in the wording, or possible data entry and interpretation difficulties. Changes were made to improve the questionnaire's logical flow, language accuracy, and content validity to ensure it successfully collects the desired data.

Additionally, the internal consistency of the survey items was measured using Cronbach's alpha to assess the questionnaire's reliability. An adequate degree of consistency in the questionnaire items is indicated by a reliability coefficient of 0.7 or above. The required changes, particularly rewording or reorganising certain elements, were made to increase coherence if the reliability score falls below the allowed threshold. The results of this pilot test were used to

improve the research tool, making it more organised, comprehensible, and able to gather reliable data for the study in Homa Bay County.

3.8 Instrument Reliability

The consistency of the measurements over time is what reliability is all about. Using Cronbach's alpha, internal consistency was evaluated. A goal value of 0.70 or higher indicates that the items consistently measure the same construct. The questionnaire was given to the same respondents twice to assess test-retest reliability. Reliability was demonstrated by consistency between the two sets of answers. When several researchers participate in the data coding process, inter-rater reliability is assessed, if necessary, to guarantee consistency in interpreting qualitative data gathered from key informant interviews.

3.9 Instrument Validity

According to Bell et al. (2022), validity refers to the extent to which data collection instruments measure what they are intended to measure. To ensure content validity, the questionnaire was reviewed by experts in maritime security and resource management. Their feedback confirmed that the questions adequately addressed the study's objectives and were relevant to the research context. Construct validity was evaluated through factor analysis, which determined whether the questionnaire items align as expected, verifying that they measure the intended constructs. Criterion-related validity was also examined by comparing the study's results with established findings from similar research to ensure consistency and alignment.

3.10 Data Collection Procedure

Getting the required study permits and ethical approvals was the first step in the data collection procedure after the project had been accepted. To guarantee adherence to national research regulations, a research permit was acquired from the National Commission for Science, Technology, and Innovation (NACOSTI), and approval was requested from the appropriate

university ethics committee. Permission was also sought from important organisations, including the KCGS and other pertinent authorities at the County Government of Homa Bay. The study tools, such as interview guides and structured questionnaires, underwent pilot testing to evaluate their dependability and clarity before complete data collection. To guarantee the tools' efficacy, any necessary modifications were made in response to the pilot study's feedback.

A mixed-method approach was used in the study, combining quantitative and qualitative data collection techniques. Selected respondents, such as KCGS personnel, law enforcement officers, and local community members, were given structured questionnaires. To guarantee widespread involvement, the surveys disseminated the questionnaire digitally and physically, and follow-ups were conducted to optimise response rates. To better understand the efficacy of the maritime security legal system, semi-structured interviews were conducted with important players, including security specialists. For thematic analysis, the interviews were recorded and transcribed. Policy documents such as the Maritime Zones Act, 1989, the Kenya Coast Guard Service Act, 2018, and the Fisheries Management and Development Act, 2016, were also examined to determine their applicability and influence on maritime security enforcement.

The project proceeded to data processing and analysis after data gathering was finished. Key findings were summarised using descriptive statistics like frequencies and percentages after quantitative data from the survey responses were processed using SPSS. Correlations between variables were also investigated through inferential analysis. The effectiveness and difficulties of the legal framework were better understood by doing a thematic analysis to look for recurrent themes and patterns in the qualitative data from policy analysis and interviews. Combining these results made it easier to reach thorough conclusions and suggest policies that would improve Homa Bay County's maritime security.

3.11 Data Analysis

Creswell and Clark (2017) define data analysis as converting raw survey data into meaningful insights using analytical tools. The study analysed quantitative data using the Statistical Package for Social Sciences (SPSS), version 27. Descriptive statistics, including percentages and frequencies, were applied to interpret the quantitative data. Additionally, the relationships between the effectiveness of KCGS and the state of maritime security were examined using Spearman correlation analysis. The findings were presented in tables and figures to ensure clarity and alignment with the study's objectives. Similar phrases, themes, and patterns were identified and categorised for qualitative data using thematic analysis. The data was organised into themes, analysed, and reported verbatim to provide supporting evidence for the findings derived from the questionnaires. This approach ensured a comprehensive and cohesive quantitative and qualitative data analysis.

3.1 Legal and Ethical Considerations

Ethical considerations were strictly adhered to throughout the data collection process. Respondents' identities were not captured to ensure confidentiality. Informed consent was obtained from all participants before the distribution of research instruments, and they were informed of their right to withdraw from the study at any point. Additionally, the necessary permissions and authorisations to conduct the research were secured before the study began. It included obtaining a research permit from the National Commission for Science, Technology, and Innovation (NACOSTI) and an introductory letter from the Africa Nazarene University (ANU). Copies of these clearance documents were shared with all participants. Once data collection was complete, the responses were coded and analysed using SPSS version 26 to ensure accurate and reliable findings.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

This study aimed to assess the performance of the Kenya Coast Guard Services in ensuring maritime security. The chapter analyses the qualitative and quantitative data obtained from participants. The analysis will follow the research objectives guiding this study, with data analysed to identify key concepts as they apply to performance and activities related to maritime security. The findings are presented as tables, charts, and themes.

4.2 Response Rate

The researcher distributed questionnaires to diverse study participants. Face-to-face interviews were also carried out with members of the public and key KCGS personnel, including participants from different areas, to ensure that the information obtained reflects the views of all stakeholders and minimises biases.

Table 4.1: Response Rate

Data collection method	Frequency	Actual response	Response rate
Questionnaires	128	65	50.8
Interviews	12	11	91.7
Total	140	76	54.3

Source (Field data, 2025)

The study achieved a response rate of 54.3%, which exceeds the generally accepted threshold of 50% for adequate data collection in social science research (Fincham, 2020). This level of response also suggests effective data collection procedures and strong engagement from participants, which further enhances the credibility of the research outcomes. This level of response also suggests effective data collection procedures and strong engagement from participants, which further enhances the credibility of the research outcomes.

4.3 Demographic Characteristics

Important personal information of the respondents was collected to understand the kind of respondents from which the primary data was obtained and to demonstrate the basis upon which their interpretations are made. Background information is crucial as it helps the researcher understand some essential characteristics in the analysis. The demographic characteristics included were age, gender, duration lived in Homa Bay County, employment, and education level.

4.3.1 Gender

The respondents were asked to indicate their gender since it is an essential demographic characteristic to understand the participants and their views on maritime security.

Table 4.2: Gender Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	F	7	10.8	10.8	10.8
	M	58	89.2	89.2	100.0
	Total	65	100.0	100.0	

Source (Field data, 2025)

Of the participants, 89.2% were male ($n = 58$) and 10.8% were female ($n = 7$). The analysis suggests that men are more involved in maritime security than women.

4.3.2 Age Range

The study also sought to assess the age range of the participants. The results are presented in *Table 4.3*.

Table 4.3: Age Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-35 years	25	38.5	38.5	38.5
	36-55 years	40	61.5	61.5	100.0
	Total	65	100.0	100.0	

Source (Field data, 2025)

Most participants were 36–55 years, accounting for 61.5% ($n = 40$), while 38.5% were aged 18–35 years ($n = 25$), out of a total sample of 65.

4.3.3 Education Level

Education level was also a crucial demographic characteristic determined during the research. This information was crucial as it helped inform the participants' understanding of the activities of KCGS and the legal framework governing maritime security. The results are presented in *Table 4.4*.

Table 4.4: Educational Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Secondary	24	36.9	36.9	36.9
	University	41	63.1	63.1	100.0
	Total	65	100.0	100.0	

Source (Field data, 2025)

Most participants had a university education, representing 63.1% ($n = 41$), while 36.9% had attained secondary education ($n = 24$), out of a total sample of 65.

4.3.4 Number of Years Working in Homa Bay

The respondents were also required to indicate the number of years they have lived or worked in Homan Bay County.

Table 4.5: Number of Years Worked in Homa Bay County

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5	40	61.5	61.5	61.5
	6-15	14	21.5	21.5	83.1
	Less than 1	6	9.2	9.2	92.3
	15+	5	7.7	7.7	100.0
	Total	65	100.0	100.0	

Source (Field data, 2025)

Most participants had worked in Homa Bay for 1–5 years, accounting for 61.5% ($n = 40$). It was followed by 21.5% who had worked for 6–15 years ($n = 14$), 9.2% who had worked for less

than one year ($n = 6$), and 7.7% who had worked for more than 15 years ($n = 5$), out of a total sample of 65.

4.4 Activities undertaken by the Kenya Coast Guard Service in enhancing maritime security

The first objective of this study was to explore the activities undertaken by KCGS to enhance maritime security. The results of the study based on questionnaire responses revealed that participants were aware of some of the activities carried out by the KCGS in ensuring maritime security, as presented in *Figure 4.1*.

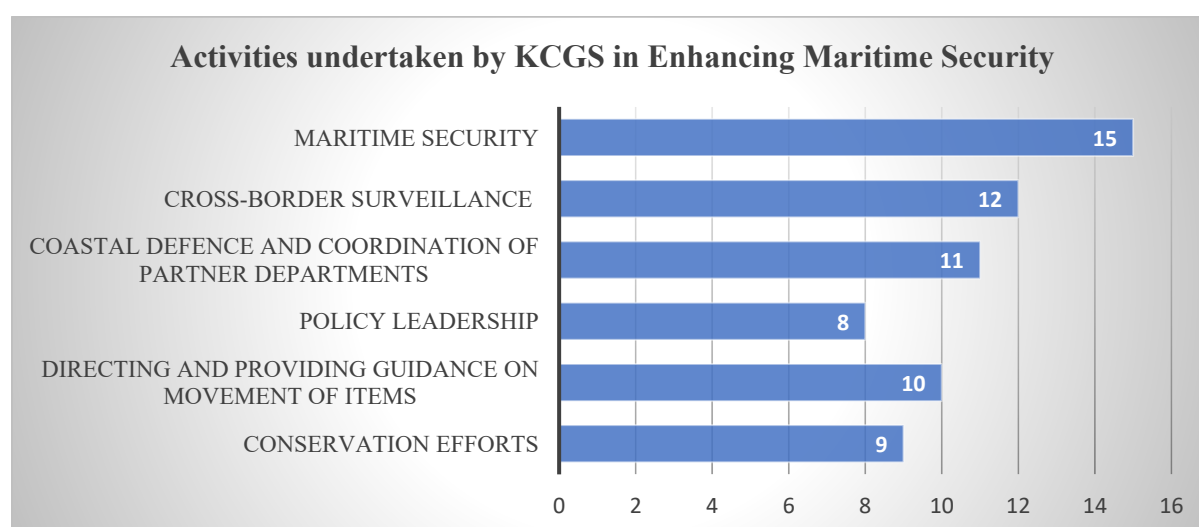


Figure 4.1: Activities Undertaken by KCGS in Enhancing Maritime Security

Source (Field data, 2025)

Based on questionnaire responses, the analysis of maritime security activities undertaken by KCGS in Homa Bay County reveals varied levels of engagement across different focus areas, reflecting key aspects related to the Institutional Theory. Maritime security emerged as the most frequently cited activity, with 15 out of 65 respondents (23.1%) identifying it as a key area of focus. It was closely followed by cross-border surveillance at 12 respondents (18.5%), and coastal defence and coordination of partner departments, mentioned by 11 respondents (16.9%). Other significant activities include directing and providing guidance on the movement of items, cited by

10 respondents (15.4%), and conservation efforts, noted by nine respondents (13.8%). Policy leadership was the least cited, with eight respondents (12.3%) indicating it as a primary activity.

The questionnaire respondents were asked whether KCGS conducts risk assessment while performing their duty. *Table 4.7* presents views on Conducting Risk Assessment by KCGS.

Table 4.6: Conducting Risk Assessment by KCGS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	14	21.5	21.5	21.5
	Yes	51	78.5	78.5	100.0
	Total	65	100.0	100.0	

Source (Field data, 2025)

Most participants (78.5%, n = 51) indicated that KCGS performs risk assessments and analyses regarding its role and impact on maritime security. A smaller proportion (21.5%, n = 14) believed that KCGS does not engage in such assessments, based on the total sample of 65 respondents.

One key theme that emerged from the analysis of participant responses to open-ended questions and interviews was that the activities undertaken by the KCGS facilitated the enforcement of maritime laws, which are crucial to maritime security and reflect an institutional approach, as evidenced by the following responses:

“Through enforcement of Maritime regulations” (Participant 1)

“Security for the fisherfolk on their fishing gears not to be robbed, and enforcement of the fishing laws and regulations. Since the Coast Guard was deployed... enforcing life jacket regulations, the number of drownings has decreased considerably” (KII 1)

Another theme that emerged from the interviews and responses to open-ended questions was that KCGS was crucial in preventing illegal activities, unauthorised fishing, human trafficking, and illegal trade, as evidenced by the following responses and interview notes:

“Help prevent movement of illegal and harmful goods through our borders on the internal waters” (Participant 2)

“Removing unauthorised fishing gear helps protect and sustain the fish population in Lake Victoria. Preventing contraband goods, human trafficking, and the conservation of fish breeding zones. Cross-border surveillance serves as a deterrent by preventing the proliferation of illegal weapons and contraband goods” (KII 2)

It was evident from the responses that KCGS also plays a critical role in protecting local water users, such as fishermen, as seen in the following responses.

“Significant improvement, especially in terms of safety... many fishermen did not wear life jackets” (Participant 3)

“They help in curbing insecurity on the lake. Protect the people of Homa Bay County and the entire country of Kenya, plus their property. They enhance safety among Kenyan fishermen since KCGS averts cross-border threats” (KII 3)

The activities undertaken by the KCGS have also been found to promote cross-border water surveillance, which is a key contribution to national security, as noted in the comments below:

“Like in the case of cross-border security, it helps prevent external invasion through inland waterways. Cross-border surveillance... helps reduce illegal immigration” (Participant 4)

The study also sought the participants' opinions on how risk assessment and analysis are done to improve maritime security. One emerging theme from the responses was intelligence gathering and stakeholder engagement, which combined underscore the importance of Co-management Theory as it applies to this study. It was done through collaboration with local communities and agencies, as seen from the following comments:

“Before conducting any operation, they have to assess the situation of the lake. They also work mainly on the intelligence given to them by different stakeholders, like BMU leaders and the general public and through meetings like the Border Management Committee (BMC), involving other stakeholders in a multi-agency set-up, where progress reports and challenges are discussed.” (KII 4)

“By doing fisher training and joint meetings with BMUs for data collection and educating them on the importance of life jackets...” (Participant 5)

Another vital strategy identified from the participants was threat identification and prevention action, highlighting the structured approach to assessment and reduction of risks using models such as threat matrices, situational analysis, and safety enforcement, as shown in the following comments:

“Threat assessment matrix. Identifying potential threats, analysing the risk they pose, and implementing protective measures to safeguard fishermen, ferry and boat crews, as well as the surrounding environment.” (KII 3)

“Since the deployment of the Coast Guard and KMA personnel... they have enforced lifejacket policies... we have had fewer drownings.” (Participant 6)

Finally, while examining questionnaire responses on the activities conducted by the KCGS in ensuring maritime security, assessing the training practices for maritime security was crucial. Table 4.8 presents whether there is a standardised training for maritime security in Homabay County.

Table 4.7: Standardised Training Standard for Maritime Security in the County

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	41	63.1	63.1	63.1
	Yes	24	36.9	36.9	100.0

Total	65	100.0	100.0
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Source (Field data, 2025)

Most participants (63.1%, n = 41) reported no standardised training for maritime security in the County, while 36.9% (n = 24) indicated that such a standard does exist, based on a total sample of 65 respondents. However, evidence from the responses revealed that most training practices available are directed towards the protection of territorial waters and enforcing safety and protection within Kenyan waters. Another training was on the Visit Board Search and Seizure (VBSS).

“The trainings are being developed, but have been in place as VBSS” (Participant 7)

4.5 Effectiveness of the activities undertaken by the Kenya Coast Guard Service in enhancing maritime security

The second objective of this study is to assess the effectiveness of KCGS’s activities in enhancing maritime security. *Table 4.8* reports the participants’ perception of various assessment criteria based on their questionnaire responses.

Table 4.8: Effectiveness of KCGS

	Agree	Disagree	Strongly agree	Strongly Disagree	Undecided
Directing and providing guidance on the movement of items and people has been very effective	33.8% 22	33.8% 22	18.5% 12	3.1% 2	10.8% 7
Conservation efforts have been very effective	26.2% 17	47.7% 31	26.2% 17	0.0% 0	0.0% 0
Policy leadership has been very effective	15.4% 10	30.8% 20	26.2% 17	9.2% 6	18.5% 12
Coastal defence and coordination of partner departments have been very effective	26.2% 17	20.0% 13	29.2% 19	6.2% 4	18.5% 12
	24.6%	43.1%	26.2%	4.6%	1.5%

Cross-border surveillance has been very effective	16	28	17	3	1
Maritime security response has been very effective	30.8%	38.5%	18.5%	0.0%	12.3%
	20	25	12	0	8

Source (Field data, 2025)

Based on the questionnaire responses, participants (n = 65) had mixed views on the effectiveness of various activities by KCGS. Directing and providing guidance on the movement of items and people was viewed as effective by 52.3% of respondents, with 33.8% agreeing and 18.5% strongly agreeing, while 33.8% disagreed. Conservation efforts received a more divided response, with 47.7% disagreeing about their effectiveness, while 26.2% agreed and 26.2% strongly agreed. Policy leadership was met with more negative feedback, as 30.8% disagreed and 9.2% strongly disagreed, while 26.2% strongly agreed. In contrast, coastal defence and coordination of partner departments were viewed positively by 55.4% of participants, with 29.2% strongly agreeing and 26.2% agreeing. Cross-border surveillance had a more mixed reception, with 43.1% disagreeing, while 26.2% strongly agreed and 24.6% agreed. Finally, maritime security response was generally seen as effective, with 49.3% of respondents agreeing or strongly agreeing, although 38.5% disagreed. Overall, maritime security activities were mostly perceived as effective, though there was greater scepticism regarding policy leadership and conservation efforts.

The next question addressed organisations cooperating with KCGS concerning Homa Bay County maritime security. The responses to the questionnaires are given as follows:

Table 4.9: Organisations that Cooperate with KCGS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	International organizations	5	7.7	7.7	7.7
	Local organisations	26	40.0	40.0	47.7

National organizations	34	52.3	52.3	100.0
Total	65	100.0	100.0	

Source (Field data, 2025)

Regarding cooperation in maritime security in the county, the aim was to demonstrate the application of the co-management theory to this study and highlight the key stakeholders that work together to ensure maritime security. Most participants indicated collaboration with national organisations (52.3%, n = 34) like KMA, KPA, the Police, Ngao, among others. It was followed by local organisations like BMUs (40.0%, n = 26), and a smaller percentage of respondents mentioned working with international organisations like the International Organisation for Migration (IOM) (7.7%, n = 5), based on a total sample of 65.

The next question addressed whether the participants had been trained in maritime security practices, as shown in *Table 4.11*.

Table 4.10: Received Training in Maritime Security

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	27	41.5	41.5	41.5
	Yes	38	58.5	58.5	100.0
	Total	65	100.0	100.0	

Source (Field data, 2025)

From the questionnaire responses, most participants (58.5%, n = 38) reported having received training in maritime security, while 41.5% (n = 27) indicated they had not been trained, based on a total sample of 65.

Another important question that needed to be addressed to understand the participants' perspective on the effectiveness of the activities mentioned earlier, which KCGS is undertaking in enhancing maritime security, was to review the in-service training sessions. This question, which applies to KCGS personnel, revealed specialised and diverse in-service training sessions relevant to maritime security, a crucial reflection of institutional practices that demonstrate the application

of institutional theory. For instance, a key emerging theme from the in-depth interview sessions confirmed that the personnel undergo specialised training tailored for their profession, as reflected in the following response:

"We have a variety of training activities focusing on the Law of the Sea, VBSS, maritime operations, anti-piracy and monitoring safety, leadership training, instructor on maritime security training, transnational organised crime, among others, " (KII 4)

The responses to the in-service training highlight the role played by KCGS and how they effectively deliver their services and ensure maritime security. It reflects the importance of activities such as advanced boarding courses, maritime operations courses, border management and coordination, conservation, and safety in the lake training to ensure KCGS effectively protects maritime resources and guarantees security.

The next question assessed whether the KCGS effectively adhered to its rules, regulations, and policies. The questionnaire responses revealed a divergent perspective, as shown in *Table 4.12*.

Table 4.11: KCGS Adherence to Policies, Rules, and Regulations

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	41	63.1	63.1	63.1
	Yes	24	36.9	36.9	100.0
	Total	65	100.0	100.0	

Source (Field data, 2025)

Participants were also asked whether the KCGS adhered to set policies and rules such as the KCGS Act 2018, Maritime Zone Act, and National Security Laws. Most participants (63.1%, $n = 41$) indicated that they do not believe KCGS has faithfully adhered to set rules, regulations, and policies in its operations. In contrast, 36.9% ($n = 24$) believed that KCGS has adhered to these standards, based on a total sample of 65. These divergent perspectives were informed by two

emerging themes from the assessment of interview responses and open-ended questions. First, some respondents pointed out the issue of integrity and accountability as they were concerned with poor coordination, corruption, and selective enforcement of the rules set forth. It implied inconsistent adherence to policies by KCGS as seen in the following comments:

“Sometimes, some officers act outside the law; they also engage in illegal activities”

(Participant 8)

“Fishermen have often complained that they see them passing by their BMUs to collect money or fish catch for illegal gears instead of seizing them. They cannot be faithful... because 1) they are corrupt, 2) they are not doing patrol according to their mandate, 3) they don't have enough equipment. KCGS does not protect our territorial waters from invasion by the Uganda People's Defence Force (UPDF) soldiers who always invade our waters” (KII5)

“Lack of coordination among officers of different agencies, and lack of cooperation with other maritime stakeholders” (Participant 9)

Besides the arguments presented above, it is also worth noting that some participants held a different view, acknowledging that there are reduced incidents, discipline, and law enforcement, demonstrating professional conduct among KCGS staff as reflected in the following responses:

“KCGS is a disciplined force and adheres to rules and regulations. They do their work diligently by strictly enforcing laws and regulations. The number of reported security incidents has greatly reduced, as well as accidents on the lake” (KII 6)

“Reduced cases of loss of life and detention of Kenyan fishermen by UPDF”

(Participant 10)

These results reflect a perception gap among the stakeholders regarding KCGS's adherence to policy and professional conduct.

Another critical question was whether KCGS has effectively maintained good order for maritime resources. The participants' responses to questionnaires revealed the following pattern:

Table 4.12: KCGS Maintenance of Good Order for Maritime Resources

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	19	29.2	29.2	29.2
	Yes	46	70.8	70.8	100.0
	Total	65	100.0	100.0	

Source (Field data, 2025)

Based on the responses and results above, it is worth examining what informed the distribution. An analysis of qualitative data revealed interesting patterns and themes. For instance, one emerging theme was partial effectiveness based on enforcement and sensitisation, such that KCGS has made efforts to ensure public awareness and enforcement of maritime rules. It has been evidenced by the reduction in the number of incidents of security and compliance among those using maritime resources, as reflected in the following responses:

“They have sensitised water users on many occasions, and water users are aware of the consequences of disobeying safety regulations” (Participant 10)

“Arrest of the offenders using unauthorised fishing gears. Reduced cases of accidents and theft of fishing gear and catch on the lake” (Participant 11)

“Sensitisation of people whose livelihood depends on the lake resources. Our mission is to provide for equitable resources utilisation within our waters” (Participant 12)

The participants who held divergent views about the performance of KCGS complained of corruption and capacity gaps, such as a lack of tools/inadequate equipment, which compromised

effectiveness while weakening KCGS' role in ensuring good order for maritime resources. The following responses support this:

“IUUF in Lake Victoria is rife” (Participant 13)

“KCGS has been going around our BMUs collecting money for bribes instead of maintaining our maritime resources” (Participant 14)

“They lack important tools to perform their duties” (Participant 15)

“Most often, the enforcement officers are compromised along the way by maritime law offenders” (Participant 16)

“Instead of creating awareness... they are busy collecting money from fishermen and other lake users, including passengers” (Participant 17)

These responses reveal that the KCGS has made visible and appreciated efforts to ensure good order for maritime resources. However, there is still room for improvement due to limitations and systemic issues.

4.6 The legal framework guiding the Kenya Coast Guard Service in enhancing maritime security.

The third objective of this study was to examine the legal framework guiding KCGS in enhancing maritime security in Homa Bay County. Based on questionnaire responses, the following figure reports on the legal frameworks the participants were familiar with in maritime security.

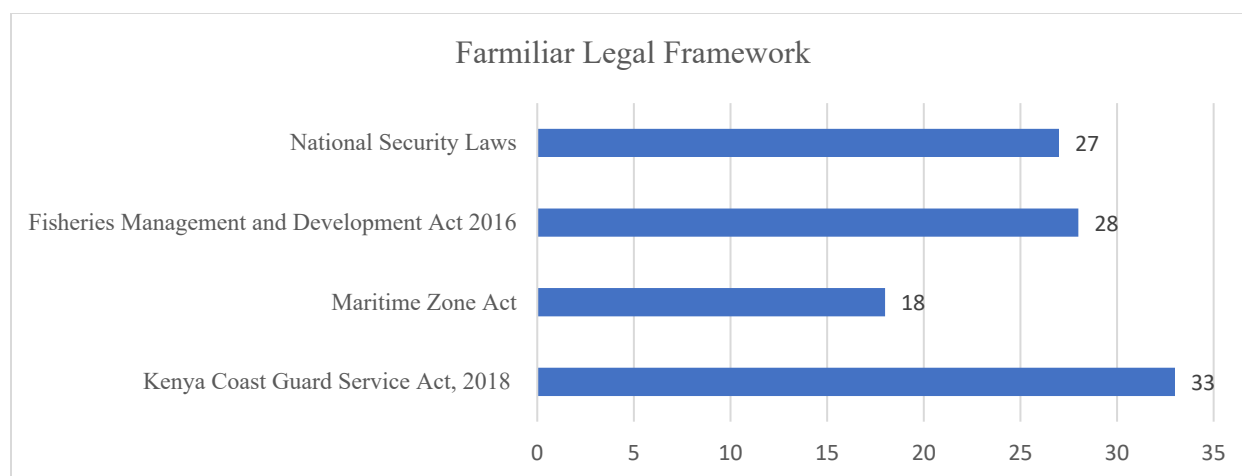


Figure 4.2: Legal Framework Governing KCGS

Source (Field data, 2025)

Analysis of the legal frameworks guiding maritime security operations in Homa Bay County, according to questionnaire responses, reveals varying levels of awareness and engagement among respondents. The Kenya Coast Guard Service Act, 2018, was the most recognised, with 33 out of 65 respondents (50.8%) indicating familiarity with it, underscoring its central role in outlining the operational mandate of KCGS. The Fisheries Management and Development Act, 2016, was followed closely, cited by 28 respondents (43.1%), reflecting its significance in marine resource protection and regulation. Similarly, 27 respondents (41.5%) identified National Security Laws as influential in maritime governance, suggesting an appreciation for broader security provisions that impact coastal operations. On the other hand, the Maritime Zone Act, 1989, was the least cited, with only 18 respondents (27.7%) acknowledging its relevance. It may point to a knowledge gap or limited applicability perceived by the respondents, indicating a potential need for enhanced training and awareness on specific legislative tools within the maritime security framework.

The next question related to participants' perception of their understanding of the Kenya Coast Guard Service Act, 2018, a key legal piece that guides the operations of KCGS personnel, as reflected in the questionnaires. The results are as shown in *Table 4.14*.

Table 4.13: Understanding of the Kenya Coast Guard Service Act, 2018

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	11	16.9	16.9	16.9
	Moderate	35	53.8	53.8	70.8
	No Knowledge	1	1.5	1.5	72.3
	Very High	18	27.7	27.7	100.0
	Total	65	100.0	100.0	

Source (Field data, 2025)

Participants' understanding of the Kenya Coast Guard Service Act, 2018, varied across each questionnaire. The majority (53.8%, $n = 35$) rated their understanding moderate, while 27.7% ($n = 18$) reported a very high understanding. A smaller proportion (16.9%, $n = 11$) rated their understanding as low, and 1.5% ($n = 1$) did not know the Act, based on a total sample of 65.

The next question was the participants' perception of whether the legal framework guiding the KCGS was sufficient to ensure maritime security.

Table 4.14: Sufficiency of Legal Framework Governing KCGS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	30	46.2	46.2	46.2
	Disagree	2	3.1	3.1	49.2
	Strongly agree	27	41.5	41.5	90.8
	Strongly Disagree	1	1.5	1.5	92.3
	Undecided	5	7.7	7.7	100.0
	Total	65	100.0	100.0	

Source (Field data, 2025)

From the questionnaire responses, most participants (87.7%, $n = 57$) agreed that the legal framework guiding KCGS was sufficient in ensuring maritime security in Homa Bay County.

Specifically, 46.2% (n = 30) agreed, and 41.5% (n = 27) strongly agreed. However, 3.1% (n = 2) disagreed, 1.5% (n = 1) strongly disagreed, and 7.7% (n = 5) were undecided, based on a total sample of 65.

The next question addressed participants' perceptions on whether KCGS has been ineffective in enforcing maritime security laws. The results are shown in *Table 4.17*.

Table 4.15: KCGS Ineffective in Enforcing Maritime Laws

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	21	32.3	32.3	32.3
	Disagree	24	36.9	36.9	69.2
	Strongly agree	13	20.0	20.0	89.2
	Undecided	7	10.8	10.8	100.0
	Total	65	100.0	100.0	

Source (Field data, 2025)

Responses from the questionnaires were mixed regarding the effectiveness of KCGS in enforcing maritime security laws. While 52.3% of participants (n = 34) agreed or strongly agreed that KCGS has been ineffective, with 32.3% (n = 21) agreeing and 20.0% (n = 13) strongly agreeing, 36.9% (n = 24) disagreed with this view. An additional 10.8% (n = 7) were undecided, based on a total sample of 65.

The next question addresses the challenges hindering effective enforcement of maritime security laws in Homa Bay County.

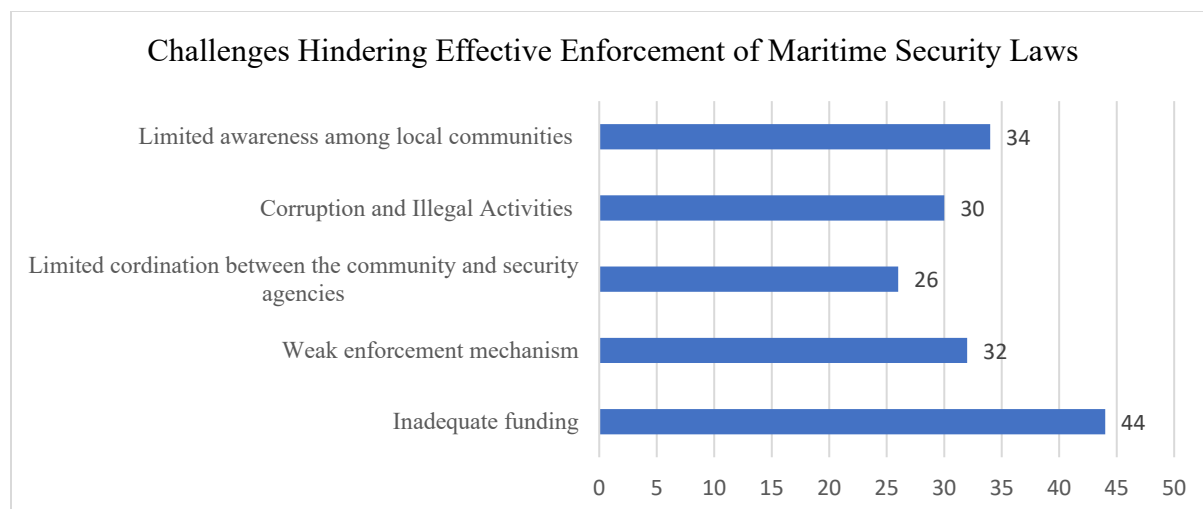


Figure 4.3: Factors that Hinder Effective Enforcement of Maritime Security Laws

Source (Field data, 2025)

From *Figure 4.3*, respondents to questionnaires identified several critical challenges that hinder adequate maritime security in Homa Bay County. Inadequate funding emerged as the most pressing issue, cited by 44 out of 65 respondents (67.7%), highlighting the financial constraints faced in implementing security measures. Thirty-four respondents (52.3%) reported limited awareness among local communities, indicating a gap in public education and community engagement. Weak enforcement mechanisms were acknowledged by 32 respondents (49.2%), pointing to deficiencies in upholding maritime laws and policies. Additionally, 30 respondents (46.2%) noted corruption and illegal activities, reflecting underlying governance and ethical concerns. Lastly, limited coordination between the community and security agencies, cited by 26 respondents (40.0%), underscores the need for stronger partnerships and communication strategies to enhance collaborative security efforts. These challenges suggest the need for multifaceted reforms to strengthen regional maritime security.

Analysing qualitative data also provided significant insight into the legal framework and how it can be enhanced to improve maritime security. Different emerging themes were identified from the participant responses to open-ended questions and interview notes. First, it was evident

that there is a need for the institution to strengthen its resources and capacity by getting better equipment, stations, and improvements in logistics and funding. Adopting these strategies will help improve the operations of KCGS as reported in the following responses:

“Police operating within the lake sub-counties should be provided with boats, and officers trained on maritime laws. Improving the logistics and establishing more camps on the islands. Allocation of more resources. Creation of more KCGS camps within the lake and along the borderline, more funds for KCGS and capacity building”

(KII 3)

“To provide security with equipment to enable them to move from one place to another. The government should allocate more funds to security actors” (Participant

18)

Another emerging theme from the qualitative responses was tackling corruption and enhancing operational accountability within KCGS. It will help to ensure better oversight and integrity, as reported in the following responses:

“Corruption and illegal activities. Our legal and enforcement authorities on the lake should be corruption-free” (Participant 19)

“... redeployment of KCGS officers after every three months to minimise compromise from illegal fishers” (Participant 20)

Another most important theme from the qualitative data was harmonisation of legal frameworks and policy reforms in terms of county, national, regional, and international frameworks, as evidenced from the following responses:

“Aligning laws enacted by the county regarding fishing activities with the Constitution and the Kenya Fisheries and Management Act, 2016...” (Participant 21)

“Reforms on the extent of sanction to be imposed if one is found in possession of contraband goods or illegal/prohibited fishing gear from the neighbouring countries...” (Participant 22)

Multi-agency collaboration and stakeholder engagement were also reported as crucial strategies to ensure better coordination between the local community structures, such as BMUS and enforcement bodies. Participants also recommended public awareness and deterrence to prevent illegal practices and ensure community sensitisation.

“Coast Guard and KMA need to create awareness among the local community to bring order on the lake” (Participant 23)

“Steeper penalties for maritime offenders. There is a need for stronger enforcement mechanisms” (Participant 24)

The study also explored the participants' views regarding how KCGS can enhance collaboration with local communities to improve marine security. Several key themes emerged from qualitative analysis, such as the need for community awareness and sensitisation through education to increase cooperation.

"Creating more awareness on who and what they are together with their framework and policies" (Participant 24)

"Through sensitisation of their operations and legal mandates. Ensuring they operate within the confines of the law. "Sensitisation of the community on safety and respond quickly [to] rescue mission[s] in water" (Participant 25)

The participants also recommended participating in community forums and events such as training sessions, workshops, barazas, and other local gatherings.

"Attending more barazas... maybe explaining to them why they are trying to enforce policies might help. Organise events such as clean-up drives, educational workshops, and community gatherings..." (Participant 26)

"This can be done through meetings, capacity-building forums, and simulation exercises" (Participant 27)

Furthermore, the KCGS needs to build relationships and trust, which promote respect and collaboration with the local community.

"Work closer with the community by improving their relationship" (Participant 28)

"Community Engagement Programs" (Participant 29)

Therefore, based on this analysis, KCGS can improve its relationship with the communities through transparent communication, mutual trust, and active participation.

Finally, the study also sought to examine additional measures that the government can take to strengthen the legal framework governing maritime security. From qualitative data assessment from interviews and open-ended questionnaire responses, one emerging theme was the need for capacity building and resource allocation to ensure adequate training, funding, equipment, and personnel.

"Proper regulations, funding, and proper equipment. Empowering the legal framework, like funding the organisation for proper training" (Participant 30)

"To provide security personnel with enough equipment. Continuous capacity building of KCGS personnel to enable them to understand the rules governing maritime security" (Participant 31)

There is also a need for cross-border harmonisation and regional cooperation on lake use and maritime law matters.

"To harmonise regulations of lake users in East African countries for better cooperation" (Participant 32)

"Comparing with other pieces of legislation from neighbouring countries sharing Lake Victoria..." (Participant 33)

"To strengthen the relationship between neighbouring countries" (Participant 34)

The government should also focus on implementing strategic legal reforms and creating a comprehensive maritime security strategy that ensures a more structured approach to governance.

"Review policies after some time" (Participant 35)

"Develop a comprehensive national maritime security strategy that defines a clear vision and mission..." (Participant 36)

Finally, there is a need to ensure enhanced enforcement of law and border control by boosting KCGS capabilities, addressing its limitations when dealing with unpatrolled areas and island zones, and deterring illegal activities.

"Continuous enforcement of Maritime laws" (Participant 37)

"Deployment of more officers and establishment of more Coast Guard satellite camps on our islands to deter exploitation by foreign officers" (Participant 38)

"By designating maritime borders" (Participant 39)

4.7 Challenges faced by the Kenya Coast Guard Service in enhancing maritime security

The fourth objective explored KCGS's challenges in enhancing maritime security in Homa Bay County. The results in the table below report the participants' views of these challenges in implementing the community maritime security Programme based on their responses to various questionnaire questions.

Table 4.16: Challenges in Implementing Community Maritime Security Programs

Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	No	3	4.6	4.6	4.6
	Yes	62	95.4	95.4	100.0
	Total	65	100.0	100.0	

Source (Field data, 2025)

Most participants (95.4%, n = 62) reported challenges experienced when undertaking and implementing community maritime security programs in Homa Bay County. In comparison, only 4.6% (n = 3) indicated otherwise, based on a total sample of 65. The study also examined the most common challenges that the KCGS mainly experiences. An analysis of qualitative data revealed essential themes such as corruption and mismanagement among officials, thereby undermining public trust.

"Corruption among BMU leaders and County government officials" (Participant 40)

"Political goodwill, corruption" (Participant 42)

The participants also cited political interference at the county level, which undermined effective governance and enforcement.

"Political interference, lack of knowledge. A lot of political interests than the security itself" (KII 8)

Mistrust and poor community relations were also prominent themes based on the relations between enforcement agencies and local communities, thereby creating poor cooperation, resistance, and ineffective implementation.

"There is mistrust between the community and enforcement agencies sometimes."
(Participant 43)

"Poor relationships between authorities and local communities." (Participant 44)

"Mistrust between the community and security organs leads to a failure to realise the desired results. Lack of goodwill from the community" (Participant 45)

The issue of inadequate funding and resources is also a recurring concern that has seen KCGS unable to operate optimally.

"Lack of enough tools and modern equipment for patrols. The agencies lack sufficient resources to effectively carry out their responsibilities. There is also inadequate funding to enable security officers to reach all corners..." (KII 9)

The study also sought to determine instances where the institutions have worked together to ensure maritime security. The table below reports on whether there is cooperation between the public institutions.

Table 4.17: There is Cooperation between Public Institutions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	27	41.5	41.5	41.5
	Yes	38	58.5	58.5	100.0
	Total	65	100.0	100.0	

Source (Field data, 2025)

Based on the questionnaire responses, most participants (58.5%, n = 38) believed that cooperation between public institutions in the county works effectively. In comparison, 41.5% (n = 27) felt that it does not, based on a total sample of 65. Meanwhile, an assessment of qualitative data revealed that KCGS participates in joint patrols and operations when working with other institutions.

"Joint patrols with NGAO" (Participant 46)

"Police, NGAO, BPU, and KCGS have been pursuing and apprehending criminal elements on the lake, including those involved in cross-border illegal trade..."
(Participant 47)

"Joint patrols and sensitisation through Mbita BMC" (Participant 48)

Another emerging theme was dealing with emergency responses and rescue missions in crises like drowning, floods, and accidents.

"During tragedies/accidents, KCGS, NGAO, KMA, BMU networks, and the Police have come together in search and rescue missions..." (Participant 49)

"Rescue operation during flooding, and drowning..." (Participant 50)

"In emergency response and when resources are available" (Participant 51)

Intelligence sharing and communication are also standard practices that demonstrate collaborative efforts in maritime security.

"They give information and intelligence to the Coast Guard" (Participant 52)

"Physical and virtual meetings to compare notes on issues of security interests"
(Participant 53)

Finally, the study also examined improving maritime security in Homabay County. Responses to open-ended questions and interviews revealed that one central emerging theme was allocating sufficient resources and providing equipment such as surveillance tools, patrol boats, and fuel to enhance operational capacity.

"Provision of more resources which are cost-effective, like effective boats and an effective way of obtaining fuel..." Addition of funds, modern equipment like patrol boats, and surveillance equipment. The county government is to provide the resources necessary for maritime security in the county" (KII 10)

There is also a need for more training for both local communities and enforcement personnel to improve service delivery.

"Sensitization and training" (Participant 54)

"More specialised training targeting maritime personnel" (Participant 55)

“Local training, improved security” (Participant 56)

“More training, more patrol boats...” (Participant 57)

Finally, the results also emphasised the importance of institutional reforms and recruitment to promote cultural and structural changes within KCGS, thereby improving professionalism.

“Recruit officers with a dedicated mindset... Categorising officers by their original services often creates a sense of hierarchy...” (KII 11)

“To employ more people within the maritime security sector...” (Participant 58)

“We have had a command issue sometimes where some officers from the Military feel superior to take command from officers from other agencies like the Police, thus creating enforcement challenges ...” (KII 12)

4.8 Summary of Key Themes

Table 4.18: Summary of Key Themes

Theme	Codes (Examples)	Short Description
Law Enforcement and Safety Compliance	life jackets, arrests, illegal gear, patrols	KCGS enforces maritime laws and promotes safe practices to reduce accidents.
Corruption and Misconduct	bribes, compromised officers, and money collection	Reports of corruption among KCGS and other actors are undermining maritime security.
Training and Capacity Gaps	None, basic training, VBSS, SAR	Limited and uneven in-service training among personnel affects performance.
Community Sensitisation and Engagement	barazas, awareness, education, local training	There is a need for more outreach to build trust and cooperation with local communities.
Cross-border Multi-agency Coordination	and joint patrols, BMC meetings, and collaboration with Uganda	Coordination between KCGS, BMUs, and regional agencies is inconsistent but necessary.
Resource Constraints	boats, fuel, equipment, personnel	Insufficient resources hinder enforcement and operational capacity.

Policy and Reforms	Legal	harmonised laws, penalties, and development	stronger strategy	Gaps in legislation and enforcement mechanisms require updates and better alignment.
Mistrust and Relationships	Poor	community enforcement hostility, and poor communication	distrust, improved	Lack of trust between locals and KCGS reduces the effectiveness of maritime security.
Positive Impact Areas		reduced accidents, safety, and arrests		Some positive changes were noted due to KCGS's presence and enforcement.

Source (Field data, 2025)

CHAPTER FIVE

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the study's findings, based on its guiding objectives. A summary of the findings, conclusions, and recommendations for policy implementation and further research is also presented.

5.2 Discussion

5.2.1 Activities undertaken by the Kenya Coast Guard Service in enhancing maritime security

The results of this study show that KCGS adopts different activities and practices to ensure maritime security. It was evident that some of the activities carried out by the KCGS include cross-border surveillance, coastal defence, coordination of partner departments, and policy leadership. Other activities adopted to ensure maritime security include guiding the movement of items and conservation efforts. The activities undertaken by KCGS as reported in this study also align with the findings from a report by the European Security and Defence on coast guard operations, which highlight that most coast guards contribute to maritime security through inspection, regulation, oversight, and provision of aid.

The report further highlights that the coast guards are often called upon to counter illegal fishing, smuggling, piracy, and a range of other illicit activities, which aligns with the findings from the current study. These activities demonstrate the significant role that the KCGS has played in ensuring maritime security. These activities have been found to facilitate the enforcement of maritime laws, implying that the KCGS is a crucial force in preventing illegal activities, human trafficking, IUUF, and illegal trade. The results from this study can be compared to the findings from a study by Njue (2020), who found that the defence and security of maritime resources were a crucial factor for properly exploiting the blue economy.

KCGS was also found to carry out other critical activities such as cross-border surveillance and the protection of local water users. Therefore, from the results, it is worth arguing that the activities undertaken by KCGS are crucial in ensuring maritime security. A research report by the United States Coast Guard (USCG) also recognises the practices and activities conducted by the KCGS. It highlights the importance of this unit in effectively combating maritime crime, especially drug trafficking, and enhancing maritime coordination and security. Therefore, the findings from the current study, previous investigations, and official reports underscore the need to recognise the critical role that KCGS plays in ensuring maritime security.

5.2.2 Effectiveness of the activities undertaken by the Kenya Coast Guard Service in enhancing maritime security

The second objective of this study was to examine the effectiveness of the various activities carried out by the KCGS in ensuring maritime security. It was evident from the results that KCGS personnel undergo specialised training tailored for their profession. Their training also includes in-service professional development courses focusing on boarding, maritime operations, board management and coordination, and safety in lake training. Some of the results also revealed that some stakeholders were concerned with the effectiveness of the KCGS, pointing to issues related to poor coordination and corruption. However, there was also a different perspective on the issue, as some results revealed reduced incidents and improved law enforcement and discipline, pointing to an improvement in KCGS effectiveness. Furthermore, effective enforcement was reported when KCGS was examined for effectiveness in maintaining good order for maritime resources.

A similar pattern was also reported in the case where some participants complained of corruption and a capacity gap when reporting on their views towards the service's effectiveness in ensuring good order for maritime resources. Therefore, this difference reflects a significant perception gap among stakeholders. An assessment of maritime insecurity in the Kenya maritime

domain by Mbugua and Mwachinalo (2017) demonstrated the strategic response initiated by the government and an assessment of the improvement of the effectiveness of key actors. Poor enforcement and performance of maritime legislation were also disclosed in the report. These comments highlight the need for more research to comprehend the varying opinions of the Kenya Coast Guard Service's (KCGS) efficacy. The background of the United States Coast Guard (USCG) investigation, which found that the movement of drugs between Kenya and Tanzania disturbs political stability and creates an atmosphere of corruption and inadequate enforcement, can be used to compare the efficacy of KCGS. The USCG assessment also notes that although Kenya's maritime units have made considerable strides in counter-narcotics operations, especially with installing new stations and purchasing new assets, coordination and operational capacity issues still exist.

Other regional investigations have brought up similar issues. Okafor (2020), for example, said that maritime enforcement organisations in East Africa frequently face challenges related to conflicting mandates, a lack of resources, and insufficient legislative frameworks, all of which impair their capacity to combat transnational crimes successfully. Furthermore, systemic issues in maritime governance in the Western Indian Ocean were brought to light in a report by the United Nations Office on Drugs and Crime (UNODC, 2021), which also pointed out that enforcement agencies frequently lack the interagency cooperation and technical know-how required for effective law enforcement.

In contrast, the USCG's success has been ascribed to its established operational procedures, interagency cooperation, and cutting-edge technical assistance, areas in which the KCGS is currently building its capabilities. Thus, even while the KCGS's creation is a step in the right direction for maritime governance, the problems with subpar law enforcement performance reflect

regional and global patterns in which new maritime security organisations encounter political, logistical, and institutional challenges. It reaffirms the necessity of focused reforms, increased interagency cooperation, and capacity building to fortify Kenyan maritime law enforcement. The report, however, notes that bureaucratic overlaps routinely hamper the process. These findings demonstrate the need for further inquiry into the effectiveness of the KCGS given the interplay between political, operational, and professional factors.

5.2.3 The legal framework guiding the Kenya Coast Guard Service in enhancing maritime security.

The third objective of this study was to determine the legal framework guiding KCGS in enhancing maritime security. The findings from this study have demonstrated that KCGS has limited resources and capacity, highlighting the need for institutional reforms to ensure it is well supplied. The most common concern was the limitations in equipment and stations due to poor funding, leading to significant logistical challenges. In terms of policy, there is also a need to develop measures and rules to counter corruption-related issues and introduce measures that will help enhance operational accountability within the KCGS. Therefore, policies and regulations aimed at improving oversight and integrity should be improved. It is also crucial to harmonise the legal framework and policy reforms with special focus on those that relate to the county, national, and regional levels.

A legal framework focusing on multi-agency collaboration and stakeholder engagement is also needed to enhance operational efficiency, which can be achieved through public awareness and relationship building. Therefore, the government should take different measures to improve and strengthen the legal framework that governs maritime security. Therefore, a policy framework should focus on ensuring adequate training, funding, and capacity building. The findings from this study correspond with an inquiry on policymakers' effectiveness, which revealed the need to draft

a bill on the Coast Guard, whose establishment might resolve coordination problems (Machir & Kamau, 2022). The report also points to a significant problem: the judiciary is still developing maritime security law enforcement capacity. It emphasises the need for further improvement in coordination efforts between government agencies involved in policy making and their implementation or enforcement. Furthermore, while there might be a lacuna in law, there is a need to harmonise the law, especially in jurisdiction issues, since the maritime sector has not seen a significant legal precedent.

5.2.4 Challenges faced by the Kenya Coast Guard Service in enhancing maritime security

The last objective of this study was to examine the challenges faced by KCGS in enhancing maritime security. The results of this study revealed essential insights highlighting management and corruption as the key problems among the personnel. As noted earlier, political interference, especially from the county government of Homa Bay, was also a significant challenge faced by the KCGS. Despite the need for cooperation at community levels, the study also highlighted concerns with poor community relations and mistrust between the locals and KCGS. The result is poor cooperation, which leads to ineffective implementation. The study also indicated that inadequate funding and resources are a significant concern affecting the enforcement capacity. It is also evident from the study that KCGS experiences major problems with rescue missions and emergency responses due to limited equipment and resources, such as petrol and boats.

According to the study, effective communication, inter-agency collaboration, and relationship-building are critical components for intelligence sharing and the successful implementation of maritime security operations, which aim to improve KCGS's operations and address new challenges. The UNODC (2021), which highlights the vital significance of multi-stakeholder coordination in managing complex marine risks throughout the Western Indian Ocean region, agrees with these findings. To improve the KCGS's response capability, the government

should prioritise providing them with up-to-date surveillance equipment, a steady budget, patrol boats in operation, and a dependable fuel supply. Enhancing service delivery also requires training for law enforcement agencies and local actors. Okafor (2020), who contends that enhancing maritime enforcement skills in East Africa requires capacity building and ongoing professional development, supports this viewpoint. Institutional reforms and structural realignments are required in addition to training to guarantee that the KCGS can successfully traverse the changing maritime threat scenario.

Recognising that the KCGS works in a highly dynamic environment influenced by military operations, evolving geopolitical interests, technical advancements, and escalating commercial competition in the maritime sector is also crucial. According to Mwachiro and Kamau (2022), the Coast Guard's wide-ranging mission, encompassing environmental protection, marine safety, national security, and domain awareness, necessitates an organisational structure flexible enough to address many intricate problems. These observations support the study's conclusions and highlight the need for ongoing innovation, strategic vision, and policy development to improve the KCGS's operational preparedness. It reflects the problems identified in this study, highlighting the need for continued innovation.

5.3 Summary of Main Findings

Using four primary goals as a guide, this study examined how well KCGS improved maritime security. According to the findings, KCGS engages in various activities to advance maritime security. These include coastal defence, policy leadership, coordination with partner agencies, conservation efforts, and cross-border surveillance. To combat illegal fishing, human trafficking, smuggling, and other maritime crimes, KCGS is positioned to play a crucial role in additional duties like regulating maritime movement and enforcing maritime laws. The study also looked at how effective these activities were. The results showed that stakeholders had divergent

opinions. Some respondents mentioned persistent issues like inadequate coordination, corruption, and capacity deficiencies, while others recognised the benefits of specialised training and enhanced enforcement operations. Despite these reservations, discipline and law enforcement progress were widely acknowledged, even though structural and political constraints continue to limit their efficacy.

Thirdly, the study examined the institutional and legal structure governing KCGS's operations. It was discovered that the service has severe financial and logistical constraints. The main obstacles were inadequate equipment, a small station presence, and undeveloped policy processes. It was also underlined how important it is to promote accountability, support legislation reforms to improve multi-agency coordination, and harmonise county, national, and regional policies. The study concluded that comprehensive reforms, improved training, inter-agency collaboration, and sustained government investment will be necessary to address the difficulties the KCGS faces, including internal management issues, corruption, political interference, weak community engagement, and limited resources for emergency operations. The study also identified several challenges threatening the KCGS's operational capacity, including poor infrastructure and insufficient funding.

5.4 Conclusion

The study sought to assess the performance of the Kenya Coast Guard Services in ensuring maritime security in Homa Bay County. Four central objectives guided the study. The basis of this study was to establish the key activities that KCGS participates in to ensure maritime security. The study also focused on the effectiveness of the KCGS, the challenges they face in ensuring maritime security, and the legal framework guiding their operations. The study was founded on the co-management theory and followed a mixed-methods research design. The results from this study reflect the relevance of the theory of choice, as it was evident that effective management of

maritime security in Homa Bay revolves around different groups requiring cooperation and effective community engagement. It is reflected in the type of activities that KCGS undertakes and how they engage other groups, such as BMUs, among others, in sharing intelligence and safeguarding the lake and its users.

The results from this study have established that KCGS undertakes various services, including cross-border surveillance, coordination of partner departments, and conservative efforts. These activities highlight KCGS and other stakeholders' significant role in ensuring maritime security. These activities have also been central to addressing issues such as smuggling, IUUF, privacy, and other illicit activities, underscoring their importance in ensuring maritime security. The KCGS has also played a central role in cross-border surveillance and protection of inland water users.

The results have revealed mixed reactions to the effectiveness of KCGS, as there is evidence of a reduction in incidences, improved law enforcement, and disciplined activities. On the other hand, other stakeholders complain of poor coordination and a capacity gap. As such, this underscores the need for further inquiry to close this gap in perception and understand the general view of effectiveness. The legal framework is focused on policy reforms and multi-agency collaboration. Despite the achievements, the department faces significant obstacles and challenges in enforcing its duties, such as inadequate equipment, poor funding, political interference, and a lack of a collaborative approach with some locals. These results demonstrate the nature and performance of KCGS and conclude that it has played a critical role in promoting maritime security in Homa Bay County. Adequate funding, collaborative approaches, and community engagement should be considered suitable approaches to improving KCGS operations.

5.5 Recommendations

The study provided important insights that guide future practices and improvements to ensure better performance and reduced challenges to KCGS operations. Therefore, the following recommendations are given for policymakers and stakeholders directly or indirectly involved in maritime security.

- i. Building trust and collaboration between the Kenya Coast Guard Service and coastal communities is vital. To collect intelligence, advance marine safety, and foster co-ownership of maritime security initiatives, the KCGS should initiate frequent sensitisation campaigns, community policing forums, and collaborations with local authorities and fishermen.
- ii. Sufficient financial and logistical assistance is essential to KCGS' success. It is advised that the government give KCGS regular and more funding to handle issues, including infrastructural development, operational mobility, staff training, and equipment shortages.
- iii. The KCGS should use state-of-the-art technologies, including drone surveillance, satellite tracking, artificial intelligence, and data analytics, to enhance its surveillance and reaction capabilities. These developments can fill in the gaps in surveillance, particularly in isolated and dangerous maritime areas.
- iv. The "*Usalama Baharini*" (Maritime Safety) should be further formalised as a regional framework for cooperative training, intelligence sharing, and patrols across international borders. Regional marine security will be improved, and transnational crime will be more successfully combated with the support of collaborative frameworks with nearby coastal nations.

- v. Instead of antagonism, KCGS's relationship with the military, particularly the Navy, should be based on cooperation. Integrated command structures, cooperative operations, and a clear separation of tasks will guarantee unified and effective maritime security operations.

5.6 Areas for Further Research

- i. Understanding how KCGS or other organisations protect inland waters like Lake Victoria and Lake Turkana is lacking. The operating tactics, dangers, and interactions amongst communities in these inland maritime zones should all be examined in future research.
- ii. Studies contrasting the difficulties, distribution of resources, and efficacy of KCGS treatments at sea and inland waters are needed to understand operational differences and guide resource optimisation.
- iii. The immediate effects of implementing innovation and technology (such as radar systems and maritime drones) on incident response times and crime prevention should be evaluated in future studies.
- iv. Customising community involvement tactics and enhancing service delivery can be achieved by investigating how inland and coastal populations see the legitimacy and efficacy of KCGS.

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APPENDICES

Appendix I: RESPONDENT CONSENT FORM

Study Title: *Assessing the Performance of the Kenya Coast Guard Service in Enhancing Maritime Security in Homa Bay County, Kenya.*

You are invited to participate in a research study to assess the performance of KCGS in enhancing maritime security in Homa Bay County.

This study aims to evaluate the role of KCGS in addressing maritime security challenges in Homa Bay County, including illegal fishing, piracy, and border-related conflicts. Your participation will contribute valuable insights into the effectiveness of KCGS in improving the security and sustainability of marine resources in the region.

Participation in this study is entirely voluntary. You have the right to decline participation or withdraw from the study at any time, without any consequences. All information you provide will be kept strictly confidential. Your identity will not be revealed in any reports or publications resulting from this research. Data will be stored securely and only accessed by the research team. By signing below, you indicate that you have read and understood the information provided above and voluntarily agree to participate in this study.

I have read and understood the information provided above. I voluntarily agree to participate in this study and understand that I can withdraw at any time without consequence.

Signature: _____

Date: _____

Appendix II: Research Questionnaire

This questionnaire aims to facilitate the research on ASSESSING THE PERFORMANCE OF THE KENYA COAST GUARD SERVICE IN ENHANCING MARITIME SECURITY IN HOMA BAY COUNTY, KENYA. Please read each item in this questionnaire and fill in or tick in the appropriate spaces provided. Your response will be highly appreciated.

SECTION A: DEMOGRAPHIC INFORMATION

1. What is your gender?
 - Male ☐
 - Female ☐
2. What is your age?
 - 18-35 years ☐
 - 36-55 years ☐
 - 55 and above ☐
3. What is your highest level of education?
 - Non-formal ☐
 - Primary school ☐
 - Secondary school ☐
 - Tertiary ☐
 - University ☐
4. Number of years working in Homa Bay County
 - Less than 1 ☐
 - 1 – 5 ☐
 - 6 – 15 ☐
 - More than 15 ☐

SECTION B: ACTIVITIES UNDERTAKEN IN ENSURING MARITIME SECURITY

1. If yes, which of these activities are you aware of? (Select all that apply.)
 - Conservation efforts ☐
 - Directing and providing guidance on the movement of items and people ☐
 - Policy leadership ☐
 - Coastal defence and coordination of partner departments ☐
 - Cross-border surveillance ☐

Maritime security response ☐ ☐

Other ☐ (Specify).....

2. How do the activities mentioned above promote maritime security in the County?
-

3. Does KCGS perform risk assessments and analyses on its role and how it can affect maritime security?

Yes ☐ No ☐

4. If yes, how is risk assessment and analysis done to improve maritime security?
-

5. Is there a standardised training standard for maritime security in the County?

Yes ☐ No ☐

6. If yes, what areas does the training cover?
-

SECTION C: EFFECTIVENESS OF THE ACTIVITIES IN ENSURING MARITIME SECURITY

Please respond to the following questions on how much you agree or disagree with the statements.

7. Directing and providing guidance on the movement of items and people has been very effective.

Strongly Disagree ☐ Disagree ☐ Undecided ☐ Agree ☐ Strongly Agree ☐

8. Conservation efforts have been very effective.

Strongly Disagree ☐ Disagree ☐ Undecided ☐ Agree ☐ Strongly Agree ☐

9. Policy leadership has been very effective.

Strongly Disagree ☐ Disagree ☐ Undecided ☐ Agree ☐ Strongly Agree ☐

10. Coastal defence and coordination of partner departments have been very effective.

Strongly Disagree ☐ Disagree ☐ Undecided ☐ Agree ☐ Strongly Agree ☐

11. Cross-border surveillance has been very effective.

Strongly Disagree ☐ Disagree ☐ Undecided ☐ Agree ☐ Strongly Agree ☐

12. Maritime security response has been very effective

Strongly Disagree ☐ Disagree ☐ Undecided ☐ Agree ☐ Strongly Agree ☐

13. What other organisations do you cooperate with regarding maritime security in the County

Local organizations ☐ ☐

National organizations ☐ ☐

International organizations ☐ ☐

Other ☐ (Specify).....

14. Have you been trained in maritime security?

Yes ☐ No ☐

15. How many in-service training sessions have you undergone? Please mention the type of training, where applicable.

16. What areas were you trained in?

17. Can you say KCGS has faithfully adhered to set rules, regulations, and policies in its operations?

Yes ☐ No ☐

18. What informs your answer above?

19. Has KCGS been effective in maintaining good order for maritime resources?

Yes ☐ No ☐

20. What informs your answer above?

21. Are the maritime resources in the County sustainable in the long run?

Yes ☐

No ☐

22. If yes, how is sustainability ensured in the county?

SECTION D: LEGAL FRAMEWORK FOR ENSURING MARITIME SECURITY

23. Which legal frameworks are you familiar with that govern the operations of the Kenya Coast Guard Service (KCGS)? (Check all that apply)

The Kenya Coast Guard Service Act, 2018 ☐ ☐

The Maritime Zones Act, 1989 ☐ ☐

The Fisheries Management and Development Act, 2016 ☐ ☐

National Security Laws (e.g., Prevention of Terrorism Act) ☐

Other (Please specify) _____

24. How would you rate your understanding of the Kenya Coast Guard Service Act, 2018?

Very High ☐

Moderate ☐

Low ☐

No Knowledge ☐

Please respond to the following statements on a scale from strongly agree to strongly disagree.

25. Is the legal framework guiding the Kenya Coast Guard Service sufficient to ensure maritime security in Homa Bay County?

Strongly Disagree ☐ Disagree ☐ Undecided ☐ Agree ☐ Strongly Agree ☐

26. Has the Kenya Coast Guard Service been effective in enforcing maritime security laws?

Strongly Disagree ☐ Disagree ☐ Undecided ☐ Agree ☐ Strongly Agree ☐

27. What challenges hinder the effective enforcement of maritime security laws in Homa Bay County? (Check all that apply.)

Lack of adequate funding/resources ☐

Weak enforcement mechanisms (e.g., KCGS, police, navy) ☐

Corruption and illegal activities within the sector ☐

Limited awareness among local communities ☐

Other (Please specify) _____

28. What legal reforms or policy adjustments do you think are necessary to improve maritime security in Homa Bay County?

29. How can the Kenya Coast Guard Service enhance collaboration with local communities to improve maritime security?

30. What additional measures should the government take to strengthen the legal framework governing maritime security?

SECTION E: CHALLENGES IN MARITIME SECURITY

31. Are there challenges experienced when undertaking and implementing community maritime security programs in Homa Bay County?

Yes ☐ No ☐

32. If yes, please list the most common challenges you mainly experience.

33. Does the cooperation between the public institutions work in the County?

Yes [] No []

34. If yes, what are the instances where the institutions have worked together to ensure maritime security?

35. Are there reporting and information management systems in place for maritime security?

Yes [] No []

36. If yes, state the types of information systems in place.

Crime detection systems []

Offenders database []

Coordination systems []

Other [] (Specify)

37. Has KCGS improved trust between all the concerned parties?

Yes [] No []

38. Does the government provide the resources necessary for maritime security in the County?

Yes [] No []

39. In your opinion, what can be done to improve maritime security in the County?

THANK YOU

Appendix III: Key Informant Interviews Guide

Key informants, including Kenya Coast Guard officers, government officials, marine stakeholders, and other pertinent staff, can utilise this guide in semi-structured interviews. The goal is to compile comprehensive data on Homa Bay County's maritime security initiatives. Responses will only be utilised for scholarly purposes, and interviewees will remain anonymous.

- i. What activities are undertaken by the Kenya Coast Guard Service to ensure maritime security in Homa Bay County, Kenya?

- ii. How effective are the activities undertaken by the Kenya Coast Guard Service in ensuring maritime security in Homa Bay County, Kenya?

- iii. What legal framework guides the Kenya Coast Guard Service in ensuring maritime security in Homa Bay County, Kenya?

- iv. What are the challenges the Kenya Coast Guard Service faces in maritime security in Homa Bay County, Kenya?

Appendix IV: University Research Authorisation Letter



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15th April 2025

TO WHOM IT MAY CONCERN

RE: RESEARCH PERMIT: JOAB OBINDAH NAMUSHI

Joab Obindah Namushi Reg. No. (21J01DMGP035) is a Bonafide postgraduate student at Africa Nazarene University, pursuing a master's degree in governance, Peace and Security Studies. This program entails Coursework and Thesis. He has successfully completed coursework and defended his thesis proposal entitled:

"Assessing The Performance of the Kenya Coast Guard Service in Enhancing Maritime Security in Homa Bay County ".

Any assistance accorded to him to facilitate data collection and complete his thesis will be highly appreciated.

Sincerely,

Prof. Orpha K. Ongiti
Dean, Postgraduate Studies & Director, Institute of Research

Appendix V: NACOSTI Research License

 REPUBLIC OF KENYA Ref No: 244653	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION Date of Issue: 10/May/2025
RESEARCH LICENSE	
	
This is to Certify that Mr. Joab Namuhi Obindah of Africa Nazarene University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev:2014) in Homa Bay on the topic: ASSESSING THE PERFORMANCE OF THE KENYA COAST GUARD SERVICE IN ENHANCING MARITIME SECURITY IN HOMA BAY COUNTY for the period ending : 10/May/2026.	
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Legal Notice No. 108: The Science, Technology and Innovation (Research Licensing) Regulations, 2014

The National Commission for Science, Technology and Innovation, hereafter referred to as the Commission, was established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

CONDITIONS OF THE RESEARCH LICENSE

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2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way:
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 - ii. Adversely affect the lives of Kenyans
 - iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
 - iv. Result in exploitation of intellectual property rights of communities in Kenya
 - v. Adversely affect the environment
 - vi. Adversely affect the rights of communities
 - vii. Endanger public safety and national cohesion
 - viii. Plagiarize someone else's work
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15. Relevant Institutional Scientific and Ethical Review Committee shall monitor and evaluate the research periodically, and make a report of its findings to the Commission for necessary action.

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Appendix VI: Homa Bay County Map

