Effects of Multi-Agency Collaboration on Maritime Surveillance along Mombasa Coast, Kenya

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Abstract

The gap that exists in the reviewed literature depicts Maritime surveillance has attracted scant preview in local studies, therefore, it is in this context that this study intends to explore maritime surveillance. The study specifically addressed organization structure, staff competence, information technology, and sharing of information. A cross-sectional research design was employed using a target population of 294 participants from 7 maritime-related organizations. The sample size of maritime multi-agencies was determined using Yamane formula as a representation of the target population. Structured questionnaires were used in data collection. From the findings, majority of the respondents reported that organization structure affects the speed of decision-making within the maritime multi-agency. From the study, it was apparent that organizational structure affected the speed and accuracy of decisions; learning and growth culture within an organization was influenced by efficiency of information exchange within the multi-agency. Regression results showed that an increase in a presentation by one unit would have a corresponding unit in information technology and information sharing equivalent to 0.041 and 0.371 units respectively. Empirically the study affirmed information technology, information sharing, and staff competence a contribution on maritime (senior level and supervisors) in aligning employees' tasks-based staff abilities and competency by establishing efficient information sharing systems hence enhancing efficient and effective maritime surveillance. The study therefore recommends the government to support the implementation of the maritime -multiagency policy framework to address Ad-hoc participation by maritime multi-agency. It also recommends that proper monitoring and evaluation mechanisms be implemented with sufficient resources to ensure that maritime surveillance is efficient and effective.

Keywords: *Multi-agency collaboration, organization structure, staff competency, information technology, information sharing*, *maritime surveillance*

1.0 Introduction

Maritime space occurs in a setting of territorial waters, contiguous zones, and exclusive economic zones. However, the terminology does not consist of lake or river boundaries, which are considered in land boundaries context (Mark, 2001). Marine spaces have been considered to be physical media where agents network and project their interest to attain their goals.

Oceans and seas are considered significant in international politics apart from international society development (Marcelo, 2021).

According to Tomasz (2019), globally, maritime space covers 72% of the earth, maritime produces 60% and carries 90% of world's trade. Oceans and seas are most important elements of transportation infrastructure, economy, and ecosystem in the world. Oceans also play a substantial political role symbol of cohesiveness of interests among different continents states. Maritime domain is Africa's lifeblood of economy. Pursuant to (Spotlight, 2019) whether littoral or landlocked, the expression "No shipping, no shopping" is true for every country in the world. The phrase is key to both food security and food sovereignty. Apart from goods coming into African ports, a remarkable quantity is similarly exported. Equally, export of finished merchandise, manufacturing, and exportable craftsmanship sectors is on the rise. Important for effective worldwide maritime trade is secured maritime transit routes in integrating products across international marketplace. Deep-sea is significant to Africa's prosperity progress (Spotlight, 2019).

Locally, Kenya is strategically placed in terms of major maritime trading routes due to the comparative advantage of the location of Mombasa. As a result, many major shipping companies are represented in the country, which is responsible for carrying Kenya's foreign trade. It is apparent from the aforesaid that Kenya has quite numerous maritime activities, this also reflects the importance of these maritime activities not only to Kenya but also to her neighbours (Muindi, 1987).

Problem Statement

Existing gap that exists in the reviewed literature depicts Maritime surveillance has attracted scant purview in local studies, therefore, it is in this context that this study intends to explore maritime surveillance. To augment surveillance, there is a critical need for maritime actors to embrace partnerships to bridge the gap to set surveillance levels. The maritime sector is a system consisting of the individual shipping, ports, marine, and maritime business service industries, each of which comprises a diverse array of activities (Career Transition Partnership, 2021).

Maritime space and ecosystem facilitate evenly spread of trade and commerce. No country is entirely self-sufficient therefore, it depends on maritime trade to sell what it has and buy what it needs. Maritime transport is the bedrock of global trade and economy. The volume of international trade in goods is carried by sea, which is higher in percentage approximated to be over 80% globally for most developing countries. With much-hyped advantages and benefits of maritime sector, the maritime environment does not operate in isolation to avoid human interference. The major problem that the maritime space encounter in its daily operations includes water pollution, piracy, inadequate budget allocations from the government, and illegal business. Despite the above-mentioned maladies, the maritime space contributes to dramatic development in living standards of millions of people living in abject poverty in recent years. This is critical for the achievement of the 2030 Agenda in terms of economic pillar for sustainable Development (Ki-Moon, 2016). Most local studies such as Busiega (2016) and Njue (2020) focused on maritime security. Few or no known study has addressed maritime surveillance in the Kenyan Coastal region. The research intends to bridge information gap to explore the effect of multi-agency collaboration and maritime surveillance in Kenya's Mombasa Coast.

Research Objectives

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i. To establish the effect of organization structure on maritime surveillance in Mombasa Coast, Kenya.

ii. To examine the effect of staff competency on maritime surveillance in Mombasa Coast, Kenya.

iii. To find out the effect of information technology on maritime surveillance in Mombasa Coast, Kenya.

iv. To determine the effect of information sharing on maritime surveillance in Mombasa Coast.

2.0 Literature Review

Theoretical Review

The purpose of this study is to support the effect of multi-agency cooperation and maritime surveillance in a combative operational environment. Theoretical framework is based on Michael Porter's Five Forces model, which recognizes and examines the five competitive forces that shape a company's blueprint to discover the strengths and weaknesses in an organization's arrangements. By analyzing level of competition, the attractiveness of a market, and its profitability, the model pinpoints five indisputable elements that help to shape the operating environment. The five factors included in this research are the power of the buyer, the strength of the seller, the threat of replacement products, and industry competitiveness (Greenberg & Ortiz, 2016). The educated judgments every organization makes to comprehend in factoring areas impacting profitability with the use of the Five forces analysis include whether to enter a given market, whether to enhance capacity in a specific industry, and whether to build competitive strategies.

An inquiry instrument by (Ugur Yetkin, 2013) to thoroughly evaluate post-modern fleets. Although the driving reasons for marine security are different from those of the business industry, he applies this model to analyze it (Ferdinand, 2014). Globalization was greatly influenced by technological development, which led to an increase in information flow and maritime traffic. This calls for states to implement a maritime security strategy with an international perspective one that is restricted to their internal territorial jurisdiction. According to Ugur Yetkin (2013), developing a sea-going safety approach is a long-term remedy that necessitates a vigilant examination on issues influencing the seafaring sphere. Also is essential that parties engaged in strategic planning are able to provide solutions to issues by having a thorough understanding of the changing aspects of the working surroundings. Yetkin examined decision made by future merchant marines to develop and execute a cooperative maritime security architecture that improves a shared global perspective with international positioning to deal with asymmetrical threats (Ferdinand, 2014).

By comprehending its changing aspects and knowing which strength has a significant impact on an organization, the five forces assist strategists in evaluating an operational environment. Understanding these forces allows one to comprehend the strength associated with each driving force while also assisting in the identification of the participants who play a part in each force (Bruno & Yao, 2015). Defense organizations' personnel who influence how well the naval force can carry out its task, are the power of suppliers in (Ugur Yetkin, 2013) examination of postmodern fleets (product). Through a steady supply of replacement parts, the defense industry assists in both the development of the fleet and the improvement of its operational capabilities. Without domestic defense industries, emerging nations must constantly rely on the importation of spare parts from foreign military industries to maintain and repair their seagoing

warships. In this sort of situation, the armed forces sectors end up being quite solid, and, as a result, they wind up dictating how effective the fleets of these nations are. Due to the inadequacy of easily accessible qualified professionals which results in a shortage of labour force power and the fact that there are numerous private sector job opportunities, many individuals choose to work for land formations rather than join the navy at sea (Bruno & Yao, 2015).

In a marine setting, the product (mission achieved) by the navy determines the purchasing power of the consumers. The global public in various areas are only a few potential customers in the marine industry; the local end users are ship agents and owners. The first customers are undoubtedly the citizens, who benefit from the marine security services supplied by the navy (Greenberg & Ortiz, 2016). This is due to their unquestionable ability, through their representative in the parliament, to set the money allotted to the navy. The navy's capacity to manage the budget dictates how well it can carry out its mission as the supplier of maritime security, although they have no other option. Fourth street coverage, internet development, and issues affecting the maritime domain were able to receive the necessary consideration and reaction worldwide community urged strong fleets to take responsibility. As a consequence, global public is a powerful customer in postmodern navies. The implemented measures entail those that secure the Sea Lanes of Communication (SLOC) to guarantee that ships can move through regions with maritime risks effectively (Greenberg & Ortiz, 2016). By adopting these steps, the navies support the activities of other purchasers, like ship owners and ship brokers, by fostering a sense of trust in them to keep up their shipping operations. If ship owners and agents choose to modify the route to avoid a high-risk location in the maritime territory, a clear uptick in maritime lawlessness, basically defines the cost of shipping, leading to an unheard-of increase in the insurance premium. Ugur Yetkin (2013) proposed that because governments in various settings had a deficiency in the purchasing power will to influence the universal community's reaction, they cannot make their own decisions and are forced to accept aid on the conditions of the more powerful state.

Empirical Review

Maritime Surveillance

According to Lim (2007), effective surveillance of the global waterways although attaining "sea control" of the global commons is about the capability to detect and watch anything sailing at sea at any moment. Therefore, nations achieve more through an international organization to plan and leverage local maritime strategy, through information-sharing networks across maritime multi-agency.

Sustenance of users by offering better-quality considerate and quality monitoring of fishing, marine pollution, and the marine environment, and support to maritime global organizations is enhanced by maritime surveillance in accordance (EMSA, 2018). Vessel transiting in sea location when thought to be drifting after they lose contact, based on last known coordinates. Vessels over large areas are made available for tracking with the help of SAR radar satellite pictures. Vessels operating from uncontrolled areas at sea are highly visualized using resolution optical images that provide valuable insight. Maritime act is put into practice by incorporating varied tasks such as actions to avert: ocean-going criminal activities, sea incidences, marine pollution, illegal fishing, armed robbery, trafficking and smuggling of illegal imports, and piracy. To prompt responsive intelligence and operational coordination, as directed by decision-makers supported by appropriate maritime law and moulded by strategy-driven

policies, information management, intelligence processing, information sharing, and sense-making enable MDA to be achieved.

Organization Structure and Maritime Surveillance

A UN expert team in charge of IMO is a team; that has a responsibility of monitoring and supervising of shipping industry. The UN conference agreement from Geneva in 1948 led to the creation of the IMO, which was created 10 years later and conducted its inaugural meeting in 1959.174 nations and 3 associate members make up the IMO (IMO, 2015). Its main objective is to establish and maintain a comprehensive regulatory framework for shipping, marine well-being, environmental concerns, policy matters, technical teamwork committee, maritime security, and shipping effectiveness. Several sub-committees work is supported by the primary technical committees (IMO, 2015). Five committees handle the business of the IMO, with the help of technical subcommittees. Observer status is provided to eligible non-governmental organizations and other United Nation organizations who watch proceedings of the IMO. A permanent secretariat of personnel who serve as representatives of the IMO's members supports the organization. The IMO is divided into several sections, including ones for conference planning, environmental protection, and marine safety. There are five major IMO committees: the facilitation committee, the legal committee, the technical cooperation committee, and the maritime safety committee. Several subcommittees' work is supported by the primary technical committees (IMO, 2015).

Staff Competency and Maritime Surveillance

Kenyan teenagers seeking work as sailors on board foreign ships were given training and skill development assistance under a memorandum of understanding (MOU) between the department of shipping and maritime and the department of state (Karigithu, 2019) the development of skills and linkages to employment possibilities in the shipping and marine industries will be guaranteed amongst these divisions through co-operation. Numerous inventiveness targeted at overhauling the marine industry to enhance the social and economic prosperity of Kenyans, more popularly known as the blue economy is in progress.

Closer to the achievement of supportable blue growth, Kenya aims to become the development of marine skills, and young access to work prospects. The PS suggested that the Memorandum of Understanding will also guarantee that qualified seafarers, who frequently have difficulties in satisfying pre-embarkation requirements, have access to financial help. The agreement is a component of government measures aimed at giving Kenyan youngsters access to both domestic and foreign seafaring jobs. The president's announcement of the opening of the Maritime Academy in Mombasa served as a major catalyst for Kenya's reform efforts to position the blue economy sector. To satisfy the demands of the developing blue economy sector, the Bandari Maritime Academy seeks to increase the number of skilled seafarers in Kenya and the region at large (Karigithu, 2019).

Information Technology and Maritime Surveillance

In determination to discontinue illegal maritime traffic, naval officials intensify operations around the coast in order to control illegal trade, the Kenya Navy and KCGS boosted patrols in the Indian Ocean (Ahmed, 2020). These operations target, among other things, illicit fishing, drug trafficking, and marine pollution. At least Sh10 billion in lost income is thought to result from unlawful and lawless activity along Kenya's coast each year. KPA serves as an advisor to the Coast Guard technical committee, where it is a member. According to President Uhuru Kenyatta's directive, the marine agency is responsible for ensuring the security of the nation's territorial waters, protecting the ports, and preventing the discharge of hazardous waste and

pollutants into the ocean. The Coast Guard's job is to make sure that all boats, seafarers, and other sea users are properly licensed for any employment, pleasure, or commercial water travel. Services for search and rescue have a further role in preventing unlawful business operations including people trafficking and illegal fishing. To assure rigorous monitoring of the coastal waterways, the Coast Guard set out on a quest to build a coastal surveillance system (Ahmed, 2020).

To combat marine crimes and make its infamously dangerous waterways safer for sailors, South Africa is utilizing contemporary technologies. The Maritime Domain Awareness of the nation is being improved, according to research from the Institute for Security Studies (ISS). Thousands of boats regularly approach, traverse, or leave the maritime domain of South Africa due to the country's location at the convergence of the Atlantic and Indian oceans and astride the strategically significant Cape shipping route. While most are simply conducting trade, some are engaged in illicit fishing, poaching, smuggling, and trafficking, and if allowed to continue, they might represent a security problem (Reva, 2021).

Information Sharing and Maritime Surveillance

As part of the US strategy, information about ships, sailors, and cargoes is being produced and used to create Maritime Domain Awareness. To effectively comprehend anything connected to the marine sector affecting well-being and economics. according to (Galdorisi, 2014). MDA enables measures that eliminate threats to US national security interests by facilitating swift, accurate decision-making.

A global link for area-based naval establishment internationally broadcasting, identifying measures, and notifying activities are just a few of the services offered by this company (Martins, 2014). To accomplish MDA, governments must share a focus on increasing maritime security through situational and threat awareness. It demands improved coordination and harmonization between various branches and agencies of the government as well as partnerships with the corporate sector. Given that international shipping is a major industry, partnerships are essential. Commercial information could be made public as it would enormously benefit the information exchange corporation of manufacturers and shippers'.

3.0 Methodology

The study adopted a cross-sectional research design and used a target population of 294 participants from 7 maritime-related organizations. The sample size of maritime multi-agencies was determined using Yamane formula as a representation of the target population. Structured questionnaires were used in data collection. Sampling technique used was stratified random sampling. The researcher engaged any willing staff in the target population organizations to answer questionnaires through drop and pick a technique to provide ample time for participants to react to the questionnaire. Data gathered using open-ended questions was presented precisely in themes or patterns. Information gathered was edited, cleaned, coded, and entered using SPSS version 23 software and analysed using both descriptive and inferential statistics. To enable an explanation of study findings, data was offered in distribution tables. Multiple regression analysis was utilized to draw a link between independent and dependent variables.

4.0 Results and Discussion

Descriptive of Organization structure

Table 1: Respondents' response on Organization structure

	1	2	3	4	5	MEAN	SD
The organizational structure affects speed of decision making within the maritime agencies in Mombasa coast Kenya		2	2	8	32	25	4.10 0.926
Organization structure adopted, fosters creation of lean teams at maritime agencies	1	5	15	30	18	3.86	0.944
Organization structure adopted, fosters efficient tasks Completion within maritime agencies in Mombasa	2	6	10	37	14	3.80	0.964
Efficiency solution delivery to maritime stakeholders is positively increased by organization structure.	4	3	13	21	27	3.94	1.145
Personnel are empowered by organization structure to make decisions relating to the routine tasks they are working on	4	6	7	26	26	3.93	1.167

As per table 1 above, the distribution was a result of the views of respondents on different statements given organizational structure. There were scores 1= strongly disagree, 2 =disagree, 3= neutral, 4= agree and 5 = strongly agree.

This study sought tried to sought how the speed of decision-making in maritime agencies in Mombasa is affected by organization structure, 4 respondents (5.6%) in totality disagreed, 8 (11.6%) remained neutral whereas 32 (46.4%) and 25 (36.2%) agreed and strongly agreed respectively. The effect of organizational structure stimulates the growth or failure of many organizations. The question was to gauge the perception of the respondents on the effects of organizational structure on decision-making in an organization. The relevance is outlined in the effectiveness of organizational structure to speed up decision-making process hence steady task completion.

The study sought to establish how the respondents rated efficient tasks completion within maritime agencies, 2 (2.9%) and 6 (8.7%) in totality disagreed, 10 respondents (14.5%) were neutral and 51 (73.9%) respondents agreed that indeed the creation of lean teams will be triggered by organization structure at maritime agencies, 18 respondents represent (26.1%) strongly agreed and 30 (43.5%) agreed. 15 respondents (21.7%) remained neutral and 1 respondent (1.4%) strongly disagreed. The lean team enhances faster dissemination of information among the players in the same game. Therefore, whether the organization structure adopted fosters creation of lean teams was intended to bring out the importance of lean teams, this team improves performance in maritime sector as tasks are assigned according to staff job specifications, therefore, reducing the assignment of duties also duplication of tasks is addressed.

The study sought to determine if the organization structure positively increases efficiency solutions delivery to maritime stakeholders, 13 respondents (18.8%) tended to be neutral, 4 (5.8%) and 3 (4.3%) respondents conclusively disagreed, and 21 (30.4%) and 27 (39.1%) agreed respectively. Respondents were asked if the organization structure empowers individual personnel to make decisions relating to the routine tasks they are working on, 52 respondents (74.2%) in totality agreed, 7 (10.1%) remained neutral and 10 (14.5%) respondents disagreed.

The results showed that a positive organizational structure has a positive impact on the performance of every organization. Organizations' structure in groups to enable tasks that seem difficult to be achieved as individuals are made possible. In relation to maritime, surface area to be covered is relatively large to be monitored hence organizational structure of groups, regional bodies, international, states etcetera. The positivity in organization structure enhances efficiency in delivery of tasks intended. From the respondents' standpoint; it is evident that indeed strengthened and goal-oriented organizational structure brings in more efficiency toward achievement of set goals.

The mean score of various responses generated showed the average perception around the mean. The standard deviation was examined showing the level of consensus on a different statement with regard to organization structure. A strong tendency to agree was indicated by mean scores above 3.5 whereas, above 3.0 were interpreted as a tendency to agree on average. There was no agreement for a standard deviation above 1; consensus for a standard deviation below 1. A mean of 4.10 means; the results from the table above show that the respondents strongly agreed that the organization structure affects the speed of decision-making within the maritime agencies along Mombasa coast. Results (mean = 3.86), showed that organization structure adopted fosters creation of lean teams at maritime agencies. Organization structure adopted fosters efficient tasks in completion within maritime agencies in Mombasa (mean = 3.80), A mean of 3.94 affirmed that efficient solutions delivery to maritime stakeholders is positively initiated by organization structure and the individual personnel is empowered to make decisions on routine tasks they are working on through organization structure (mean=3.93). The respondents had a consensus that the organization structure affects the speed of decision-making within the maritime agencies in Mombasa, the organization structure adopted fosters creation of lean teams at maritime agencies, and Organization structure adopted fosters efficient tasks in completion within maritime agencies in Mombasa with the standard deviation of 0.926, 0.944 and 0.964 respectively. On the other hand, respondents had no consensus on whether the organization structure positively increases efficiency solutions delivery to maritime stakeholders (s.d = 1.145) or whether the organization structure empowers individual personnel to make decisions relating to the routine tasks they are working on (s.d=1.167).

Descriptive of Staff Competence

Table 2: Respondents response on Staff competence

	1	2	3	4	5	MEAN	SD
Organization depends on alterations in performance , perception and conduct of workers' commitment to justify competency competencies and certify retention	0	0	24	40	26	4.35	2.033
The organization implements initiatives to boost workers' competencies and certify retention	2	2	11	33	21	4.72	6.209
In determining the personnel to be trained effective development and assessment plan is conducted in the organization	0	5	9	33	22	4.04	0.865
On-job training opportunities are capitalized greatly by the organization	2	4	8	32	23	4.03	1.000
Follow up after a learning activity of new skills and knowledge is integrated by an organization into workers tasks	3	1	10	32	23	4.59	4.909

The distribution from table 2, was a result of views of respondents on different statements given staff competence. There were scores 1= strongly disagree, 2 =disagree, 3= neutral, 4= agree and 5 = strongly agree.

Regarding if organization depends on alterations; performance, perception, and conduct of workers' commitment to justify competency competencies and certify retention, 24 respondents remained neutral, 40 and 26 respondents conclusively agreed and strongly agreed respectively. The conduct and perception of workers carry the image and reputation of the organization. Therefore, it is evident in the purview of the respondents' perception that organizational performance depends on the workers' conduct and image.

The study sought to examine whether follow-up after a learning activity of new skills and knowledge is integrated by an organization into workers' tasks, 3 (4.3%) respondents in totality disagreed, 1 (1.4%) respondent disagreed, 10 (14.5%) remained neutral whereas 32 (46.4%) and 22 (31.9%) agreed and strongly agreed respectively. The positive view of respondents towards learning new skills and knowledge integration, it's a key pillar in workers' capability or ability towards task accomplishment. It's the rule of thumb that indeed knowledge integration and acquisitions are always a very important bloc of tasks and goal attainment.

The results further showed in determining the personnel to be trained effective development and assessment plan is conducted in the organization, 5 respondents (7.2%) disagreed, 9 respondents (13%) were neutral and 55 respondents (78.3%) agreed that indeed in determining the personnel to be trained effective development and assessment plan is conducted in the organization.

Regarding On - Job Training (OJT) respondents were asked to indicate whether On - Job Training (OJT) opportunities are capitalized greatly by the organization, 23 respondents (33.3%) strongly agreed and 32 (46.4%) agreed. 8 (11.6%) respondents remained neutral and 2 (2.9%) and 4 (5.8%) respondents disagreed in totality. Training frequently adds value to the workforce, steady assessment brings about improvement in methods and modes of skill and knowledge acquisition within the working environment. Therefore, it was imperative to note that given the '1respondents' perception. Assessment plans and different training modes and methods inculcate more skills and abilities into the workforce which brings about organizational growth, therefore, it must be greatly capitalized and invested in by organization.

The study also sought to identify whether follow-up after a learning activity of new skills and knowledge is integrated by organization into workers' tasks, 3 respondents (4.3%) strongly disagreed, 1 respondent (1.4%) disagreed, 32 respondents (46.4%) remained neutral and 23 respondents (33.3%) strongly agreed. According to the current situation, most maritime organizations enhance nurturing of skills to newly joined staff to enhance continuity of organization culture and norms enrooted to certain conduct attuned to mission readiness of the same organization.

The mean score of different statements of staff competence matrix was generated showing the average perception and responses around the mean. The mean scores above 3.5 were interpreted as a strong tendency to agree and mean scores above 3.0 were interpreted as a tendency to agree on average. The standard deviation was examined showing the level of consensus on a different statement with regard to staff competency. There was no consensus for a standard deviation above 1 and consensus for a standard deviation below 1. The results from the table above show that the respondents strongly agreed that the Organization depends on alterations in performance, perception, and conduct of workers' commitment to justify competency competencies and certify

retention by a mean of 4.35 or follow up after a learning activity of new skills and knowledge is integrated by an organization into workers tasks (mean 4.59) or the organization implements initiatives to boost workers competencies and certify retention (mean=4.72). The respondents also strongly agreed that On - Job Training (OJT) opportunities are capitalized greatly by the organization (mean = 4.03), In determining the personnel to be trained effective development and assessment plan is conducted in the organization (mean = 4.04). The respondents had no consensus that an organization depends on alterations in performance, perception, and conduct of workers' commitment to justify competency competencies and certify retention or Follow up after a learning activity of new skills and knowledge is integrated by an organization into workers' tasks or the organization implements initiatives to boost workers competencies and certify retention or On - Job Training (OJT) opportunities is capitalized greatly by the organization, with the standard deviation of 2.033, 4.909, 6.209 and 1.000 respectively. On the other hand, the respondents had consensus in determining the personnel to be trained effective development and assessment plan is conducted in the organization (s.d=0.865). Finally, whether staff competence has some effects on organizational well-being in maritime arena, it is imperative to outline that staff competence contributes immensely to the growth and tasks and mission accomplishment and readiness among the players in oceanography. How this is achieved through core competencies which help staff to enhance teamwork, be well motivated, cope easily with any unbecoming/ hardship environment at sea (sea sickness, stress, sea rough), developing of strategies, help adapt easily to any sea disastrous environment, making decisions, coping up with emotions. As such organizational well-being leverages maritime organizations to work as one team and meet set objectives. In addition, its staff are motivated, dedicated, and feel to be part of the organization.

Descriptive of Information Technology

Table 3: Respondents' response to Information Technology

	1	2	3	4	5	MEAN	SD
Data collection process by field officers at the maritime agencies have significantly improved services by using IT tools	25	0	0	40	2	3.93	0.667
Paper-based process in data collection is easier as compared to IT tools	4	9	14	29	13	3.55	1.119
Better management of department data needs at the maritime agency is facilitated by the use of IT	1	1	11	35	21	4.07	0.810
Decision-making process hastened by use of IT data management system in the organization	4	0	13	28	24	3.99	1.036
Target monitoring and reporting has significantly improved at maritime agencies as a result of IT use	2	3	10	25	29	4.10	1.002

From table 3 above: The distribution was as result of views of respondents of different statements in view of staff competence. There were score 1= strongly disagree, 2 =disagree, 3= neutral, 4= agree and 5 = strongly agree.

The study sought to determine whether data collection process by field officers at the maritime agencies has significantly improved services by using IT tools, 25 respondents strongly disagreed, 40 respondents agreed and 2 respondents strongly agreed. Information technology is a driver of all economic aspects geared towards goal attainment and development, in maritime space, it's not opposite in the sense that the maritime family sees IT as an indicator of performance improvement.

The study sought to establish whether a paper-based process in data collection is easier as compared to IT tools, 42 respondents (60%) in totality agreed, 14 respondents (20.3%) remained neutral whereas 9 respondents (13%) disagreed and 4 strongly disagreed (5.8%). In comparison between manual paperwork and information technology. The maritime players presume that paperwork is better than IT workings. This is an indication of avoiding change. As a basic economic driver, IT revolutionizes and steadily improves working environment by making it easier to achieve set goals. In this study, the comparison was important since cleared the doubt about whether IT tools and modes should be incorporated into the daily workings of the organizations or not.

On better management of department, respondents were asked to indicate whether better management of department data needs at the maritime agency is facilitated by the use of IT, 2 respondents represent (2.8%) disagreed in totality, 56 respondents (81.1%) conclusively agreed and 11 respondents (15.9%) remained neutral. Therefore, better management of department data needs at the maritime agencies is facilitated by use of IT. In data transformation and storage, it is one of the basic functions of IT, in a maritime family, it is no different. The maritime sector in wholesome depends on information technology for data management. IT plays a very vital role in data management hence relevant to this study that partakes information at the center of its heartbeat.

In line with Information Technology; Decision-making process hastened by the use of I.T data management system in the organization, 4 respondents (5.8%) strongly disagreed and 13 respondents (18.8%) remained neutral. 28 respondents (40.6%) agreed and 24 respondents (34.8%) strongly agreed. Due to speedy information processing and dissemination by IT platforms, decisions are reached very fast. IT creates a very important pillar and platform through which maritime teams share, process, store, and transfer information faster giving birth to pregnant decisions within the maritime space.

The study sought to determine whether target monitoring and reporting have significantly improved at maritime agencies as a result of IT use,2 respondents represent 2.9% strongly disagreed, 3 respondents (4.3%) disagreed, 10 respondents (14.5%) tended to be neutral, 25 (36.2%) and 29 (42%) respondents agreed and strongly agreed respectively. Not only IT enhance decision-making process but also improves monitoring and reporting capabilities. Based on the above respondents thinking and perception, IT is as critical as it's in monitoring and reporting results between the maritime teams that necessitate fertile decisions resulting in productive outcomes.

The mean score of different statements of organization structure matrix was generated showing the average perception and responses around the mean. The standard deviation was examined showing the level of consensus on a different statement with regard to organization structure. The mean scores above 3.5 were interpreted as a strong tendency to agree and mean scores above 3.0 were interpreted as a tendency to agree on average. There was no consensus for standard deviation above 1 and consensus for a standard deviation below 1. The results from the table above show that the respondents strongly agreed that better management of department data needs at the maritime agency is facilitated by use of IT, Target monitoring and reporting have significantly improved at maritime agencies as a result of IT use, or Decision making process hastened by use of IT data management system in the organization, Paper-based process in data collection is easier as compared to IT tools and Data collection process by field officers at the maritime agencies has significantly improved services by using IT tools with respective mean of 4.07, 4.10, 3.99, 3.55 and 3.93. There was consensus that data collection process by field officers at the maritime agencies has significantly improved services

by using IT tools (s.d 0.667) and better management of department data needs at the maritime agency is facilitated by use of IT (s.d 0.810). On the other hand, respondents had no consensus on Paper-based process in data collection is easier as compared to IT tools, Decision-making process hastened by use of IT data management system in the organization, and Target monitoring and reporting has significantly improved at maritime agencies as a result of IT use standard deviation was 1.119, 1.036 and 1.002 respectively. The study sought to establish how the respondents rated whether information technology is a vital pillar for coordination of players and surveillance in maritime environment? It is obligatory to note that information technology is super and enhances and improves the workings in terms of data management, decision making, information sharing, and monitoring at large hence proper coordination resulting in desired collaboration amongst the players in maritime space. IT is key in coordinating tracing/tracking/detecting, deterring, and denying criminal activities at sea like piracy activities, in ashore IT gives best option of container scanning thereby enhancing security in maritime sector. IT enhances tracking of vessels approaching EEZ through such visibility tools as Sea vision, radars, and satellites. IT tools help to know whether shipment conveyed is illegal goods, contrabands, illegal small arms, or explosives and facilitate earlier intersection and confiscation of such illegal activities. Port facilities are placed with highly electronic surveillance equipment by virtue of IT.

Descriptive of Information Sharing

Table 4: Respondents' response to Information Sharing

	1	2	3	4	5	MEAN	SD
Personnel hold brainstorming sessions to come up with suggestions for solving problems concerning maritime surveillance	6	3	11	32	17	3.74	1.146
New personnel are assigned mentors to help them on personal work and accelerate their learning	4	6	13	22	24	3.81	1.179
Personnel contribute ideas and thoughts to the organization through online discussion	7	3	12	27	19	3.71	1.221
Information sharing infrastructure and equipment (internet and intranet) is easily available to all employees at the agencies	4	9	22	21	13	3.43	1.118
New staff/Recruits share their experiences and knowledge about working with other organizations in meetings	9	5	15	25	15	3.46	1.279

Distribution in table 4 was based on views of respondents of different statements given organizational structure. There were scores 1= strongly disagree, 2 =disagree, 3= neutral, 4= agree and 5 = strongly agree.

The findings showed that, if personnel hold brainstorming sessions to come up with suggestions for solving problems concerning maritime surveillance, 11 respondents tended to be neutral which represented 15.9%, 32 and 17 respondents conclusively agreed (46.4% and 24.6% respectively). 6 and 3 respondents agreed respectively (8.7% and 4.3% respectively). New positive suggestions and thinking rejuvenate the players always. Therefore, it's vital to highlight that maritime family encourages new thinking and suggestion thereby giving opportunities to individual players to express his/her feeling and thinking towards improving the maritime sector at large.

Regarding mentorship, respondents were asked to indicate if new personnel is assigned mentors to help them with personal work and accelerate their learning 10 respondents in totality disagreed (14.5%), 13 remained neutral (18.8%) and 46 respondents fully agreed (66%). Mentoring is a process of coaching and apprenticeship that is aimed at improving the working techniques and motivation of the labour force. 70% of respondents agreeing is an indication that indeed maritime fraternity encourages mentorship which in turn promulgates desired results and raises team spirit among the ocean players.

The study sought to examine whether personnel contribute ideas and thoughts to the organization through online discussion, 10 respondents in totality disagreed (14.4%), 12 remained neutral (17.4%) whereas 27 (39.1%) and 19 (27.5%) agreed, and strongly agreed respectively. Encouraging discussion and free flow of ideas among the workers in an organization is a source of morale for workers. This leads to work improvement motivation between the teams. Based on the results above, shows that the maritime players take it positively to contribute their thoughts and ideas to the organizational functionality. This makes them part and parcel of the organization.

The study determined whether Information sharing infrastructure and equipment (internet and intranet) is easily available to all employees at the agencies, 4 and 9 in totality disagreed representing 5.8% and 13% respectively, 22 respondents were neutral (31.9%) and 34 respondents representing (49.2%) agreed in totality that indeed Information sharing infrastructure and equipment (internet and intranet) is easily available to all employees at the agencies. Internet and intranet are IT variants that enable communication in today's technological space. Therefore, maritime arena must invest in the same to enhance improved communication with its members. Leaders must make it a policy to have internet within maritime organizations. In addition, there is a need for energy backup to supplement power resupply to prevent flow of network in case of a power cut or inflactuation of energy supply such backups include standby generators, solar power. Half of the respondents dissenting is a clear view that no major investment has been put forth, hence poor coordination that is necessitated by poor communications between the players thereby giving birth to undesired collaborations.

Regarding new staff/Recruits sharing their experiences and knowledge about work with other organizations in meetings, 15 respondents (21.5%) tended to strongly agree while 25 respondents (36.2%) agreed. 15 respondents (21.7%) remained neutral. 9 (13%) and 5 (7.2%) respondents strongly disagreed and disagreed respectively. Exchange of skills and knowledge is very important since it leads to identification of gaps and solutions to those gaps. Therefore, it's encouraging to see that maritime fraternity allows a knowledge exchange program between the recruits and staff of other organizations. This is vital because it promotes team playing and problem-solving skills among the players.

The mean score of different statements of information sharing matrix were generated showing the average perception and responses around the mean. The standard deviation was examined showing the level of consensus on a different statement with regard to information sharing. The mean scores above 3.5 were interpreted as a strong tendency to agree and mean scores above 3.0 were interpreted as a tendency to agree on average. There was no consensus for a standard deviation above 1 and consensus for a standard deviation below 1. The results from the table above show that the respondents strongly agreed that new personnel is assigned mentors to help them with personal work and accelerate their learning by a mean of 3.81). The respondents also agreed that personnel brainstorming sessions to come up with suggestions for solving problems concerning maritime surveillance (mean = 3.74), Personnel contribute ideas and

thoughts to the organization through online discussions (mean = 3.71), new staff/recruits share their experiences and knowledge about work with other organizations in meetings (mean= 3.46) and information sharing and equipment (internet and intranet) is easily available to all employees at agencies (mean=3.43). The respondents had no consensus on whether personnel holds brainstorming sessions to come up with suggestions for solving problems concerning maritime surveillance (s.d = 1.146) or whether new staff/recruits share their experiences and knowledge about work with other organizations in a meeting (s.d = 1.222) or information sharing and equipment (internet and intranet) is easily available to all employees at agencies (s.d = 1.279) or personnel contributes ideas and thoughts to the organization through online discussions (s.d = 1.118) or New personnel are assigned mentors to help them on personal work and accelerate their learning (s.d = 1.179). Information sharing is a cornerstone that holds an organization focused on its goals and vision. Improved coordination, collaboration, and good decisions are a result of enhanced information sharing. When asked whether information sharing is a key pillar to the success of an organization? The response must be in totality positive that indeed information is a key pillar that must not be looked down upon. Regional maritime coordination centers act as the link between maritime multi-agency and ships underway in the sense that exchange information regarding safety, sea route, times of distress, monitoring, and surveillance of vessels. justifies information sharing.

Descriptive of Maritime Surveillance

Table 5: Respondents' response to Maritime surveillance

	1	2	3	4	5	MEAN	SD
Accountability mechanisms ensure that all of the required maritime agencies contribute to the success of maritime surveillance	2	3	9	36	19	3.97	0.923
Multi-agency team includes state actors with an interest in the security of Kenya's Coast maritime industry, that is, KMA, KPA, Kenya Navy, KSL, KPA, KCGS etc.	3	1	9	25	31	4.16	1.009
Maritime surveillance is used for the protection of vessels both internally and externally	2	1	5	27	34	4.30	0.896
There is a link between multi-agency collaboration and maritime surveillance in Mombasa Coast, Kenya	2	3	12	30	22	3.97	0.970
There is a clear protocol on communication and information-sharing modalities within the multi-agency collaboration	1	5	13	30	20	3.91	0.951
A maritime diplomacy is a tool in enhancing activities of multi-agency collaboration and maritime surveillance	0	4	13	31	21	4.00	0.857

The findings in table 5: The distribution was a result of views of respondents on different statements given staff competence. There were scores 1= strongly disagree, 2 =disagree, 3= neutral, 4= agree and 5 = strongly agree.

When asked whether accountability mechanisms ensure that all of the required maritime agencies contribute to the success of maritime surveillance, 2 respondents strongly disagreed representing 2.9%, another 3 disagreed representing 4.3%, 55 respondents conclusively agreed

to represent 79.7% and 9 respondents remained neutral which represent 13%. Therefore, accountability mechanisms ensure that all of the required maritime agencies contribute to the success of maritime surveillance. Accountability is the state of acceptance of any inability and openness. The accountability mechanism employed by maritime sector is acceptable to all members based on the respondents' views above. The mechanisms train the individual to be responsible, own the fault when falling due, and be accountable for any situation that might be in place. Therefore, one can control what he/she can account for. The success of every organization is based on responsibility that every member carries.

The study sought to examine whether a multi-agency team includes state actors with an interest in the security of Kenya's Coast maritime industry, that is, KMA, KPA, Kenya Navy, KSL, KPA, KCGS etc., 56 respondents in totality agreed (81.1%), 9 respondents remained neutral (13%) whereas 1 respondent disagreed (1.4%) and 3 strongly disagreed (4.3%). For success to occur and goals to be achieved, players of the game must be subject matter experts. Therefore, it was prudent enough to employ those entities or individuals responsible for maritime environment and sustainability. The respondents' views above firmly conquer the principle. It's important to note that the workforce must be deployed according to their capabilities and abilities. A football player must only play football, not hockey.

Regarding protection of vessels, respondents were asked to indicate whether Maritime surveillance is used for the protection of vessels both internally and externally, 2 respondents strongly disagreed which represents 2.9%, 1 respondent disagreed (1.4%), 29 respondents agreed which represent 39.1% whereas 5 respondents remained neutral (7.2%) and 34 respondents strongly agreed (49.3%). The goal behind maritime surveillance is protection of maritime ecosystem. It is based on this background that the larger number of respondents in totality agreed that indeed maritime surveillance was integral part in protection of vessels both internally and externally. The chemistry behind this statement was to capture the players' views on roles of maritime surveillance.

In line with whether there is a link between multi-agency collaboration and maritime surveillance in Mombasa Coast, Kenya, 2 respondents strongly disagreed (2.9%) and 3 respondents disagreed (4.3%). 12 respondents remained neutral (17.4%). 30 respondents agreed (43.5%) and 22 respondents strongly agreed (31.9%). The linkage between two or more proactive teams aimed at hitting the bull's eye is an important factor to consider in every situation as far as there's proper coordination in the play. The practicability of this scenario is evident when almost 75% of respondents in totality are in consensus as displayed above. The linkage between players strengthens and promotes team spirit which is the foundation of success in every organization.

The study sought to find out if there is a clear protocol for communication and information-sharing modalities within the multi-agency collaboration, 6 respondents conclusively disagreed which represents 8.6%, 13 respondents were neutral (8.8%), 30 (43.5%), and 20 (29%) respondents agreed and strongly agreed respectively.

On whether Maritime diplomacy is a tool in enhancing activities of multi-agency collaboration and maritime surveillance, The results further showed that; 4 respondents disagreed (5.8%), 52 respondents conclusively agreed (75.3%) and 13 respondents remained neutral (18.8%). Therefore, maritime diplomacy is a tool for enhancing activities of multi-agency collaboration and maritime surveillance.

The mean score of various maritime surveillance responses created showed an average perception of the mean. The standard deviation was examined showing the level of consensus

on a different statement with regard to organization structure. The mean scores above 3.5 were interpreted as a strong tendency to agree and mean scores above 3.0 were interpreted as a tendency to agree on average. There was no consensus for a standard deviation above 1 and consensus for a standard deviation below 1. The results from the table above show that the respondents on average strongly agreed on Accountability mechanisms ensure that all of the required maritime agencies contribute to the success of maritime surveillance by a mean of 3.97. The multi-agency team includes state actors with an interest in the security of Kenya's Coast maritime industry i.e. KMA, KPA, Kenya Navy, KSL, KPA, KCGS, etc. (mean = 4.16), Maritime surveillance is used for the protection of vessels both internally and externally (mean = 4.30), there is a link between multi-agency collaboration and maritime surveillance in Mombasa Coast, Kenya (mean= 3.97), a Maritime diplomacy is a tool in enhancing activities of multi-agency collaboration and maritime surveillance by mean of 4.00 and There is a clear protocol on communication and information sharing modalities within the multi-agency collaboration (mean=3.91). The respondents on average had a consensus that accountability mechanisms ensure that all of the required maritime agencies contribute to the success of maritime surveillance, Maritime surveillance is used for the protection of vessels both internally and externally, and there is a link between multi-agency collaboration and maritime surveillance in Mombasa Coast, Kenya, maritime diplomacy is a tool in enhancing activities of multi-agency collaboration and maritime surveillance, and there is a clear protocol on communication and information sharing modalities within the multi-agency collaboration standard deviation of 0.923, 0.896, 0.970, 0.951 and 0.851 respectively. However, respondents had no consensus on the multi-agency team includes state actors with an interest in the security of Kenya's Coast maritime industry, that is, KMA, KPA, Kenya Navy, KSL, KPA, KCGS etc., (s.d = 1.009) whether the linkage between the teams in the play bares positive results? It is a norm that must be encouraged in all organizations that team playing necessitates success. Proper coordination and collaboration in every organization is as a result of good working environment and team playing spirit. In addition, Maritime surveillance faces challenges mainly due to ever changing nature of International Maritime Organization instruments and the expansion in terms of improved regulations in the maritime industry, which if not domesticated, as such Kenya is expected from time to time put into law any upcoming maritime policy to leverage maritime know-how and enhance legal activities and safety at sea at all times.

Regression Analysis

The regression model was used to draw the relationship between Maritime surveillance and the four variables namely: organization structure, staff competencies, information technology, and information sharing.

Table 6: Model Summary

Model Summary							
Model	R	R^2	Adjusted R^2	Std. Error of the Estimate			
1	.513ª	.263	. 217	.55020			

The results from table 6 above: There was a positive correlation between the maritime surveillance and independent variables as the correlation coefficient, expressed as R, was 0.513. The coefficient of determination gave the amount of explained variance in the dependent variable (expressed as R^2) as a result of the independent variable. The independent variable that was studied, explained 26.3% of the dependent variable as represented by the adjusted R

square. This implies that other factors not studied in this research 73.7% should be conducted to assess effects of multi-agency collaboration and maritime surveillance along Mombasa Coastline, Kenya.

The study sought to know the relationship between the organization structure, staff competence, information technology and information sharing (independent variable) and Maritime surveillance (dependent variable). In this context, Maritime surveillance was regressed against the independent variables and the correlation results are presented in Table 7 below.

Table 7: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	6.931	4	1.733	5.724	.001[b]
	Residual	19.374	64	.303		
	Total	26.305	68			

The findings in table 7 above Significance value P value = 0.001 which is less than 0.05 representing the model to be reliable and statistically significant in predicting how independent variables (organization structure, staff competence, information technology, and information sharing) affect maritime surveillance. The F Critical at 5.724% level of significance was 2.033. Since F Calculated (Value 5.724) is greater than the F Critical (value 2.033), this shows that the overall model was significant.

Table 8: Coefficient Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	2t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.898	.445		6.512	.000
	OS	-.064	.113	-.073	-.569	.572
	SC	-.023	.035	-.076	-.672	.504
	IT	.041	.132	.044	.314	.755
	IS	.371	.093	.524	3.983	.000

The findings from table 8 above show: The co-efficient of determination explains the extent to which changes in the dependent variable (Maritime Surveillance) can be explained by the change in independent variable, that is, organization structure, staff competence, information technology and information sharing.

$(Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X4 + \varepsilon)$

Y= 2.898 + - 0.064+ - 0.023+0.041+0.371+ ε

Whereby:

Y= Maritime surveillance

β_0 = Current maritime surveillance position

X_1= Organizational Structure

X_2= Staff competency

X_3= Information Technology

X_4 = Information sharing

$\beta_1, \beta_2, \beta_3$ and β_4 = determination of coefficients

ε = precision or error term

According to the regression equation established, taking all the independent into constant at zero, Maritime surveillance along Mombasa coast, Kenya.

The data findings show that a unit increase in information technology would lead to 0.041 increase in maritime surveillance along Mombasa coast, Kenya. Automatic notifications are sent out through photos generated by electronic surveillance systems at sea regardless of the time or weather, enabling the detection of dark targets vessels that have their transponders unlawfully turned off. As suspicious ships are found and monitored, analysts calculate the position of the dangerous ships if left unattended. When a vessel enters a prohibited area or behaves in a way that may be interpreted as criminal conduct, such as trans-shipping illegally obtained fish between two vessels at night or on the open seas (Reva, 2021). Hence, information technology has grossly led to effective service delivery and efficiency in the maritime industry at large.

An increase in unit information sharing led to 0.371 growth in maritime surveillance along Mombasa coast. Barshefsky (2016) stresses the significance of maritime awareness in boosting maritime security through the collecting, processing, and distribution of facts that serve as the foundation for both military and law application operations involving maritime security agencies within the lawful parameters of maritime legal guidelines and in light of the all-inclusive interest in bettering our understanding of who is involved in what marine operations.

In the context of this study's findings, a unit increase in staff competence resulted in a negative (-) 0.041 in maritime surveillance along the Mombasa coast. Customize (2017) shows that operationalizing maritime surveillance necessitates the development of hands-on skills by workers for incumbent maritime industries future maritime needs like marine bio prospecting. Underdeveloped states face a range of new educational, skill development, and training challenges related to the maritime industry and experts in promoting interest; creating industries, and creating business ties. Therefore, an increase in staff competence will not cause any difference in effecting maritime surveillance.

Table 8 above illustrated regression equation by establishing that one unit increase in organization structure would lead to negative (-) 0.064 which had a decrease in the maritime surveillance. It is worth noting that this sector (maritime) influences dominance at sea in terms of the strongest naval forces and spatial relationships. This framework offers means like resources to complete its mission (maritime surveillance). These surveillance roles, entail enlisting, deployment of naval forces at sea, sea patrol, air surveillance of the ocean etc. In this context, organizational structure has no effect in multi-agency collaboration and maritime surveillance.

5.0 Conclusion

Based on the study findings, it is concluded that a significant and a positive relationship exists between information technology practices and Maritime surveillance along Mombasa Coastline in Kenya. The study also concluded that information sharing affects the multi-agency collaboration and Maritime surveillance along Mombasa Coast, Kenya. To effectively automate maritime surveillance, several systems have been developed to ensure that maritime domain or territorial waters and Exclusive Economic Zone (EEZ) are sufficiently secured to enhance maritime trade and to strike a balance between the costs involved in reacting to criminal activities like piracy, human trafficking/ smuggling of goods/small arms etc. and customer satisfaction (investors and maritime employees and coastal communities).

Regional Security Complex Theory (RSCT) supports the recommendation of the best way forward for a combined East African countries strategy to develop maritime policies to guide operations in the maritime domain. Integration contests will revolve around how best to reconcile top-down maritime integration contained visions in the RECS and AU, through approaches incorporating the bottom-up realities of working among member states on issues touching on joint resource extraction, border delineation, facts distribution specifically sensitive statistics on naval capability. Additionally, according to the primary premise of securitization theory, many behaviours in certain cases may be considered normal, become severe security challenges, and are securitized in the framework of this research. For instance, (Illegal, Unreported, and Unregulated) IUU and marine environment pollution, which for a long time were non-concern issues, have recently become major security concerns as a result of the securitization of the issues by various players like politicians, security experts, and environmentalists (Stritzel, 2014) Staff competence is paramount in organizations; visionary leaders in tackling the issues of maritime surveillance. Their academic qualification, skills (soft, hard and technical) and their experience levels always influence their ability to make correct decisions/judgments regarding maritime and its ability to sustain long-lasting effective multi-agency collaboration and efficient maritime surveillance.

The study also concluded that coordination among agencies, locals along the coastline, other states, regional bodies and international entities had a greater influence on the country's maritime ability to secure its marine borders and enhance sustainable peace and stability and a favorable working environment for the locals, workers, and investors. It was also concluded that regional and international organizations played a crucial role in influencing Kenya's ability to secure its maritime borders. The influence was majorly through the facilitation of the negotiation process and collaboration.

6.0 Recommendations

In the context of staff competencies, the study recommends that emphasis be placed only on scientific employment of qualified persons with a maritime education background to ensure that employees in the maritime sector, competently perform their duties and save funds that would have been used to train untrained enlisted individuals. In addition, to capacity building, policymakers need to adopt strategies that will see maritime staff, be trained on the necessary skills and competencies needed to match international maritime organizations (IMO) standards on a need-to-need basis. This will enhance efficiency in maritime surveillance and collaboration.

In the context of use of information technology, the study recommends that more emphasis be put on the collection of information and monitoring electronic surveillance equipment using computer-literate staff who can effectively manage the electronic devices for ease of access to information through sharing with relevant agencies, for transparency purposes and enhancing surveillance of the large surface area of seas and oceans/ unidentified sea areas. Also, this study recommends that proper monitoring and evaluation mechanisms be implemented with sufficient resources to ensure that maritime surveillance is efficient and effective.

In the context of the use of information sharing, the study recommends that personnel working in maritime sector be encouraged to contribute ideas and thoughts through a secured online discussion platform or sea power symposiums to share ideas, and current methodologies, adopt to international maritime standards as enshrined in IMO. This will enhance proper ISPSS code standards adherence, monitoring, and evaluation in facilitating maritime surveillance efficiency and effectiveness.

Finally, the research recommends the implementation of the maritime -multiagency policy framework to address Ad-hoc participation by maritime multi-agency to reduce inefficiency when responding to situations/disasters at sea and advocate for terms and references for multi-agencies to operationalize a fully-fledged maritime multi-agency and efficient and effective administrative systems this will help in the detection of criminal activities and devise lean existence of maritime business and blue economy. Existing maritime multi-agency action plans should be incorporated into the maritime laws of the land to address Ad-hoc participation to bolster the safety, effectiveness, and efficiency of service delivery in the maritime sector.

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