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An interrogation of the role of NGOs in improving the maritime education and training (MET) system in Kenya

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DISSERTATION

AN INTERROGATION OF THE ROLE OF NGOs IN IMPROVING THE MARITIME EDUCATION AND TRAINING (MET) SYSTEM IN KENYA

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A dissertation submitted to the World Maritime University in partial fulfilment of the requirements for the award of the degree of Master of Science in Maritime Affairs

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Declaration

I certify that all the material in this dissertation that is not my own work has been identified and that no material is included for which a degree has previously been conferred on me.

The contents of this dissertation reflect my own personal views and are not necessarily endorsed by the University.

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Abstract

Title of Dissertation: **An interrogation of the role of NGOs in improving the maritime education and training (met) system in Kenya.**

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The global MET system is characterized by a multi-level governance system of multiple stakeholders that emphasizes collaboration, coordination, and transparency in the decision-making process for effective and equitable governance. This equally involves inclusivity of several stakeholders among various governmental levels, including local, national, regional, and international levels as well as non-governmental actors, such as the public, the private sector, and Non-Governmental Organizations (NGOs). In the maritime sphere, NGOs have been described as drivers of change in the 21st century, as maritime governance is increasingly influenced by intensifying, national, regional, and global activities through multilateral relations between maritime institutions.

The study aimed to interrogate the role of NGOs in the MET system in Kenya by exploring the nature of NGOs' participation in system governance in general and maritime governance in general. It identified key stakeholders in the Kenyan MET system as well as analyzed the current and potential contribution of NGOs to the development of the MET system in Kenya. The study used a qualitative research approach by using a systematic literature review for its secondary data and semi-structured interviews for primary data. Respondents were selected through purposive sampling to include experts from the Kenyan maritime sector.

Results indicated that, even though respondents were able to identify several NGOs and their roles in different sectors in Kenya, they did not consider NGOs to be key stakeholders in the Kenyan MET system. The respondents perceived the Kenyan MET system to essentially be made up of four major key players that include the government, the industry, the regulator, and the METIs. The study recommended a need for Kenya to harness its efforts in the MET system to equally attract efforts from NGOs' support and their full participation.

KEYWORDS: Maritime Education and Training System, System Governance, Non-Governmental Organization, Maritime Governance, IMO Instruments, Polycentric Governance, STCW 78, Governance.

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LIST OF ABBREVIATIONS

4IR	4th Industrial Revolution
BC	Bandari College
BMA	Bandari Maritime Academy
CoC	Certificate of Competency
ILO	International Labor Organization
IMLI	International Maritime Law Institute
IMO	International Maritime Organization
INGOs	International Non-Governmental Organizations
JKUAT	Jomo Kenyatta University and Agriculture Technology
KMA	Kenya Maritime Authority
KPA	Kenya Ports Authority
MIOME	Mombasa Institute of Muslim Education
MLC 2006	Maritime Labor Convention
MET	Maritime Education and Training
METI	Maritime Education and Training Institution(s)
MNC	Multi-National Corporations
NGO	Non-Governmental Organization
STCW	Standards of Training, Certification and Watchkeeping for Seafarers
SOLAS	Safety of Life at Sea
TUM	Technical University of Mombasa
UN	United Nations
WMU	World Maritime University

1. CHAPTER ONE - INTRODUCTION

The maritime industry remains the main supporting industry for the global economy, facilitating more than 80% of global trade by volume (IMO, 2023). Arguably, this makes shipping one of the most international of all industries. However, the industry is also considered very high-risk and highly dependent on the expertise and competency of seafarers for its safety and security (Voloshinov, 2019). Seafarers' competency is to be acquired through a maritime education and training system of global uniformity in training outcomes, certification processes, authentication mechanisms, and language use (Manuel & Baumler, 2020). Over time, Maritime Education and Training (MET) has evolved from the classical practice of "seaman to seaman" apprenticeship through years of on-the-job experience to a more structured approach of international regulation covering seafarer education and training (Manuel, 2017). On this basis, the International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers (STCW) 1978 was adopted as the backbone of the global MET system (Manuel, 2017). Currently, the MET system is contributing to meeting the global maritime industry's need to be in line with the proliferation of new ideas and technological changes in areas of technical and higher education (Dewan et al., 2023). However, with continuing globalization and technological advances, efforts from all stakeholders involved in the maritime sector whether ashore or offshore are crucial to ensuring that the MET system in place can meet the rapidly changing industry demands globally through optimal governance.

1.1 Background of Study

The on-going discussion about Maritime Education and Training (MET) Systems has been centered largely on new international training legislation, the dynamic shipping environment, technological changes as well as the needs of its governance system to be in line with industry demands **(**Pilley & Maxwell, 2002; Manuel & Baumler, (2020). Generally, a system is said to be a combination of several components interacting for a specific purpose to achieve a specific goal through its finality with boundaries through which inputs come in and outputs go out (Mele et al., 2010).

The degree to which the system boundaries are "permeable" makes a system open or closed such that open systems imply that the system is open to its environment with information and resources flowing both in and out (Mele et al., 2010). Furthermore, open systems can reach their intended end state through equifinality, meaning through diverse means or through a mix of many different means. However, systems need to be dynamic to stay optimal and avoid entropy/decay as well as maintain a steady-state of equilibrium (a process called "homeostasis") to stay healthy and function properly (Mele et al., 2010). Consequently, given the current challenging environments of globalization, governance systems can steer and direct decision-making among various stakeholders to achieve a specific goal or objective (Aleyao, 2016). This is achieved through stakeholder engagement in governance leading to a decision-making process involving multiple stakeholders from governmental and non-governmental sectors, including the private sector of business owners, as well as society at large in the form of multi-level governance (Doornbos, 2004).

Like any other system, the MET system depends on different components for its equifinality and needs to be maintained to avoid its decay or retrogression (Clayton & Radcliffe, 2018). There is also a need for the MET system to maintain its optimization through the dynamism of organizations and dynamic connectedness and interaction of its components and the whole system through an appropriate governance system (Manuel, 2023). The governance system is a means through which emerging challenges in the MET system can be solved by a diverse set of actors spelling out their rules of interaction while ensuring accountability of individual actors, and consensus in case of a conflict (Yuksel et al, 2005). Additionally, the governance system can also facilitate incentives to motivate the participation of such actors with specific actions to encourage innovative outputs (Schmeiss et al., 2019). Notably, it is in the governance of the interrelationships and interconnectedness of such system dynamics that the MET system abilities are augmented, and in the interdependence of its components that potential solutions to the emerging challenges are derived (Jensen, et al, 2015).

The global MET system is characterized by a multi-level governance system of multiple stakeholder that emphasizes collaboration, inclusivity of several stakeholders, and transparency in the decision-making process for effective and equitable governance (Jensen, et al., 2015). The main governance body that formulates and develops international systems is the United Nations (Rowihil & Farag, 2020). Due to the extremely varied and specialized activities of maritime affairs and international seaborne trade, the UN has delegated the responsibility of maritime governance to two of its specialized agencies, namely, the International Labor Organization (ILO) and the International Maritime Organization (IMO) (Mykoo, 2003).

The system equally involves collaboration and coordination among various governmental levels, including local, national, regional, and international levels as well as non-governmental actors, such as the private sector and Non-Governmental Organizations (NGOs). NGOs in particular play a vital role in the maritime industry especially in areas of education, training, research, advocacy, environmental conservation, and management by promoting the MET system through collaboration and coordination with other stakeholders in supporting the education and training of seafarers, to ensure that they are equipped with the necessary knowledge and skills to competently operate ships safely and securely (Calado et al.,2012).

1.2 Problem Statement

The MET system in Kenya is following a global trend characterized by efforts to conform to and optimally exceed the standards laid down in the International Convention on Standards of Training, Certification, and Watchkeeping for seafarers (STCW), 1978, with the aim of providing competent skilled maritime professionals for the dynamic shipping industry (Mabuti, 2013). However, compared to best-case examples of implementation of the optimized MET systems, the implementation of the MET system in Kenya appears not to be adequately coordinated to make it globally competitive. Apparently, this is due to a lack of institutional synergies and seamlessness in the provision and delivery of MET courses to meet the mandatory standards.

Furthermore, the MET system in Kenya has been limited by several factors such as a lack of qualified trainers, lack of training facilities, lack of common curriculum, and on top of all, lack of effective governance in the MET system (Kiplimo & Ikua, 2017). For this reason, it has been argued that the MET system in Kenya needs to be subjected to a similar governance system of polycentric and multi-level governance of many stakeholders that will enhance deliberate and concerted efforts and partnerships from stakeholders since its implementation requires significant funding for investment in human resources, technological requirements, training equipment, and materials (Basak, 2017). This calls for the strengthening of collaboration and coordination between MET providers, regulators, and other stakeholders including both the public and private sector as well as Non -Governmental Organizations (NGOs) like what is evident in the global MET system.

The aim of this study is to interrogate the role of NGOs in the MET system in Kenya. The research is in the national context, selecting Kenya for the study because the Kenyan MET system is still in its nascent stage of development and all its demand for maritime education and training has not been mapped to understand the needs of the challenging and rapidly changing industry (Mabuti, 2013). Moreover, the Kenyan maritime sector is equally growing and looks promising, especially with its National Government Strategy to address the needs and desires of the maritime industry. (Kiplimo & Ikua, 2017). On the other hand, several research works have concentrated on the government's role in the MET system in Kenya (Mohammed, 2021; Mwashigadi, 2014; Rasowo et al., 2020) ignoring specific role of NGOs, with no similar published study having been carried out in the country.

1.3 Research Aims and Objectives

The study was in-depth explorative research in Kenya into the dynamics of collaboration between the government and NGOs focused on education and maritime issues. Understanding the dynamics of these partnerships and the role of NGOs in the MET system would help improve the MET system in Kenya to ultimately enable Kenya to produce competent seafarers for safe and secure shipping.

The aim of the study was addressed by the following research objectives.

1. To explore the nature of NGOs participation in system governance in general and maritime governance in particular.
2. To identify the key stakeholders and their actual and perceived roles in the current MET system in Kenya
3. To analyze the current and potential contribution of NGOs (within the stakeholder network) to the development of the MET system in Kenya.

1.4 Research Questions

The study objectives were achieved by answering the following research questions.

1. What is the nature of NGO participation in system governance in general, and maritime governance in particular?
2. Who are the key stakeholders in the current Kenya MET system and what are their roles (actual and perceived)?
3. What are the current and potential contributions of NGOs (within the stakeholder network) to the development of the MET system in Kenya?

1.5 Research Methodology and Methods

To meet the stated objectives of this study, the research used a qualitative research approach which is more holistic and involved a rich collection of data from various sources for a deeper understanding. Data was collected and analyzed qualitatively through a systematic literature review to answer RQ1 which gave an in depth understanding of the concept of governance. Similarly, this formed the discussion of the nature of NGOs in system governance in general and maritime governance in particular. To address RQ2 and RQ3 from the Kenyan perspective, the researcher used primary data collected through recorded online semi-structured interviews with respondents selected through purposive sampling, to find relevant themes and ideas for thematic analysis. A comprehensive detailed methodology is discussed in chapter 3 of the dissertation.

1.6 Ethical Issues

This research is based on the research ethics principles consonant with the WMU Research and Ethics Committee requirements. The research has endeavored to avoid any misrepresentation of data collected and has aimed at showcasing the true and fair position of the findings based on high levels of professionalism and research ethics during data collection, analysis, and presentation/discussion of findings.

1.7 Key Assumptions and Potential Limitations

The study aimed to interrogate the role of NGOs in improving the MET System in Kenya. Studies related to the role of NGOs have been extensively conducted on Maritime Environmental issues. However, there are limited attempts to address the role of NGOs in relation to MET Systems, thus related literature was limited. On the other hand, the MET System in Kenya is still in its nascent stage, there is a need to conceptualize the concept of MET system in Kenya to comprehend its development with reference to the theoretical framework of the study. In efforts to unveil both the actual and perceived contributions of NGOs to optimize the MET system in Kenya, the researcher collected data through semi structured interviews with experts in the field of Maritime Education and Training, who were purposively sampled to provide the relevant information needed.

2. CHAPTER TWO – LITERATURE REVIEW

INTRODUCTION.

The purpose of this chapter is to present the literature framework in relation to the construct of "the Maritime Education and Training (MET) System". Consequently, the chapter aims at discussing the theoretical framework by application of three major theories that will anchor and support the analysis in the study. The theoretical framework discussed will form the basis for addressing the aim and objectives of the study. Firstly, "Systems Theory" explicates the practical nature of Maritime Education and Training (MET) as a system and its dynamic nature. This will be followed by "Stakeholder Theory" which expounds on stakeholder engagement, particularly to understand the contribution of NGOs as one of the stakeholder groups in the MET System. Finally, "Governance Theory" is discussed to appreciate the genesis and cogency of decision-making processes in the MET System, while reflecting on the influence and contribution of stakeholders (NGOs) and their impact on the MET System. The resulting theoretical framework builds the foundation for answering the research questions and ultimately addresses the objective of the study which aims to interrogate the role of NGOs in improving the MET System in Kenya. Lastly, the chapter reviews empirical studies on the role of maritime stakeholders (with a focus on NGOs) in the Maritime Education and Training (MET) System by relating to the findings of other researchers in manifesting the knowledge gap.

2.1 Systems Theory

As a discipline of science, Systems Theory has evolved from a mere theoretical framework to a more practical methodology, where it provides a methodology of description and analysis. It is apparently driven by the desire to simplify and interpret reality and comprehend natural and social events through explaining phenomena experienced daily, to understand patterns and predict what will happen by looking at interrelationships between objects and events (Dekkers, 2017). As a field of inquiry, the macro theory (with its different microlevel approaches) offers a deeper understanding of the complexity of behaviors of real-life organized systems of all kinds and contributes to finding solutions for challenges in dealing with such systems (Whitchurch & Constantine, 1993).

This is achieved by applying general principles of systems to interpret the likely and actual interactions between the systems.

In this regard, a system is said to be,

> ...an interconnected set of elements that is coherently organized in a way that achieves something … a set of things – people, cells, molecules or whatever – interconnected in such a way that they produce their own pattern of behavior over time. […] An important function of almost every system is to ensure its own perpetuation (Meadows, 2008).

Its components can be composed of people. The world can be viewed as a large complex system with smaller complex subsystems that generate outcomes which depend on numerous interactions (Clayton & Radcliffe, 2018). This is supported by Diana Wright in Meadows (2008):

> Today, it is widely accepted that system thinking is a critical tool in addressing the many environmental, political, social, and economic challenges we face around the world. […] Once you start to see the events of the day as parts of trends, and those trends as symptoms of underlying system structure, you will be able to consider new ways to manage and new ways to live in a world of complex systems.

2.1.1 Nature of systems

Systems are comprised of a set of components working together towards a common goal. Importantly, the components must be independent but interconnected either directly or indirectly. However, the goal may be different for each set of components, making the system a mere abstraction or model conceived by the viewer (Leveson, 2020). Systems can be simple or complex, natural, or built, physical, or conceptual, closed, or open, static, or dynamic, and possess attributes and relationships composed of and arising from the interactions between the system's components. Bing and Gong (2019) point out that there also exist subsystems that are interrelated, interconnected, and overlapping within the main system, such that changes in one subsystem may directly or indirectly affect the other subsystems.

Every system, at a certain level, tends to absorb the supra-system and sub-systems to develop as a whole system. Bing and Gong further describe systems to be cyclic in nature, as in the case of an open system. The existence of subsystems within a system creates the concept of dominance and its importance is discussed by Meadows, (2008), who observes that: -

> Dominance is an important concept in systems thinking. Such that, when one loop dominates another, it has stronger impact on behavior. Because systems often have several competing feedback loops operating simultaneously, those loops that dominate the system will determine the behavior.

2.1.2 Open and Closed System

Open and closed systems are two main systems discussed by Ludwig von Bertalanffy, who describes an open system to be one that allows exchange and interactions between its internal components and the environment, whereas a closed system is one that is isolated from its environment (von Bertalanffy as cited by Sayin, 2015). Open systems will transform the energies available to them as inputs and export some products into the environment as outputs in a cycle of events through its boundaries. This exchange is identified to be cyclic in nature, whereby the product exported into the environment furnishes the source of energy for the repetition of the cycle of activities (Shafritz et al., 2015). Open systems need such exchanges to avoid entropy and maintain equilibrium; they should not be static but rather dynamic with ability to change structures and adapt to conditions and environmental dynamics. Its elements are connected to ensure both physical and information flow to perpetuate behavior.

2.1.3 Basic Concepts of Systems

The exchanges within a system will lead to internal changes (of system elements which are connected to ensure flow), such as homeostasis, equilibrium/balance, autopoiesis, equifinality/common finality, system inertia and self-regulation.

Homeostasis refers to the ability to actively maintain a steady-state or stable conditions for survival. The open nature of systems, which enables exchanges between the system and the external environment, prevents entropy and allows the system to maintain steady-state equilibrium over time (Mele et al., 2010; Hannan and Freeman,

1977). Notably, homeostasis becomes inevitable and automatic for any system that is functioning properly and can also be maintained by several systems working together. The **Equilibrium/Balance** state of a system implies the ability of a system to influence and contribute to the needs of some or all supra-systems within the main system toward which a system naturally evolves if left undisturbed (Liphardt, 2002).

Self-regulation is a trait of systems rather than a result of system interactions, and it refers to the adaptive mechanism that allows a system to maintain itself under balanced condition within the limits of its structure of internal components and exchange with the outside environment (Mele et al., 2010).

Autopoiesis is a self-organizing feature of a system that stimulates a selective mechanism to align the system's internal complexity with the complex environment (Mele et al., 2010; Maturana and Varela, 1975). This feature enables systems to be creative in interacting with the complex environment.

Finality simply refers to the intended goal/or end state of a system, which guides system behavior to meet system goals in the form of equifinality, multi-finality or counter finality (Kruglanski et al., 2015).

Equifinality is one of the "means-goal" modes of systems regarding the ability of open systems to reach the same goal/end state irrespective of starting conditions through diverse means/or taking different paths (Mele et al., 2010; Katz & Kahn, 1978). **Multi-finality** on the other hand is the ability of one means of a system to reach several goals, while **counter-finality** implies the ability of one goal to be served by a single means that simultaneously undermines another goal.

2.2 Stakeholder Theory

Stakeholder Theory is gaining momentum in a wide variety of disciplines and helps describe the dynamic and complex nature and complexity of the environments in which different organizations operate including the Higher Education Institutions (HEIs) such as the Maritime Education and Training Institutes (Langrafe et al., 2020).

The theory initially developed by Freeman considers the stakeholder paradigm as its core concept and argues that the ability of an organization to manage relevant stakeholders is key to developing valuable relationships and gaining competitive advantage for that organization's success (Freeman et al., 2010). Thus, considering stakeholders, their needs and their interests is paramount to formulating strategies that will enhance collaboration and engagement to the benefit of the organization and all its stakeholders (Langrafe et al., 2020).

Additionally, stakeholder theory focuses on relationships with multiple stakeholders and is primarily about value co-creation and benefit-sharing with stakeholders (Barney & Harrison, 2018). Consequently, stakeholder theory views stakeholder interaction as one of the main principles to advance organizational sustainability by identifying an organization as an ecosystem of stakeholders characterized by interconnected networks of relationships having both direct and indirect consequences (Crane, 2018).

2.2.1 Stakeholder Analysis.

Stakeholder analysis refers to "an approach and procedure for gaining understanding of a system by means of identifying the key actors and stakeholders in the system and assessing their respective interests in that system" (Pomeroy & Douvere, 2008).

Stakeholder analysis represents a means by which one can identify and describe stakeholders as well as their interrelationships, current and potential (future) interests and objectives, while answering the question of how and to what extent they represent various sections of people within a given context (Pomeroy & Douvere, 2008).

It further gives an empirical description of the management environment for organizations particularly by exploring a typology of stakeholder interconnectedness and their salience to organizations. Mitchell et al, (1997) describe the salience of stakeholders as the degree to which managers (organizations) give priority to different competing stakeholders. Salience goes beyond stakeholder identification and can be based on the following 3 major attributes; (1) the stakeholder's **power** to influence the organization, (2) the **legitimacy** of the stakeholder's relationship with the organization, and (3) the **urgency** of the stakeholder's claim on the organization. Stakeholder salience is thus positively related to the number and level of prominence of stakeholder attributes (Power, Legitimacy, and Urgency) perceived to be present.

One attribute presents low salience (Latent), 2 attributes present moderate salience (Expectant) and 3 attributes present high salience (Definitive), (Mitchell.,1997). In this regard, power, legitimacy, and urgency become the identifiers of different stakeholder classes and how they interact to influence, contribute, or participate in the decision-making process of an organization.

2.2.2 Primary and Secondary Stakeholders Vs External and Internal Stakeholders

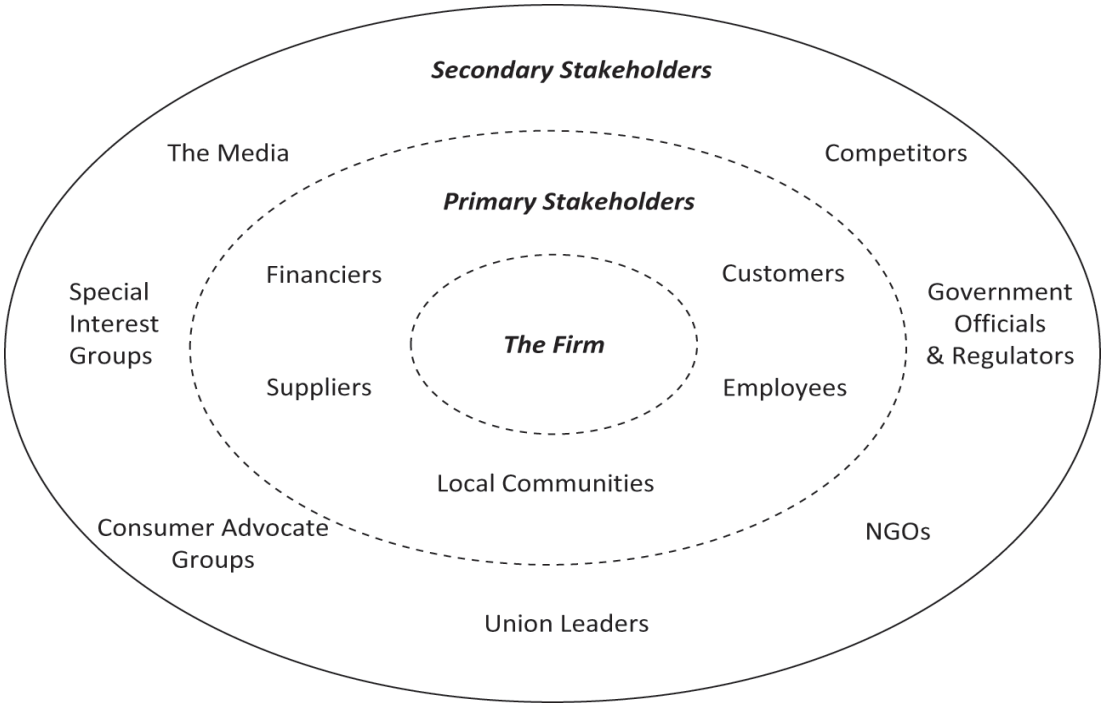
Subject to different contexts, the terms primary and secondary stakeholders vs external and internal stakeholders are commonly used interchangeably to highlight the difference in the influence or dependency of the stakeholder on an organization and vice versa (Matuleviciene & Stravinskiene, 2015). Stakeholder theory identifies specific and generic stakeholders where the specific stakeholder is the primary stakeholder i.e., an entity on which the organization is dependent for survival with direct impact on the organization and within the circle of the organization, such as the financiers (owners), customers, suppliers, employees, and the government.

The generic stakeholders, also referred to as secondary stakeholders, consist of all others in relation to the organization with less and indirect impact, and further from the organization such as the community, government,[1] media, non-governmental organizations (NGOs), political groups, associations, and the public (Matuleviciene & Stravinskiene, 2015) as summarized in Figure 1.

[1] The categorization of primary and secondary stakeholders is dependent on the organization and its context. Government may be a primary stakeholder in one organizational context and a secondary stakeholder in another.

Figure 1.

Types/ classes of stakeholders.



Note. From "Stakeholder Theory: Concepts and Strategies" by R.E. Freeman, J.S. Harrison and S. Zyglidopoulos, 2018, Cambridge University Press. Copyright, 2018, by R. Edward Freeman, Jeffrey S. Harrison and Stelios Zyglidopoulos.

2.3 Governance Theory

Governance theory is considered an interdisciplinary concept rooted in political science, public administration, sociology, economics, law, and extension into many applied sciences. Notably, several researchers reckon that there is no single theory of governance but rather several theoretical debates and discussions, rendering the concept of governance a buzzword of many definitions with no precise meaning (Ansell & Torfing, 2016; Kjaer, 2023; Bellamy & Palumbo, 2017;). In some literature, governance is said to have come to displace the word government (Mayntz, 2017). Contrary, Plattner, (2013) explains that, both words originated from a Greek verb *ku-banan,* meaning to steer a ship, which later became a Latin word *gubernare* that introduced the old French *gouvener* and passed into other languages including the Portuguese and English to form the words government and governance with no clear distinction between them over centuries.

Traditionally, governance has been defined to mean the act of governing. In later years, the two words were distinguished, with Pierre and Peters (2000), for example, pointing out that the two terms should not be taken to mean the same. Plattner, (2013) concurs and distinguishes the two terms by defining government as the ruling body of a state and governance as the process in which power is exercised in management of a states' economic and social resources for development. He further suggests that government is political as opposed to governance, which is managerial in contexts such as, corporate governance and global governance. Similar and clearer distinctions between the two terms are also identified by Rhodes, (1996) in his article 'New Governance: Governing Without Government' in which he emphasizes that governance is not synonymous with government. Governance has further been described as indicating the totality of mechanisms and instruments available for making decisions that will influence social change in predetermined directions (Lafferty 2004, as cited by Kardos, 2012).

2.3.1 Evolution of governance

Facing the current challenging environment of globalization, governance can steer as well as direct decision-making among various stakeholders in achieving a specific goal (Aleyao et al., 2016). The evolution of governance can be traced back to the early days of human existence. This evolution has been shaped by factors such as changes in political systems, societal practices, and dynamic technological developments, ranging from a stated-centered (centralized government) to the involvement of multiple stakeholders incorporated in a wide range of institutional arrangements and inclusion mechanisms (Kardos, 2012, Stefan & Nelson, 2018, Aiken, 2023).

In the early days, an increase in population made societies complex and led to centralized governments as a form of governance in which power was concentrated in the hands of a small group of individuals within a large population, or decision-making rested in a single entity (Stefan & Nelson, 2018). Over time, the continual increase in population and societal changes necessitated stakeholder engagement in governance, leading to a decision-making process involving several voices of both the government, the private sector of business owners (shareholders), as well the society at large within communities in the form of multiple-stakeholder and multi-level governance (Doornbos, 2023).

2.3.2 Multi-stakeholder Governance

Multi-stakeholder governance emphasizes collaboration, inclusivity of several stakeholders, and transparency in the decision-making process for effective and equitable governance (Steven, et al., 2015). This is in line with stakeholder theory, which implies that a system should not be concerned just with profit-making for shareholders but should also consider the interests of all stakeholders to create value for them. Multi-stakeholder governance aims to involve all relevant stakeholders making them central in the decision-making process through active engagement, cooperation and partnership of both external and internal stakeholders as identified in the stakeholder theory. In multi-stakeholder governance, identification of stakeholders becomes key, especially as related to their levels of engagement as well as their potential "stake" (Gleckman, 2018).

2.3.3 Multi-level Governance

Stefan & Nelson, (2018), argue that multi-level governance considers the distribution of authority and responsibilities among various governmental levels and other players as the key component, where different levels of government work together in decision-making to accomplish common goals and objectives. Multi-level governance navigates a system of governance which involves the scaling interaction between governments and nongovernmental agencies at different levels to influence the social, political, and economic sustainability of a given community such that the decisions of governments are presented as the product of such interactions or a result of interconnecting interests between governments and non-state actors (Wurzel et al., 2018; Stefan & Nelson, 2018).

It also involves collaboration and coordination between various governmental levels and other stakeholders, including local, national, regional, and international levels of government, community groups as well as non-governmental organizations, and the private sector. Power and decision-making are shared among different levels of government at national, regional, and local levels (Roe, 2009). It ensures that all levels of government work together effectively to address the country's most pressing issues.

This requires coordination, cooperation, and communication among all the different levels of government as well as the involvement of other stakeholders, such as civil society organizations and the private sector, posing the challenge of ensuring that the benefits of governance are distributed fairly across different regions and communities (Corfee-Morlot et al., 2009). In the maritime industry, the nation-state remains a significant player in policymaking, especially at the international level, where the national representatives of different states formulate maritime policies for a globalized maritime industry.

Multi-level governance is thus exhibited through increased division and reorganization of nation-state functions, to facilitate integration and dispersion of state activities to supra-national, regional, and local levels as a reflection of the international nature of the maritime industry operations (Roe, 2009). The concept argues for the dissemination of central government authority both vertically to actors located at the territorial levels and horizontally to non-state actors with respect to accommodating the supranational, regional, national, and local governments entrenched in key networks for policy making.

2.3.4 Polycentric governance

The polycentric governance concept has been noted by Mcginnis & Eu, (2005) to have originated from the works of Vincent and Elinor Ostrom which connotes a traditional type of government in a community with its multiplicity of political jurisdictions and centers for decision making overlapping in a complex way but each with some level of autonomy to produce diverse public goods and securing not just a sustainable but also a resilient social order (Mcginnis & Eu, 2005). Governance occurs simultaneously at multiple levels and in different areas of public policy mainly to foster the development of sub-national regions and generate a shared goal. The multilevel jurisdiction allows for a balance between centralized and fully decentralized or community-based governance (Carlisle & Gruby, 2017). However polycentric governance is not just about the number of levels or actors involved but rather emphasizes these actors having a good understanding of local conditions and the ability to act independently.

This approach to governance is perceived to offer institutional solutions at the global level for several emerging issues originating at the international level, but with impacts at the national and local levels, such as the menace of climate change, and the threats of Green House Gas (GHG) emission in communities (Tan et al., 2022). Consequently, the actors may both compete and cooperate, though they will interact and draw lessons from one another, enabling responsibilities at different levels tailored to match the scale of public services they provide, thereby improving policies over time, building trust for broader cooperation through different exchanges among its actors (Cole, 2011, as cited by Tan et al., 2022).

The concept is largely applicable to governance of natural resources ecosystems such as forest ecosystems, water resources ecosystems and land-based ecosystems with activities such as agriculture. Decentralization of decision-making authority is key in natural resource management policy and practice (Bixler, 2013). However, the multiplicity of jurisdictions at different scales/levels paves the way for some institutional externalities such as increasing transactional costs in a community as well as leading to geopolitics in different nations especially the developing nations (Lubell, 2017).

2.3.5 Maritime Governance

With a relatively recent history, "Maritime Governance refers to the process of governing and adhering to maritime policies to achieve and maintain international standards in the shipping industry and consisting of the institutional and legal framework" (Aiken, 2023). Maritime activities can be governed by setting certain standards and establishing the rule of law to provide order and create responsibilities and obligations for all stakeholders. As such, maritime standards are set by the International Maritime Organization (IMO) and anchored on the following four pillars of maritime governance, providing an overarching regulatory framework (Reiling, 2019).

1. International Convention for Safety at Sea (SOLAS) 1974.
2. International Convention for the Prevention of Marine Pollution from Ships (MARPOL)1973.
3. International Convention on Standards of Training, Certification and Watchkeeping for seafarers (STCW) 1978.
4. Maritime Labor Convention (MLC) 2006.

Successful compliance and enforcement of such conventions as pillars of maritime governance can be achieved through more and more interactions and cooperation amongst the stakeholders like the member states of IMO. Arbitration and partnerships between stakeholders, MoU agreements, positive deliberate engagement and active participation will build on confidence and trust among stakeholders.

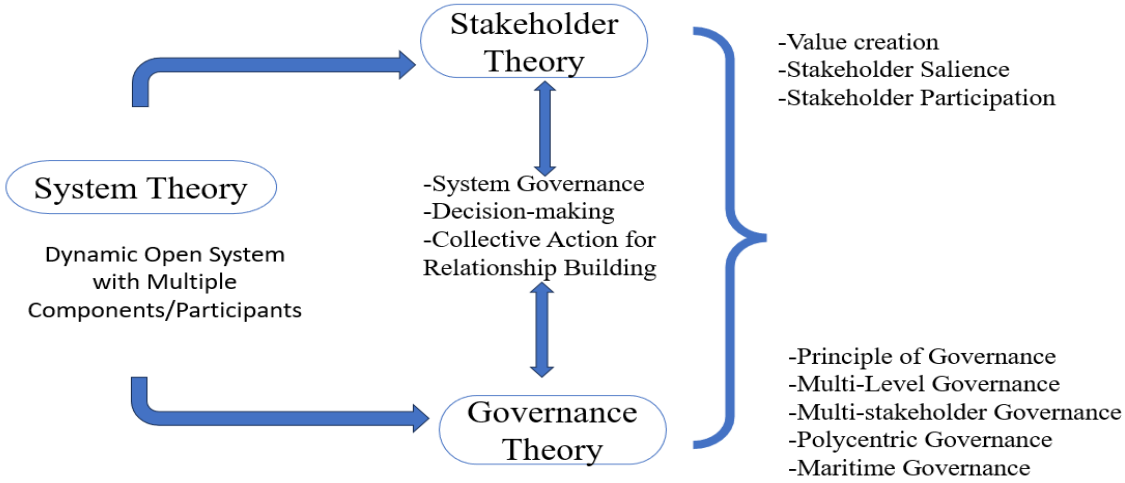
Notably, the challenges witnessed at the international, supra-national and national levels within the maritime sector largely reflect inadequacies in policymaking which are adopted and derived from ancient institutional frameworks centered upon the state as the main actor (Roe, 2009). Hence, there is an urgent need of a paradigm shift allowing a revised governance framework and structure that is more sensitive to the demands, needs and interests of all stakeholders for better policy making frameworks fostering sustainability in the maritime sector at all jurisdictional levels (Roe, 2013). As a result, this researcher observes that, the need is for not just a paradigm shift but rather a blended paradigm which considers and applies the concepts of the multi-level, multi-stakeholder, and polycentric governance. This is essential in developing a maritime governance framework that is sensitive to the complex nature of the maritime sector with a focus on the role of its stakeholders.

Effective maritime governance should be based on a resilient governance framework that emanates from real-life situations considering the rapidly changing, complex and interdependent world of the maritime industry. The fundamental issues in the maritime sector relate to safety, security, and environmental protection, which are all linked to humans and hence the Maritime Education and Training (MET) System will be vital in developing skilled professionals through well-designed educational policies.

2.4 Integrating the Theories into a Theoretical Framework

The three theories (systems, stakeholder and governance theories) have been presented to form the central argument of the study and to inform the theoretical framework on which the study is based as shown in Figure 2. Together, they provide a lens through which key concepts underlining the study can be viewed, interpreted, and understood and through which the aim and objectives of the study can be achieved and the literature in the domain contributed to. The theories have been integrated to answer the research questions that aim to interrogate the role of NGOs in improving the Maritime Education and Training (MET) System.

Figure 2
Theoretical Framework



Systems theory defines the basis of understanding MET as a system in its functioning as a dynamic open system of interconnectedness between various components inside and outside the system for the attainment of certain goals. Stakeholder theory gives direction to how different agents referred to as components within the system (MET System) should come together for the benefit of all in achieving a common goal by outlining the structure of the system to define the multitude of participants pursuing multiple or even varying goals.

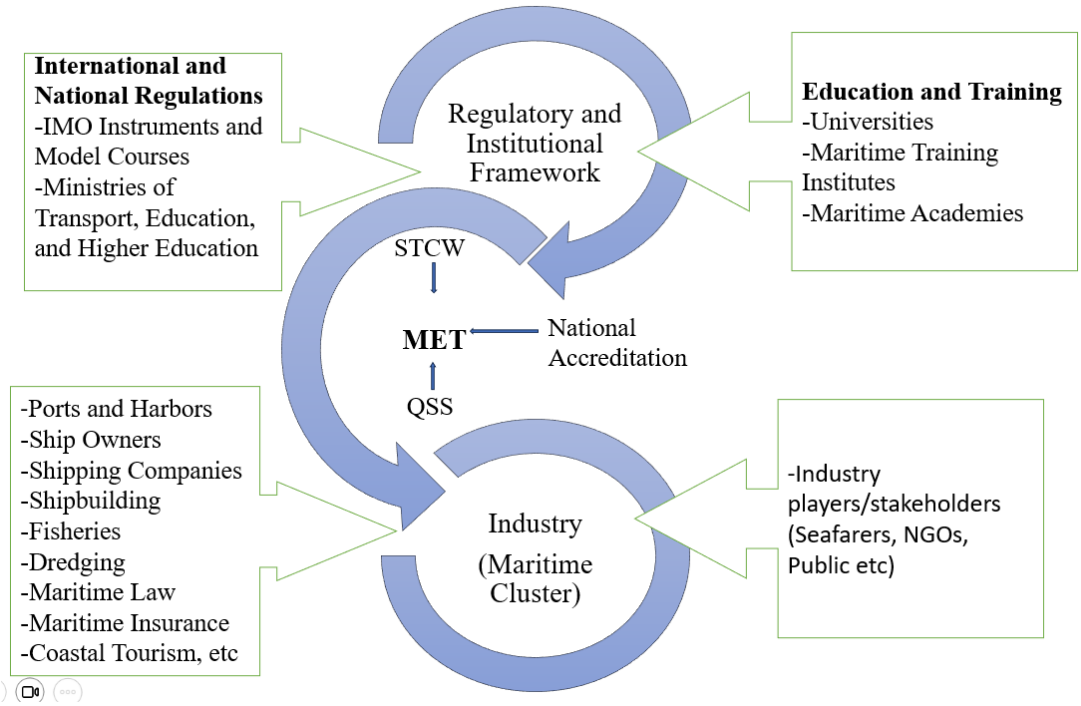
Finally, governance theory emphasizes the need for an effective decision-making mechanism that will ensure cooperation and partnership among the stakeholders or participants (components/agents) within the system to successfully implement policies and regulations for a sustainable system for the benefit of all stakeholders. The theories give insights in understanding the complexities in which the MET System operates.

2.5 MET System from a Theoretical Perspective

The MET System is dynamic in nature and made up of interconnected components for its effectiveness per systems theory. For the purposes of this study, the components in focus are interchangeably referred to as stakeholders[2], whose needs must be addressed in the system through an effective governance mechanism as elaborated by governance theory. An effective MET system is thus defined by systems theory and the successful interconnectedness of its components is well explained by stakeholder theory. The degree of success in goal achievement through this interconnectedness is dependent on adherence to effective governance mechanisms best described by governance theory. Using a stakeholders-based approach in the MET System, highlights the need to maintain the system's balance and effectiveness through the incorporation of stakeholders' needs, for example, in the design, development, and delivery of curricula (Nickols, 2005).

[2] There are other components or elements of the MET system quite apart from stakeholders. They include, for example, legal norms and infrastructure.

Figure 3
MET System



2.6 Key Stakeholders in the Maritime Education (MET) System

Stakeholders are referred to as any group or individual that can affect or is affected by the achievement of a corporation's purpose both inside and outside the corporation (Freeman, 2020). Similarly, it refers to any "holder" with a "stake" engaging with the firm to enable its operations[3]. Stakeholders in the maritime industry are paramount in promoting not just stable but flexible relationships and engagements for collective development and sustainability of the MET System (Demirel, 2020). Relevant stakeholders were identified by the literature as indicated in Table 1.

[3] The literature highlights the importance of decision-making in stakeholder interconnectedness based on their expectations (Mitchell et al, 1997).

Table 1

Identified Key Stakeholders in MET System

Stakeholder	Examples	Responsibilities
International Body (Rowihil & Farag, 2021,)	IMO – International Maritime Organization	UN specialized agency with the responsibility for the safety and security of shipping and the prevention of marine and atmospheric pollution by ship.
State/Government (Barchue, 2009)	Maritime Administration	Mandated to regulate, coordinate and oversee maritime affairs. They monitor and evaluate training programs to ensure conformity with set standards in the STCW 78 convention as amended.
Industry (Kitada, 2022, Basak, 2017, Mohammed, 2022)	Making up the maritime cluster (Ports, Shipping companies, Dredging, fisheries, coastal tourism, and shipbuilding among others)	Needs to adopt a human-centered approach for the future maritime industry in increasing resilience to manage uncertainties.
Institutions (Mohammed, 2022, Lau & Ng, 2015, Basak, 2017)	Maritime Education and Training Institutions (METIs)	Offering education and training to all persons interested in maritime education careers by developing a suitable curriculum for courses that meet the industry demand, comply with the set standards, and trace the requirements of national and international emerging needs in the maritime industry.
NGOs (Ulleberg, 2009)	Non-Governmental Organizations (NGOs)	Have an independent role in society acting as advocates, critics, innovators, and policy partners to the government
Beneficiaries/Customers (Kitada, 2020, Lau & Ng, 2015, Manuel, 2017)	Seafarers and other Maritime Professionals	People working in the maritime industry with the necessary knowledge and skills from MET System.
The Public/Individuals (Demirel & Ziarati, 2013)	Students/cadets	Make up the human resource in the maritime industry upon completion of their education and training.

2.6.1 International body (International Maritime Organization (IMO))

Grounded from the social-constructivists perspective, the International Maritime Organization (IMO) acts as a bureaucratic learning actor that stimulates its members towards the adoption and enforcement of agreed conventions. IMO is a specialized United Nations (UN) agency that came into existence in 1958 with key responsibility for the safety and security of shipping and protection of the marine environment through prevention of marine and atmospheric pollution by international shipping (IMO, 2019).

The organization is recognized as the global standard-setting authority that creates and maintains a fair and effective regulatory framework and has a number of instruments that are internationally adopted and implemented for a sustainable maritime industry faced with tremendous technological changes (Kardos,2012). It is responsible for developing new instruments as the need arises as well as updating existing instruments including those that existed before the organization's inception. The instruments include conventions, codes, resolutions, and other non-mandatory instruments such as guidelines and recommendations (see Table 2 for examples). Some of the conventions existing before its inception include the International Convention for the Safety of Life at Sea (SOLAS) 1948 and the International Convention for the Prevention of Pollution of the Sea by Oil (MARPOL) 1954. There are a total of 50 international conventions to date (IMO, 2019).

The MET System is among the issues addressed by IMO, covered by the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW)78, which makes up one of the four pillars of the IMO as international maritime law together with the International Convention for the Safety of Life at Sea (SOLAS) 1974, International Convention for the Prevention of Pollution from Ships (MARPOL) 1973, and Maritime Labor Convention (MLC) 2006. STCW 78 is the first instrument to set standards for seafarers' education and training as a global oversight. It prescribes minimum standards of training, certification and watchkeeping for seafarers, which member states are obliged to meet or exceed, and provides detailed information to IMO concerning administrative measures taken to ensure compliance with the convention, education, and training courses, certification procedures as required under Chapter I, regulation I/7 of the revised Convention (IMO, 2019).

Table 2
Examples of IMO Instruments.

Area of Regulation	**Name of IMO Instrument**
Prevention of Marine Pollution	International Convention for the Prevention of Pollution from Ships 1973 **(MARPOL 73)**
	International Convention for the Control and Management of Ships Ballast Water and Sediments 2004 **(BWM 2004) and BWMS Code**
	International Convention on the Control of Harmful Anti-fouling System 2001 (**AFS 2001)**
Maritime Safety and Security	International Convention for the Safety of Life at Sea 1974 **(SOLAS 74)**
	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978 **(STCW 78) and STCW Code**
	International Ship and Port Facility Security **(ISPS Code)**
	International Safety Management **(ISM) Code**
	Cyber Risk Guidelines
	Resolution MSC.428(98) on Cyber Risk
	International Convention on Load Lines 1966 **(LL 66)**
	Convention on the International Regulations for Preventing Collisions at Sea 1972 **(COLREG 72)**
Liability and Compensation	International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea 1996 **(HNS 96)**
Search and Rescue	International Convention on Maritime Search and Rescue 1979 **(SAR 79)**
Others	International Convention on Salvage 1989 **(SALVAGE 89)**

2.6.2 The State

While the International Maritime Organization (as a body of member states) has the responsibility for developing global technical safety, security and pollution prevention standards relating to ships and shipping activities, the individual state is obligated to enforce and implement those standards they have agreed to by way of ratification, signature, or accession (Barchue, 2009). Each state that allows its nationals to work onboard must give special attention to its MET System as should the states on whose flagged ships the seafarer serves.

Traditionally, the role of the state has been primarily to ensure safety and security of ships, but over the years, the responsibilities have grown exponentially in areas ranging from ships' safety standards, maritime security, seafarers' wellbeing, marine pollution, and crew training; thus, states make up a vital component of the MET System. States also have the key responsibility of implementing and enforcing international maritime regulations pertaining to matters of MET (IMO, 2019) specifically in ensuring that all METIs comply with the stipulated standards of the STCW 78 Convention and Code. They must ensure integration of the quality system in all government agencies involved in the MET System of seafarers, certification and endorsement and revalidation of certificates through a Quality Standard System.

The state must further ensure the administration of the MET System through an established Maritime Administration acting as an independent body charged with the primary responsibility of authorizing and supervising METIs to issue CoCs (Baylon et al., 2011). Besides these responsibilities, government commitment becomes vital in promoting a sustainable MET System and maintaining accountability to the conventions and treaties, among them being the STCW 78 Convention, through the so-called "IMO Whitelist"[4] process.

Optimally, the state should encourage collaboration between the industry and other stakeholders, especially academia to ensure lifelong learning. Arguably, such industry/academia collaborations are successful when governments support and encourage initiatives by establishing an enabling environment/platform for innovation through education (Kitada, 2022).

With its legitimacy and power to be the regulatory authority, the state is responsible for regulating MET and facilitating stakeholder engagement as advocated by stakeholder theory which mostly advocates for bilateral links between the industry and the government to improve the MET System both as vocational education and training.

[4] List of "Parties to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978, confirmed by the Maritime Safety Committee to have communicated information which demonstrates that full and complete effect is given to the relevant provisions of the Convention."

2.6.3 Maritime Education and Training Institutions (METIs)

The safety and security of life at sea and more than 80% of the global trade by volume depend on the expertise and competency of seafarers, in turn demanding highly trained and qualified personnel nurtured from well-established maritime education and training institutes (METIs) (IMO, 2022). This is achieved through their program contents which should be in accordance with the STCW 78, and content of the IMO Model Courses related to seafarers' education and training system (Ghobakhloo, 2020).

However, it remains the responsibility of the states/governments who are member parties to the STCW 78 Convention to ensure the training and assessment of seafarers is administered, supervised, and monitored in accordance with the provision of the Convention (DITIC, 2023). It is necessary for the METIs to improve the standards of their teaching staff, facilities and equipment and proactively support the efforts of the state and administration to develop and implement STCW requirements.

In today's maritime environment, MET goes beyond seafaring with broader coverage in all aspects of maritime, such as naval architecture, maritime law, marine engineering, and marine insurance among others. Kitada (2022) argues that METIs have the key responsibility of offering learning opportunities for skills on demand and ensuring equal access to education and training to both men and women. IMO has established two main global maritime institutions, the World Maritime University (WMU) and International Maritime Law Institute (IMLI), which endeavor to maintain a flow of high-level managers, policymakers and expertise into the maritime professionals and maritime administrations (*IMO.org*). On the other hand, individual nations/state have developed several METIs to offer education and training in marine transportation, marine business, and marine engineering at national, regional, and international level.

2.6.4 The Maritime Industry

The maritime industry relies heavily on the Human Element which needs to be highly qualified, competent, and skilled to ensure safety of life and property at sea as well as protection of the environment through updated and effective Maritime Education and Training (MET) System *(*IAMU AGA, 2016**).** Thus, the industry needs to attract and support the MET System to ensure they get the right people for the job descriptions they have designed, mainly because, the more attractive the maritime industry becomes, the more open and equal MET needs to be (Kitada, 2022).

Additionally, the industry needs to train and retrain its employees for upskilling to remain relevant to the industry's emerging needs as well as ensuring the safety and security at sea and protection of environment which depends on the professionalism and competence of seafarers through compliance with in the STCW 78[5].

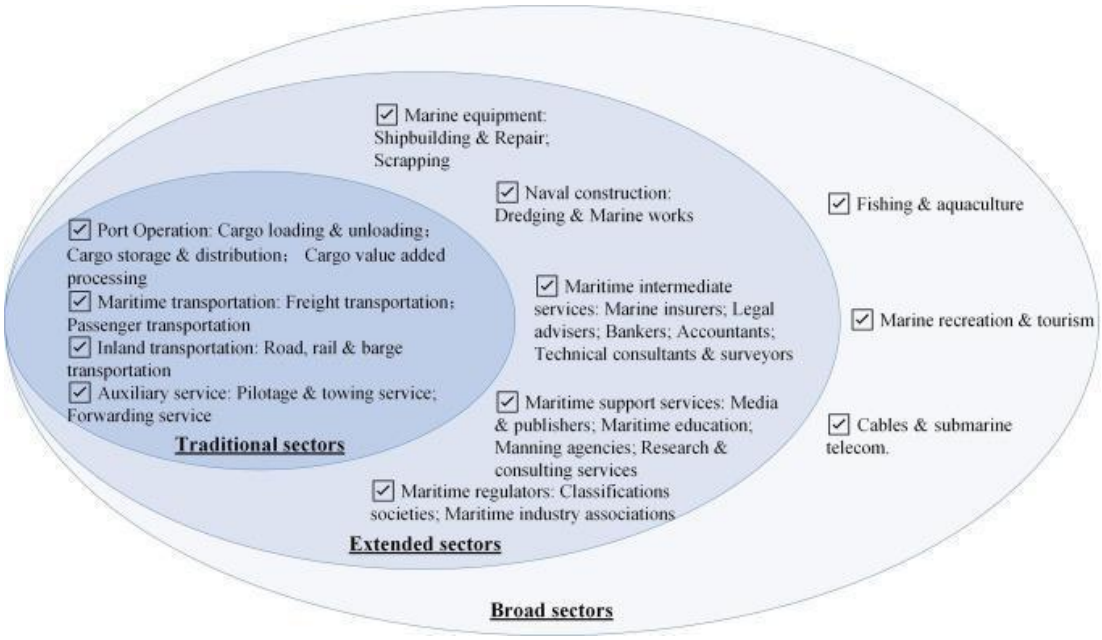
The maritime industry is changing rapidly from its conservative nature adapting to the information age of technological development with a shift to the fourth industrial revolution of digital transformation (Raza et al., 2023), known as industry 4.0[6]. Consequently, the MET System through the maritime education providers, are required to have a good understanding of the industry's needs to align the education and training with the industry's emerging needs through curriculum development which needs to incorporate constructive alignment (Basak, 2017).

The industry can further be understood by assessing the maritime cluster, which breaks down the sector into subsectors of all activities directly or indirectly related to maritime as shown in Figure 4.

[5] Addresses the training and shipboard operational competencies of seafarers as well as provides possible enrichment of maritime education and training by prescribing minimum standards relating to training, certification, and watchkeeping for seafarers.

[6]Industry 4.0 refers to the 4th Industrial Revolution. It involves the utilization of cyber-physical systems at its core, with an increase in the use of digital tools. The 1st revolution was the introduction of mechanical production, the 2nd revolution was the introduction of division of labor and mass production, and the 3rd revolution was the use of electronic and IT systems that automated production.

Figure 4
Sub-sectors of Maritime Industry



Note. From "Maritime cluster research: Evolutionary classification and future development by X. Shi, H. Jiang, H. Li and D. Hu, 2020, Transportation Research Part A: Policy and Practice, 333, p. 241 (https://doi.org/10.1016/j.tra.2020.01.015)

2.6.5 Non-Governmental Organizations (NGOs)

The importance of the non-governmental organizations' (NGOs) input in the MET System for excellent desirable outcomes cannot be ignored. NGOs are the focus of the discussion, and the aim of this research is to obtain findings around their current role as well as their potential contribution in the MET System particularly in Kenya.

Much as the term NGO has become popular in academic studies, most literature is either silent on its definition or with many varieties of explanations lacking a unified meaning (Martens, 2002in). The term NGO was initially coined by the UN to mean any organization established outside the government and remains secondary to the government. Otto (1996) claims that, the language of the United Nations (UN) Charter, simply defines NGOs as not governmental organizations with no clear guidance of what it entails.

Contrary to Otto's view, however, Brown (2009) notes that the UN does give more guidance on the term NGO by defining it as a not-for-profit, voluntary citizens' groups, which is organized on a local, national, or international level to address issues in support of the public good and that they are task oriented made up of people with common interests.

Traditionally, NGOs have a perceived role of gap-filling with strategies and activities that are of interest to impact on governmental capacity development in several sectors including the education sector, thus acting as advocates, critics, innovators, and policy partners (Ulleberg, 2009). In the maritime realm, the IMO granted about 88 NGOs consultative status to enable them to make significant contribution to the work of IMO in supporting maritime affairs and allowing them to act as observers on matters of common interest to foster cooperation in such matters but with no voting power (NGOs, 2019). **Appendix A** shows a list of NGOs with consultative status from IMO and their respective participation in different maritime issues/interests.

2.6.6 Seafarers and Other Maritime Professionals

The maritime industry depends greatly on highly qualified professionals and competent seafarers for safe, secure, and efficient shipping with high levels of skills, knowledge, and expertise from an effective standard of education and training system. Additionally, MET system need to be lifelong learning that should be developed to provide talented young men and women with MET to source the industry, especially in the emerging era of 4th Industrial Revolution (4IR) by moving away from its traditional techno-economic approaches to socio-economic approaches which are more human-centered, sustainable and can empower the industry and young people who can flexibly design their maritime careers through lifelong learning (Kitada, 2022). More importantly, seafarers have the responsibility of putting into operation the various safety, security, and antipollution measures necessary to the ship, developed by IMO, through their education and training.

2.6.7 The Public/Individuals

The public/individuals are the main users of the MET System constituting mainly of customers (the parent) and customers (the students) who make up the human resource on completion of the education and training. The main human element of the maritime sector is the seafarers, however, employment opportunities provided are not just for seafarers but a wider range of people directly and indirectly supporting the sector with over more than thirty professional areas for employment opportunity within the sector (Demirel & Ziarati, 2013).

Efforts need to be harnessed in encouraging the upcoming generation to join the maritime industry, especially on seafaring sector given the world's concern on reports of shortage and rarity of qualified seafarers, because most of the young people do not prefer to spend most of their lives at sea (Yuen et al., 2018). Such efforts include IMOs "Go to Sea" initiative aiming to attract young people to go to sea. On the other hand, education becomes inevitable in enhancing the employability rate of an individual.

Similarly, the MET System will play a vital role in providing young people with the necessary skills and knowledge required for employment, more so with the fact that finding and maintaining a good job without education is becoming harder.

2.7 Chapter Summary

The chapter gave a comprehensive theoretical framework as the basis of understanding the MET System. This also provides the basis for the choice of research method as discussed in the subsequent chapter. In the discussion of the three major theories, the chapter has highlighted their relationship and interconnectedness that helped in answering the research questions with the aim of interrogating the role of NGOs in improving the MET System as follows. MET (System Theory – as a Dynamic Open System) needs cooperation and partnership (Stakeholders Theory – focus on role of NGOs) for effective decision-making process (Governance Theory - through policies).

3. CHAPTER THREE – METHODOLOGY

INTRODUCTION

This chapter discusses the research methods used and methodological rigor attempted throughout the data collection and analysis. The aim of this study is to interrogate the role of NGOs in improving the Maritime Education and Training (MET) System in Kenya. The overall aim and the research questions of this research work was addressed by empirical and theoretical insights based on inductive reasoning that led to a modification of the theoretical framework entailing theory building and new knowledge creation. For this study, a Systematic Literature Review (SLR) focused on the concepts in the theoretical framework used to address some of the research questions.

3.1 Methods and Methodology

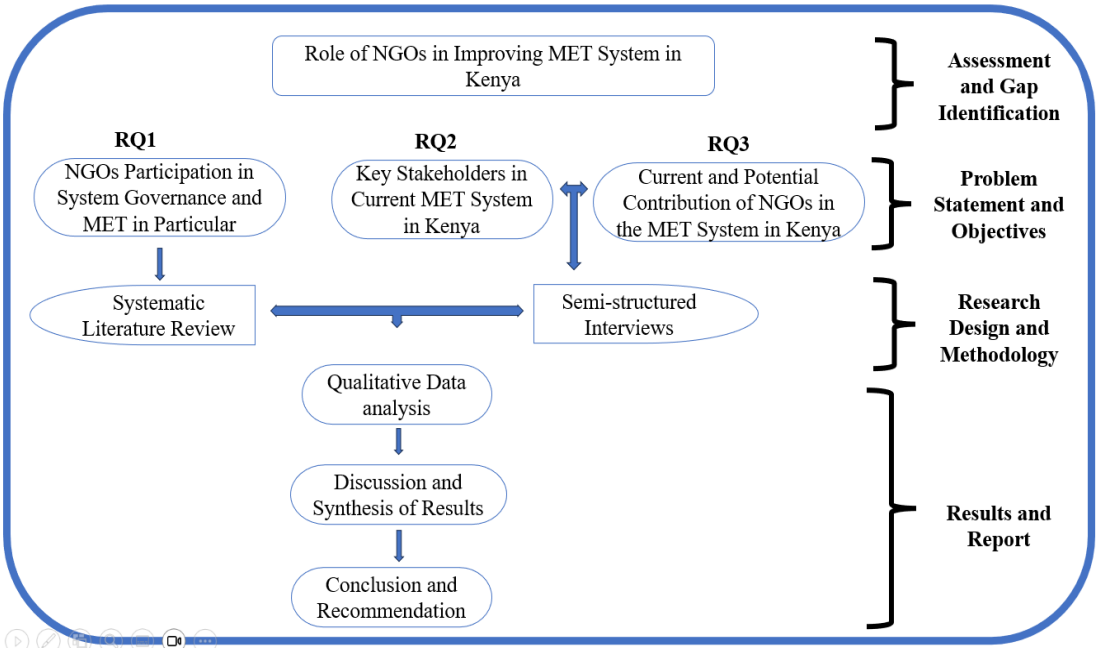
Research methodology gives direction in which the researcher formulates their problem and objective and analyzes the results from data collected during the study period (Abu-Taieh et al., 2020). The overall research work of this study is therefore based on qualitative research methodology. This methodological approach is useful for an in-depth, rich understanding of the research issues and informs the conduct of data collection and analysis. However, several researchers refer to qualitative research methodology as soft science that lacks scientific rigor when compared to quantitative research which uses experimental, objective methodologies (Black, 1994; Koch & Harrington, 1998 as cited by Cope, 2014). The former is commonly criticized as being subjective, anecdotal, and lacking generalizability (Cope, 2014).

Arguably, however, qualitative research is not inferior to quantitative research but simply a different methodology which is sufficient and can fully contribute to the understanding of a certain phenomenon, not necessarily only to assist quantitative research, but as a stand-alone research methodology. Black (1994) affirms that there are issues that are best investigated using qualitative approaches especially in complex situations where the relevant variables associated with the outcomes are not apparent. Two qualitative methods were used to collect data, the Systematic Literature Review (SLR) and the Semi-Structured Interviews (SSI).

A systematic literature review was used by adopting a replicable, scientific, and transparent process to provide detailed description of the steps taken by the researcher and reduce any bias in performing the review by applying the conceptual insights which are deduced to form a holistic framework of understanding the role of NGOs in improving the MET System. The semi-structured interviews involved recorded online interviews to collect primary data.

A methodological framework is provided in Figure 5 to present the methodology approach and steps taken in this study. Additionally, the choice of methods for each research question of the study is presented in Table 3.

Figure 5
Research Methodological Framework



The SLR was intended to lead to a comprehensive discussion to understand MET as a System as well as answer RQ1 which identifies the nature of NGO's participation in system governance and identifying the key stakeholders in MET system and their role both perceived and actual.

RQ2 and RQ3 were answered through SSI with at least one participant from various identified stakeholders namely, state/government, industry, seafarers, METI's and NGOs.

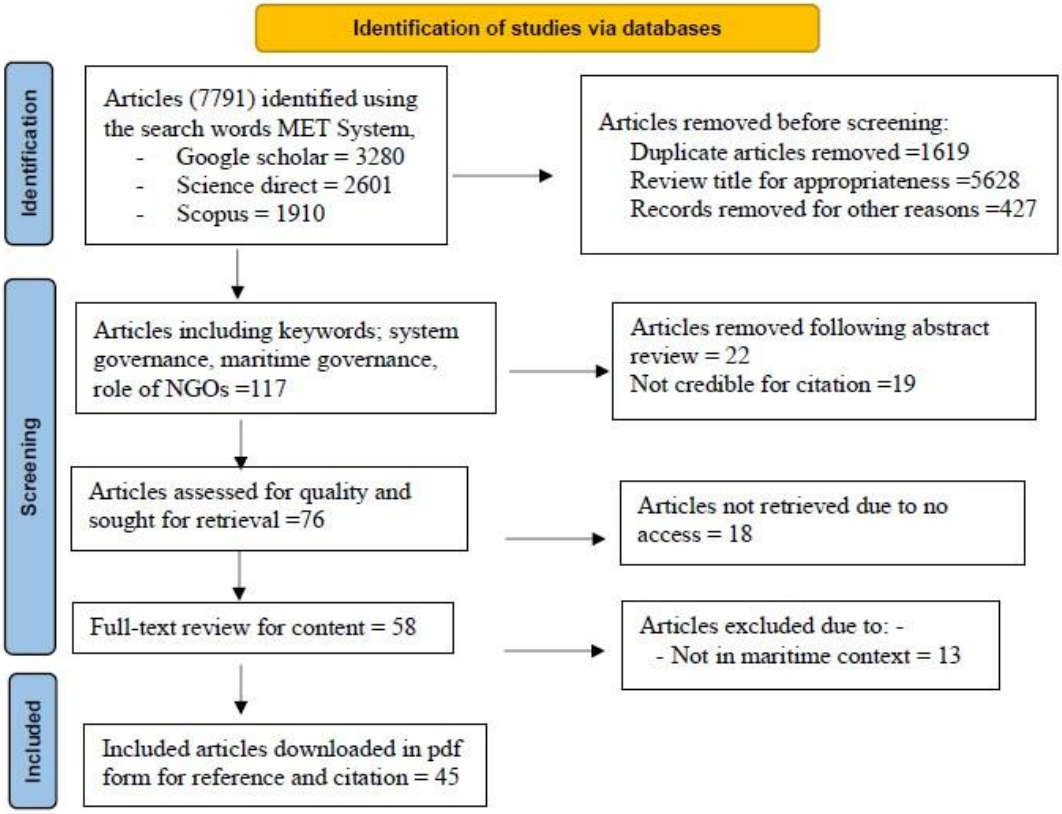
Table 3
Appropriate Research Methodology Choice

Research Questions	Data/Source	Data collection	Method Use	Justification of Method Used
Q1) What is the nature of NGO participation in system governance in general and maritime governance in particular?	-Journals and articles from scholarly research work on the nature of NGO participation in system governance in general and maritime governance.	-Data from Systematic Literature Review through search engines, namely Google Search, Scopus, ScienceDirect, and other academic search engines.	-Literature review -Thematic analysis	Collection of data from various sources on understanding the nature of NGOs and their participation in governance in general which is not quantifiable.
Q2) Who are the key stakeholders in the current Kenya MET System and what are their roles (actual and perceived)?	- -Semi-structured interviews recorded via Zoom and Teams.	-Data obtained from semi-structured interviews recorded on Zoom and Teams.	-Purposive sampling	The relevant stakeholders in MET System must be identified accurately to ascertain their optimum contribution.
Q3) What are the current and potential contributions of NGOs (within the stakeholder network) to the development of the MET system in Kenya?	-Semi-structured interviews recorded via Zoom and Teams.	-Primary data from semi-structured interviews recorded on Zoom and Teams with participants from identified stakeholders including, (the State/Ministry/ Administrator, MET Institutions, Seafarers, NGOs, and the industry.	-Purposive sampling	The contribution of Stakeholders in the maritime industry to the MET System is not quantifiable.

3.2 Systematic Literature Review (SLR)

The SLR addressed the RQ1 to achieve the aim of the study. The main intention for a systematic literature review is to identify, evaluate and interpret significant parts of research regarding specific issues or phenomena of interest of research questions (Følstad & Kvale, 2018). The SLR involves following a specific guideline of applying a search strategy that involves selecting the literature based on predefined inclusion and exclusion criteria (Schröer et al., 2021). The research specifically used the Preferred Reporting Items for Systematic Reviews and Meta Analysis (PRISMA) procedure as a guide for reporting the details of its systematic literature review as shown in Figure 6.

Figure 6
Description of SLR using PRISMA Procedure



The PRISMA[7] procedure included three main processes which were observed to complete the systematic literature review as explained.

Process 1 – Identification of Articles

The SLR sought to answer research question 1 which states,

What is the nature of NGO participation in system governance in general and in maritime governance in particular?

The question is meant to highlight the role of NGOs in the MET System.

[7] *From* Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71
For more information, visit: http://www.prisma-statement.org/

Process 2 – Screening of the Articles

The search was on reliable academic databases including Google Scholar, ScienceDirect, and Scopus for journals and published articles to provide significant literature about system governance and specifically maritime governance to address the research question 1. Grounded on best practices, the results are limited to publications of reasonable current years of between 2008 to 2022, with search terms having emphasis on different notations of System Governance, Maritime Governance, Maritime Stakeholders and Role of NGOs with a nuanced discussion of the contribution of NGOs in improving MET System.

Process 3 – Included Articles

The researcher finally reviewed 45 articles and journals from the mentioned academic databases as indicated in the PRISMA procedure in Figure 6, which were further analyzed and included in the systematic literature review. The articles and journals included in the review are presented in **Appendix B**.

3.3 Semi Structured Interviews (SSI)

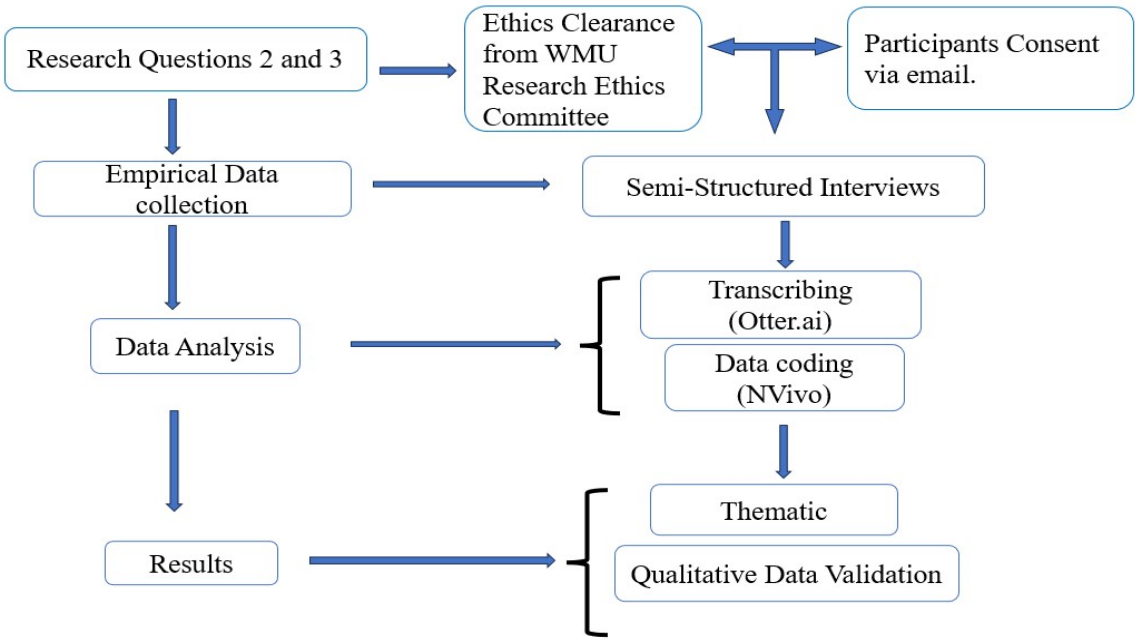
SSI are carried out using an interview questionnaire or list of predetermined primary questions which are open-ended questions meant to elicit unstructured responses to generate discussion that will result in sub-questions as probes within each participant's response (McIntosh & Morse, 2015). The study used semi-structured interviews as a research/data collection method for primary data which entailed having an interview guide with open-ended questions along with follow-up probe questions addressing the research aim and objectives intended for RQ2 and RQ3. Fifteen semi structured questions were administered to sixteen participants working in different organizations that constitute the key stakeholders in the Kenyan maritime education and training system.

Preference would have been to do an in-person interview though it was not feasible for the interviewer to travel form Malmo, Sweden to Kenya, hence the modality used was audio-recordings via Zoom for data analysis. The participants had an option of video-recording or audio-recording, but they all opted for audio-recording.

Brief demographic information was obtained through the consent form sent out to participants prior to the interviews and a copy of the consent form is presented in **Appendix C**.

The interview instrument comprising of the 15 questions is presented in **Appendix D.** Questions were asked in the same order of all the participants so as to analyze the data systematically item by item. Specifically, the interview was aimed at identifying the various stakeholders in the MET System and understanding the role of NGOs in the MET System. Through the interviews, the researcher was able to identify the presence of NGOS in Kenya (both the actual and the potential ones) and their role in MET System. Figure 7 presents the process of the semi-structured interviews followed.

Figure 7
Semi-Structure Interviews Process Flow.



3.3.1 Interview Tool

The interview tool was prepared and submitted to the Research Ethics Committee of the World Maritime University for approval as compliance with ethical guidelines in conducting the interview. Additionally, a pretest was conducted to validate the content/questions for the interview with one of the target participants. Content validity checks (through the use of a pre-test) ensured questions asked reflected all the important aspects of the subject of interest.

3.3.2 Purposive Sampling

The research used the non-probability approach of purposive sampling, being the best fit for qualitative research which mostly is an iterative process to ensure collection of appropriate and specific data. Purposive Sampling involves selecting participants based on their meeting certain criteria of interest. In this case, consideration was given to the participants' experience and expertise in the maritime sector. 14 participants out of the 16 identified and interviewed had over 10 years of experience and expertise in the maritime sector within their specific organizations. Only two participants had less than 10 years of experience but still substantial of over 5 years of experience.

The participants are considered experts in their respective positions within the various participating organizations identified as key stakeholders in MET System. They all had extensive wealth of knowledge and valuable insights in their various capacities. This greatly informed the findings of the study. A list of participants that were interviewed with their respective organizations and brief demographic information is included in **Appendix E**. Invitations to the participants were sent out between the 3rd and 10th of July 2023 with the expected date of completion of the interviews set for 13th August 2023. Each interview lasted between 45-60 minutes, were transcribed upon completion using the web based Otter.ai tool and further analyzed using NVivo 14 application.

3.4 Research Quality

The debate on defining the quality of qualitative research has been ongoing but still attributed to both the stages in carrying out the interview (with focus on establishing the ethical guidelines and determining the interview protocol), and the content generated which emanates from a good grasp of the subject matter by the interviewer. Additionally, the methodology has maintained the objectivity of the research with questions that strictly address the aim and objectives of the study. Furthermore, the open-ended questions together with follow-up probe questions allowed for the natural flow of the conversation, making each interview session unique and informative.

3.5 Analysis of Data (Qualitative Data Analysis)

Data analysis for semi-structured interviews aims at providing a thorough and precise descriptive summary of various perspectives of the participants (Rabionet, 2011). The analysis begins with preparing the data for analysis by transcription of audio files (recorded interview) to text and importing transcripts into Computer Assisted Qualitative Data Analysis (CAQDA) software to conduct the content analysis.

Notably, reading the transcribed interviews inspires the interviewer to new interpretations of a well-known phenomenon or to a substantial new knowledge of a sector (Brinkmann & Kvale, 2018).

All the data from the interview sessions was transcribed using the Otter.ai application and later imported into the NVivo 14 software for coding and qualitative analysis using thematic analysis. This involved organizing the data in themes and assigning codes/nodes to the relevant parts of the responses from the interviews for the purposes of analysis. The coding process ensured all the data from the responses were assigned to a specific code to inform a theme.

3.6 Ethical Consideration

Establishing ethical guidelines is crucial throughout the different stages of the interview process from the very start of the research work for consent from the participants to the final stage of reporting with attention to disclosure, and trustworthiness when discussing the findings (Rabionet, 2011). The ethical guidelines set by the World Maritime University were all adhered to from the onset by seeking approval from the Research Ethics Committee (REC) to conduct research among people which guaranteed them confidentiality and ensuring data would strictly be protected. The storage and deletion requirements of the University were also met.

The process considered issues of purpose, consequences, identity, confidentiality, and courtesy throughout the interview process.

Consent was sought and obtained by inviting the participants to the interview through emails and expressed consent for recording was sought at the start of the interview. Confidentiality was protected for the respondents by the use of the acronym “R” followed by numeric order of respondents naming R1 to R16 as shown in Table 4. A copy of the relevant REC form is presented in **Appendix F.**

Table 4
List of Respondents as Identified in the Semi Structured Interview

Respondents ID	Stakeholder
R1	MET
R2	INSTITUTION
R3	ADMINISTRATION
R4	
R5	STATE
R6	
R7	
R8	ASSOCIATION
R9	NGO
R10	INDUSTRY
R11	
R12	
R13	
R14	
R15	SEAFARER
R16	IGO

3.7 Chapter Summary

This chapter discussed the choice of methodologies used for the study in reference to the research questions they needed to address. Additionally, the chapter also discussed the development and validity of each choice of the method and clearly explained the alignment of the choices with regards to the aim and objective of the study. The ethical considerations are briefly but concisely elaborated, contributing to the quality of the research work.

4. CHAPTER FOUR – RESULTS AND DATA ANALYSIS

INTRODUCTION

This chapter presents an analysis of the data collected from the systematic literature review and semi structured interviews. The chapter further gives a qualitative analysis of the data which successfully addressed the aim of the study; to interrogate the role of NGOs in improving the MET System in Kenya.

4.1 Data from Systematic Literature Review (SLR)

A systematic literature review was used by the researcher to address RQ1 which sought to assess the nature of NGOs participation in system governance in general and maritime governance in particular.

To address this concern, the researcher obtained literature to provide a comprehensive overview and understanding of NGOs and their participation in system governance and maritime governance. The definition of NGO has been influenced by the attributes, such as non-profit organization, voluntary in nature and independent free from government. The participation and roles of NGOs are said to be constantly evolving as the issues they deal with change and the jurisdictions they operate in are different. Their classical roles include advocacy in merely raising awareness, charity, service delivery, and gap filling. However, in recent years, their participation and activities have widened to the role of enabler, watchdog, advocate, consultant, catalysts, lobbyists, and expert as shown in Table 5.

Additionally, literature was sought to describe the theoretical perspective of MET System which was further supported by data from the semi-structured interviews which aimed to describe the MET System from a practical perspective.

Table 5
List of Classical and New roles of NGOs

Roles of NGOs	Description of Functions and Activities.	Author
Classical Roles	1. **Advocacy** – Merely in raising awareness.	(Calado et al., 2012; Otto, 1996)
	2. **Charity -** To less privileged to increase the capacity of the poor in efforts to eradicate poverty and enable societies (called funder in the new role).	(Ulleberg, 2009)
	3. **Service delivery – Strengthen** the public demand for effective public services and strengthen the supply of such services.	(Ulleberg, 2009; Brown, 2009)
	4. **Gap-filling –** Put pressure on governments to improve their capacities, aimed at developing the capacities of governments.	(Ulleberg, 2009; Brass, 2016; Otto, 1996)
NGOs have evolved over time, and have become powerful taking up important functions in governance issues (Ghadar, 2009)		
New Roles	1. **Enablers/facilitators** - Empowering through capacity building and providing input for management such as funding, providing equipment and facilities, process facilitation, and network creation.	(Crossman, 2013; Romero-Brito et al., 2016; Calado et al.,2012)
	2. **Advocacy/advisor** – Drawing attention to specific issues, policymaking and implementation, lobbying, and participation in cross-sector collaborations as the voice of the people and educational outreach.	(Crossman, 2013; Romero-Brito et al., 2016; Calado et al., 2012)
	3. **Consultant –** Have international connections that draw knowledge from different sectors and experts.	(Romero-Brito et al., 2016)
	4. **Catalyst** – Initiating projects and acting with speed with minimal bureaucracy as well as pressuring governments and corporations for accountability and transparency.	(Ulleberg, 2009; Ghadar, 2007)
	5. **Expert/innovators -** Increasing organizational knowledge through scientific research and expertise.	(Crossman, 2013; Calado et al., 2012; Ulleberg, 2009)
	6. **Manager –** Management or co-management of projects.	(Crossman, 2013)
	7. **Watchdog –** By monitoring compliance through direct action such as direct interference with targeted activities or lawsuits and increase transparency and accountability.	(Ulleberg, 2009; Crossman, 2013; Ghadar, 2007)
	8. **Funder –** Some international NGOs have budgets that exceed that of the government, which allows them to fund several projects as well as develop parallel, institutionalized structures of service provision.	(Ulleberg, 2009)

4.1.1 Non-Governmental Organizations (NGOs)

As briefly mentioned in the literature review of this study, the term NGO has become popular but defining it has become a daunting task especially in determining what these organizations are and what they do (Ahmed & Potter, 2015; Hein, 2008; Aldashev et al., 2015). It is frequently the case that, organizations are referred to as NGOs but with no clarity of what they mean, resulting in researchers defining NGOs in different connotations to suit their specific research objectives but in some cases with some fundamental features. Such features are identified by Goel & Tripathi, (2010) and Abiddin et al., (2022) as the main four characteristics defining NGOs, which include being voluntary in character, being independent from government, having a non-profit orientation, and having a public interest orientation.

Consequently, a broader definition was developed by Abiddin et al (2022), to define NGOs as nearly all organizations except for political parties and private organizations that are not sponsored by the government.

> Except for political parties and private organizations, the term non-governmental organizations (NGOs) refer to nearly all organizations that are not sponsored by the government. The organization must be entirely voluntary and must operate within the confines of the laws of the country in which it operates.

The term NGO came into frequent use after the establishment of the UN in 1945. However, Willets (2002) affirms that it was in use prior to that time under the label of the Union of International Associations and became popular particularly from the early 1970s. Willets further adopted a basic approach in describing NGO and defined NGOs as an independent voluntary association of people acting together on a continuous basis, for some common purpose, other than achieving government offices, making money, or illegal activities. Besides the lack of a clear agreed upon definition, the term NGO is also vague in whether it is referring to a local, national, regional, or global body. NGO by itself is often used to refer to national NGOs, while regional or global bodies are sometimes referred to as International NGOs (INGOs). However, the term INGO is not often used, and NGO is still commonly used to cover both national and international NGOs (Willets, 2002).

The literature has identified some of the key functions of NGOs which are to promote sustainable community development through capacity building and empowerment activities that help people, organizations and communities at large develop their capabilities. Abiddin et al. (2022) have further highlighted that, in some cases, NGOs can also influence policy making on issues they advocate for such as human rights. As such, it is believed that, without the active involvement of NGOs, even the UN human rights system would not function well.

Shigetomi (2002) argues that NGOs can no longer be described only as volunteer organizations supporting the efforts of developing countries to develop, but they have become important actors in the spheres of international politics and have demonstrated the potential to shake even the foundations of the international economic order, making them leading agents of civil society. With respect to participation of NGOs in policy making, Goel & Tripathi (2010) point out that their influence may at times result in divergent or conflicting goals and values that may lead to confrontational relations between the government and NGOs. In this case, Otto (1996) argues that NGOs are seen to be in a never-ending tension with the government because of their overreliance on donors for financial aid, which obliges them to follow the agendas of the donors which, in most cases, may be contrary to the government's own agenda. Table 6 shows summary attributes of NGOs as gathered from the literature with a list of comprehensive definitions presented in **Appendix G.**

Table 6
Summary Attributes of NGO from Literature

Summary definition/description	No. of articles	Article/Author
1. Non-profit making	8	(Willets, 2002; Brass, 2012; Shigetomi, 2002; Abiddin et al., 2022; Mburu, 1989; Brown, 2009; Goel & Tripathi, 2010; Jamali, 2003).
2. Independent voluntary	7	(Willets, 2002; Brass, 2012; Shigetomi, 2002; Abiddin et al., 2022; Mburu, 1989; Brown, 2009; Goel & Tripathi, 2010).
3. Independent from government	6	(Mburu, 1989; Willets, 2002; Shigetomi, 2002; Jamali; 2003; Goel & Tripathi, 2011; Ahmed & Potter, 2015).
4. Benefit of the public	5	(Brass, 2012; Shigetomi, 2002; Brown, 2009; Goel & Tripathi, 2010; Jamali, 2003).
5. Promoting common goals	3	(Willets, 2002; Brown, 2009; Martens, 2002).
6. Organized national or international	3	(Brass, 2012; Brown, 2009; Martens, 2002).
7. Association of people	2	(Willets, 2002; Brass, 2012)
8. Continuous basis	2	(Willets, 2002; Shigetomi, 2002)
9. Collective action	2	(Willets, 2002; Abiddin et al., 2022)
10. Non-criminal or non-illegal	2	(Willets, 2002; Abiddin et al., 2022)
11. Formal (professionalized)	1	(Martens, 2002).

With respect to the different views on the concept of NGO, the following definition has been developed in reference to this study.

> A group of people who voluntarily and formally come together for a common goal with the main purpose of carrying out community development for the benefit of the public. They are independent from the government and carry out collective actions on a continuous basis that are non-profit and non-criminal and may be at the local, national, or international levels.

4.1.2 Role of NGOs in System Governance

The concept of governance while being arguably complicated, has been simplified in the literature to mean the art of steering a group of people, societies, or organizations towards a goal through decision making with multiple actors (Millard, 2018; Boone et al,2019). As described by Ghadar (2017),

> The complexity of governance is difficult to capture in a simple definition. Obviously, the need for governance exists anytime a group of people come together to accomplish an end. One simple definition of governance is that it is the art of steering societies and organizations.

Millard, (2018) have further pointed out that the actors involved have evolved over the years and governance has had to respond accordingly to match the change. From early governance in small tribal communities governed by a chieftain, the small communities grew into larger nation states governed by kings, giving rise to central governments and non-governmental actors such as multinational corporations and NGOs (Kardos, 2012; Aleyao et al., 2016). This is equally confirmed by Pierre (2000), who emphasizes that governance is the ability to coordinate and collaborate with different actors including states/governments, civil society organizations, interest groups, and non-governmental actors. However, Pierre further notes that each actor is driven by their own distinct outcomes. On the other hand, the UN definition of NGOs as not governmental organizations, reveals the defensive position of states/governments towards NGOs which emphasizes the separation of NGOs from government or act of governing and asserts the status of NGOs to be peripheral to that of the state/government (Otto, 1996).

Other theorists, besides confirming NGOs to be non-governmental actors, still see them as making governing decisions and implementing them in collaboration with the government/state as opposed to the notion that government should be the one to steer (make policy) and non-governmental actors should only row (implement policy). This view sees NGOs as taking a main role and participation in governance (Brass, 2016; Ghadar, 2007; Stefan & Nelson, 2018).

4.1.3 Role of NGOs in Maritime Governance.

The maritime sector embodies globalization and, as such, its operation requires common rules to allow inter-operability and efficiency for sustainability. This has resulted in maritime governance being the bedrock of the maritime regulatory framework, which is characterized by a long history of intergovernmental decision-making by various international bodies (Bowman & Smythe, 2019, Łukaszuk, 2018).

Such bodies were established from as early as the 14th century as controls of global shipping up to the current international organization, IMO. The IMO is now the central locus of authority with full capacity and mandate to develop and adopt regulations that help in shaping and implementing international maritime laws alongside the International Labor Organization (ILO) for labor issues (van Leeuwen, 2015).

The concept of maritime governance with its subsequent changes in authority has mostly been discussed by van Leeuwen in her multiple publications. Van Leeuwen (2010) argues that the marine environment is under increasing pressure from maritime activities that are associated with environmental effects such as oil spills, chemicals discharges, depletion of natural resources like fish and minerals, air pollution, noise pollution as well as security, safety, human sustainability and workforce welfare issues. Other issues arise from potential disruption and vulnerabilities due to increasing digitalization and new technologies. All this has increased the dynamic nature of the maritime industry, increased uncertainty and resulting in variations in the locus of authority in maritime governance[8].

The stakeholder theory and governance theory discussions in this study highlighted the development of polycentric governance in maritime governance with the need for multi-stakeholder and multi-level governance. Among the multiple actors besides the state as the locus of authority, are the Multinational Corporations (MNC), Individual Corporations, Private Entities, and Non-governmental Organizations (NGOs) on the local, national, and global levels. Notably, currently NGOs sit directly at the table of decision making and policy making as opposed to the traditional set up where their access to transnational or international politics was via the state.

Additionally, NGOs are increasingly developing the steering mechanism in some cases without the state's involvement. The increasing interaction and involvement of NGOs have helped in policy development and implementation by ensuring feasible and effective policies, thereby helping states pursue their interests (Parviainen et al., 2017).

[8] It has been characterized by a shift in governance to include multiple actors who have emerged to challenge traditional governance as well as a shift to multi-levels due to an increase in international institutions that facilitate the development of international policies.

Baumler et al. (2021) have echoed the fact that the IMO decision-making mechanism promotes inclusivity by giving a voice to all stakeholders. This is at the core of contemporary maritime governance.

As such, the IMO has allowed NGOs to play an active role in their work through the direct contributions these NGOs make to the discussions in the various IMO organs and fora as well as providing expert advice to IMO Member States in their (NGO's) areas of work and expertise. It is worth noting, however, that this is only possible for International Non-governmental Organizations (INGO) who qualify to be in Consultative Status with the IMO. This "privilege" is granted by the IMO Council with the approval of the Assembly (NGOs, 2019)

Over the past decades, NGOs have generally increased in number both in developed and developing countries as well as increasing in size and scope. Based on this, Jamali (2003) highlights that NGOs have become central to contemporary socio-economic development of communities and are consequently pivotal in governance with capacity and commitment to fill in for government shortcomings.

Similarly, Parviainen et al. (2017) assert that NGOs have taken center stage in the environmental and social responsibility in the maritime industry, by demanding safe and sustainable shipping practices through effective data collection, sharing, and dissemination in the shipping industry for a sustainable maritime industry. The theorists further argue that NGOs as part of key stakeholders in the maritime governance can improve and pressure the shipping industry into incorporating greater social and environmental responsibility in its action.

Table 7 shows a summary of the SLR results identifying specific roles of NGOs in different maritime sectors as examples of their participation in maritime governance.

Table 7
SLR on Role of NGOs in System Governance/Maritime Governance

Maritime Sector/Issues	Role/Activity/Function	Author/Article	NGOs
Environment for Marine and Marine Wild Conservation (Enabling role)	Demanding safe and sustainable shipping practices through effective data collection, sharing, and dissemination of information in the shipping industry for sustainable maritime industry.	(Van Leeuwen, 2010)	ICS
	Conservation and management of the marine environment through the development and implementation of Marine Spatial Planning (MSP)	(Calado et al., 2012)	FON,
	Co-management especially in areas where the state is inadequate	(Crosman, 2013)	Elkhorn Slough Foundation
Human Rights in Maritime for Social Responsibility (Advocate Role)	Working for peace and maintenance of social justice for economic progress.	(Ghadar, 2007)	ITF
	Serve as early warning mechanisms, and help monitor and implement international agreements	(Brass, 2016)	
	Encourage the participation of civil society stakeholders to promote the rights and well-being of seafarers.	(Calado et al., 2012)	Ocean Conservancy
	Facilitators between the government/state and the communities at large.	(Calado et al., 2012)	
Marine Research-Research and Advocacy (Advocate Role)	-Research, Advocacy, Report, and Technical Assistance closely with scientists, local and indigenous communities, policymakers, fisheries, and other NGOs to enhance global marine protection.	(*About Pew Charitable Trusts*, 2015)	Pew
Maritime Safety and Safer Shipping Practices.	-Uphold International Standards of Professional Competence for Seafarers. -Policy making and advocating for safer operational shipping practices, preservation from human injury, protection of the marine environment, and safety of life and property at sea	(Van Leeuwen,2015 and Baumler et al., 2021)	IFSMA
Policymaking and Marine Governance	Ensures feasibility in policies and their effectiveness and the development and implementation of international policies.	(Parviainen et al., 2017)	IFSMA
Regulatory Sector for Marine Governance and Marine Law (Watchdog Role)	Developing steering mechanisms with minimum state involvement.	(Parviainen et al., 2017)	All NGOs
	Catalyst to assist the international regulatory bodies (IMO and ILO)	(Van Leeuwen,2015 and Calado et al., 2012)	ITF
	An integral part of decision-making for policy development and implementation	(Baumler et al., 2021)	ICS
Education for Capacity Building (Expert Role)	Funding institutions for infrastructure and equipment	(Crosman, 2013)	IOI
	Offer funding and financial contributions for developmental projects, governmental initiatives,	(Calado et al., 2012)	Ocean Conservancy
	Create awareness using out-reach programs	(Calado et al., 2012)	WWF Baltic Sea Project
	provide analysis, expertise, advice, and valuable knowledge in different maritime sectors through research and dissemination of results	(Crosman, 2013)	SOSF
Seafarers' Health and Wellbeing (Enabler Role)	Improving the quality of health of seafarers, fishermen, and port workers	(*IMHA - International Maritime Health Association*, n.d.)	IMHA
Trade and Shipping	Promotes e-Commerce within the maritime industry	*(Shippsupply)*	ISSA
	Committed to steering an effective democratic society and market economy	(Jamali, 2003)	BIMCO

4.2 Data from Semi-Structured Interviews (SSI)

The researcher used the Semi-structured Interviews to specifically address the following research questions.

RQ2 – *Who are the key stakeholders in the current Kenya MET system and what are their roles (actual and perceived)?*

RQ3 – *What are the current and potential contributions of NGOs (within the stakeholder network) to the development of the MET system in Kenya?*

In addressing the above research questions, the respondents were taken through the interview questions that brought out the following themes for analysis.

4.2.1 MET System - Global and Kenyan Perspective

The respondents described MET system both from the global and Kenyan perspectives to identify the key players/stakeholders in the system and to particularly single out the NGOs to identify both their current and potential contribution to the MET system in Kenya. Quotations of responses are cited in the following text as part of the discussion addressing the relevant research questions. These statements of the respondents are reproduced verbatim. Text in square parenthesis were not very clear from the recordings.

4.2.1.1 MET System – Global Perspective

Respondents had different views on explaining the MET system from a global perspective mainly with some characterizing it as education and training specifically for seagoing/seafarers, while others defined it as education and training for all maritime issues including both offshore and onshore activities.

Despite this, they all viewed the MET System as a fundamental element of the maritime sector that has greatly advanced because of developments in technology in the maritime industry. They noted, however, that the developments are not the same from country to country leading to different descriptions of the MET system globally with fewer developments in the developing nations as stated below:

R11: "*I think maritime education and training is quite advanced globally, especially in Europe, the Americas, and even in the Far East, you know, the growth of large ports, as well vessel types, the post-Panamax vessels flying these boats, and the advancement of containerization which has led into economic growth in these Western countries, as well as the East. It is only the third world which is still lagging behind in this in terms of maritime education, and training."*

R8: "*Okay, I think globally, yes, we have, you know, proper curricula that are being developed, both onshore and offshore"*

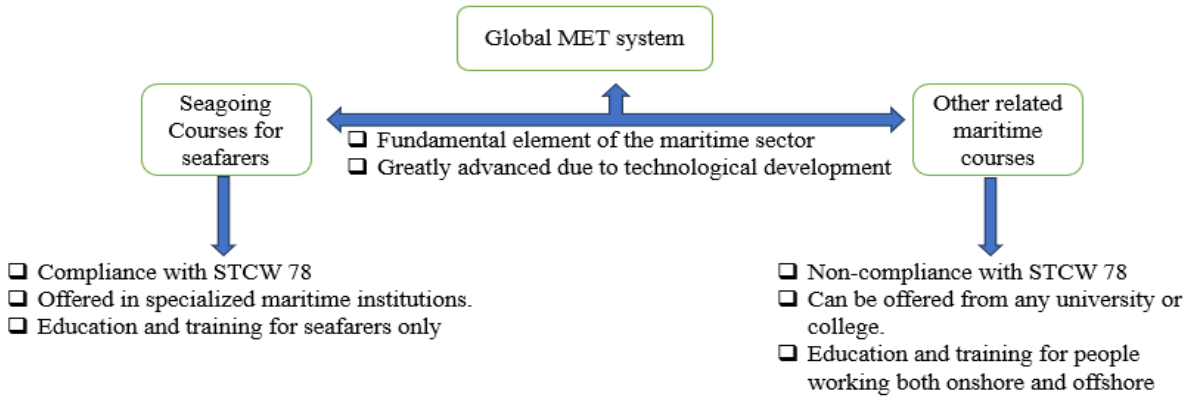
Respondents were also keen to describe MET - from a global perspective - as that aspect of transferring knowledge on maritime issues, through the establishment of maritime education and training programs in METIs. In addition, respondents also defined the MET system globally as maritime education and training adhering to internationally set standards and have increased in demand due to the expansion of the maritime industry resulting in the increase in international trade by volume.

R1: *"... traditional definition of maritime education and training, which was primarily the education and training in the deck qualification, and marine and engineering qualification, we find that it is harmonized through the STCW Convention and Code in that the STCW Convention provides for the Harmonization of the competencies that are to be achieved.*

In acknowledging that the MET system must adhere to STCW, one of the respondents clarified this is only necessary if the MET system is defined from the seagoing perspective only, but if it is described to cover other maritime issues both formal and informal as well as ashore professionals, then other courses will not require compliance with STCW. This concept is represented in Figure 8 to describe the MET system from the global perspective.

R7: "*On the global level, the whole essence of maritime education and training is to meet the requirements of the STCW Convention. But if you look at the law, there are a lot of other maritime education and training that offer various courses meant for people to go and work in the shipping industry, which is not necessarily geared to meeting the STC W Convention".*

Figure 8
Global Met System Description by the Respondents.



Some of the respondents also noted that there is no one standardized system in terms of MET because there are several existing education and training systems in various jurisdictions.

4.2.1.2 MET System Kenyan Perspective

The MET system in Kenya was described from a historical perspective as well as the current state perspective. Generally, respondents characterized the MET system as a whole ecosystem of different stakeholders interacting within the maritime industry.

MET System in Kenya – Historical

The historical perspective of the MET system in Kenya depicts not only a journey with incredible milestones, but also radical changes dating back from the colonial era to the present time. One of the respondents could recall clearly that the first seafarer training was undertaken at the current Technical University of Mombasa (TUM), which was known as the Mombasa Institute of Muslims Education (MIOME) at the time of its inception in 1948. There was also the establishment of the East African Railways and Harbours Corporation which was responsible for all the ports and inland water transport in East Africa as well as all matters of maritime education under the East African Railways and Harbours Act. They established a training school in Kenya known as Railways Training School in 1956 which has undergone transformation and is known as the Railway Training Institute to date offering training in marine with a branch in Nairobi as the central workshop offering both nautical and marine engineering.

In 1963 after independence, the government sent the first cadets to the UK for training and Kenya got its first harbormaster, first pilot, and first chief engineer. It was at this time Kenya established the Kenya Polytechnic along with MIOME to continue with maritime education and training. However, the respondents noted that, through transformation to technical institutions both the schools lost MET training along the way. Later in 1980, the Kenya Ports Authority (KPA) established the Bandari College (BC) with the main purpose of delivering inhouse port operations and cargo handling training for continuity of port operations after the collapse of the East African Railways and Harbors Corporation.

R1: *"So, then later on as the school metamorphosized into a technical training institution, MET was lost along the way. In the 1980s, we find that the Kenya Ports Authority started the Bandari College, which was an in-house training college for the training needs of the Port Authority. But then, some courses especially the basic safety courses were introduced and offered at that time, and then became synonymous with seafaring training done at Bandari College."*

According to another respondent, BC expanded in scope to include nautical studies but at this time could not really be considered a MET institution per se, as it did not offer a proper description of MET.

R7: *"Bandari College at that time they were just offering courses in clearing and forwarding. At that time, it was the College of KPA to train crane drivers. You know, evening classes for people working in clearing and forwarding. So, there was no way that there would have been any MET. At that time. To be honest, Bandari College could not have been regarded as a maritime education and training".*

Faced with rapid changes in the maritime industry, the college (BC) underwent a series of challenges. Government efforts to upgrade it from as early as 1992 never materialized. However, as part of the effort to strengthen its MET system, the government successfully ratified the STCW 78 convention in 1993 and by 2000, the government had recognized the need to establish a legal framework for its maritime development. As a result, it established the Kenya Maritime Authority (KMA) in 2004 followed by the enactment of the Merchant Shipping Act in 2009, and subsequent entry into the so-called "IMO Whitelist" in 2010. This marked a new era of the maritime industry in Kenya which characterizes the current Kenyan MET system.

MET System in Kenya - Current State

In most cases, the respondents were very inspirational in their views in expressing the current MET system and characterized the Kenyan Met system in terms of its milestones achieved that has set up the MET system to meet international standards as required.

The respondents pointed out that, in recognition of the potential economic benefits of the maritime sector, the government of Kenya focused on the sector with the following major developments.

1. Successful establishment of the Administration - Kenya Maritime Authority (KMA) as the regulator in 2004.
2. Enactment of the Merchant Shipping Act in 2009.
3. Subsequent entry to the so-called IMO "Whitelist" in 2010.
4. Transformation of Bandari College (BC) to Bandari Maritime Academy (BMA) in 2018 as a center of excellence for development in teaching, consultancy, training, innovation research, and development in maritime education and training.
5. Establishment of Kenya Coast Guard Services (KCGS) in 2018.
6. Completing a draft Integrated MET policy
7. Creation of an Institutional and Legal Framework for MET
8. Increase in MET Institutions and other institutions expressing great interest in offering MET.

A summary table of the milestones captured is shown in **Appendix H** reference.

The above milestones were all captured from several respondents as follows:

R1 *"……in the 1980s, we find that the Kenya ports authority started the Bandari College, which was actually an in-house training college for the training needs of the Port Authority…"*

R11: *"…. some courses especially the basic safety courses were introduced and offered at that time and then became synonymous that seafaring training is done at Bandari because the Technical University of Mombasa once became the Mombasa Technical Institute, to Mombasa Polytechnic lost the training along the way."*

R13: *"We have the Technical University of Mombasa; we have the Jomo Kenyatta University of Agriculture and Technology offering a Bachelor of Science in marine engineering within the scope of engineering science".*

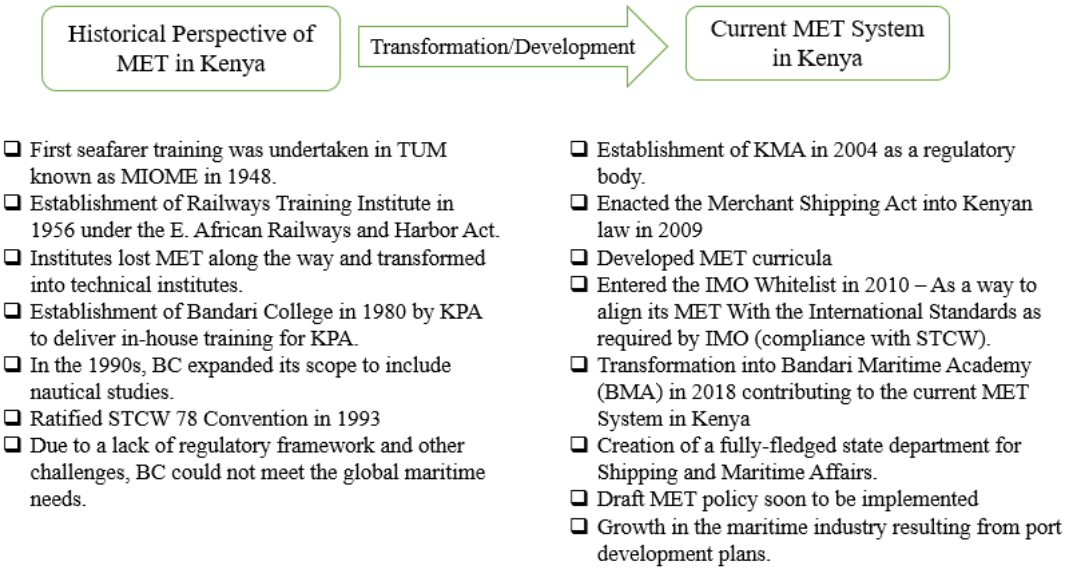
R5: *We don't have a maritime education and training policy right now. It is in the draft; we have been working on it".*

R4: *"So we are developing, we've currently developed a MET policy, which is in draft"*

R1: *"We have the bridge simulator in binary, we have the engine room simulator [in tune]. So TUM has a full complement of the bridge, including an onsite simulator for engineering and cloud-based simulators for nautical".*

All respondents could express their hope in the growing sector of the maritime industry given the support and dedication of the government. Figure 9 represents a comparison overview of the historical status and the current status of the MET system in Kenya.

Figure 9
Historical and Current State of the MET System in Kenya



4.2.2 Significance of the MET System in Kenya

Generally, the respondents unanimously agreed that the MET system is of high importance to the overall development of the country. They stated that, if well implemented, it can contribute to the socio-economic development of the country in any of the following ways:

- It can provide a competent and competitive market and labor force.
- It can reduce unemployment issues in the country.
- It provides a great caliber of professionals.

The responses of the respondents in agreement to the question of whether the MET system is of any significance in Kenya are presented in **Appendix I.**

4.2.3 Factors influencing the MET system in Kenya.

The respondents also identified factors influencing the MET system in Kenya. Key factors among them were the government (citing government will, government support, government resources), MET policy, the industry, METIs, the environment, and MET Instructors.

Others included IMO, regulatory framework, METIs, curriculum, environment, culture/interest, parents/students, partnership, and corporations as shown in Table 7. Some of the respondents highlighted the importance of government support in terms of funding and policymaking. They also identified government goodwill to be key in influencing the growth of the MET system in Kenya.

One of the respondents pointed out the downside of government involvement, where it tries to fit the MET system into the national education system, while in his view, it is supposed to fit in the global MET system to meet the global standards and industry demands.

R3: "*When it comes to maritime education and training, we're trying to fit in mostly within the government education system…….*
……. And it is important for all to understand that the maritime sector or maritime education and training is also unique, and we should be able to tailor it maybe we have our MET system which is just tailored to fit into the maritime sector and be able to respond to international demand and to meet international standards".

The respondent observed that maritime as unique and suggested an MET system that should be tailored for the maritime industry which will fit in with the global maritime sector to address or respond to international demand as well as a need for a clear system locally to strengthen the current MET system through policy for a robust system.

The environment in which the Kenyan MET system operates is characterized as disorganized, commercialized, and insufficiently regulated, which has an adverse effect on the MET system as pointed out by one of the respondents.

R5: "*The second thing is of course, what has influenced the MET system in Kenya is the disorganized, the disorganized, commercialized, and insufficiently regulated environment. The MET System. Even the environment is very critical. It is very important that the seafarer if you're training for port operations, you bring them closer to the environment that you're training with".*

Table 8 shows a comprehensive list of all the factors influencing the Kenyan MET system as highlighted by the respondents with MET policy as the most frequently mentioned factor by 13 respondents and qualification and high cost of MET as the least mentioned factors by 1 correspondent each respectively.

Table 8
Factors Influencing MET System in Kenya

Factors Influencing the Kenyan MET System	Responses	Respondents ID
Policy (MET policy) (13 respondents)	A clear integrated MET policy will be an anchor policy to MET, for all the strategies. Kenya has developed an MET policy that is yet to be adopted and it will help align training to the policy. This policy will put in place quality training to encourage partnerships for funding to improve the MET system.	R1, R3, R4, R5, R6, R7, R8, R9, R11, R12, R13, R15 R16
Industry (10 respondents)	The needs of the industry influence the MET system in Kenya because MET is demand-driven, and the industry will spell out the skills and competence it needs at any given time. In that case, the industry will influence the courses and type of training the MET system will provide. Competition within the industry has also encouraged Kenya to enhance the MET system, so that it can compete with other nations regionally.	R1, R4, R7, R10, R11, R12, R13, R15, R16
Government (8 respondents)	The government influences the MET system in terms of its support and goodwill which will encourage the improvement of the system. The government can also increase funding which can help the development of the MET system, by purchasing all the required facilities and equipment for programs in the MET system. A big chunk of the Kenyan government funding goes to Agriculture as a developing country. The government can also develop a clear integrated MET policy that can spell out the regulations and plans in support of an effective MET system.	R1,R3,R6, R9, R10, R14, R15 R16,
Regulatory Framework (5 respondents)	The regulatory framework will take precedence in case of a conflict in policy. This includes the national education and training framework and the maritime regulatory framework for the purpose of compliance with STCW.	R1, R9, R10, R11, R13,
Technology (5 respondents)	Technology influences the MET system, with its rapid change that will require a regular update of the MET system for its sustainability. New technologies bring about new teaching facilities that will require updating the MET system regularly for it to be effective. Digital advancements in ship operation have led to new security systems, facilities, and equipment that have made MET more costly.	R2, R9, R10, R13, R15
International Standards from IMO (5 respondents)	Kenya is a member of IMO, and being in the IMO whitelist has helped shape the Kenyan MET system and make it robust. As a result, the Kenyan MET system got attention and attraction and is able to see an uptake of its seafarers for employment.	R1, R5, R8, R11, R16
Curriculum (4 respondents)	The Kenyan MET curriculum has not been responsive to the emerging industry needs, hence making the Kenyan MET system less impactful.	R1, R6, R10, R15

METIs (4 respondents)	The METIs need to be harmonized and be up to date with the emerging issues and trends in the maritime industry which is dynamic and changes rapidly. This is to enable the institutions tailor-made MET courses to fit into the global standards. There is inadequate human capacity and even unqualified in the METIs in Kenya as well as inadequate facilities, which negatively influences the MET system. A fully-fledged maritime university is also a key factor, which lack has made the Kenyan MET system seen as inadequate. Kenya has not gone fully to exploit the maritime industry; the government should dedicate itself to providing one even through partnerships and cooperation.	R2, R3, R6, R8
Parents/students (4 respondents)	Students are part of the consumers of the MET system. They need to be made aware of the career opportunities it can offer in the maritime sector. The more people/students we have, the more chances of continuity of the system, because you can be assured of professionals in the system who can progress it. The government can partner with NGOs in creating awareness from as early as in primary schools and from the grassroots of the remote areas. Government and NGOs can also partner to ensure its accessibility to every person who is interested in MET.	R10, R11, R12, R13
Environment (3 respondents)	If the environment is highly commercialized and disorganized, it can lead to insufficiently regulated MET. A conducive environment will lead to an MET system that has the capability and capacity to deliver. Currently, the Kenyan MET system is strictly regulated but there is a need for more trained inspectors and well experienced for better regulation of the environment.	R5, R3, R15
Partnerships and cooperation (3 respondents)	MET system is a complex and huge venture, that cannot be addressed solely by one entity. Partnerships and collaborations are necessary for its growth, success, continuous improvement as well as its sustainability. Collaboration is necessary among all players including the governments, key industry players like the shipping companies and the port, the private sector, as well as the NGOs who can foster international connections and more development. The interaction between academia and industry is also vital in shaping the MET system by guiding the type of curriculum that can meet the industry's needs.	R1, R13, R16
Culture/Interest (2 respondents)	The culture of the people or the locals can contribute to the MET system Industry interest. In Kenya, the interest in the maritime industry is flawed by the fear of the ocean. The Blue Economy concept in Kenya will improve its maritime industry and even the MET system by teaching more ocean biology and not just general biology.	R2, R14
Qualification (1 respondent)	The minimum qualification set for absorption to MET college bars most youth from entering MET schools, making MET less popular in Kenya and hence less attractive to youths in Kenya.	R13,
High cost of MET (1 respondent)	MET education is very expensive and worse from abroad. This has made it necessary for the government to grow and monitor the MET system so that Kenyans can access it locally.	R15,

4.2.4 Challenges in MET System in Kenya and Possible Recommendations

Despite the positive elements highlighted by the respondents when describing the current Kenyan MET system, somethings were identified that need to be worked on. They were identified as challenges with some identified as historical challenges in the present Kenyan MET system. Table 9 shows a list of the challenges identified with the possible recommendations for necessary action as cited by the respondents.

Table 9

Challenges in Kenyan Met System with Possible Recommendations

Challenges identified in the Kenyan MET System	Possible Recommendations	Respondents ID
The MET Curriculum Described as superimposed on the existing national frameworks for training causing a challenge to compliance with the STCW 78 Convention. (10 respondents)	A need a Quality Standard System (QSS) than a Quality Management System (QMS) for assessment of the MET system. Reengineering the process by developing a new curriculum or revising the current one that's fit for the industry. Enhance the curriculum to cover more programs in MET.	R1, R2, R5 R6,R8,R9,R11, R12, R13, R15.
MET is not entrenched in the national education system	Establishing new areas of specialization	
	Engage other partners like the NGOs and attract them. We have to have a product for them to have their buy-in.	
	Incorporate blended learning to include other modes of teaching mainly online teaching programs and adopt a practical approach of teaching	
	Widening the curriculum to cover more courses in maritime	
	Expose the students to current industry issues and just have a curriculum that has been developed years back relying just on learning from the books, which might be outdated yet the maritime industry has a lot of advancements and students need to be kept up to speed.	
Lack of information on the MET system Best students have already been taken by law by doctors, by architects because they did not know of the MET option. (8 respondents)	Mentorship programs to the youth provide a clear career path - a role that can be taken up by NGOs. Awareness campaigns across secondary schools and universities, to ensure that people embrace the maritime concept. Incorporate MET in the early years of school, e.g. secondary schools.	R2, R4, R8,R9,R11, R12,R14,R15
Lack of MET policy This has led to a gap in understanding and differentiating competency and proficiency. Most of the policies in place recognize post-graduate academic training and not professional training and the MET system is a professional training. (7 respondents)	An integrated MET policy to allow the system to translate the CoC in terms of officers and ratings. Develop a cabotage regime to take advantage of projected growth in the shipping industry in Kenya. Cabotage will create training and employment opportunities for students and qualified seafarers respectively.	R1, R4, R6, R8, R9, R10, R14.

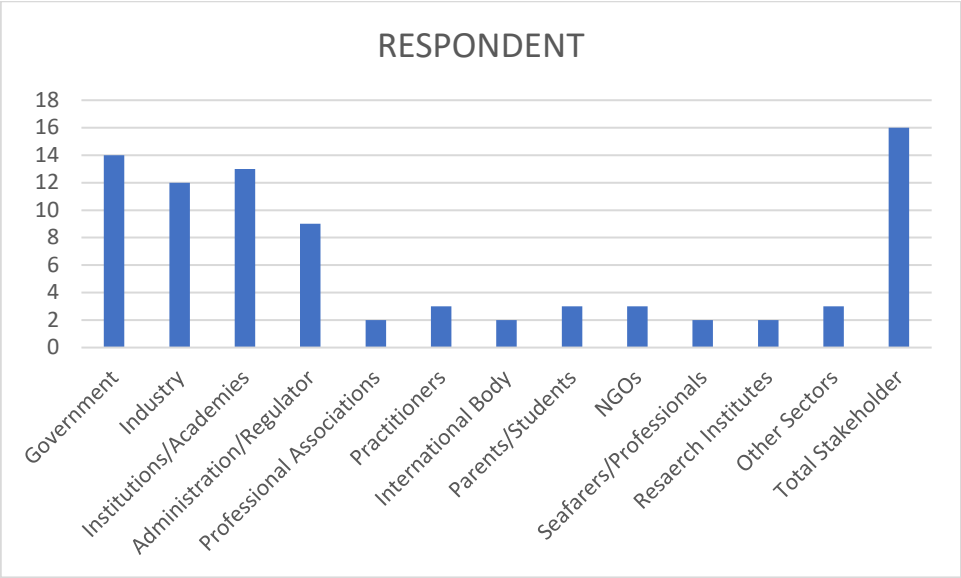
Funding funding is done in a generic format yet the maritime training, has a higher input and if it is quantified financially, it is higher financial input than other training. (6 respondents)	Addressing the nature of the input into that of training and having specific funding for MET an area where other stakeholders can come in to assist the government like, the NGOs.	R1, R6, R9, R10, R12, R16
Unqualified instructors/lecturers This affects the curriculum delivery. (6 respondents)	Identify the potential instructors and empower them with relevant MET from relevant institutions and attract them back into the Kenyan system so that they can run METIs in Kenya.	R3, R5, R9, R11,R13,R15,
Insufficient training facilities Old workshops in the METIs Lack of shipboard training due to lack of training vessels. (6 respondents)	Modernizing the workshops e.g. motion simulators. Engage partnerships to have experiential training e.g. going onboard for training. Prioritize the National Centre of Excellence (BMA)with funding for modern facilities. Identifying potential partners that are able to give our students ample see time as needed when they're training Equip BMA, the National Maritime Centre with facilities such as a National Maritime Simulator Centre, Marine Engineering Workshop, and Nautical Science workshops; these facilities are to be made available for use by other MET institutions; and Revive the Kenya National Shipping Line so it can provide the necessary shipboard training.	R5, R6, R8, R10, R14, R15,
Capacity of MET institutions Lack of fully-fledged MET institution (4 respondents)	A need to prioritize the current National Centre of Excellence BMA. Harmonize and connect the existing METIs.	R4, R7, R12, R15
Lack of capacity to offer specialized major courses and training in MET. (such as LNG vessels, passenger ships, dynamic positioning ships, mobile offshore drills, and handling vessels) (3 respondents)	Have these units operating so that we can put our students on training	R2, R5, R15

Government The government basically has its focuses on other sectors including tourism, agriculture, and other sectors in the economy. (3 respondents)	Foster partnerships with other stakeholders eg sign up MOUs Liberalize MET in terms of private, private funding, or private investors. Governments and institutions can explore public-private, public arrangements.	R9, R13, R16,
Accreditation of the courses offered. (2 respondents)	Partnering with relevant institutes globally Partnerships with the shipping lines to offer the learners opportunities to gain practical exposure. A need for industry liaison to expose the students, to what is happening currently.	R8, R10
Lack of proper needs assessment There is a disconnect between what kind of professionals or experts we need to produce versus what is being taught in colleges or universities. (1 respondent)	Engage experts and collaborate with other MET institutions	R8,
Accessibility of the studies of the MET because of the high costs of such training. (1 respondent)	Government to subsidize MET and offer special funding to MET.	R13,

4.2.5 Key Stakeholders in the MET System in Kenya.

Regarding the key stakeholders in the MET system, a similar list was identified across the respondents, with key stakeholders identified to be the Government and its relevant departments, the Regulator, the maritime education, and training institutions (METIs) that develop seafarers and maritime professionals, and the industry as the consumers who employ the seafarers and the professionals. The most mentioned was the government (14) with almost all the respondents acknowledging its participation in the MET system. The least mentioned were the seafarers/maritime professionals (2), the associations (2), and the international body (2). Similarly, only a few of the interviewees (3) identified NGOs as presented. Figure 10 shows a summary of the stakeholders identified by the respondents respectively.

Figure 10
Key Players Identified in the Kenyan MET System



Others could not identify NGOs as key stakeholders in the MET system in Kenya, simply because they were not clear on what NGOs are, and after being asked about NGOs participation, they classified them as associations.

R5: *"Oh, yes, yes. So, like, it could be associations or groupings of people? Yes. I think we have the seafarer's union. Hoteliers Association. We have the Fisherman Association".*

R12: *"There are several agencies that are no longer [broken] by the term NGO of the United Nations that support maritime training in Kenya in terms of the funding and also issues of capacity building and I don't know, we, I call them as NGOs and development partners"*

Another respondent further pointed out a minimum involvement or lack of involvement of the NGOs in the Kenyan MET system attributing it to the fact that, the Kenyan MET is not responsive to the emerging issues. Other reasons are identified by other respondents as follows,

R13: "*It all came as a result of the focus, many years, as a result, Kenya lost focus on the maritime sector, in that, the sector itself even within the country had not much support even from the government of Kenya, there was no focus and attention given to the sector"*

R3: *"The last part in which I was saying why we don't have NGO participation Yeah. Because also our MET is not responsive to emerging issues. Our training has not responded to emerging issues. That's why we are seeing a minimal inflow of NGOs. They're supporting but in smaller, smaller programs at the grassroots level, but not directly with a training institution, because we don't have any programs, that are basically fit to the emerging issues, such as the issues of climate change, issues of governance, maritime governance, issues of decarbonization, and all that*".

R9: *"I mean, for any NGO to come up. I mean, to take any role, they have to be backed up by law and regulation. So that is the first thing I can think of, if there is no regulation guiding what the NGO is supposed to attain, then they will be a bit reluctant, the government has a role to ensure they build that platform for them to perform".*

One of the respondents highlighted the need for a policy that can create a conducive environment for the NGOs to operate in order to encourage NGOs' participation in the MET system by stating that:

R16: *"But when it comes to the MET system, I have not seen a lot of participation by the NGOs as far as my interactions are concerned. So as policies are put in place, some NGOs can come into space".*

Some respondents further stated that NGOs' participation in other sectors like health, and education at large but not specifically maritime education. There is also NGO participation in the maritime sector but primarily in the environmental aspect as opposed to the MET system.

R15: "*The NGO involvement in the maritime sector has not been visible compared to the other sectors. We have had support, but it's not as much as in the other sector. So, I think there is a need also to be able to engage more with the NGOs and bring them on board so that we can have more support in the sector because the maritime sector has its own share of challenges that need to be addressed.*

R14: *"……some of them take care of the resources that are next to the shoreline like the mangroves and the sea within the maritime system, especially the environment that is located very, very close to the shore".*

R8: *"We have the ones in the tourism industry as well because they have ships, small boats as well, that also need proper recruitment and proper manning. Yes, because they ply on Kenyan waters as well".*

The respondents have acknowledged the existence of NGOs in other sub-sectors of the maritime industry, such as recreation, environment and conservation. However, the respondents did not necessarily identify NGOs as Key players in the MET system.

4.2.6 Participation and Role of NGOs in MET System in Kenya

As for the participation of NGOs in the MET system in Kenya, the interviewee responses were placed in two categories.

A summary of the roles of NGOs in general from the SLR is shown in **Appendix G.**

1. **Those who are aware and can identify the role of NGOs in the Kenyan MET system.**

This set of respondents identified the role NGOs play and commended their efforts by stating that,

R3: *The World Bank has been doing tremendous work in funding maritime institutions, it's funded the development or the refurbishment and past enhancement of the Railways Training Institute a maritime college in Kisumu. It has also assisted in funding KMA in terms of its capacity-building."*

R12: "*Yeah, there are quite a few NGOs. And I am just mentioning the ones who are directly doing it. Mostly when you come to funding, for example, trademark East Africa has done a great job in trying to professionalize the industry."*

R4: *"The World Bank is playing a kind of an NGO situation funding the Kenya Coast National Polytechnic……"*

R14: *"There are already programs that exist, for instance. There's one particular that is really of interest that is located in Mida Creek, it is called Crab Shack, and it has received a lot of grants from well-wishers. It gives lessons about the mangroves, about the currents of the ocean, about the dumping in the ocean, about sailing in areas that are protected for the mangroves".*

R14: *"We also have another one called NESCOM in Mombasa, they are basically interested in planting mangroves next to the shorelines of Mtwapa Creek. And this one they do it in order to prevent or to tap the litter that may be coming out, you know some of the of the ships sailing the high water sometimes they actually dump in the ocean, so much of the dumps sometimes end up at the shores of the Kenya coast".*

Table 10 represents a list of NGOs identified by the respondent with their respective current roles.

Table 10

List of NGOs in Kenyan Maritime Industry with their Respective Roles

NGOs IDENTIFIED IN KENYAN MARITIME SECTOR	FUNCTIONS CARRIED OUT BY THE NGO	MARITIME SECTOR	ROLE
1. Trade Mark Africa - East Africa (TMA) (R12, R9, R11)	Funded a lot of the programs by providing grants to the port to ensure there is trade facilitation from non-tariff barriers and non-trade barriers for cargo from the port to the hinterland.	Shipping and Trade.	Watchdog, Advocacy,
2. France's Expertise (Go Blue Project) (R3, R12, R14)	It has a lot of aspects in capacity building funded by the UNEP and its partners and is being championed by the JUMIA Association of the county government of Mombasa at the coast. Conducts numerous products of training the people from the grassroots on matters of Blue Economy and other aspects of Maritime Education. Offers motivation and training through a project called a Go Blue project.	Maritime Education and Training (MET) and Blue Economy	Enabler, Expert, and Advocacy.
3. Kenya Ships Agents Association (KSAA) (R12, R9)	Facilitating shipping trade and protecting the rights of shippers. Developing policies to ensure efficiency of importation and exportation in E. Africa Consulting with the government, the port, and other private and international players (internationally it consults FONASBA).	Shipping and Trade	Consultant, Enabler, Advocacy and Facilitator.
4. Beach Management Unit (BMU) (R14, R14)	Takes care of the shoreline making sure that the shoreline is easily accessible and has fish landing sites. Work closely with the local fishermen in building capacity in terms of boat construction and learning new fishing methods. The backbone of co-fisheries management in Kenya aimed to expand the fishing sector.	Environmental, Fishing, Recreational, and	Advocacy, Watchdog, and Enabler.
5. Centre for Enterprise Development and Innovation (CEDI) (R9, R12)	Work in some regions of the country to provide funding for entrepreneurial projects and support children and young people with funding for education from primary schools to secondary schools and those in Technical Vocational Education and Training (TVET) institutions.	Education, Social Welfare	Enabler and Funder

6. Kwetu Training Centre (R2, R14)	The organization in Kilifi supports local groups of youth, women, and artisanal fishermen with training on marine skills focusing on the blue economy. Promotes community participation in the conservation of mangrove forests through silviculture innovations.	Education, Environment, and Conservation,	Innovator, enabler, and expert
7. Fauna & Floral International (R14, R5)	They are basically interested in planting mangroves next to the shorelines of Mtwapa Creek in the coastal region specifically Mombasa.	Environment and Blue Economy.	Advocacy, Watchdog, and Enabler
8. The Crab Shack - Dabaso (R14, R8)	They own a restaurant located within the mangroves in Mida and offer tourists the option of Kenyan traditional cuisine other than enclosed in the hotels. Educate the community and tourists on mangroves, the currents, and about dumping in the ocean, as well as about sailing in areas that are protected for the mangroves.	Environment, Tourism and Recreational.	Enabler,
9. Watamu Marine Association (WMA) (R14, R2)	Carry study and research work on the species of inshore dolphins that can be sighted. Organize education programs to teach schoolchildren, fishermen, and visitors, the importance of these predators.	Research work and Education, Recreational and marine conservation.	Advocacy, Enabler, Expert
10. Western Indian Ocean Marine Science Association (WIOMSA) (R14)	Mainly promotes the educational, scientific, and technological development of all aspects of marine sciences throughout the Western Indian Ocean (WIO) region. Comprised mainly of coastal and marine practitioners	Research work and Education.	Advocacy and enabler
11. Wasini Women's Group (R2, R14, R16)	Under the Wasini Beach Management Unit Projects to revive coral reefs around the Wasini Island on the South Coast of Kenya by a group of women.	Fishing, Conservation.	Enabler, Promoter, and Expert.

2. **Those who are not aware of any NGO's participation in the MET system in Kenya.**

This set of respondents could not identify the participation of NGOs in the Kenyan MET system describing the NGOs' contribution to be just haphazard with no structures put in place to track, monitor, or account for their participation, hence most of their efforts go unnoticed.

R13: *"...basically is being done haphazardly, with no structures in that they just be coming and supporting seafarers to just get, STCW certificates and all these other training".*

However, all the respondents could highlight some potential roles NGOs could take up in the Kenyan MET system, especially by pointing out that similar roles are undertaken in other sectors.

Table 11 shows a list of some potential roles that NGOs can play in the Kenyan MET system as identified by the respondents. Besides NGO participation, each respondent was allowed to describe the contribution of their respective organization to the MET system as stakeholders and responses were summarized in **Appendix J**.

Table 11
Potential role of NGOs in Kenyan MET System

POTENTIAL ROLES OF NGOs IN THE MET SYSTEM IN KENYA.	SPECIFIC ROLE
NGOs can play a key role if they work in the actual community-based projects that affect the maritime education sector, through maybe training of trainers, equipping, or coming up with courses that can be taught in MET institutions.	Broker, Advocate, and Communicator
NGOs can come in and fund institutions so that they can be able to support them in building their capacity in maritime education and training. They can offer funding support for the various needs that occurred in the MET system, as well as participate in joint studies research on how we can develop the MET system together. Offer infrastructure support, you know, MET may have a lot of capital-intensive projects that require support.	Funder, Developer, Expert and Consultant
NGOs can play a role through training and empowering the youths in MET, and the maritime industry. Also, through facilitating, creating, or rather increasing awareness about MET courses even in remote areas for people to get ideas about maritime education and training.	Expert, Advocate, Enabler, and Promoter
NGOs can offer scholarships for undergraduates, and postgraduates, and organize mentorship programs in rural areas for awareness.	Enabler and Advocate,
They can help in driving policy support, as well as political goodwill, you know, once you are in a good stand with the NGOs, you know, it means that you're going in the right direction.	Advocate, Expert, Watchdog, and Manager
NGOs are basically just to come on board and build capacity, sometimes where the government may fall short.	Enabler and Promoter
Some of these NGOs have international connections. So, they're able to create a system of benchmarking and tell us what other countries offer and what the maritime industry needs.	Expert, Consultant, and Advocate
Because of the international networks, they are able to attract funding, you know, some international bodies are more confident, for reasons known to them, to work with nongovernmental organizations (NGOs) rather than the government. So, they're basically just able to bring the fluidity needed to create systems that will be able to work efficiently.	Brokers, Advocate and Funder
Talking about mobilizing the ship owners, NGOs can typically move with speed, typically, but if you look at government-to-government organizations, they must look at the necessary approvals and necessary support from the government, but NGOs will be able to work with speed. (catalyst)	Catalysts, Promoter, Facilitator, and Activists.

NGOs have a way of ensuring that the issues are implemented as fast as possible because the turnaround time is so fast compared to the government. And yes, we know when NGOs are involved, they are more results oriented.	Promoter, Monitor, and Analyst.
They can contribute to the MET system, through the creation of awareness, addressing legal challenges, and, perhaps, offering scholarships, because it is through NGOs that resources can be mobilized to develop capacity in any country.	Capacity builder, Manager, and Advocate
NGOs can play a key role in advocacy and creating awareness is key.	
NGOs can contribute by establishing more institutions that can provide education and training in the maritime sector and offer opportunities for persons wishing to pursue a career in maritime activities.	Developer, Enabler,
As a country, we lack the right facilities, or rather the required facilities to conduct much education and training in maritime, and the NGOs can fill in this gap.	Facilitator,

5. CHAPTER FIVE – DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

INTRODUCTION

This chapter seeks to address the three research questions asked in chapter 1, through a logical discussion that draws from the Systematic Literature Review and analysis of the data collected from the Semi-Structured Interviews. The chapter finally concludes by summarizing the relevant issues identified to answer the research questions used to achieve the research aim of interrogating the role of NGOs in improving the MET System in Kenya. Recommendations are proposed and finally the limitations of the research work together with suggestions for future research are presented.

5.1 Discussion of Findings

The findings of this study have mainly addressed the research questions and identified both the actual and perceived roles of NGOs in the MET system in Kenya.

5.1.1 Research question 1: What is the nature of NGO participation in system governance in general, and maritime governance in particular?

The advocates for governance without government have argued that the state is no longer capable of providing effective steering due to its excessively bureaucratic, rigid, and ineffective nature (Ulleberg, 2009; Brass, 2016;). As claimed by Brass (2016) the government is eroding or becoming irrelevant to the governance process in the sense that networks of social actors can provide more effective and responsive governance than governments. This claim has led to the suggestion that the state should retreat to a rather minimal role because other stakeholders and NGOs have equally been identified as sources of innovation in the multi-stakeholder governance platforms (Arond et al., 2019). They have also been involved in making governing decisions and implementing them alongside their government counterparts[9].

[9] This is accomplished mainly through leveraging pressure on both governments and industry to garner improvement in systems governance.

In the maritime sphere, NGOs have been described as drivers of change in the 21st century, as maritime governance is increasingly influenced by intensifying, national, regional, and global activities through multi-level and multilateral relations between maritime institutions (Arond et al., 2019).

In addition to their role in governance, their participation has been deemed crucial in serving as the gateway for developing partnerships and collaborations in the maritime sector.

As a result, NGOs have been recognized to have the ability to make substantial contributions to the work of IMO and hence are recognized and awarded consultative status by IMO as outlined by this study with reference to **Appendix A.**

In pursuit of achieving the 2030 Agenda for Sustainable Development Goals (SDGs) aiming to address most of the global challenges if not all, IMO as the global standard-setting authority for the safety, security, and environmental performance of international shipping, has been calling out for collaboration and partnership by asserting that, working through partnerships allows for a much greater impact than working individually (IMO, n.d).

5.1.2 Research question 2. Who are the key stakeholders in the current Kenya MET system and what are their roles (actual and perceived)?

In identifying the key stakeholders in the Kenya MET system, most of the respondents identified four stakeholders who they considered to be the key players in the MET system. Among the four most identified (main) were the government, identified as the topmost stakeholder, followed by the METIs, the regulator, and the industry. Other stakeholders identified to a lesser degree included, the seafarers, parents/students as the public who should be made aware, the IMO and the NGOs. Borrowing from stakeholder theory, these latter identified stakeholders were deemed peripheral to the MET systems and not identified as key stakeholders. Arguably, the perceived Kenyan MET system is made up of government, industry, METIs and regulator as the primary stakeholders.

Furthermore, there was no uniformity in describing the Kenyan MET system among the respondents and several challenges were identified that contributed to the lack of a rigorous conceptualization of the Kenyan MET system.

Among the challenges identified, key ones are characterized as traditional, including challenges in methodology in developing MET curricula, human resources capacity to implement the training, lack of adequate resources, lack of MET system policy, and insufficient and unqualified instructors (Mabuti. 2013; Kiplimo & Ikua, 2017; Mohammed, 2019). Similarly, the respondents identified key challenges to be MET curriculum which lacks programs that are responsive to the global emerging issues and lack of MET system policy. However, the respondents pointed out that currently there is a draft MET policy soon to be implemented which should hopefully address some of the cited challenges.

From the historical perspective of the MET system in Kenya, it was clearly evidenced, that Kenya had a good start in the MET system with the establishment of a maritime institution as early as in 1948 during its colonial era. However, this was short-lived. The collapse of its MET institutions forced Kenya over the years to take its seafarers abroad for training with the hope of having qualified mariners probably to later revive the MET system. After independence, the government made efforts to revive its MET system with several development plans including situating the MET system in a more formal governance setting but under an archaic maritime national policy inherited from its colonial time that was inept for its development. A good policy was supposed to have embraced a new way of governance that necessitated a supranational framework (Manuel & Baumler, 2020). Writing on the history or evolution of the legal framework of MET at the international level they observe how the international character of the maritime industry over time became "increasingly obvious and *formed* an impelling drive for a supranational framework" (p. 474).

Despite this obvious trend that set up an international framework, to date, the Kenyan MET system has continued to maintain a wholly national character, and its development plans are all controlled by the state, resulting in its failure to keep up with the international emerging needs of the maritime industry. The same was echoed by Mohammed, (2019) who noted that the Kenyan MET system is tailored to the existing educational and training framework governed by the Merchant Shipping Act, a

decision that has contributed to the numerous gaps and challenges of the existing Kenyan MET system, even though the Act aligns Kenya to international norms.

This among other reasons has left the Kenyan MET system to be described as either rooted in traditional challenges (Mohammed, 2019) or in nascent development but not yet developed (R6, 2023) or still referred to as just a "potential tool" to empower Kenyan seafarers to be competitive in the global shipping labor market (Mabuti, 2013).

Clearly, the government efforts needed to be aligned with contemporary governance as discussed in governance theory, to include both multiple stakeholder governance and polycentric governance.

On an equal note, borrowing from the system theory literature, the Kenyan MET system needs to be open[10] for all stakeholders to contribute to its optimization. This is because each stakeholder was identified with respective roles that they need to play for an effective MET system.

5.1.3 Research question 3: What are the current and potential contributions of NGOs (within the stakeholder network) to the development of the MET system in Kenya?

Several studies have been carried out in the Kenyan MET system but not with a focus on governance (Wainaina, 1989; Musa, 2000; Mabuti, 2013; Musyimi et al., 2018; Mohammed, 2019; Mohammed, 2021;) that would have initiated a paradigm shift to embracing the multistakeholder and polycentric governance. The two in addition with the multilevel governance is now vital in ensuring the sustainability of any system as well in attaining the global sustainability and recognition for its competitive and comparative advantage as well as all levels of engagement from supranational organizations such as the NGOs (Durose & Rummery, 2006).

Again, this will allow for partnerships and collaborations (in the Kenyan MET system), from NGOs who are now seen as participants within a multi-sector governance alongside government and other intergovernmental organizations (Lambell et al., 2008).

[10] Shifting from a closed, unitary system of government to a more decentralized system of governance. This is to allow for its interdependent elements to be sensitive and responsive to its subsystems and other external elements (industry emerging needs and global trends) while at the same time applying the stakeholder theory which advocates for a "win-win" relationship.

NGOs' History and Presence in Kenya.

Kenya gained independence in 1963 and remained relatively economically strong in its early years through its highly centralized government. However, in subsequent years, the centralized government granted access to state resources through the Provincial Administration via ethnos regional power brokers based on loyalty. This led to rampant corruption and ethnic violence which resulted in deteriorating economic conditions and service provision all the way to the 1990s (Brass, 2011).

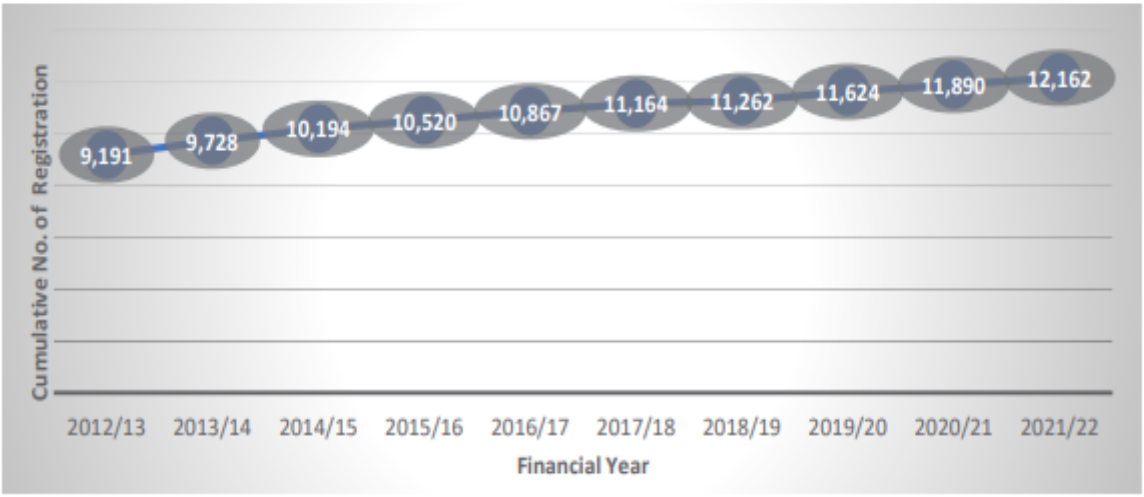
Fortunately, the economy rebounded due to the introduction of improved donor relationships that encouraged roles for non-governmental actors in public decision-making (governance). Much as NGOs was a relatively new term in Kenya by this time, non-governmental service provision was already in existence even before independence mainly through Harambee[11] groups that largely motivated national development through self-help organizations (Brass, 2012).

Over time, the Harambee groups succeeded in bringing development projects, but at the same time, encouraged the country's dependence on patronage politics, reinforced inequalities, and provided justification for administrative re-centralization (Brown, 2009). As a result, effective Harambee groups became a threat setting the stage for interactions between government and NGOs. The growth of NGOs in Kenya as in any other developing country has been staggering but grew nearly 15-fold in the 1980s with approximately a quarter being international based. Figure 11 shows the total number of registered NGOs in Kenya has been increasing accumulatively since early 2000.

[11] Harambee is a Swahili word meaning “Let’s pull together” and it was declared the country’s motto after independence in 1963.

Figure 11

Cumulative Number of registered NGOs in Kenya, 2012/13-2021/22



Note. From "Annual NGO sector report year 2021/2022" by NGOs Co-ordination Board, 2023, (https://ngobureau.go.ke/wp-content/uploads/2023/06/AR-Booklet.pdf) Copyright 2023 by NGO Coordination Board.

As the number of NGOs grew, they helped to provide a natural social safety net, while on the other hand, most of the aid from donors to Kenya was channeled through NGOs rather than directly to the government (Brass, 2012)[12]. Consequently, donors pressured governments throughout Africa to allow non-governmental actors to participate in states' decision-making allowing for NGOs' role in governance through the following key roles,

1. Drawing attention to problems that the government could not discuss, thus becoming closer to the people than the government.
2. Maintaining autonomy from the state, to provide freedom of expression and freedom of association.
3. Nurturing a collaborative nature both in pure service providing as well as a combination of both service providing and governance through participatory decision-making mechanisms.

[12] Donors saw NGOs as a valuable alternative means of aid.

NGOs' involvement in governance was also encouraged by donors which has become a new global trend, where leading multinational institutions require governments to work in collaboration with NGOs (Brown, 2009). Currently, the NGOs in Kenya are seen to be playing the key role of providing some funding to government projects.

Role of NGOs in the MET system in Kenya

The literature is silent concerning NGOs' participation specifically in the MET System, but the history of NGOs in Kenya shows that NGOs have contributed largely to other sectors, especially on governance (Brass, 2016). Similar contributions should be encouraged in the Kenyan MET system as echoed by Brass, (2016) that, NGOs play a significant role in the general education sector in Kenya by increasing its quality, equity, and accountability. NGOs are known to be driven by their interest in developing robust systems in terms of their impact, not only to achieve their developmental goals but also to employ their expertise (Arond et al., 2019). This is manifested in the NGOs zeal seen through successful stories published regarding their role in other sectors (Brass, 2012).

Such sectors include, health (Wamai, 2004; Wamai, 2018; and Hearn, 1998;), agriculture (Ndungu et al., 2008; Muoko, 2010; Goldberger, 2007) environment (Amuyunzu, 2009; Wanjiru, 2018; Kameri-Mbote, 2000), education (Obonyo et al., 2018; Kaunga, 2012;), extractive industries (Arond et al., 2019), maritime industry in general (Matindıı & Matindi, 1998), and for the general development of a country (Oyugi, 2005; Mukanga, 2011; Bikuri, 2003).

A similar trend of successful stories of the role of NGOs in other sectors is provided by literature outside the Kenyan context (Sanadgol et al., 2021; Hecht & Tanzi, 1994; Das & Kumar, 2016), agriculture (Bingen & Mpyisi, 2001; Zubair et al., 2022), human rights (Ajibade, 2008;), Environment (Al Mubarak & Alam; 2019; Schwartz, 2004) and education (Brophya, 2020). This is to say, that the same can be replicated in the Kenyan MET system for a robust system[13].

[13] It is also an indication that, clearly, there is space for NGOs to fully participate in the Kenyan MET system.

5.2 Conclusion

It is evident from the data analyzed in the study that NGOs have significant participation in system governance and particularly in maritime governance. In addition, the NGOs have significant contribution to other sectors in Kenya including the maritime sector but with minimal participation to the MET system.

5.2.1 Contribution to the Literature/Conclusion

The inspiration to interrogate the role of NGOs in the MET System in Kenya manifested from the need to develop an effective and robust MET system in Kenya that will be adaptive to the emerging issues in the maritime industry and that will incorporate the concept of long-life learning, to guarantee a resilient and competent workforce (human element). In most cases particularly in Kenya the responsibility of developing such systems is left solely to the government. This study has provided insights into governance that highlights the need for other stakeholders (in particular NGOs) to participate and collaborate in processes that lead to an effective and sustainable MET system.

Even though the respondents were able to identify several NGOs in Kenya, they did not consider NGOs as key stakeholders in the Kenyan MET system. It may thus be concluded that, the Kenyan MET system is perceived to be not open to all stakeholders, in this case, the NGOs in particular. The potential roles of NGOs identified in the SSI include advocate, promoter, funder, catalyst, watchdog, broker, consultant, and expert. Currently, for the NGOs mentioned in the MET system in Kenya not much of the expert and broker roles are witnessed. Most of them come in as funder and advocate mostly to create awareness. However, Kenya needs to allow NGOs to take a more dominant role in the MET system, especially that of expert, consultant, and even manager. This will allow Kenya to benefit from the expertise the NGOs (particularly international NGOs) have on the concept of the MET system and the maritime industry.

Globally, discussions are always ongoing for improving the maritime industry. It will need high levels of engagement for any country to be able to benefit from such discussions. Hence collaboration and partnership with other stakeholders in the industry will be one way of ensuring access to first-hand information for continuous improvement and sustainable MET system for Kenya.

5.3 Recommendations

The Kenyan government should harness its efforts in the Kenyan MET System to equally attract efforts from NGOs for support. It has been concluded from this study that the participation of this stakeholder in the country's MET system is minimal as compared to other sectors in the country. This is partly attributed to a fragmented MET system which needs to be improved so that it can guarantee not only the full participation and contribution of NGOs but other stakeholders as well. Therefore, this study makes the following recommendations.

5.3.1 To Foster Partnerships and Collaborations Through Good Governance

In its desire to seek support in improving the MET system, the government should foster mutually beneficial relationships with NGOs and other stakeholders including the industry cluster and global maritime affiliated institutions to keep abreast with the industrial emerging issues and demands. This should involve increased networking efforts with experts and benchmarking a role that is performed well by the NGOs as identified in other sectors, so as to encourage continuous improvement and growth for a sustainable MET system. Similarly, the government should adopt contemporary approaches to maritime governance relieving it from overburdening itself in trying to "governize" everything.

Centrally governing, as opposed to governance, is normally characterized by too much bureaucracy and highly politicized processes leading to slow actions which are incompatible with the rapidly changing environment of the global MET system and industry. The government should give room to experts of the field to steer/take charge and contribute to direction-setting in matters relating to the MET system.

5.3.2 Government Focus on the MET System in Kenya

So far, the government efforts in the maritime industry as a whole have been witnessed but sadly with minimum outcomes. The government should focus on the MET system, and find a niche (seafarer brand,) where it can concentrate and consolidate its efforts and resources by strategizing on a particular outcome as opposed to wanting to "achieve it all" at a go leading to haphazard actions of fragmented efforts with no clear outcomes to be realized even after a long period of time.

The government should set small but realistic achievable goals, to continually accumulate them into bigger results. It should keep up with time and embrace technological changes and development to avoid playing the forever "catch-up" game. Additionally, the government should purpose to understand the MET system within and outside its realms, more in the international arena, so that it is able to meet its requirements. The MET system is ever-changing due to the dynamic nature of the maritime industry; hence the government should support more research work on the subject.

5.3.3 Review of the Kenyan MET Curriculum and the Regulatory Framework.

Alignment of the Kenyan MET curriculum with the emerging current issues to meet the needs of the industry as opposed to only forcing a fit into the national education system is necessary. The maritime industry is mostly international; thus, the Kenyan MET system should always conform to international standards and not just national standards. Standards for curriculum development and design should therefore address core issues such as qualifications of curriculum developers, adherence to the STCW Convention and its Code, and a comprehensive industry Training Needs Assessment which will ensure a sustainable and effective MET system that is able to meet the industry's demand.

In this respect, the intervention and contribution of appropriate NGOs can be helpful. There is a need to regulate better what appears to be a highly commercialized and disorganized environment. Optimal implementation of the MET policy, underpinned by these recommendations should help make the Kenyan MET system more robust in a sustainable way.

5.4 Limitations and Future Study.

The main concepts discussed in this study as pertaining to the MET system and NGOs are vast and cannot be exhausted in one research work. Furthermore, the jurisdictional context of the study (Kenya) may be deemed a limitation of the study given that the country is still in its nascent developmental stage as regards to formulating its MET system. It is recommended that future studies provide comprehensive and comparative analyses of the MET system functioning vis-à-vis maritime governance and the role of stakeholders in other jurisdictions in other contexts (geographic, developmental, political).

In the Kenyan context, this study cannot be said to have addressed all issues. Accordingly, further research is recommended to address further the following area of concern:

- Interrogate in-depth the specific nature of the existing NGOs involved (even if peripherally) in the MET system in Kenya and explore/model how best they can contribute to the MET system now and in the future.

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APPENDICES

Appendix A. List of NGOs With IMO Consultative Status.

(IMO, n.d.)

Maritime Interest	Function/role	Name of NGO/ Year established
Shipping and maritime transport	• establish, review, promote, and develop technical requirements in relation to the design, construction, maintenance, and survey of ships and other marine-related facilities. • act as an advocate for the maritime industry on issues such as shipping policy and technical matters such as ship construction, operation, safety, and management. • develop an international regulatory environment shipping can operate and offer expert knowledge and practical advice to safeguard the members' interests. • provide education, assistance, and information to both the private and public sector through unique status with regulatory bodies and technical strength of its membership. • Act as the voice of their members in the industry and offering training, events, publications, news, and insights on market analysis, port information, and voyage planning. • promote fair and equitable practices and ensure the needs of their members are understood at international, regional, and national levels across the maritime industry. • promote the safe transportation of cargo by shippers of varying sizes, carriers of all modes, container manufacturers, and reconditioners.	1.Active Shipbuilding Experts' Federation (ASEF) (2015) 2. Bureau International des Containers et du Transport Intermodal (BIC) (1933) 3.BIMCO (1905) 4.Community of European Shipyards' Association (CESA) (1937) 5. Dangerous Goods Advisory Council (DGAC) (1978) 6. The European Association of Internal Combustion Engine Manufacturers (EUROMOT) (1991) 7. The Federation of National Association of Ship Brokers and Agents (FONASBA) (1969) 8. International Association of Ports and Harbors (IAPH) (1955) 9.International Bunker Industry Association (IBIA) (1992) 10. International Bulk Terminals Association (IBTA) (2016) 11. International Cargo Handling Coordination Association (ICHCA) (1952) 12. International Electrotechnical Commission (IEC) (1906) 13.International Federation of Shipmasters' Association (IFSMA) (1974) 14.International Iron Metallics Association (IIMA) (2011) 15.International Association of Dry Cargo Shipowners (INTERCARGO) (1980) 16.INTERFERRY (1976) 17.International Association of Independent Tank Owners (INTERTANKO) (1970) 18. International Ship Managers' Association (InterManager) (late 1980's) 19.International Association of Oil and Gas Producers (IOGP) (1974) 20.International Parcel Tankers Association (IPTA) (1987) 21.International Ship Suppliers & Services Association (ISSA) (1955) 22. International Towing Tank Conference (ITTC) (1932) 23.International Vessel Operators Dangerous Goods Association Inc. (IVODGA) (1955)

		24.International Wind Ship Association (IWSA) (2014)
		25.International Water Mist Association (IWMA) (1998)
		26.Society of International Gas Tanker and Terminal Operators Ltd. (SIGTTO) (1979)
		27.Society for Gas as a Marine Fuel Ltd. (SGMF) (2013)
		28.Superyacht Builders Association (SYBass) (2007)
		29.International Women's International Shipping and Trading Association Limited (WISTA) (1974)
Safety and Security	• act as catalysts to assist international regulatory bodies, mainly the IMO and ILO, and other standard organizations to develop, amend, and interpret regulations and industry standards in ship design, construction, and management to improve safety at sea and prevention of marine pollution. • promote safe, secure, efficient, and environmentally sound conduct of maritime operations in port waters.	30.Comité International Radio-Maritime (CIRM) (1928)
		31.International Association of Classification Societies (IACS) (1968)
		32.International Association of Drilling Contractors (IADC) (1940)
		33.International Association of Aids to Navigation and Lighthouse Authorities (IALA) (1957)
		34.Ballastwater Equipment Manufacturers Association (BEMA) (2017)
		35.The Association for Material Protection and Performance (AAMP) (2021)
		36.International Harbor Masters' Association (IHMA) (1996)
		37. International Life-Saving Appliance Manufacturers Association (ILAMA) (1956)
		38.International Maritime Pilots' Association (IMPA) (1970)
		39.International Maritime Rescue Federation (IMRF) (1924)
		40.International Organization of Airport and Seaport Police (INTERPORTPOLICE) (1969)
		41.International Port Community Systems Association (IPCSA) (2011)
		42.International Spill Control Organization (ISCO) (1983)
		43.International Tanker Owners Pollution Federation Ltd (ITOPF) (1968)
		44.Global TestNet (2010)
		45.National Association of Corrosion Engineers (NACE) (1943)
		46.World Nuclear Transport Institute (WNTI) (1998)
		47.World Shipping Council (WSC) (2000)

Environment	• participate in research, advocacy, report, and work closely with local and indigenous communities, policymakers, fisheries, and other NGOs to enhance global marine protection. • encourage responsible and sustainable practices such as in fishing and encourage the use of environmentally friendly aquaculture methods. • create awareness in the community about environmental issues such as ocean pollution and marine litter for cleaner and safer oceans. • organize and initiate programs that may support recycling and waste management, such as beach clean-up programs	48.ACOPS (1952) 49.European Chemical Industry Council (CEFIC) (1972) 50.Environmental Defense Fund (EDF) (1967) 51.Friends of the Earth International (FOEI) (1971) 52.Greenpeace International (1971) 53.International Fund for Animal Welfare (IFAW) (1969) 54.The global oil and gas association (IPIECA) (1974) 55.International Union for Conservation of Nature (IUCN) (1948) 56.Inuit Circumpolar Council (ICC) (1977) 57.Oil Companies International Marine Forum (OCIMF) (1970) 58.Pacific Environment (1987) **59.** The Pew Charitable Trust (1948) 60. Clean shipping Coalition (CSC) (2010) **61.**World-Wide Funds for Nature (WWF) (1961)
Tourism and recreation	• promote marine sports and responsible sustainable tourism activities for a sustainable marine ecosystem. • establish conservation-oriented ecotourism enterprises. • advocate, educate, and promote the common interests of their members and represent them in all matters concerning maritime sports.	**62.**Cruise Lines International Association (CLIA) (1975) **63.**World Sailing Ltd (1996)
Trade	• affiliated with other organizations such as the International Confederation of Free Trade (ICFTU) to promote knowledge and awareness of the trading environment. • keep up with the environment to provide new ways of trade such as promoting e-commerce within the maritime industry. • committed to steering an effective democratic society and market economy.	64.International Chambers of Commerce (ICC) (1919) 65.Institute of International Container Lessors (IICL) (1971) 66.International Paint and Printing Ink Council (IPPIC) (1992) 67.International Salvage Union (ISU) (2009) 68.International Union of Marine Insurance (IUMI) (1874) 69.The Grain and Feed Trade Association (GAFTA) (1878) 70.International Group of Protection and Indemnity Associations (P&I Clubs) (1899)

Seafarers' rights and wellbeing	• promote peace, unity and tolerance and support all seafarers regardless of nationality, religion, culture, gender, or ethnic background. • advocate for seafarers' rights and welfare through just and fair labor practices • promote policies to ensure safe operational practices, safety standards, preservation from human injury, protection of the marine environment, and safety of life and property at sea.	71.International Christian Maritime Association (ICMA) (1969) 72. International Maritime Health Association (IMHA) (1997) 73.International Transport Workers' Federation (ITF) (1896)
Maritime law and governance	convene experts in the maritime field to share knowledge and develop voluntary consensus-based international standards that support innovation and provide solutions to global challenges in the industry.	74. Comité Maritime International (CMI) (1897) 75.International Council of Marine Industry Associations (ICOMIA) (1967) 76.International Organization for Standardization (ISO) (1947)
Education and training	• use education and training to encourage participation in various activities within the maritime sector, such as in conservation activities • participate in educational and training programs for capacity building for the global shipping industry and enhancement of maritime safety and environmental protection. • promote professionalism, best practices, and safety throughout the maritime industry. • promote study, development, research work, the acquisition of maritime knowledge, and the creation of networks of contact and collaboration.	77.Global Maritime Education and Training Association (GlobalMET) (1996) 78.International Association of Institutes of Navigation (IAIN) (1957) 79.International Association of Maritime Universities (IAMU) (1999) 80.Ibero-American Institute of Maritime Law (IIDM) (1987) 81.International Maritime Lecturers Association (IMLA) (1977) 82.International Ocean Institute (IOI) (1972) 83.The Nautical Institute (NI) (1971) 84.The Royal Institute of Naval Architects (RINA) (1860)

Appendix B. Articles and Journals Included in the Systematic Literature Review.

Author	Article	Source
1. (Abiddin et al., 2022)	Non-Governmental Organisations (NGOs) and Their Part Towards Sustainable Community Development.	*Sustainability*, *14*(8), 4386. https://doi.org/10.3390/su14084386
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3. Aldashev et al., 2015)	Governance Of Non-Profit and Non-Governmental Organizations - Within-And Between- Organization Analyses: An Introduction.	*Annals of Public and Cooperative Economics*, *86*(1), 1–5. https://doi.org/10.1111/apce.12064
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Appendix C. Consent Form

Interview Consent Form

You are kindly invited to take part in this interview for a research survey, which is carried out in connection with a Dissertation that will be written by the interviewer, in partial fulfillment of the requirements for the degree of Master of Science in Maritime Affairs at the World Maritime University in Malmo, Sweden.

The topic of the Dissertation:
Interrogation of the Role of NGOs in Improving the Maritime Education and Training (MET) System in Kenya

Your participation is completely voluntary and without any payment and the information provided by you in this interview will be used for research purposes only, anonymized, and treated in the strictest confidence. The results will form part of a dissertation, which will later be published online in the WMU's digital repository (maritime commons) subject to final approval of the University and made available to the public. Your personal information will not be published. You may withdraw from the research at any time and your personal data will be deleted after the award of the degree. Thank you for your participation.

Your participation in the interview is highly appreciated.

Student's name	Kulthum Hussein SALIM
Specialization	Maritime Education and Training (MET)
Email address	w1003207@wmu.se WhatsApp (+254732309562)

I consent to my personal data, as outlined above, being used for this study. I understand that all personal data relating to participants is held and processed in the strictest confidence and will be deleted at the end of the researcher's enrolment.

Name: ……

Signature: ……

Date: ……

Appendix D. Interview Tool

Interview Tool

1. Name (Participant) optional/anonymous
2. Name of organization
3. Occupation
4. Email Contact
5. Number of years in industry

List of questions

1. Can you please describe the organization you work with and tell me about your own maritime experience?
2. How would you describe Maritime Education and Training (MET) globally?
3. How would you describe the Maritime Education and Training (MET) System in Kenya – history and current state?
4. What factors, in your opinion, influence the MET system in Kenya?
5. In your view, is the MET System of any significance to the overall development of the country?
6. What gaps exist in the MET system in Kenya, in your opinion?
7. What challenges can you identify, if any, in the current MET System in Kenya?
8. What changes would you recommend to the existing MET System?
9. Who are the key players you can identify in the MET system?
10. Are there any NGOs you can identify participating in MET System? If yes, what is their role in the MET System?
11. In what way(s) do you think NGOs can contribute to the MET System?
12. Are there any programs or initiatives you know that NGOs have taken part in MET System?
13. What is your organization's contribution to MET System in Kenya, and how is it supported by the government or by law?
14. What is your organization's role in the MET System?
15. Are any of your organization's employees graduates of any local Maritime Education and Training Institutions? If yes specify which institution.

Appendix E. Demographic Information of Respondents

Respondents ID	Stakeholder	Experience	Gender	Medium
R1	MET INSTITUTION	15 Years	Male	Zoom
R2		6 Years	Female	Zoom
R3	ADMINISTRATION	18 Years	Female	Zoom
R4		15years	Male	Zoom
R5	STATE	14 Years	Male	Zoom
R6		15 Years	Male	Written
R7		32 Years	Male	Zoom
R8	ASSOCIATION	15 Years	Male	Zoom
R9	NGO	15 Years	Female	Zoom
R10	INDUSTRY	25 Years	Male	Zoom
R11		25 Years	Male	Zoom
R12		33 Years	Male	Zoom
R13		26 Years	Female	Written
R14		30 Years	Male	Zoom
R15	SEAFARER	28 Years	Male	Written
R16	NGO	18 Years	Female	Zoom

Appendix F. Research and Ethics Committee (REC) Form.

WORLD MARITIME UNIVERSITY

WMU Research Ethics Committee Protocol

Name of principal researcher:	Kulthum Hussein SALIM
Name(s) of any co-researcher(s):	N/A
If applicable, for which degree is each researcher registered?	Master of Science in Maritime Affairs at the World Maritime University (MET)
Name of supervisor, if any:	Professor Michael Ekow MANUEL
Title of project:	Interrogation of the Role of NGOs in improving the Maritime Education and Training (MET) System in Kenya
Is the research funded externally?	No
If so, by which agency?	N/A
Where will the research be carried out?	Malmo (Online Interviews)
How will the participants be recruited?	by phone (Purposive sampling)
How many participants will take part?	About fifteen (15) people
Will they be paid?	No
If so, please supply details:	N/A
How will the research data be collected (by interview, by questionnaires, etc.)?	By interview (on line interviews/ zoom)
How will the research data be stored?	It will be stored in a secured online drive (one drive) and hard disk with strong password in my laptop. The data will be deleted after the award of the degree.
Is a risk assessment necessary? If so, please attach	N/A

Please delete as appropriate:

- I am a student carrying out the research as part of a Master's level programme of study. I will delete all data completely as soon as my degree is awarded.

Signature(s) of Researcher(s): ..... Date: 15TH JUNE 2023

Signature of Supervisor: ..... Date: 15/06/2023

Please attach:

- A copy of the research proposal
- A copy of any risk assessment
- A copy of the consent form to be given to participants
- A copy of the information sheet to be given to participants
- A copy of any item used to recruit participants

Appendix G. Definitions of NGOs and General Roles from Literature.

The connotation of the term NGO has evolved in many ways since its introduction by the UN in 1945 and has found widespread application ever since (Martens, 2002).	
Definitions of NGO	**Article citation**
• "A private voluntary grouping of individuals or associations not operated for profit or for other commercial purposes but which have organized themselves nationally or internationally for the benefit of the public at large and for the promotion of social welfare, development, charity or research in the areas inclusive but not restricted to health relief, agricultural, education, and supply of amenities, and services	Kenyan definition (Brass, 2012)
• "An independent voluntary association of people acting together on a continuous basis, for some common purpose, other than achieving government offices, making money, or illegal activities".	(Willets, 2002)
• "An organization possessing the following six attributes: 1) non-governmental, 2) non-profit making, 3) voluntary, 4) of a solid and continuing form, 5) altruistic, and 6) philanthropic".	(Shigetomi, 2002)
• "Defined by four characteristics: they are voluntary, non-partisan, non-profit, and non-criminal". • "Development actors that can contribute to the strengthening of social relations and cross-networks that can serve as a foundation for collective action and increased democratic participation".	(Abiddin et al., 2022)
• The UN definition of NGOs: "Any international organization which is not established by inter-governmental agreement shall be considered as an NGO".	(Ahmed & Potter, 2015)
• "Any organization that is self-governing and independent from a government authority, explicitly not created for profit, and that has meaningful voluntary content".	(Mburu, 1989 as cited by Aleyao, 2016).
• According to the United Nations, an NGO is a "... not-for-profit, voluntary citizens' group, which is organized on a local, national, or international level to address issues in support of the public good. Task-oriented and made up of people with common interests".	**(**Brown, 2009).
• "NGOs are formal (professionalized) independent societal organizations whose primary aim is to promote common goals at the national or international level".	(Martens, 2002).
• "NGOs exhibit four mains characteristically, voluntary in character namely, independence from government and donors, non-profit orientation, and public interest orientation".	(Goel & Tripathi, 2010).

• The World Bank's operational directive on NGOs (No. 14.70, August 1989) defines NGOs as "Groups and institutions that are entire/largely independent of government and characterized primarily by humanitarian or cooperative rather than commercial objectives' and 'private organizations that pursue activities to relieve suffering, promote the interests of the poor, protect the environment, or undertake community development".	(Jamali, 2003).
Different NGOs preferentially adopt different roles depending on their profiles, aims, and expertise.	
Functions/roles of NGO	**Article**
• traditionally assumed a gap-filling role. • Now act as innovators, critics, advocates, and policy partners. • A new role as catalysts and promoters of development.	(Ulleberg, 2009).
• Ten NGO roles are distinguishable: lobbyist or promoter, landowner or land manager, champion, ongoing manager, founding manager, certifier, advisor or facilitator, networker, broker, and consultant in the context of ecotourism for conservation.	(Romero-Brito et al., 2016)
• Five NGO roles were identified: advocate, enabler, expert, manager, and watchdog.	(Crosman, 2013).
• Pressure governments and corporations to be more accountable and transparent. • Instead of supplanting, NGOs supplement.	(Ghadar, 2007)
• Provide a voice for groups affected by globalization	(Brown, 2009)
• Act as facilitators between governments and communities. • Provide cross-sectoral knowledge and expertise. • Community organizing, training, research, education, and advocacy. • Increase pressure on policy to improve decision-making. • Promote cooperation through education, lobbying, and targeted advocacy.	(Calado et al.,2012)
• Represent aspects of global public opinion and the aspirations of people of the world	(Otto, 1996)
• Make governing decisions and implement them alongside their government counterparts.	(Brass, 2016)
• NGOs leverage pressure on both the government and any industry to garner improvement. • NGOs are sources of institutional innovation within multi-stakeholder platforms.	(Arond et al., 2019)

Appendix H. Summary of Kenyan MET System Milestone.

ACHIEVEMENT	YEAR
○ Establishment of the first MET institution called the Mombasa Institute of Muslim Education (MIOME). (Now transformed into the Technical University of Mombasa-TUM).	1945
○ Establishment of the Inland Transport Act	1948
○ Establishment of Railways Training School under the East African Railways and Harbor Act. It is now called the Railways Training Institute (RTI).	1956
○ Establishment of Kenya Ports Authority, which subsequently established the Bandari College (BC).	KPA - 1978 BC - 1980
○ Ratification of STCW 78 Convention for the first time.	1992
○ Establishment of a regulatory maritime body Kenya Maritime Authority.	2004
○ Legally constituting KMA under the Kenya Maritime Act, No 5 with a mandate to regulate, coordinate, and oversee maritime affairs in Kenya.	2006
○ Amendment of the new version of the Merchant Shipping Act 2009 (MSA 2009) for a comprehensive and modern legal regime for merchant shipping in Kenya. It is the primary legislation that domesticates the STCW 78 Convention into Kenya's internal law.	2009
○ Admitted into the International Maritime Organization (IMO) "Whitelist", signifying Kenya's full compliance with the STCW 78 Convention.	2010
○ More public institutions are offering MET. 1. Technical University of Mombasa (TUM) 2. Jomo Kenyatta University of Agriculture and Technology (JKUAT) 3. Kenya Coast National Polytechnic 4. Moi University As well as interest from private institutions.	From 2012 to date
○ Formation of the State Department of Shipping and Maritime Affairs, mandated to promote the maritime and shipping industry in Kenya.	2015
○ Transformation of Bandari College to Bandari Maritime Academy (BMA) as a center of excellence.	2018
○ Kenya significantly recognizes the Blue Economy as a key pillar for driving socio-economic development in Kenya. As a result, MET is given a deliberate policy intervention.	2018

Appendix I. Significance of MET System in Kenya.

RESPONDENT ID	RESPONSES FROM THE INTERVIEW.
R1	The MET system is significant in the development of the country. MET plays a very great role when it comes to the human capacity for the sustainable exploitation of the oceans. Kenya being a coastal state, can tap that into the maritime industry for our economic development.
R2	MET system is of great importance to the country at large. If implemented well, it can greatly help in the development of a competent and competitive market and Labor force, it will greatly help in reducing the unemployment issues in the country.
R3	Of course, it is of importance because, you know, we have our Navy, which has small vessels that can ply our waters in the creeks and the bays. So, when you have more people knowing much more about maritime education and training, you have many people joining our naval forces to actively participate in guarding exclusive economic zones, which as I told you before, it's around 42% of the entire land mass of Kenya. So, education and training for this will be very significant.
R4	Absolutely. Very relevant. I feel the current and the future is the sea. From better livelihoods and better decision-making to best management practices, it all trickles down to the right information which can be achieved through education and training.
R5	Yes, yes for me it helps us as a country to develop the skills and capacity that are required for the maritime industry and shipping industry to meet both our local and international markets.
R6	Yes. It helps the development of skills and capacity in the various TVET training. Helps with conversion courses.
R7	Yes indeed, I mean, maritime education and training will really be a game changer in, improving the economy of Kenya and in improving the socio-economic status of Kenya, because many people can benefit, like people from the coast who already have good traditions and culture of knowing what the ocean is all about. These people can get jobs immediately after completing education and training in maritime, in the maritime sector.
R8	Of course, yes, I think it will play a crucial role, especially, looking at the caliber of professionals that are churned out from such courses and such universities when they graduate.
R9	Yes, it is of great importance because it has an effect in terms of the economic value of this country. The shipping industry in Kenya serves the neighboring countries, bringing foreign currency into the country that boosts our GDP

R10	Indeed, the maritime education and training system has a lot of significance in the overall development of any country, that has a coastline, and Kenya is privileged to have a large coastline with sheltered harbors.
R11	Absolutely yes, the MET system is of great significance to the overall development of the country in terms of providing a window for employment to the youth. The maritime industry provides a great source of employment, and in turn, this employment helps in the overall economic development of the country.
R12	Totally yes, it gives the country global space in the international shipping industry. So that's why it's important to have a MET system as a country. In fact, in the new policy draft, there is a proposed harmonized MET system.
R13	Yes, the MET system is of great significance to the overall development of the country in terms of providing a window for preparing and equipping Kenyan youths with the required skills for employment in the maritime sector both locally as well as internationally.
R14	Very, very, very much so. Maritime education and training are crucial for the development or for the economic development of Kenya. That's why Kenya hosted the first global conference on the blue economy because we knew that from knowledge of the maritime, from knowledge in maritime education and training, we'll be able to utilize the marine and coastal resources that we have more efficiently.
R15	Yes MET system is very important, it is vital to Kenya, bearing in mind that Kenya has a port, has a coastline which is a 10-mile coastal strip, therefore, for it, to use the coastline to its maximum, there is a need for its people to have maritime education and training, so that it can harness the resources that are available in the maritime industry. It is very important because it needs competent human resources to safely handle the ships and the goods that come into the country.
R16	Yes, definitely it is significant. It offers a new opportunity for the youth to learn or to get more skilled or to try out these skills as compared to traditional jobs. For example, lawyers, doctors, engineers, and so on the stem, the STEM careers. There's now a lot of interest in this sector and several projects have come based on this interest looking at maritime and shipping issues and their opportunities.

Appendix J. Role of Organizations (as Stakeholders) in Kenyan MET System

RESPONDENT S ID	ORGANIZATION) (STAKEHOLDER	ROLE OF ORGANIZATION/STAKEHOLDERS IN KENYAN MET SYSTEM.
R1	MET INSTITUTION (MET1)	My organization is Technical University. It is a public university, funded by the government. The University is one of the maritime training institutions in Kenya, with approved courses for both the academic and the competency and proficiency courses. We do have a great role in training and providing human capacity as part of the MET system in Kenya, not only for the technical sectors but also for the commercial sectors within the maritime sector.
R2	MET INSTITUTION (MET2)	Bandari Maritime Academy is a maritime institution that facilitates education and training for seafarers and port workers. It receives grants from the government of Kenya, which is meant to support its mandate of teaching. It addresses the global maritime sector's skills needs, through the provision of training, information, and information materials required for the MET training and learning. It has facilitated and sponsored many students to pursue maritime education and training.
R3 R4	ADMINISTRATION	Kenya Maritime Authority is a maritime national regulator. It has been charged with a number of activities which include issues of maritime safety and security, issues of seafarers' affairs, maritime education and training, and issues of regulating the maritime transport services in the country. On maritime education and training, KMA is the institution charged by the government to implement maritime Conventions which we are signatories to. We implement the STCW. We develop curriculums in MET that are rolled out to the institutions to implement both the seagoing courses and land-based courses. The curriculum starts from the certificate or the artisan level to the diploma. There is a diploma in nautical science, a diploma in marine engineering, and a diploma and a certificate in maritime transport operations. Another role for KMA is the accreditation of maritime institutions, to ensure that they meet the requirements of both international requirements especially if they offer seagoing training, and that they comply with the STCW requirements.
R5 R6	STATE	The function of our State Department is human resource development, management, and research in support of Kenya's shipping industry. So, that provides a policy function of the State Department. We provide policy development and direction. We provide strategic guidance for institutions participating in the MET system, as well as ensure that there is capacity building going on. We take care of the MET system; we define what it is.

R7	STATE	Among the mandates of IMO, is assisting developing countries to build their institutional and human capacities. And of course, when it comes to human capacities, that includes education and training. When it comes to maritime education and training, IMO set up two training institutions, World Maritime University (WMU) and International Maritime Law Institute (IMLI) in Malta to offer high-level maritime training to students or officials from developing countries as part of their capacity building. In terms of training institutions, IMO has been giving technical assistance to maritime training academies all over the world, to help them train more and more people in accordance with international requirements. In the case of Kenya for example, IMO has been assisting Bandari Maritime Academy (BMA) right from the time it was Bandari College (BC) under Kenya Ports Authority (KPA).
R8	ASSOCIATION	We are basically given a platform by the government. Our contribution is bringing international connections for persons who would want entry into the Kenyan market, either for recruitment or to just set up a business. But our involvement is support to the maritime industry.
R9	NGO	We work with all the key stakeholders – the Ministry of Transport, the State Department of Shipping and Maritime Affairs, the Maritime Authority, the Kenya Ports Authority, the Kenya Coast Guard, BMA and TUM, and the Kenya Ship Agent Association to promote the maritime industry in Kenya.
R10 R11	INDUSTRY PORT 1 PORT 2	The government owes 100% of the Kenya Port Authority. The organization's main job is to load and discharge cargo, basically handling vessels and cargo and very involved in Port infrastructure and coordinating the flows of cargo. It is involved in the MET system. We have the local training then we have international training. Kenya Ports Authority is fundamental in the development of the MET system in Kenya because as a port authority, we need well-trained personnel. From the very onset Kenyan government, through the support of the UNDP established the maritime training college as the training arm of KPA and the foundation of the MET system in Kenya. Kenya Port Authority itself is a government parastatal that handles vessels as they bring in or take away cargo from the port.

R12 R13	SHIPPING 1 SHIPPING 2	Our trainees, our interns, our future leadership program, our company, HR department, work very closely with the government, but it is not involved in our programs. We want to have the freedom not to be tied down to the regulation of the government, which is all very rigid and bureaucratic.
R14	KMFRI	KMFRI is the only organization that is mandated by law to conduct research in the aquatic system of Kenya and train the community free of charge. We receive funds from the government but little because there are other priorities in the country, like agriculture, education, and health. So what we normally do we collaborate, with organizations, that have an interest in the ocean, and also in countries, that have a shoreline in order to have a concerted effort in addressing the marine issues.
R15	SEAFARER	I'm a professional seafarer, actually, a seafarer deck officer with more than fifteen years in the profession with quite a number of years, almost seven years in academia in specialty maritime education, and training. Most of my time is now dedicated to maritime education, and training, where I have been able to bring the Technical University of Mombasa from having only two programs that were running a diploma in marine engineering and a diploma in nautical science, to now having a Bachelor of Technology in marine engineering, which I developed in compliance with the STCW Convention, Regulation III/1, and Bachelor of Science in nautical science, which is to start soon, in compliance to STCW Convention, Regulation II/1 and also the short mandatory courses in Chapter V and Chapter VI.
R16	IGO	We serve as an intergovernmental organization and in terms of industry, we are a policy organization. As a policy institution, we advise our member states, the government, and the region in general, on maritime and shipping matters. We advocate for fair practices when it comes to shipping, and we also look at emerging issues and equip the governments to be able to tackle them.