UNIVERSITY OF GHANA

THE IMPLEMENTATION OF THE ISPS CODE AT THE TEMA FISHING HARBOUR

BY

ADDO JOSHUA NII ADDO

10542313 (MPS0002315)

THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF M.A. PORTS AND SHIPPING ADMINISTRATION DEGREE.

JULY, 2015

DECLARATION

I, ADDO JOSHUA NII ADDO hereby declare that this dissertation "THE IMPLEMENTATION OF THE ISPS CODE AT THE TEMA FISHING HARBOUR" consists entirely of my own work produced from research undertaken under supervision and that no portion of this work has been submitted in support of an application for another degree or qualification to this or any other university or institution of learning, except for the permissible references from other sources, which have been duly acknowledged in the text.

NAME OF STUDENT: ADDO JOSHUA NII ADDO

SIGNATURE: …… DATE:……..

NAME OF SUPERVISOR: CAPTAIN CATHERINE HAIZEL

SIGNATURE: …… DATE:……

DEDICATION

I dedicate this dissertation to the glory of my creator and protector, the God Almighty and also to my mum, Mrs. Salomey Addo.

ACKNOWLEDGEMENT

My foremost appreciation goes to the glory of the Almighty God for the free gift of life and grace that have brought me this far and keeps me on.

I wish to extend my sincere gratitude to my able supervisor, Capt. Catherine Haizel for her guidance, corrections and pieces of advice put at my disposal for the successful completion of this study. My deepest gratitude goes to Mr. Mamonkose C. Otchere Maxwell (Teaching Assistant) at the Port and Shipping Department of the Regional Maritime University for his immense help and contributions towards this dissertation.

My special thanks go to my dear mum, Mrs. Salomey Addo and my uncle, Mr. Moses Ankaman Addo for their endless prayers and support for me.

To all who in diverse ways contributed to the successful completion of this work, I pray and wish them and their families God's blessings.

ABSTRACT

The Gulf of Guinea which currently tops in the security incident of IUU fishing and also a hotspot for maritime armed robbery and piracy has nearly all the coastal states bordering it declaring their commitment to the implementation the ISPS Code including Ghana. However, in spite of the fact that the ISPS Code functionally requires the restriction of unauthorised persons to vessels and port facilities, the Tema Fishing Harbour is observed to be still dominated by unregulated and unchecked access of persons to the fishing harbour and vessels.

Using the research instruments of mainly questionnaires and semi structured interviews through the qualitative approach, it was set to study the implementation of the ISPS Code at the Tema Fishing Harbour with the specific objectives of finding out how the code is implemented, identifying the impact of implementation and finding out the challenges confronting the implementation of the code.

The findings revealed amongst others that attempt is being made to implement the ISPS Code at the Tema Fishing Harbour through the mechanisms, structures and measures mainly established in the main Port of Tema. However, whilst the study highlighted that the fishing vessel operators have not undertaken (for lack of knowledge) to implement the requirements of the ISPS Code, the factors of the limited application of the code, the commercial role of the fishing harbour, the community influence, etc have also challenged the implementation of the ISPS Code at the Tema Fishing Harbour. To this end, it is recommended among others that the Administration Authority undertakes to sensitise or educate all the applicable fishing vessel operators on the requirements and relevance of the ISPS Code, an exclusive berth be designated for only the applicable fishing vessels that fall under the coverage and the creation of an external fish market.

TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

DEFINITION OF ABBREVIATIONS

ABBREVIATION	DEFINITION
AMSSA	Africa Maritime Safety & Security Agency
CoC	Code of Conduct
DCC	Djibouti Code of Conduct
FAO	Food and Agricultural Organisation
FoC	Flag of Convenience
FSO	Flag State Officer
GMA	Ghana Maritime Authority
GMS	Ghana Maritime Security
GoG	Gulf of Guinea
GT	Gross Tonnage
ICC	Inter-regional Coordination Centre
IMB	International Maritime Bureau
IMO	International Maritime Organisation
ISPS	International Ship and Port Facility Security
IUU	Illegal, Unregulated and Unreported
LRIT	Long Range Identification and Tracking
MDA	Maritime Domain Awareness
MOWCA	Maritime Organisation of West and Central Africa
NAFAG	National Fishermen Association of Ghana
PFSA	Port Facility Security Assessment
SOLAS	International Convention for the Safety of Life at Sea
SP	Security Plan
SSA	Ship Security Assessment
SUA	Suppression of Unlawful Acts
UNCLOS	United Nations Convention on the Laws of the Sea
UNODC	United Nations Office on Drugs and Crime
US	United States

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

The bombing of the twin towers of the World Trade Centre, New York on September 11, 2001 by terrorists did not only result in the death of over 3000 persons but also presented the need to improve the security of vulnerable international facilities against any acts of terrorism (Business & Maritime West Africa, 2014). Although the incident was executed via air, it became necessary for the international community to adopt and implement measures that would protect all facilities employed in port operations against security threats and exploitation by terrorists. This led to amendments to the convention on the Safety of Life at Sea (1974) to create awareness of all contracting governments, government agencies, local authorities, port and ship industries on the need to cooperate in the global commitment to detect security threats in the maritime transportation sector. Thus, the coming into being of the International Ship and Port Facility Security (ISPS) Code in 2002.

The ISPS Code is set towards the main objective of establishing an international framework that involves cooperation amongst all the stakeholders of the maritime industry to detect or assess security threats and take preventive measures affecting ships or port facilities used in international trade (Mazaheri, 2008). It was also set to define the roles and responsibilities of all parties concerned in ensuring maritime security at both national and international levels. In the end, the code was also set to ensure confidence that adequate and appropriate measures are in place for maritime security. According to Ablede (2014), the code is specifically in response to

the security incidence of sabotage, terrorism, piracy, theft or armed robbery, illegal fishing, stowaways and smuggling at sea.

The ISPS Code set minimum standards for compliance by all contracting parties to ensure protection against incidence of security but does not specify specific measures towards the evaluation of risks associated with any maritime facilities. Mazahen (2008) recognised that specific measures could not be set by the code because of the varying nature of the port and ship facilities in terms of cargo and trade. Therefore, for implementation purposes, the code is split into two parts; namely part A, which is mandatory and part B which is recommendatory and serves as guidelines when implementing the former and hence optional. In as much as the code enjoins all contracting parties to cooperate efforts towards the campaign against security incidence, it primarily concerns both port and ship facilities that are engaged in international voyages (IMO, 2002). Specifically, the code applies to passenger ships, including high-speed passenger crafts; cargo ships, including high-speed craft, of at least 500 gross tonnage (GT); Mobile Offshore Drilling Units (MODU) and port facilities.

The ISPS Code is risk assessment-based and functions mainly by the gathering and assessing information regarding security threats and exchanging such information with appropriate Contracting Governments (Mazaheri, 2008). Amongst other things, the code requires contracting parties particularly shipping companies to prevent unauthorised access to ships, port facilities and other restricted facilities (IMO, 2002). For the code to achieve its set objectives in the maritime industry, it presents a set of responsibilities for contracting governments and shipping companies including their respective security officers.

In all, there is the mandatory requirement to undertake Port Facility Security Assessment (PFSA) and Ship Security Assessment (SSA) to determine areas of vulnerability to security threats. The PFSA and the SSA will help to determine the security level and the consequent design of a Security Plan (SP) which shall be verified and certified by an officer of the Administration or a recognised security organisation. The certified SP will be within the responsibility of the Security Officer to update with time.

The security assessments are set to result in the determination of varying degrees of security levels. The contracting governments can set any of the three security levels for which appropriate, additional or specific security measures shall be applied. According to IMO (2002), the type of security level is to be based on the degree that the threat information (as assessed) is credible, corroborated or specific/imminent and the potential consequence of a security incidence. "*Higher security levels indicate greater likelihood of occurrence of a security incidence"* (IMO, 2002). It follows obviously that at higher security levels, the measures to prevent the security incidence are also heightened and becomes more specific. One important measure besides ensuring the performance of all security duties and which forms runs through all the security levels is the control of access to the ship or port facility and monitoring restricted areas to ensure unauthorised access.

The occurrence of acts of piracy and armed robbery against ships, which largely entails unauthorised access to ships by pirates and armed robbers, present a direct security threat/incident for which the implementation of the ISPS Code becomes critical and imperative to any contracting party to the code.

The fishing harbour operations which are often separated from the main harbour activities involving the accommodation of both seagoing fishing vessels and local vessels (canoes), offer a market situation which necessitate a greater access of persons to the fishing harbour and the fishing vessels.

1.2 PROBLEM STATEMENT

The recent acts of piracy in the Gulf of Guinea (GoG) are increasingly making the maritime trade within the sub region the most insecure region in the world (Blede, 2014). This security threat has not spared the fishing vessels that trade within the GoG although such acts against tankers are the most dominant. Apart from being a seldom victim of piracy, fishing vessels are virtually engaged in every piratical act in the GoG. IMB (2014) reported that pirates normally launch attacks against vessels with the use of mother vessel which are usually ocean going fishing vessels or hijacked dhows. Besides, Tesch (2011) described most pirates in the GoG, Southeast Asia and off Bangladesh as (Ex) fishermen. This, in no doubt, presents fishing activities in a tainted view as far as maritime piracy and armed robbery are concerned.

Besides piracy, West African waters are estimated to have the highest levels of Illegal, Unregulated and Unreported (IUU) fishing in the world (International Peace Institute, 2014). IUU fishing is often prevalent in regions where the ability or willingness to effectively monitor the operations of ships is lacked. Following this, Tesch (2011) argued that, it becomes difficult to challenge that IUU is not the root cause of piracy and armed robbery as the GoG is also identified as a hotspot for maritime armed robbery and piracy (Fiorelli, 2014).

All the above sufficiently point to the fact that all fishing harbours particularly within the GoG (including fishing vessels and all persons) pose a security threat which should trigger the

implementation of the ISPS code. Blede (2014), stated that 20 coastal states that boarder the GoG have declared their allegiance to the implementation of the code. Ghana started by passing the Ghana Maritime Security (GMS) Act, 2004 (Act 675) and consequently amended it following the discovery of oil. By implication, the GMS Act also applies to fishing vessels of not less than 500 GT and of course the entire fishing harbour.

Notwithstanding that the GMS Act applies to Ghanaian registered fishing vessels. Tema Fishing Harbour is still dominated by unregulated and unchecked boarding or access of persons to the fishing vessels which remarkably contradicts the outstanding security measure enshrined in the ISPS Code. This together with the recent upsurge in the acts of piracy in the GoG (under the greater influence of fishing vessels) presents the need to research on the implementation of the ISPS Code: its impact on fishing vessels operations and challenges confronting its implementation at Tema Fishing Harbour.

1.3 RESEARCH QUESTIONS

The pertinent questions that challenged the researcher to undertake this research include the following:

- How is the ISPS Code implemented at the Tema Fishing Harbour?
- What are operational impacts of the ISPS Code implementation on the fishing vessels?
- What are the challenges confronting the implementation of the ISPS Code?

1.4 RESEARCH OBJECTIVES

The main objective of this research is to study the implementation of the ISPS Code at the Tema Fishing Harbour. The specific goals towards which the main research objectives shall be achieved include:

- To find out how the ISPS Code is implemented at the Tema Fishing Harbour;
- To identify the impacts of the ISPS Code implementation on the operations of the fishing vessels;
- To find out the challenges confronting the implementation of the ISPS Code at the Tema Fishing Harbour;
- To find out the possible solutions to the challenges facing the implementation of the ISPS Code.

1.5 SIGNIFICANCE OF THE STUDY

A successful completion of this research would highlight the following:

- How the ISPS Code is implemented at Tema Fishing Harbour;
- The impacts of the advent of the ISPS Code on the operations of fishing vessels at Tema Fishing Harbour;
- The challenges facing the implementation of the ISPS Code at Tema Fishing Harbour.

The study would also highlight possible solutions to deal with any identified challenge confronting the ISPS Code implementation that would enhance the achievement of the good objectives of the code and so serve as an empirical guide for policy making in respect of the implementation of ISPS Code.

More importantly, the outcome of this study may also serve as the basis for further research work relating to ISPS implementation by any contracting parties to the code.

1.6 THE SCOPE AND LIMITATION OF THE STUDY

This study will generally pertain to the implementation of the ISPS Code with a specific focus on Tema Fishing Harbour. The study therefore would be limited to all Ghanaian registered fishing vessels of 500 GT and above including all persons that are engaged in fishing operations and any facility within the harbour of security interest and GMS Act coverage.

The study is also extended to cover the authorities of the Ghana Maritime Authority (GMA) and its security department who is mandated to superintend over the GMS Act the GPHA who as well oversee the security operations of the fishing harbour and the National Fishermen Association of Ghana (NAFAG) who are mainly the operators or owners of the fishing vessels at the Tema Fishing Harbour.

The study shall cover the time period between 2004 when the GMS Act was passed to 2014 which shall denote a decade of the implementation of the Act or the ISPS Code

1.7 ORGANISATION OF THE WORK

This research work shall be divided into five chapters:

- Chapter one features the background to the study, the problem statement and the research questions, as well as the justification of the study and the organisation of the study;
- Chapter two deals with the review of literature related to the study;
- Chapter three discusses the methodologies used in collecting data and how the data would be analysed;

- Chapter four presents the analysis, interpretation and presentation of data;
- Lastly, Chapter five is the presentation of the summary of findings, the drawing of conclusion and the researcher's recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter is a review of literature on maritime security threats with particular stance on the Gulf of Guinea. It also discusses the responses that have been designed to counter the maritime security threats with an extensive review of the ISPS Code and its implementation in ports and on ships. The Ghana Maritime Security Act that ensued the ISPS Code is also reviewed and its provisions towards the implementation of the ISPS Code in Ghana maritime domain. Finally, this chapter presents a discussion of fishing harbour operations and its related security threats and the relevance of the ISPS Code in securing fishing harbours.

2.2 OVERVIEW OF MARITIME SECURITY THREATS

According to the Africa Maritime Safety & Security Agency (AMSSA), maritime security is defined to be concerned with the prevention of intentional damage through sabotage, subversion, or terrorism and from a broad perspective it also relates to concerns such as international peace and security, sovereignty/territorial integrity/political independence, security from crimes at sea (piracy or armed hijackings), resource security, environmental security, security of seafarers and fisheries" (AMSSA, 2013). Such incidents as pilferage & theft, illicit drug trafficking, illegal immigrants & stowaway, piracy and armed robbery, sabotage and terrorism are often counted as threats to maritime security. Ameri & Shewchuk (2007) discussed the major threats to maritime security to include the following: threat or use of force against the sovereignty, territorial integrity or political independence of a state, terrorist acts against shipping, offshore installations and other maritime interests, unlawful acts, piracy and armed robbery at sea, transnational

organized crimes, e.g., smuggling of migrants, narcotic drugs, arms, threats to resource security, e.g., illegal, unregulated and unreported (IUU) fishing, environmental threats, e.g., major pollution incident, illegal dumping. In a larger extent, maritime security is highly international and also includes activities of the fishing industry.

However, Graf (2011) considered maritime violence which constitutes both piracy and terrorism as the major threats to international cargo shipping and international security in the maritime environment. William (2014) also indicated that, on the heels of maritime terrorism came the biggest threat to the physical security of maritime trade, which is piracy or armed robbery. William (2014) also brought to light that maritime security threats were initially a matter of sole concern to state actors until between 2002 and 2005 when terrorist attacks and armed robbery spike the Malacca Strait that private maritime security got involved in undertaking counter security measures against the threats of piracy and armed robbery.

The bombing of the United States (US) Navy destroyer Cole (in Yemen) in 2000 together with the ensuing more devastating terrorist attack on September 11, 2001 deepened states' effort towards combating maritime security threats. However, Mazaheri (2008) cited three maritime security incidents (the incidents of *Achille Lauro* in 1985, *City of Poros* in 1988 and *Our lady of Mediatrix* in February, 2000) prior to the aforementioned cases which also involved human lives and seriously triggered state actions in combating maritime security threats. Consequently, these maritime security incidents which mainly targeted human lives greatly influenced the coming into force of the ISPS Code (Burmester, 2005).

The maritime industry did not only suffer the loss of human lives from terrorist attacks, but also suffered losses from hijacking, stolen cargo, and ransom despite the world's efforts at combating

terrorism (Williams, 2014). Maritime security has therefore been directly threatened by all sorts of attacks or violence against ships, crews and cargo irrespective of whether it occurs in territorial waters or not. These attacks or acts of violence have existed as long as the sea has been plied for international trade but according to Timben (2011), they have taken outstanding proportions in the last two decades. This trend of maritime security threats against merchant vessels implies the need for private participation to compliment state efforts in the combat of maritime security threats. One may rightly claim therefore that the coming into force of the ISPS Code in 2004 engaged both state and non state actions towards the combat of maritime security threats. Many skeptics however do not believe in the effectiveness of the ISPS Code, and this proves that there have not been sufficient efforts to implement security management (Meau, 2010).

Historically, areas such as the Caribbean and the Mediterranean were rife with pirate attacks on merchant ships (Mosely, 2009) The main identified hotspots of maritime piracy and armed robbery between the late 90's and the early 2000's are the South China Sea, the Strait of Malacca, West Africa, Somalia and Singapore (MarEx, 2013). According to William (2014), the Gulf of Guinea has now emerged as a new piracy and armed robbery hotspot. William (2014) further highlighted that the maritime security threat in the Gulf of Guinea leaves regional coastal states, global players, and non-state actors scrambling to implement security responses and the legal framework necessary to control it.

2.2.1 Maritime Armed Robbery and Piracy

Maritime piracy and armed robbery has been the major security incidents that have topped all other maritime security incidents. The two are however security incidents with similar acts of no emphatic difference in all respects except for the maritime zone and jurisdiction in which they are executed.

Piracy, in accordance with Article 101 of the United Nations Convention on the Laws of the Sea (UNCLOS) (1982) is defined as:

(1) *"Any illegal acts of violence or detention, or any act of depredation, committed for private ends by the crew or passengers of a private ship or private aircraft, and directed:*

a) On the high seas, against another ship or persons or property on board such ship.

b) Against a ship, persons or property in a place outside the jurisdiction of any State.

(2) *Any act of voluntary participation in the operation of a ship or of an aircraft with the knowledge of acts making it a pirate ship or aircraft, and*

(3) *Any act of inciting or of intentionally facilitating an act described in subparagraph (a) or (b)".*

The above definition of piracy given by UNCLOS was under the discussion of issues relating to the interactions on the high seas by persons and agencies whether governmental or otherwise. The obvious implication is that since UNCLOS defines the high seas to be that part of the sea outside the jurisdiction of any state (with an emphatic exclusion of the Exclusive Economic Zone (EEZ), Territorial waters and the internal waters) the form of armed robbery at the high seas should exclusively be called piracy. Although piratical acts are security incidents of the high seas, the right to treat cases of both piracy and armed robbery (by virtue of the provisions of

UNCLOS) resides in the jurisdiction of the state that has undertaken to make a seizure or an arrest of such acts of piracy or armed robbery.

Armed robbery against ships, in accordance with the International Maritime Organisation (IMO) Code of Practice for the Investigation of the Crimes of Piracy and Armed Robbery against Ships, is defined as: *"(1) Any unlawful act of violence or detention, or any act of depredation, or threat thereof, other than an act of piracy, directed against a ship, or against persons or property on-board such ship, within a state's jurisdiction over such offences".* This definition of armed robbery also adds to maintain the fact that maritime piracy and armed robbery are different security incidents in legal application and maritime zone and jurisdiction of occurrence.

However, the International Maritime Bureau (IMB) (a specialised agency of the International Chamber of Commerce (ICC)) which has set up a piracy reporting centre to offer up-to-date incidents of piracy to propel a coordinated action to combat such security threat did not seek to explicitly establish any differences between maritime piracy and armed robbery. IMB (2014) defined piracy as *"The act of boarding any vessel with intent to commit theft or any other crime, and with an intent or capacity to use force in furtherance of that act".* Clearly, the definition does not make the distinction made by the UNCLOS definition that the act of piracy occurs only on the high seas; it places piracy and armed robbery against ships in the same category for their reporting purposes whether on the high seas, in territorial seas, at anchor in a port or alongside a wharf. However, IMB acknowledges the definitions as enshrined in UNCLOS and as given by the International Maritime Organisation (IMO) and as makes the effort to give the distance from shore at which the incident was executed, in most cases.

A total of 245 incidents of maritime armed robbery and piracy have been reported to the IMB in 2014 which is described as a continued decrease in the reported attacks in the fourth consecutive year (IMB, 2015). The reported number of incidents for 2012 and 2013 are 297 and 264 respectively. However, it is highlighted by IMB (2015) that the GoG has a considerable amount of under reported incidents given the fact that Bergen Risk Solution, Norway has reported a little more than double the incidents reported by IMB in the West African sub-region. A mention must be made also that the reported incidents for the case of Ghana has increased from 1 (in 2013) to 4 (in 2014) with the latter involving one attack on a Ghanaian registered fishing vessel. The total number of reported incidents of attacks on fishing vessels has also increased by 1 between the period of 2013 and 2014 and that has placed it as the 10th most attacked vessel among 41 types of vessels according to IMB (2015). More striking about fishing vessels in the account of maritime armed robbery and piracy incidents is that IMB (2015) warned ship masters and Privately Contracted Armed Security Personnel (PCASP) to keep clear of fishing vessels and others.

According to IMB (2015), maritime armed robbery and piracy incidents constitute several actual or attempted attacks, vessel boarding, hijacking and firing vessels, hostage of crew member, injuring, kidnapping and crew fatalities. It is also indicated that the level of violence in piracy and armed robbery has increased in recent times.

According to Canca (2014), maritime armed robbery and piracy incidents in 2013 were mostly prevalent in the ports of the Indian Ocean, Malacca Strait, South America, South China Sea and Mediterranean Sea and also mostly committed in the international waters of Arabian Sea, East Africa and West Africa. IMB (2015) however indicates that the incidents of armed robbery and piracy are mostly occurring in Southeast Asia followed by Africa and Indian Sub Continent.

Maritime piracy and armed robbery are *"enemies of mankind"* and often discussed as not only transnational but also as *"not only enemies to one state but all states* and so present a unique and share security risk at the international level (Fiorelli, 2014). The menace of maritime armed robbery and piracy has therefore had varying responses from all the stakeholders of maritime trade and the international community including the coming into force of the ISPS Code.

2.2.2 Illegal, Unregulated and Unreported Fishing

Illegal, Unregulated and Unreported (IUU) fishing is composed of three distinct words of *illegal, unreported and unregulated.* It is however generally defined as fishing which does not comply with national, regional or global fisheries conservation and management obligations (Stolsvik, 2008). According to Sodik (2007), illegal fishing involves fishing conducted by both domestic and foreign vessels without proper authorization or in contradiction of the terms and conditions of a valid license. Sodik (2007) also explained unregulated fishing to refer to fishing undertaken in areas where authorities have failed to establish regulations or exercise their responsibility over vessels and persons engaged in such fishing. Whatever is illegal and unregulated as already discussed will go unreported and this was the reason why Sodik (2007) referred to unregulated fishing as a subset of both illegal and unregulated fishing. IUU fishing therefore paves ways for a fleet of undocumented and unidentified vessels and crews to ply the seas and give them the aptitude to commit other maritime crimes such as armed robbery and piracy.

However, IUU fishing as a maritime security threat has not yet received enough attention (Lewerenz & Vorrath, 2015). It is often discussed as a global problem that undermines international fisheries and conservative management measures (Sodik, 2007). Stolsvik (2008) brought to light that there many cases where fishing vessels, transport vessels and other ships

operate together illegally to commit various types of maritime crime, including IUU fishing. This clearly suggests that there is the need for a closer marking of all fishing vessels and their activities by all maritime stakeholders in their quest to enhance maritime security and combat IUU fishing (Stolsvik, 2008). Besides this, Stolsvik (2008) discussed the need for a change of view of IUU as a purely managerial problem to a criminal phenomenon that result in less secure maritime environment and the importance of cooperation between IMO and Food and Agricultural Organisation (FAO).

According to Sodik (2007), the factors that account for the emergence and increase of IUU fishing globally include lack of flag state control over fishing vessels and ineffective fisheries monitoring, control and surveillance. This consequently is the major reason why many are of the view that Open Registers or Flag of Convenience (FoC), who are often characterised as lacking the ability or willingness to effectively monitor the operations of ships flying their flags, are the main facilitators of IUU fishing. Palma (2006) therefore emphasised the need for flag states and port states to exercise effective control over fishing vessels and their activities and tackling it from the security point of view will imply a critical implementation of the ISPS Code at the fishing harbours.

Developing countries are most at risk of IUU fishing (Agnew, Pearce, Pramond, Peatman, Watson, Beddington & Pitchel, 2009) with West African waters estimated to have the highest levels of IUU fishing in the world, representing up to about 37% higher than the region's reported catch. This provides a further insight into the direct relationship between IUU and maritime armed robbery and piracy. It is reported also that IUU fishing in the region of Eastern India is substantially high and also makes up to the region of hotspot for maritime armed robbery and piracy (Agnew, et al., 2009).

2.3 MARITIME SECURITY IN GULF OF GUINEA

The GoG is an important maritime region which is not only a major source of hydrocarbon resources that produces about 5.4 million barrels of crude oil per day and an investment hub for both onshore and offshore drilling activities but also host of rich fishing and other marine resources (The Royal Institute of International Affairs, 2013). According to Oliveira (2007) as cited by (Fiorelli, 2014), the GoG possesses one-tenth of all oil reserves in the world. These features of the GoG make it an important maritime route for commercial shipping from Europe and America to West, Central and Southern Africa.

The GoG however is however emerging as a zone prone to the security incidents of maritime armed robbery and IUU fishing. Piracy in the Gulf of Guinea accounted for nearly 30% of attacks (427 of 1,434) in African waters between 2003 and 2011, and that proportion is increasing. (The Royal Institute of International Affairs, 2013). As already indicated, the accounts of IUU fishing in the GoG have made the region the worst hotspot for IUU fishing.

The United Nations Office on Drugs and Crime (UNODC) (2013) discussed that because of the booming black market for fuel in West Africa, maritime piracy and armed robbery have generated renewed attention in the Gulf of Guinea. Therefore, a large share of the recent piracy attacks targeted vessels carrying petroleum products. Nigeria, which is the largest producer and exporter of crude oil and natural gas in the Gulf of Guinea has always recorded the highest number of piracy incidents since 2007 (IMB, 2014). UNODC (2013) also brought to light that in 2011, 22 attacks took place off the coast of Benin, a country that had been mostly unaffected by the continual piracy around Lagos, just a few kilometers away. These attacks stopped as quickly as they started, and only two attacks have been recorded in 2012 to date. But there were 18

similar attacks in Togo by the middle of September 2012, another unprecedented wave. According to the compilation of incidents of piracy between 2006 and mid September, 2012 in the GoG by UNODC (2013), Ghana is the fourth highest amongst 10 countries where piratical activities were located.

Unlike in the Gulf of Aden, Fiorelli (2014) brought to light that piracy in the Gulf of Guinea focuses on robbing ships of their cargo and valuables, rather than taking hostages and demanding ransoms. In the case of the GoG, Osinowo (2013) mentioned that ships may be hijacked and sailed to distant locations across maritime borders where cargo is transferred to other vessels.

Fiorelli (2014) supported this nature of piracy in GoG by indicating that IMB data in 2012 records a substantially higher occurrence of robberies without injuries to crews in the Gulf of Guinea than that of hijackings, with hostage (which is more common) in the Gulf of Aden. It is also more often said that the Gulf of Guinea model of piracy seems to be more lucrative as attackers can see a substantial financial return within a week if a pre-arranged buyer for the stolen cargo is found in West Africa than the Somali style of hijacking for ransom which regularly take over a year to negotiate.

Not only has piracy hampered the oil business in the GoG, it has also hindered the rich fishing and other marine resources in the region in the form popularly termed as IUU fishing (Fiorelli, 2014). According to Nincie (2009) as cited by (Fiorelli, 2014), IUU fishing has caused the seafood prices to skyrocket and feared that without external pressure, piracy will continue to increase in the Gulf of Guinea, leading to deteriorating conditions for its inhabitants and serious consequences for the security of the region. For this reason, Anyimadu (2013) stated that international attention is now shifting to the insecurity of the Gulf of Guinea.

2.4 RESPONSES TO MARITIME SECURITY THREATS

The menace of all the maritime security threats that have retarded the smooth flow of all maritime operations have attracted varying reactions or responses from all the stakeholders of maritime business. According to Wilson (2015), contemporary criminal and terrorist attacks against ports, offshore installations, and ships have sparked unprecedented diplomatic and legal responses to these threats that will resonate for a generation. However, Onuoha (2012) indicated that the high incidents of maritime piracy, armed robbery and other maritime crimes have prompted several national, bilateral, regional, and extra-regional engagements to improve maritime security. The formidable form of responses amongst them is the various legal establishments designed to guide the processes of combating the security threats as examined below in sections 2.4.1-2.4.3.

2.4.1 Global Responses to Maritime Security Threats

Wilson (2015) highlighted that collaborative efforts around the world have led to five key intersecting developments that have changed the responses of governments to maritime security. They include: expanded laws, interagency coordination, states cooperation, improved acquisition of threat information, and the creation of multinational training centers. Collectively, they form a unifying thread to support a networked response to counter maritime crime.

In the elaborations given under the expanded laws, Wilson (2015) identified three key developments initiated by IMO to fight against maritime security threats. They are the Protocol to the Convention for the Suppression of Unlawful Acts (SUA) Against the Safety of Maritime

Navigation (SUA Protocols), the ISPS Code, and the Long Range Identification and Tracking (LRIT) system.

The SUA Protocols (2005) provides a framework to collaborate and criminalise the conduct of those who illicitly ship biological, chemical, or nuclear weapons; transport terrorists; or use a ship as a weapon and obliges Contracting Governments either to extradite or prosecute alleged offenders. The SUA Convention was approved in 1988 when there was no treaty to address maritime terrorism and legal ability to prosecute terrorism and armed robbery at sea) in response to the terrorist hijacking and murder aboard the cruise ship *Achille Lauro* (Wilson, 2015). However, it is noted that the convention is underutilised and also without the ability to forestall maritime security incidents as it is primarily focuses on jurisdiction after a criminal act.

The ISPS Code was only discussed by Wilson (2015) as an internationally recognised baseline for minimally acceptable port and ship security and which its implementation remains an ongoing effort. This obviously implies that the implementation of ISPS Code is still deemed very relevant in the quest to combat maritime security threats.

The LRIT system provides for the global identification and tracking of ships. As approved by IMO, this system allows the flag, port and coastal states to better identify, monitor, and intercept transnational maritime threats by providing the identity and position of ships of 300 gross tons or more off their shores. Collectively, Wilson (2015) indicated that these international instruments to respond to the maritime security threats can resonate for a generation provided they are frequently used and amended as necessary.

Sodik (2007) also discussed the interagency cooperation between the FAO and IMO that has promoted the effective jurisdiction and setting up of regional ports and flag states control to curb the menace of IUU fishing. The international responses to maritime security threats has not only

taken the form of merely establishing legal frameworks but also included the practical oversight responsibility of international bodies and communities to ensure the effective and efficient implementation of the legal frameworks such as conventions, codes, regulations and other agreements that states have ratified.

2.4.2 Regional Responses to Maritime Security Threats

At the regional level, the basic mechanism that has been predominantly employed to counter the incidents of maritime security is a high level cooperation amongst neighbours of a particular regional block. Regional cooperations are usually targeted at specific security threat and may involve activities such information communication and information cooperation, and providing specialised training and equipment and also the development of agreement to commit to the fight against the threats to security.

According to IMO (2012), the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP), concluded in 2004, is the first regional government-to-government agreement to promote and enhance co-operation against piracy and armed robbery. It also discussed that the benefit of many of the positive lessons learned from the experience with ReCAAP has been harnessed in the Djibouti Code of Conduct (DCC), set up by IMO in 2009 to develop regional capacity to counter piracy in the Gulf of Aden and western Indian Ocean. In the DCC regional members undertake to co-operate in a variety of activities, including investigation, arrest and prosecution; interdiction and seizure of suspect ships and property; the rescue of ships and persons subject to piracy and the facilitation of proper care, treatment and repatriation of seafarers; and the conduct of shared operations, both among signatory States and with navies from countries outside the region.

There is as yet no specific regime existing, in terms of regional approach to maritime security in the Gulf of Guinea (MNE7, 2012). The move by the Maritime Organisation of West and Central Africa (MOWCA) to establish sub regional coast guard in 2008 is still in negotiation and remains as a concept. However, over the years, MOWCA has undertaken the activities of surveillance in territorial waters by the naval forces provided by member states, enforcement of maritime security code by national maritime administrations, development of Memorandum of Understanding (MOU) on port state control, making sure its members are ISPS Code compliant (which 18 out of the 20 coastal member states of MOWCA) are compliant , etc to help achieve maritime security in the sub region of West and Central Africa (MOWCA, 2008). Regional Maritime Rescue Coordinating Centres (RMRCC) have also been set up in Monrovia (Liberia) and Lagos (Nigeria) for search and rescue purposes to ameliorate the risk of maritime security. It is clearly evident that in the Gulf of Guinea, regional efforts have not been perfectly independent of the national responsibilities towards the campaign against maritime security threats.

However, more recently, two regional Maritime Trade Information Sharing Centres (MTISC) are being established in order to facilitate cooperation between the West and Central African coastal states. According to IMO (2014), the two centres will complement each other in the implementation of the Code of Conduct (CoC) concerning the repression of piracy, armed robbery against ships and illicit maritime activity in the GoG. The CoC mandated by the declaration of the Head of States meeting in Yaoundé (Cameroon) in 2013 also endorsed the establishment of the Inter-regional Coordination Centre (ICC) to oversee its implementation. The MTISC-GOG located in the Regional Maritime University (RMU) in Ghana aims to establish an affordable, sustainable and enduring regional maritime information sharing centre within the

Gulf of Guinea that is fully supported by regional states and all maritime stakeholders (IMO, 2014).

The Economic Community of Central African States (ECCAS), the Economic Community of West African States (ECOWAS) and the Gulf of Guinea Commission (GGC) signed an additional protocol to establish the ICC in 2014 for the implementation of a regional strategy for maritime security (IMO, 2014). The ICC provides a means for establishing cooperation, coordination and communication between member states of the three organisations at the strategic level, including the exchange of information on a range of issues, namely, best practice and cooperation on capacity building as well as contributing to countering piracy, armed robbery and other illicit activities at sea. All the regional efforts as discussed in this section are mainly responsive to first objective as set out in the ISPS Code as presented in section 2.5

2.4.3 National Responses to Maritime Security Threats

At the national level, responses to achieve maritime security is mainly seen in the national efforts towards implementing both global and regional conventions, codes, MOUs, protocols, etc established to ensure maritime security. The Information Sharing Environment (2005) indicated that maritime security is best achieved by blending public and private maritime security activities on a global scale into an integrated effort that addresses all maritime threats. This implies that although national efforts are very crucial, their impacts are felt at the regional and global levels of implementation.

Maritime Domain Awareness (MDA) programmes are being undertaken in various maritime states to collect, fuse, analyse, disseminate actionable information and intelligence to operational or security agencies through electronic surveillance systems. MDA requires that maritime

activities and actors become more transparent, that what is seen is properly understood, and that this visibility and understanding be shared as widely as possible among members of the maritime community (Nimmich & Goward, 2006).

National efforts to implement any given international security resolution can vary amongst state usually depending on their experience circumstances or capacity. It is widely known as highlighted by Mazaheri (2008) that the US, for instance, has declared mandatory compliance to the optional part of the ISPS Code on all vessels flying their flag. It is generally discussed that developing countries are ineffective and weak at exercising control over their coastal areas. To this end, stated that GoG countries are weak in their capacity to exercise effective control over their coastal and deep offshore territories. By this assertion, it becomes very relevant to assess how countries within the GoG implement the ISPS Code and give appropriate recommendations on how best their weakness can be surmounted

2.5 THE ISPS CODE

As already discussed in section 2.2, the catastrophic September 11 incident directly made it necessary to rename the chapter XI of the International Convention for the Safety of Life at Sea (SOLAS) which contains special provisions on the enhancement of maritime safety as chapter XI-1, with the addition of a new chapter called chapter XI-2 to provide for special measures to enhance maritime security in 2002 (Mazaheri, 2008). Chapter XI-2 applies to passenger ships and cargo ships of 500 GT and upwards, including high speed craft, mobile offshore drilling units and port facilities, which serving such ships engaged on international voyages. The newly created chapter had the ISPS Code as a supplement which is therefore a purely maritime security related code which applies to both port and ship facilities.

The code contains two parts, A and B that basically set the minimum security requirements for ships and ports. The former, Part A is compulsory while the latter, Part B is not; it serves as a guideline when implementing the security provisions as set out in Part A (IMO, 2002). Mazaheri (2008) stated that the main goal of the ISPS Code is to establish a uniform and international framework for the risk evaluations in maritime transportation industry

However, the general objectives of the ISPS Code as given stipulated in section 1.2 of the Code include:

- *"To establish an international framework involving co-operation between Contracting Governments, Government agencies, local administrations and the shipping and port industries to detect security threats and take preventive measures against security incidents affecting ships or port facilities used in international trade;*
- *To establish the respective roles and responsibilities of the Contracting Governments, Government agencies, local administrations and the shipping and port industries, at the national and international level for ensuring maritime security;*
- *To ensure the early and efficient collection and exchange of security-related information;*
- *To provide a methodology for security assessments so as to have in place plans and procedures to react to changing security levels; and*
- *To ensure confidence that adequate and proportionate maritime security measures are in place".*

The earlier review of the regional responses to the security threats have proved a significant effort towards the achievement of the first objective regarding the kind of cooperation expected of all the contracting stakeholders to the code. However, the ensuing objectives require a field

research to unearth the efforts of contracting governments who have declared their commitment to implement the ISPS Code of which Ghana is no exception.

2.5.1 Overview of the Parts of the ISPS Code

Part A of the code consists of 19 sections and two appendixes. The sections generally contain the general information relating to objectives and functional requirements, definitions, application, responsibilities of contracting governments as relates to PFSA and SSA. Thus, Part A defines the obligations of the company, ship, port facility, and of the contracting government. It also defines the necessary requirements of risk assessment and security plans and the way the records regarding the assessments and plan must be provided and kept. In the end, Part A of the code also outlines the requirements in the training, drills and exercises for the staff and crew identified in the code and the requirements about the verification and certification for ships.

In order to help achieve its set objectives, the code identified the following as the functional requirements of the code:

- *"To establish a uniform and international framework for the risk evaluations in maritime transportation industry gathering and assessing information with respect to security threats and exchanging such information with appropriate Contracting Governments;*
- *Requiring the maintenance of communication protocols for ships and port facilities;*
- *Preventing unauthorized access to ships, port facilities and their restricted areas;*
- *Preventing the introduction of unauthorized weapons, incendiary devices or explosives to ships or port facilities;*
- *Providing means for raising the alarm in reaction to security threats or security incidents;*

- *Requiring ship and port facility security plans based upon security assessments; and*
- *Requiring training, drills and exercises to ensure familiarity with security plans and procedures".*

It is necessary to state that the observed unregulated access to ships at the fishing harbour has mainly triggered the need to undertake this research. However, it is mostly and erroneously held by many writers that the ISPS Code does not apply to fishing vessels. In fact, the code is explicitly emphatic in sub section 3.1.1 that it applies to *cargo ships* engaged in international voyages of 500 GT or more and this obviously include many foreign and domestic fishing vessel which cannot be classified as passenger vessels. According to Regulation 2 (g) of SOLAS, cargo ship "*is any ship which is not a passenger ship"* (IMO, 2009). Nothing therefore prohibits a contracting state from requiring that a fishing vessel, especially of 500 GT or more, flying its flag comply with some or all of the provisions of the ISPS Code (Hogan & Chapman, 2005).

The code specifies the duties of contracting governments to include: setting the applicable security level; approving port facility security assessments; determining which port facilities will be required to designate a port facility security officer; approving a port facility security plan and subsequent amendments to an approved plan; implementing control and compliance measures pursuant to regulation XI–2/9 (amendments to SOLAS); and establishing the requirements for a declaration of security. The code also stated the duties of shipping company to include ensuring the ship security plan contains a clear statement emphasising the master's authority, as well as provisions needed to support the company security officer and the ship security officer in carrying out their duties.

The code defines three security levels. Level 1 is the level at which ships and port facilities normally operate, and defines the minimum appropriate protective security measures that should be maintained at all times. Security level 2 corresponds to a heightened risk of a security incident (for which additional protective security measures are required). Level 3 is used for an exceptional security risk (a security incident is probable or imminent).

Apart from ensuring that all ship security duties are performed through the framework requiring for ship security assessments and plans, ship security officers, company officers, and certain onboard equipments, the code contains provisions regarding the control of access to ships, the control of embarkation of persons and their effects, and the monitoring of restricted areas, deck areas and areas surrounding ships. Additional sections address supervising the handling of cargo and ships' stores and ensuring that security communication is readily available. Part A of the ISPS Code also details port facility security framework requiring similarly for port facility security assessment, plans, and officers and certain security equipment to be implemented at various security levels. The code also provide additional requirements for port facility security including; monitoring and controlling access to port facilities, monitoring restricted areas and the activities of people, supervising the handling of cargo and ship's stores; and ensuring that secure communications are readily available.

In the end, the code provides that ships are subjected to security verification, which serves as the basis for issuance of an international ship security certificate. Certificates are valid for not more than five years and at least one intermediate-verification must take place during this time. Flag states are responsible for verification, but it is provided that it can be delegated to a recognised security organisation.

Just as Part A of the code, Part B contains 19 sections and 2 appendices as well. Part B contains very useful advice on the implementation of Part A as more details and guidelines about the mentioned subjects in part A are included in part B. It is often stated that although for guidance only, it is prudent if those responsible for security policies implement Part B recommendations as far as possible. Mazaheri (2008) put it that in some ways, applying part A without taking part B into account seems a vain effort.

2.6 The Ghana Maritime Security Act, 2004

In order to establish a legal framework for effective compliance with the ISPS Code and related matters in Ghana and obliging as contracting party to the code, the government of Ghana in 2004 passed the Ghana Maritime Security Act 675. The Act is being superintended over by the Ghana Maritime Authority to ensure the security of ships and port facilities.

The GMS Act has 74 sections and 8 schedules. Section 1 defines the scope of applicability whereas sections 2-6 are provisions relating to GMA; its functions and delegation powers and the appointment and duties of a recognised security organisation. Sections 7-14 are general provisions relating to security particularly all information about the three security levels and the declaration of security whiles sections 15-22 and 23-26 are generally provisions on ship security with the former being related specifically to ship security plan from approval through to enforcement and the latter also pertaining to ship security levels, assessment and systems. The ship security provisions continue from sections 27-36, 37-42 and 43-47 with specific provisions on international ship security certificate, control and regulation of ships in Ghanaian ports, and designation of officers and responsibilities of companies and ship personnel respectively. The sections from 48-69 provide security matters pertaining to the port. The provisions on the port

security among others include: duties of port facility provider, the content and report of port facility security assessment and of port facility security plan, designation of port security zones restrictions to port security zones and right of access to port security zones and ships. The last provisions from 70-74 are miscellaneous provisions relating to ministerial responsibilities and directives, maritime officers and definitions (Ghana Maritime Security Act, 2004).

The GMS Act did not categorically state to treat the Part B of the ISPS Code as mandatory but made a provision that *" The provisions of Part B of the Code shall be read as one with this Act and shall apply subject to the modifications that are necessary to give effect to this Act".* In effect, the GMS Act radically referred to take a lot of inspiration for the guidance provided by the Part B. For instance, in section 7(1) it is stated that *"The Authority shall in accordance with Part B of the Code set three separate ascendant Levels of security namely, Security levels 1, 2 and 3 for every Ghanaian ship and every port or port facility within the country".*

GMA issued Documents of Compliance (DoC) initially to the ports of Tema and Takoradi in pursuance of the GMS Act and later to the Floating, Production, Storage and Offloading (FPSO) Kwame Nkrumah and were all duly audited by a Recognised Security Officer (RSO) appointed by it (GMA, 2011). Following the implementation of the recommendations of the audit by the operators of these port facilities, the DoC was renewed for the Port of Tema and the Port of Takoradi as well as an interim DoC for FPSO Kwame Nkrumah. However, there is as yet no literature on the compliance of Ghanaian registered ships to the ISPS Code including the fishing vessels and the harbour.

2.7 THE ISPS CODE AND FISHING HARBOURS OPERATIONS

Fishing activities are broadly described to involve a wide range of tasks which collectively have to ensure an optimal benefit from fishery resources and are usually viewed simply as a food source and mainly kept under the management of a state (in terms of a coastal state) authorised division or department of fisheries (Cochrane, 2001). At the international level, fisheries management is a responsibility of the FAO. However, fishing activities are marine related and also fall into the realm of maritime operations and shipping.

From a legal perspective, security issues fall outside coastal states' fisheries management and enforcement powers (Hogan & Chapman, 2005). Since fishing activities are centered in the fishing harbours, usually part of the port area under the control of the Port Authorities, it follows that all security matters of the fishing harbour as a port facility and fishing vessels will rather fall under the direct supervision of the coastal states' maritime administrations. Therefore, there is no wonder that the FAO and IMO are cooperating to combat fishing piracy or IUU fishing as discussed earlier.

Hogan & Chapman (2005) discussed that, in regions where there are no consistencies in how fishing vessels are licensed, they experience the situation where some of the fishing vessels never make port calls to ensure effective application of flag or port state control and causes a major hindrance to the implementation of the ISPS Code at the fishing harbours. In Ghana, the licensing and registration of fishing vessels are clearly set out without any inconsistencies as GMA fishing vessel registration process requires that a fishing permit from the Ministry of Food and Agriculture is first obtained. This clearly implies that some element of hindrance has been removed to ensure effective flag and port state control and hence a clear environment for the

effective implementation of the ISPS Code to ensure maritime security in the fishing harbour and on fishing vessels.

CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

This chapter focuses on the procedures or methods employed to undertake the study. It throws light on the theories upon which the adopted methodologies are based. This chapter contains a brief description of the study area and also discusses the approach and design used by the researcher to achieve the major objective of studying the implementation of the ISPS Code at Tema Fishing Harbour. The research instruments of mainly interviews and questionnaires and the sampled population to whom the instruments were applied in gathering the primary data were elaborated. A further discussion on how the field data was processed is presented. Finally, the assurance that the data obtained and processed to meet the research objectives was advanced and the field challenges also discussed.

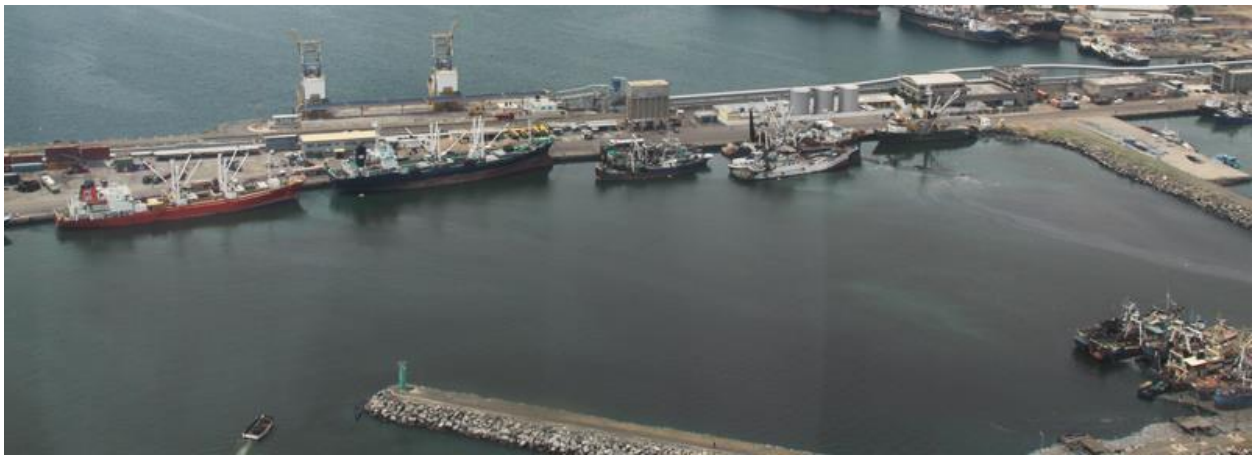
3.2 STUDY AREA

The Tema Fishing Harbour is located in the land area of Port of Tema. The Port of Tema which is the bigger of the two seaports in Ghana is located on the east coast of Ghana, about 21 nautical miles off the east coast of the capital city, Accra. In absolute location, Port of Tema is on the Greenwich Meridian and latitude 5.4 degrees north of the equator. It spans a land area of 3.9 million square metres and is flanked by the industrial city of Tema (Asuliwonno, 2011).

According to (GPHA, 2013) the Tema Fishing Harbour is located on the eastern end of the main harbour. It comprises of inner and outer harbours and a canoe basin. The inner fishing harbour begins with a 63 m wide entrance and comprises a total quay length of 467 metres which consists

of a finger jetty (60 m), lay by jetty (155 m) and a lay by wharf (100 metres) with draughts ranging between 3.5 and 4.0 metres. The outer fishing harbour comprises a 122 metre entrance with 486 metres of quay length, with draughts ranging between 5.0 to 7.0 metres.

Figure 3.1: The Tema Fishing Harbour



(GPHA, 2013)

3.3 RESEARCH APPROACH AND DESIGN

This was the plan and structure purposely designed or chosen for obtaining, processing and presentation of data to meet the set objectives of this research work. According to Thomas (2010), research design can be seen as the "logic" or the "master" plan of the research work that shows how the research work is to be conducted.

In social research like this one, qualitative and quantitative methods are the most commonly used approaches in achieving research objectives. They can be used independently, or they can be combined to give what is known in social research as mixed methods. Quantitative research aims to measure using numbers while qualitative research usually describes scenarios and gathers data through interviews or analyse the meaning of information from documents.

Taking into consideration the main objective of studying the implementation of the ISPS Code at Tema Fishing Harbour, the qualitative research approach was chosen. Kothari (2004) explained that qualitative research is concerned with qualitative phenomenon relating to or involving quality especially for investigating reasons for a particular behaviour. It is a formal, objective, systematic process of describing and testing relationships and examining cause and effect interactions among variables. The qualitative research method became more appropriate for this study because it was sensitive and powerful in capturing people's experiences and meanings of events. It also allowed the respondents to share their experiences with others from their own perspectives.

The use of the qualitative method has enabled the presentation of data in a descriptive design format through reflecting on the lived experiences, attitudes, behaviour, beliefs and opinions of the stakeholders of Tema Fishing Harbour operations. Primarily, qualitative research method is said to advance at the meaning, traits and defining characteristics of events, people, interactions, settings or culture and experiences (Tewksbury, 2009).

3.4 RESEARCH INSTRUMENT

The research instrument refers to the data collection methods employed by the researcher that aided in a successful achievement of the objectives of the work. According to Ekwall (2007) as cited by Mazaheri (2008) a common way to organise the methods employed to source information is to divide them into two groups of data; primary and secondary.

3.4.1 Primary Data

Primary data is the data collected directly by the researcher by using the instruments of interviews, questionnaires, observations, etc (Mazaheri, 2008). The primary source of data was gathered through the conduction of interviews, the administration of questionnaires to the sampled population and undertaking observations at the fishing harbour.

3.4.1.1 Interviews

Research interview is a form of conversation in which the subjects not only answer questions prepared by an expert, but themselves formulate in a dialogue their own conceptions of their lived world. Semi-structured interview was used for the personal interviews with the sampled key informants. Whilst this instrument was used to get in-depth explanation and opinions on the implementation of the ISPS Code at the Tema Fishing Harbour, it was also to validate the information as presented by the structured questionnaires.

According to Kajornboon (2004), using the semi structured interview, the researcher has a list of key themes, issues, and questions to be covered. In this type of interview the order of the questions can be changed depending on the direction of the interview. An interview guide is also used, but additional questions can be asked which often were not anticipated initially.

Within each topic, the interviewer is free to conduct the conversation as he thinks fit, to ask the questions he deems appropriate in the words he considers best, to give explanation and ask for clarification if the answer is not clear, to prompt the respondent to elucidate further if necessary, and to establish his own style of conversation.

The strengths of semi-structured interviews are that the researcher can prompt and probe deeper into the given situation. This however is considered not extended to the benefit of interviewers who may not probe into situations and could also be time consuming when there are a large number of respondents to interview. However, according to Sharma (2011), the use of interviews are the most appropriate when exploring *practitioners' perspective* for qualitative information.

3.4.1.2 Questionnaires

A questionnaire is defined as a structured means of posing a standardized set of consistent predetermined questions in a given order to respondents for self-completion in a sample survey (Harvey, 2013). It usually consists of a list of questions (open-ended and/or closed-ended), but should also include clear instructions and spaces for answers or administrative details as shown in Appendix I.

Questionnaires can be administered in one of several ways including postal, electronic, telephone and face-to-face. In particular, it can be either self-completing questionnaire (postal and electronic) or interview schedules (face-to-face and telephone). Using the self-completing questionnaire, the researcher personally submitted the questionnaires and a brief discussion was held with the respondents. In the brief discussion, the researcher ensured that the respondents meet the minimum criteria for the purposive sampling with regard to their work experience and tonnage of fishing vessels they operate and finally agreement was reached with the respondents on a collection date.

Pretesting of the questionnaire to detect errors and effect the appropriate changes before administering to the sample population was conducted on some few potential respondents. This

pilot activity assisted to check respondents' understanding and ability to answer the question as well as the right time for retrieval.

The final version of the questionnaire was distributed amongst 20 NAFAG members and 10 security officials of GPHA as elaborated in table 3.1 below.

3.4.2 Secondary Data

Secondary data was also gathered mainly through the review of literature in books, public documents, publications, articles, journals, newsletters, policies and regulations, and reports relevant to the study. The secondary data obtained as a traditional activity in most social research, thus formed the literature review as presented in chapter two.

3.5 POPULATION AND SAMPLE

A study population is the total number of a defined class of people, objects, places or events that are relevant to a research. According to Burgess (2001), population simply refers to all the members of a group that the researcher is interested in. Target population is however the eligible population that is included in research works. It includes all the elements that meet all the sample criteria for inclusion in this study.

Therefore the target population for this study includes all the stakeholders of the Tema Fishing Harbour. This research mainly targeted the authorities that have a stake in the security of the fishing harbour and which may be involved or affected by the implementation of the ISPS Code. Specifically they include GMA and its security department, GPHA and its security department, and NAFAG members.

3.5.1 Sampling Procedure

A sample is a part of a group or aggregate of entire objects selected with a view to obtaining information about a whole. According to Singleton & Straits, 2010, research sample must be a representative of the target population that provides a close approximation of certain characteristics of the target group.

The sampling technique used to select the sample from the target population is the purposive sampling technique. In this sampling technique (also called judgmental sampling), researchers rely on their expect judgment to select units that are "representative" or "typical" of the population (Singleton & Straits, 2010). The purposive sampling is one of the non-probability techniques used to select members with some predetermined or special characteristics that make them convenient enough to represent a target population.

3.5.2 Population, Sample Size and Sampling Method

Table 3.1 is a presentation of the target population, sample size and method and the survey type used to obtain information from the respondents to the questionnaire and personal interviews.

Table 3.1: Population, Sample and Research Instruments

TARGET POPULATION	**SAMPLE SIZE**	**SAMPLING METHOD**	**SURVEY TYPE**
GMA (Flag State Officer (FSO))	1	Purposive	Semi Structured Interview
GPHA	Security officials (10)	Purposive	Questionnaire
	Dock master (1)		Semi Structured Interview
NAFAG members	20	Purposive	Questionnaire
TOTAL=32			

Source: Author's survey

3.6 DATA PROCESS AND ANALYSIS

This is the main steering wing of the research work where the data obtained from the field undergoes the necessary refining to produce results that allow the achievement of the research objectives. Data processing and analysis therefore becomes the means through which conclusions can be reached and serve as the basis for making recommendations.

During the interviews, field notes and tape recordings were taking and transcribed immediately after close of the schedules. This was followed by the arrangement of the responses according to the research questions they addressed, a process that allowed the cleaning of the data for analysis. Field notes were taking during the researcher's personal observations at the fishing harbour as well.

After the collection of the primary data, the researcher purposefully edited the retrieved responses to ensure that the information provided by the respondents are clean (i.e. without errors) and ready to be fed into the computer for analysis. In discussing the *editing* process, Singleton & Strait (2010) explained that it makes the data ready for analyses on the computer which means that the data is made complete, error free and as readable as possible.

These completed and cleaned responses were coded and with the help of the Microsoft Excel and Statistical Package for Social Science (SPSS) they were presented in tables, pie chart and bar graph graphs which formed the main data used in chapter four for performing various analyses.

According to Yin (1994), the ultimate goal of analysing data is to treat the evidence fairly, to produce compelling analytical conclusion and to rule out alternative interpretations. Maynard (2002) indicated that Miles and Huberman (1994) said data analysis is seen to consist of three

concurrent flows of activities. These three are data reduction, data display, and conclusion drawing and verification. Marfo (2009) states and discusses three ways for drawing conclusions as adopted from Alvesson & Skoldbery (1994); these are inductive, deductive and adductive.

Marfo (2009) indicated that inductive method is used to draw conclusions based on empirical findings. This method is normally used when established theories in the field of study are limited and the purpose is to form a new theory. Deductive method is used when drawing conclusions perceived as valid when it is logically connected. Usually in deductive studies, theories and literature that have been established already are used as foundation for the new research. Adductive method is similar to inductive method. With Adductive method, the researcher begins with the empirical facts, just as in the inductive method. However, theoretical pre-conceptions are not rejected. In adductive method, a separate case is interpreted according to the theoretical pattern as if it was true, would explain the case. The result is then confirmed based on the new observations. The new observation from the study is then compared with the theoretical frame of reference.

The analysis of the primary data as presented in a descriptive form with occasional use of charts and tables is mainly based on the deductive method which is best suited for this study.

3.7 DATA RELIABILITY AND VALIDITY

Data reliability refers to the stability and consistency of the results of the research work. Data Reliability answers the question of whether a data is dependable using a consistent measurement whilst research validity is the congruence or the ability to fit between the operational definition and the concept it is meant to measure (Singleton & Strait, 2010).

According to Ivankova (2002), for validity to be attained, the researcher can use one of the four credibility determinants he enumerated including triangulation and member checking (pretesting). To achieve reliability of the data presented herein, the researcher applied the use of several research instruments including questionnaires, and personal interviews amongst scattered sampled respondents to fetch all the necessary information from many different angles as possible. This multi-instrumentation also known as triangulation has enabled to the researcher to consider the opinions and thoughts of all the stakeholders in the transit business in the collation of the data.

Following the assertion that "a valid measure is necessarily reliable, but a reliable data may or may not be valid" (Singleton & Strait, 2010), it is worth stating that once data validity has been achieved with the use of triangulation, pretesting of research instruments, data reliability is as well guaranteed in the work.

It is often stressed that different methods have different weaknesses and strengths and therefore the main effect of the use of methodological triangulation e.g. the mix of qualitative and quantitative research methods is to overcome the weaknesses of any single method whilst maintaining their unique strengths (Niglas, 2000).

3.8 DATA COLLECTION OR FIELD CHALLENGES

As much as possible, some measures were put in place to minimise the advert effects of some of the field challenges by the researcher. However, some of the following challenges were beyond the solution of the researcher.

During the sorting out of the responses from the questionnaires, some of the responses were completely unclear and impossible to read whilst some of them ignored some of the questions.

Also, it was noticed that some of the respondents were very reluctant to give out in-depth information as they probably doubted the true purpose of the interview for whatever reasons.

Two National Security personnel were invited for the focus group discussion but they failed to show up.

It became very challenging to obtain some other information which the researcher felt could enrich this research. In spite of all the field challenges encountered, the purpose of this research was adequately achieved.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1 INTRODUCTION

This chapter is a discussion of the data obtained from the research. It presents a critically analysed interpretation of the primary data from the interviews conducted and questionnaires administered using the methodology highlighted in chapter three of this work. The chapter is presented in basically two sections including the discussions and analysis of responses from the administration of questionnaires and conduct of personal interviews.

4.2 FINDINGS FROM QUESTIONNAIRES

This section is a discussion and analysis of the responses from the questionnaires administered amongst the selected GPHA security staff and NAFAG members. The responses are presented in the order of the arrangement of the research objectives, and directly in line with the questionnaires as attached in Appendix I.

4.2.1 Rate of Response

In all, 30 questionnaires were distributed amongst 10 security staff of GPHA and 20 NAFAG members as described in table 3.1. Out of the 30 questionnaires, 26 were retrieved, representing a response rate of 86.66%. Table 4.1 below is a summary of the rate of response to the questionnaires.

Table 4.1: Rate of Responses to Questionnaires

POPULATION	SAMPLE SIZE	NUMBER OF RESPONDENTS	PERCENTAGE OF RESPONDENTS PER TOTAL SAMPLE SIZE (%)	PERCENTAGE OF RESPONDENTS PER TOTAL RESPONDENTS (%)
GPHA SECURITY	10	9	**90.00**	34.62
NAFAG MEMBERS	20	17	**85.00**	**65.38**
TOTAL	30	26	**86.67**	100.00

Source: Field data

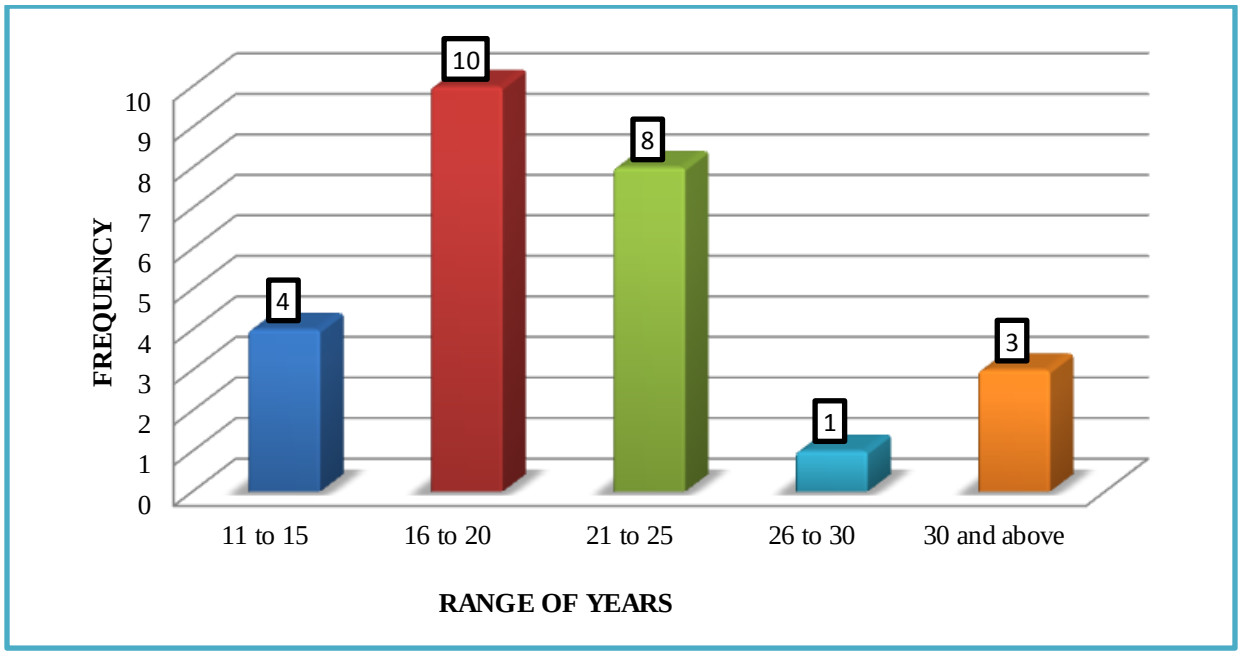
There was 86.67% rate of response per the total sample size as depicted in table 4.1. The table also shows that there was a 90% response rate per the sample size of 10 GPHA security whilst NAFAG members has a response rate of 85.00% making it the highest respondents with 65.38% rate of response amongst all the respondents. This therefore indicates a fair rate of response amongst all the respondents.

4.2.2 Years of Work Experience of Respondents

In order to achieve the objective of selecting an acceptable sample with a rich experience and knowledge about the implementation of the ISPS Code to represent the target population, a purposive selection method was used and to ensure the validity of the choices made, the respondents were asked to state their number of years of work in their respective fields of operation. The basic criterion for selection was a minimum of 11 years' work experience which denotes that respondents were in work operations at the Tema Fishing Harbour at least during the

year of ISPS Code adoption and implementation (2004). Figure 4.1 indicates the number of years of work experience as given by the respondents in the questionnaire.

Figure 4.1: Years of Work Experience of Respondents



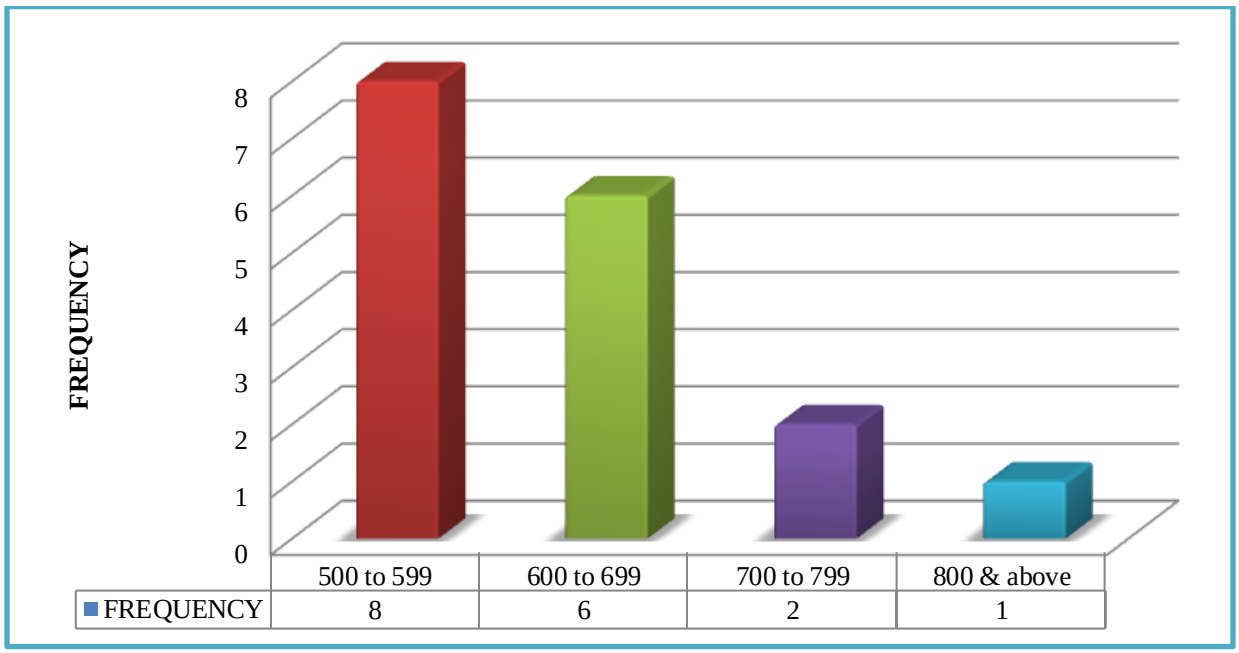
Source: Field data

From figure 4.1, it is clear that all the respondents have a work experience of 11 years or above. However 10 out of the 26 representing the majority of the respondents (38.46%) fall within the range of 16 to 20 years. 4 of the respondents representing (15.38%) fall within the range of 11 to 15 years; and 8 representing (30.77%) fall within the range of 21 to 25 years. One (1) of the respondents representing (3.85%) fall within the range with 26 to 30 years of work experience and 3 representing (11.54%) fall within the range with 30 years of work experience or above. This number is representative enough to provide the appropriate responses to the questionnaire. It can therefore be inferred that appropriate responses were received to help achieve the purpose of the study.

4.2.3 Tonnage of Fishing Vessels Operated by NAFAG Respondents

Respondents to the questionnaires who are NAFAG members were further asked to mention the tonnage of their largest fishing vessel. This was to ascertain that the sampled NAFAG respondents meet the purposive sample criteria of being respondents who operate at least vessels of 500 GT. The responses are summarised below in figure 4.2.

Figure 4.2: The Largest Size of Fishing Vessel Operated by NAFAG respondents



Source: Field data

From table 4.2 above, it is clearly illustrated that majority of the NAFAG respondents fall under the minimum category of operating fishing vessels with the capacity ranging from 500 to 599 GT. This therefore implies that all the NAFAG respondents operate fishing vessels to which the ISPS Code applies.

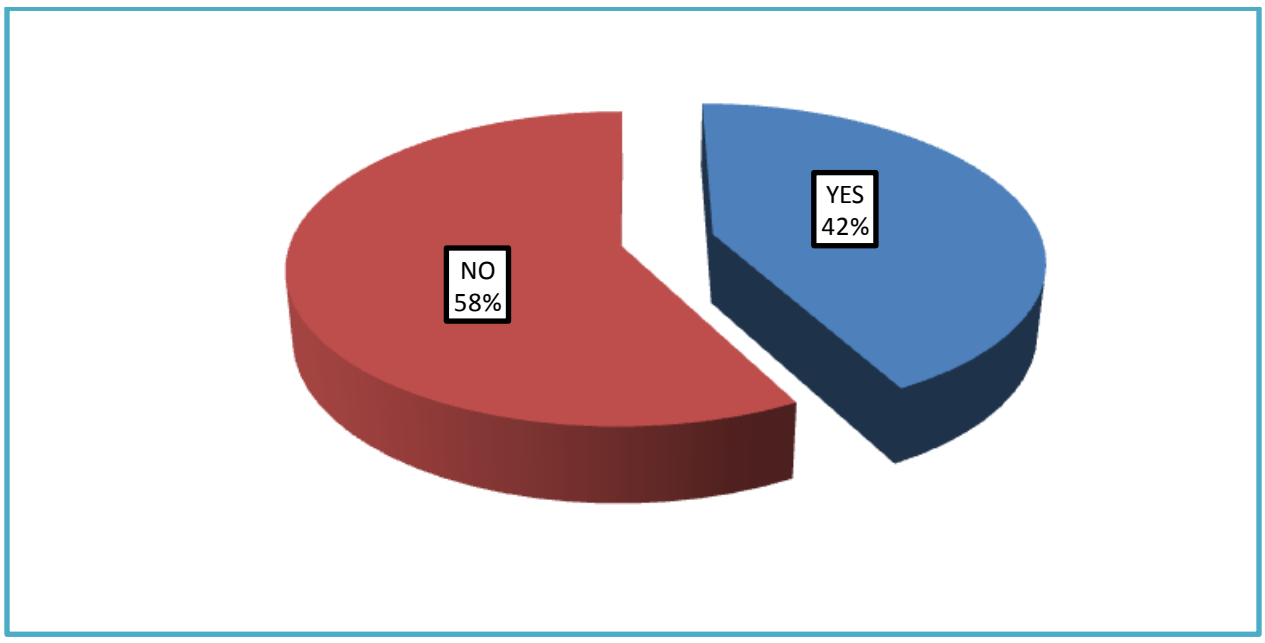
4.2.4 How the ISPS Code is being implemented at the Tema Fishing Harbour

This sub-section pertains to the responses to the various questions structured to gather information regarding how the ISPS Code is being implemented at the Tema Fishing Harbour. It begins with an enquiry from the respondents about their knowledge on the implementation of the ISPS Code at the Tema Fishing Harbour.

4.2.4.1 Knowledge about the Implementation of the ISPS Code

In order to ascertain that respondents were knowledgeable about the implementation of the ISPS Code, they were posed with the question of whether they know about the implementation of the code or not. The responses as received is summarised in figure 4.3 below;

Figure 4.3: Knowledge about the implementation of the ISPS Code

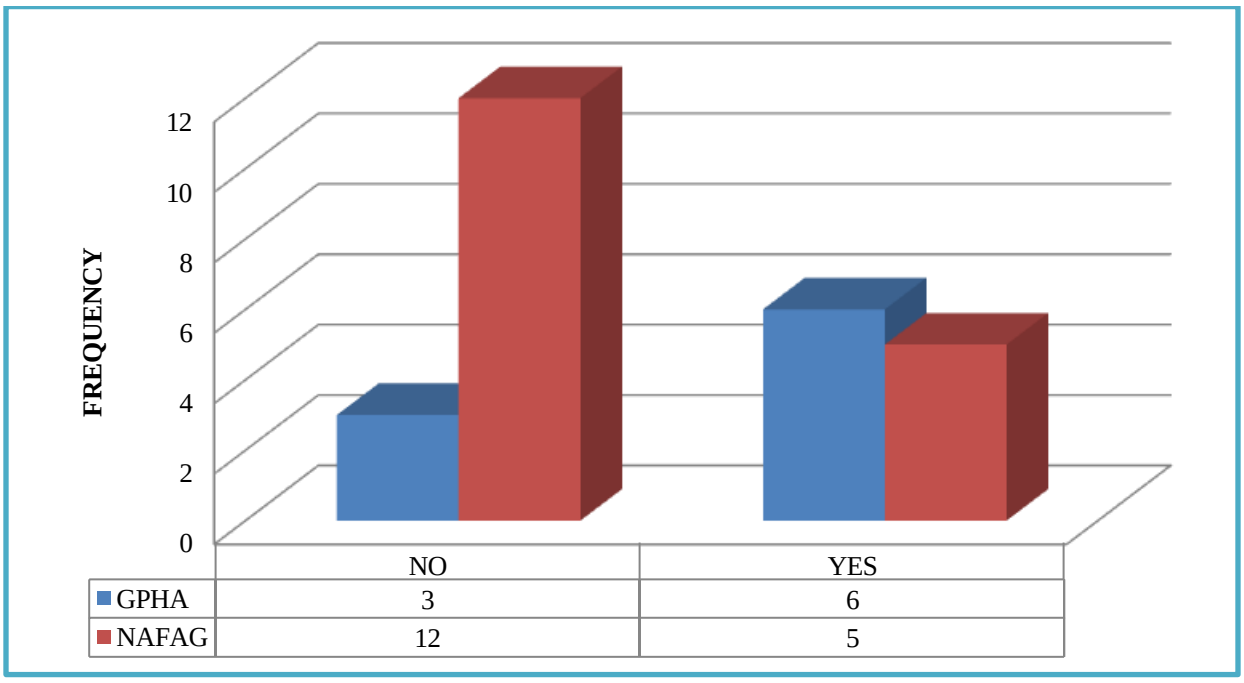


Source: Field data

From figure 4.3 above, it can be seen that the majority of the respondents do not have any knowledge about ISPS Code. The respondents with knowledge about the implementation of the code are relatively fewer than those without the knowledge of it.

Figure 4.4 below presents a detailed rate of responses regarding the respondents' knowledge about the implementation of the ISPS Code.

Figure 4.4: Rate of Respondents' knowledge about the Implementation of the ISPS Code



Source: Field data

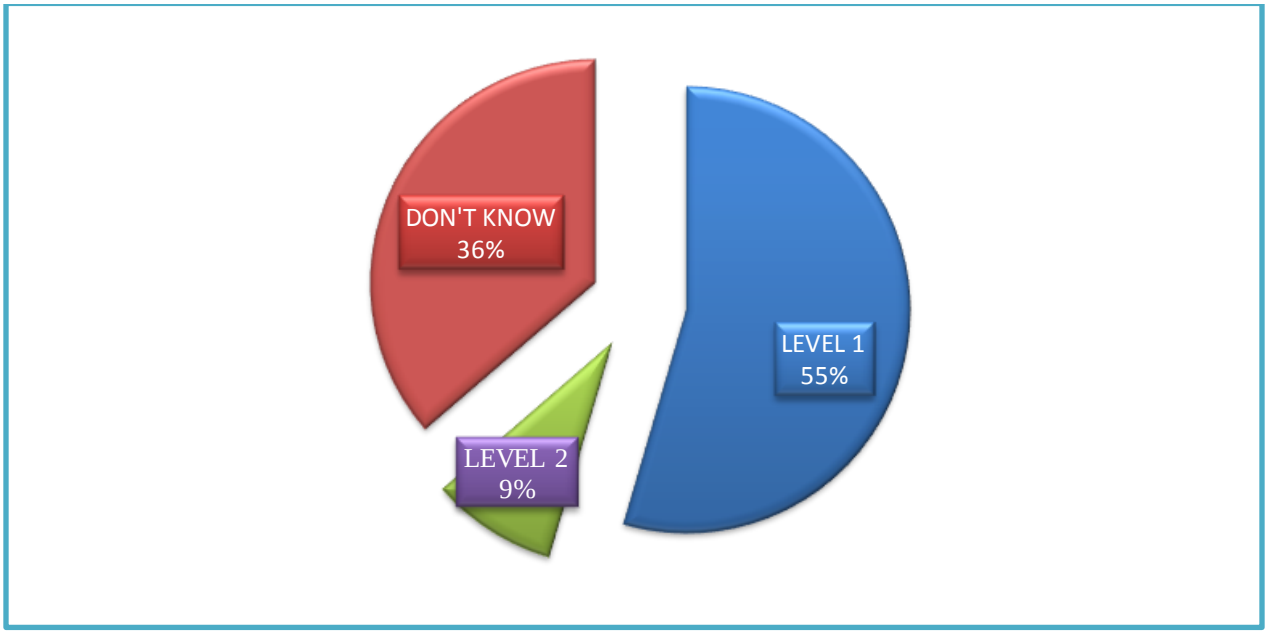
It is clearly shown in figure 4.4 above that more of the respondents who have no knowledge about the implementation of the ISPS Code are members of NAFAG representing 46.15% of the total respondents and 70% of the sampled NAFAG members. On the other hand, about 67% of the sampled GPHA security personnel have knowledge about the implementation of the code. This obviously implies that (all things being equal) the Port Authority is more abreast with the

ISPS Code implementation and comply more with the provisions of the code, than the operators of the fishing vessels in the fishing harbour.

4.2.4.2 The Security Level and Measures Set for the Tema Fishing Harbour

To further establish whether or not the respondents are practically involved in the implementation of the ISPS Code and as such know the security level set for the fishing harbour operations, they were asked to indicate the security level under which the fishing harbour operates. The responses are as illustrated in figure 4.5 below.

Figure 4.5 Responses about the Current Security Level in Tema Fishing Harbour



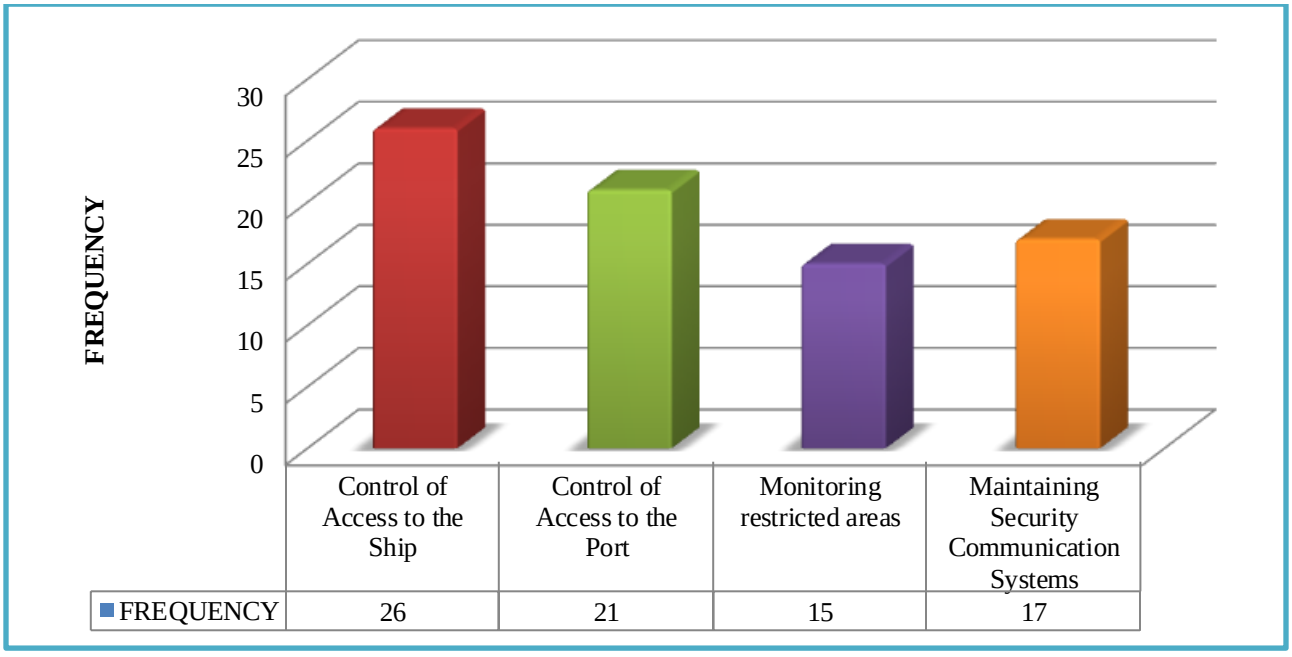
Source: Field data

It is indicated in figure 4.5 above that majority of the respondents, representing 55% say the fishing harbour currently operates under security level 1 whilst 36% of them do not know the security level set for the fishing harbour operations. However, one respondent mentioned that the

fishing harbour operates under security level 2. Whiles a lack of consensus is clearly displayed in these responses, it was noticed that all the sampled NAFAG members who responded that they are knowledgeable about the implementation of the code answered either *don't know* or *level 2*. Given the fact that majority of the sampled NAFAG members were already lacking in knowledge about the implementation of the ISPS Code at the fishing harbour, coupled with a considerable number of them stating that they did not know the set security level, one can infer from figure 4.5 and agree with the majority that the fishing harbour operates under the set security level 1.

Moreover, the respondents to the questionnaires were also asked to indicate the specific security measures that resulted from the security level set for the fishing harbour operations. The responses received are summarised below in figure 4.6;

Figure 4.6: Security Measures resulting from the set Security Level.



Source: Field data

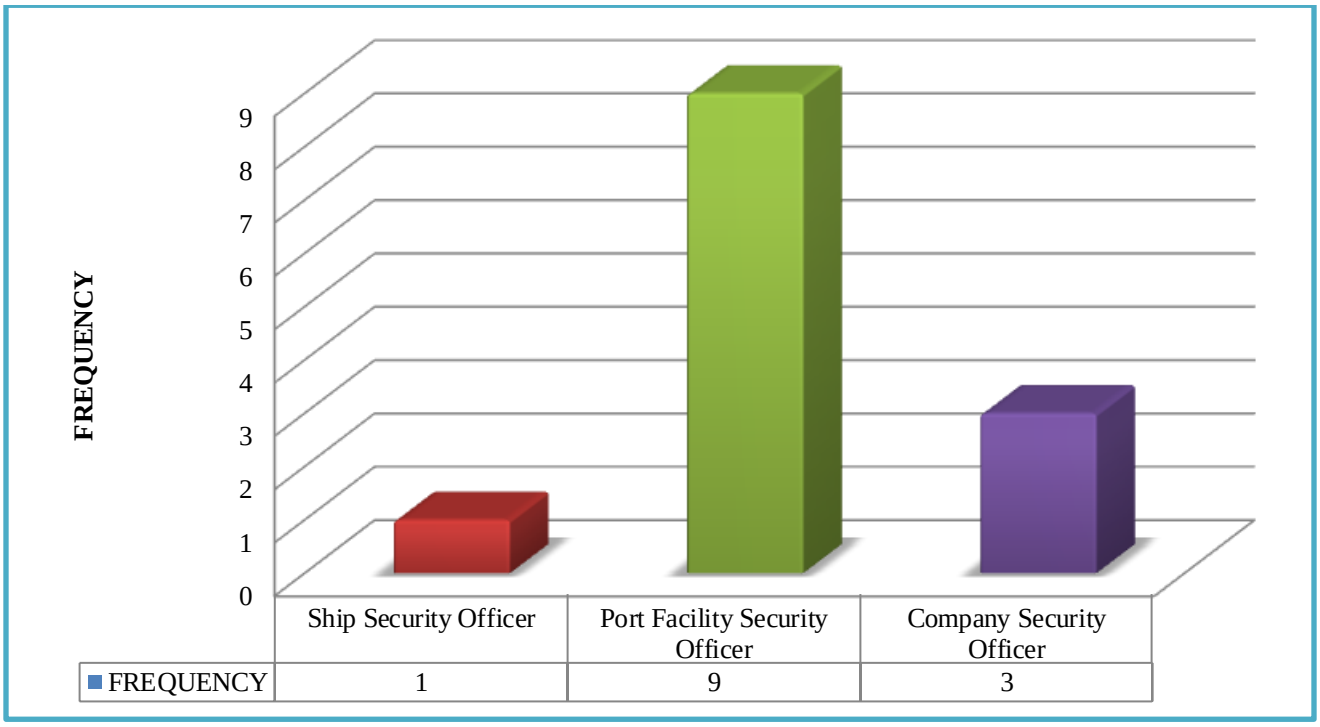
The responses as summarised in figure 4.6 above clearly indicate that all the respondents are privy to some security measures pertaining to the control of access to the ship. Majority of the respondents representing 80% and including all the GPHA security, mentioned that there are measures to control access to the fishing Harbour. However, a good number of the respondents representing 58% and 65% of the total respondents also indicated that there are some required security measures undertaken with regards to the monitoring of restricted areas, and the maintenance of communication systems respectively. On the whole, it can be deduced that although not every respondent is knowledgeable about the implementation of the ISPS Code, one is aware of some prevailing conventional measures relating to the operation of security level 1 of the ISPS Code.

Again, the respondents were asked to indicate whether or not there has been any cause to raise or lower the security level since the commencement of the implementation of the ISPS Code. This was to ascertain if any circumstances in the past had led to application of the recommendations set out in Part B of the ISPS Code. The responses generally indicated that it was once increased to security level 2 during the presidential and parliamentary elections in 2012. This was gathered from 7 respondents who are all GPHA security officials.

4.2.4.3 Enforcement of Security Measures of the ISPS Code

In order to find out the structures and personnel put in place to ensure the enforcement of the security measures and the achievement of the objectives of the ISPS Code, the respondents were asked to indicate whether or not they have the required ISPS security personnel to ensure effective and efficient compliance with the code. Figure 4.7 below gives a graphical rundown of the responses in this regard.

Figure 4.7: Availability of ISPS Code Personnel



Source: Field data

The illustration from figure 4.7 above shows that the existence of Port Facility Security Officer (PFSO) is more widely known than Company Security Officer (CSO) and the Ship Security officer (SSO). Apparently, all the sampled GPHA security officials were those who indicated the existence of PFSO without confirming that for the CSO and the SSO. However, majority of the NAFAG members did indicate that the chief officer (a crew member) is in charge of the security of the fishing vessels.

4.2.5 The Impact of the Implementation of the ISPS Code on Fishing Harbour Operations

The researcher asked the respondents whether or not the implementation of the ISPS Code has brought any security requirement that restrict access to the fishing harbour. This was to find out if by the implementation of the code, the Port Authorities or the Fishing Harbour Authorities have prevented unauthorised access. 18 respondents representing 69% of the total respondents thought that unauthorised access to the fishing harbour has not been prevented as it occurs at the main harbour whiles 8 of them thought otherwise.

The security requirement of checking for visitors *pass* to grant authorised access, according to the majority of the respondents who thought the implementation has not positively impacted on unauthorised harbour access, has not been duly enforced. In fact, the researcher was not subjected to any security checks before accessing the fishing harbour to administer the questionnaires. It can therefore be deduced that the implementation of the ISPS Code is yet to meet the objective of preventing unauthorised access of persons to the Tema Fishing Harbour.

The researcher also asked the respondents whether or not the implementation of the ISPS Code has brought any security requirement that restrict access to the fishing vessels. This again was to find out if by the implementation of the code, the fishing vessel operators have prevented authorised access to their vessels.

This time, nearly all the respondents with the exception of 3 GPHA security officials indicated that, unauthorised access to the fishing vessels have to a large extent been prevented. 15 of the NAFAG members mentioned that they are required to post security personnel at the gangway to take record of all persons embarking and disembarking the ship. However, none of the

respondents was able to discuss any additional security requirement or duties in relation to controlling restricted areas on board and the maintenance of communication protocols. It can therefore be deduced that apart from the requirement to post security personnel at the gang way, the implementation of the ISPS Code has not brought any difference in the requirement to monitor restricted areas and maintain communication protocols.

The respondents were also asked to indicate whether or not the security requirements made on the fishing vessel operations had increased their cost of operation to find out the financial implication of the implementation of the ISPS Code. All the respondents including all the sampled NAFAG members indicated that the implementation of the ISPS Code has no financial impact on their operation. This comes to imply that no cost is incurred because no commitment on the part of the fishing vessel operators has so far been made, particularly in respect of the security personnel and security assessment required by the code.

4.3 RESPONSES FROM PERSONAL INTERVIEWS

The responses discussed in this section also relate to the data gathered through the personal interviews with the Flag State Officer (FSO) and the dock master, all at the Tema Fishing Harbour.

4.3.1 Implementation of the ISPS Code at the Tema Fishing Harbour

In order to determine the rate of application of the ISPS Code at the Tema Fishing Harbour, both interviewees were asked about the total number of registered fishing vessels operating in the Tema Fishing Harbour and the number of those to which the code applies.

In response, the FSO said that *"there are hundreds of registered fishing vessels, ranging from 150 GT to 800 GT, licensed to operate in Tema Fishing Harbour".* He however could not give the exact number of the total licensed fishing vessels operating in the harbour. The dock master also could not be specific on the total number of registered fishing vessels. Rather, he reviewed his documents and gave an exact number of 18 registered fishing vessels which are above 500 gross tonnes and to which the code is applicable. Given this limited number of fishing vessels to which the code applies, one can deduce that, the code has not had a significant and universal appeal and recognition in the fishing vessel operations in the harbour.

Before the implementation of the ISPS Code, certain necessary security preparations are to be undertaken by the Port Authorities and ship operators. To unearth these necessary security preparations undertaken in the fishing harbour, the dock master was posed with the question of their security preparations before the implementation of the code. In response, the dock master mentioned the following security preparations:

- *"We had to rebuild the weak part of the then uncompleted fence wall and make it as complete as it is today*
- *It was also ensured that the CCTV cameras engulf the entire Port of Tema including the fishing harbour*
- *We had to purchase security patrol boats for security patrols*
- *Appointment of Port Facility Security Officer who is also in charge of the fishing harbour and other security officials"*

The above security investment made by the Port Authority in preparation to implement the code is simply an indication of a commitment to readily provide security for the overall operations of

the port including the fishing harbour. However, it can be noted that many of the preparations are generally meant to benefit the whole community of the port of Tema with the exception of the reconstruction and completion of the fishing harbor fence wall.

When the FSO was asked to what extent was the security adjustment in the fishing harbour more or less than in other port facilities, he mentioned that the adjustment made in the fishing harbour was far less than others.

4.3.1.1 The Implementation of Security Level Activities in the Fishing Harbour

In order to ascertain exactly which security level is set for the fishing harbour operations, both interviewees were asked about the security level under which the harbour operates and whether or not it has ever been raised or lowered. It was indicated by the dock master that security level 1 is set for the whole port area of Tema since the beginning of the implementation of the code except during the 2012 elections when it was raised to level 2. The FSO confirmed exactly what the dock master said and added by saying the following:

> *"Ghana is relatively peaceful and does not attract any acts of terrorism and so we do not consider our ports including the fishing harbour to be subject to any substantial risk whatsoever"*

The above quote by the FSO simply implies that the security level 1 set for the port is mainly because of the relative peace that the country enjoys and the hope that it continues. It was discussed with the FSO that it became necessary to raise the security level to 2 mainly because of the tension around the 2012 elections particularly the court petition that followed it.

During the personal interviews, both the FSO and the dock master mentioned the security measures that have resulted from the implementation of the ISPS Code to include:

- The use of patrol boats to prevent swimming in the fishing harbour and monitoring of other restricted areas;
- The use of *port pass* to allow only authorised access into the fishing harbour;
- The operation of 24 hours of the CCTV throughout the Tema Port area;
- The requirement of security personnel to monitor the gang way;
- The continuous assessment of the security of the port to update its security measures.

It is evident from the above listed security measures undertaken to implement the ISPS Code that inasmuch as the conventional security measures are so claimed to be implemented, there is a missing element of security measure by way of absence of restriction access to the fishing harbour by fishing vessels. The reason for such omission is later discussed in section 4.3.3 of this chapter as a challenge in the implementation of the code at the fishing harbour.

4.3.2 The Effects of the Implementation of the ISPS Code on Fishing Harbour Operations

When the interviewees were asked about the impact of the implementation of the ISPS Code on the operations in the fishing harbour, the dock master gave the following responses:

In respect of the control of access to the fishing harbour, he mentioned that because of the frequent security patrols along the water ways in the harbour, people no longer swim in the fishing harbour. He quickly added that because of that, they have been able to prevent unauthorised boarding of the fishing vessels through the harbour entrance and the main harbour.

Also, in respect of the performance of security duties in the fishing harbour and on fishing vessels, the dock master said that the implementation of the code has brought a continuous presence of the security patrol boats around the water ways to prevent unauthorised access to the fishing harbour.

Moreover, with regards to the monitoring of the restricted areas in the fishing harbour and fishing vessels, the dock master indicated that they have designated many restricted areas out of bounds to the general public but they are yet to mark them as required by the code. He however implied that in the meantime, they rely on the frequent security patrols to keep people away from such areas.

Lastly in respect of the handling of cargo, the dock master explained that in order to keep the large number of workers going on board to unload the fishing vessels, it is required that the unloading of the fishing vessels is done mechanically with the use of the conveyor belts. When the researcher challenged that assertion with the observation that all the vessels unloading at that time were not using the conveyor belts, he quickly exclaimed that *that is part of the problem* as discussed in sub section 4.3.3 below.

During the interview with the FSO concerning how the implementation has affected the cost of operation in the fishing harbour, he indicated that the preparations towards the commencement of the implementation of the code cost the Port Authorities so much and still requires significant expenses to keep the implementation going. However, he stated that it would demand so much from the vessel operators to implement the code thus adding to their cost of operation. The dock master also speculated that the implementation of the code will interrupt the free flow of their operations in the port.

Attempts were made by both interviewees to discuss the merits and demerits of the implementation of the ISPS Code in the port. Apart from the dock master mentioning that the implementation of the ISPS Code has the merit of bringing about better control of access of persons to the fishing harbour, most of their comments especially pertaining to the demerits included *more cost, interruptions to work, more administrative and paper work*. These were noticed to be speculative talk rather than being an experience.

4.3.3 Challenges confronting the Implementation of the ISPS Code at the Fishing Harbour

The fishing vessel operators' lack of knowledge out the implementation of the ISPS Code at the Tema Fishing Harbour was alarming and the contrary observations the researcher made at the harbour led to the question about the challenges affecting the implementation of the code during all the personal interviews. This brought about the following revelations from the respondents:

The FSO was of the view that;

> *"The fishing harbour as it now is viewed by the dominating indigenous fishermen or vessel operators as their home and property to which they cannot be subjected to any burdensome regulation that will drive their customers away".*

It was stated by the FSO that the situation of the "*community influence*" has made it quite impossible to introduce any restrictive policy or guide to completely prevent unauthorised access by all customers of the fishing harbour. The FSO also stated that the fishing community seems to benefit more when many people come to demand for their perishable products immediately upon arrival from the sea. Therefore any attempt to prevent unauthorised access by potential customers may not serve the interest of the vast majority of the fishing vessel operators to whom the ISPS

Code does not apply. It can therefore be deduced that not only the "*community influence"* but the limited number of fishing vessels to which the ISPS Code applies, has made the implementation of the code very challenging.

When the FSO was asked to confirm whether or not the limited coverage of the ISPS Code has been the reason why no restriction is placed on the fishing vessels entering the fishing harbour, he simply exclaimed that;

"That is the thing ooh!"

It can therefore be said that the limited scope of application of the ISPS Code at the Tema Fishing Harbour has been the major reason why it has been difficult for the ISPS administration authority to effectively implement code.

The dock master also highlighted the fact that;

"The canoe beach, which is part of the fishing harbour, traditionally allows direct trade in fish with the fishermen at their berths and this has brought about the situation where a number of unauthorised persons, who have no business in the harbour, access the harbour facility".

This implies that inasmuch as there are security checks to prevent unauthorised access at the main fishing harbour gate and frequent security patrols to prevent unauthorised access to the fishing harbour, the canoe beach has become another gate through which such security measures can be evaded.

The FSO again mentioned that;

"The use of the fishing harbour facility as the centre or market for trade in fish where people come to wait upon the arrival of fishing vessels to buy fish directly from the fishermen in the harbour has greatly hindered the implementation of the ISPS Code"

It is clearly implied in the statement above that the commercial activities in the fishing harbour takes place throughout the facility and is not limited to only the canoe beach.

Lastly the dock master revealed that;

"Part of the challenge facing the implementation is the unwillingness of the vessel operators to which the code applies to use the conveyor belt discharging system to help limit the culture of inviting unauthorised persons to work as gangs on the fishing vessels".

The above statement further implies that apart from the vast majority of the vessel operators to which the ISPS Code does not apply, the few who are under the coverage of the code do not adhere to some of the security guidelines to help prevent unauthorised access to the fishing harbour and vessels.

The stance of the implementation authority towards the implementation of the ISPS Code at the fishing harbour was revealed when the question of the efforts being made to mitigate the challenges facing the implementation of the ISPS Code was raised. The FSO indicated by saying;

"Part of the challenge in implementing the security code in the fishing harbour is the fact the broken down fishing vessels are being used as home by squatters from the community, locally *called "abaaba"*

These squatters are mainly known for their involvement in incidents such as theft or pilferage, stowaways, etc. which threatens the security of the fishing harbour.

The FSO went on to express their hope in the court granting them the right to clear such vessels and so be able to prevent unauthorised access of persons to the harbour. From the foregoing, it can be seen that the ISPS administration authority is facing serious challenge of "*community influence"* as well as pursuit of the right to get rid of broken down vessels from the fishing harbour, to eliminate the practice of squatters using them as "homes".

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter presents highlights of the findings as discussed and analysed in the previous chapter and conclusions drawn on the findings, as they relate to the objectives of the research. It further discusses the way forward to ensure effective and efficient implementation of the ISPS Code at the Tema Fishing Harbour.

5.2 SUMMARY

The findings revealed that more of the GPHA security officials were quite knowledgeable about the implementation of the ISPS Code whilst the majority of the sampled NAFAG respondents were not.

It was highlighted in the findings that it became necessary to rebuild and complete the Tema Fishing Harbour fence wall, and other general security preparations that were extended to it before the ISPS Code was implemented. The research pointed out however that the adjustments made in the fishing harbour were far less than in other port facilities.

It was also found out that the ISPS Code currently applies to only 18 registered fishing vessels of 500 GT or more, amongst the hundreds of fishing vessels licensed to operate in the Tema Fishing Harbour.

The study also brought to light that the fishing harbour currently operates under security level 1, the normal security level set for the entire Port of Tema by virtue of the relative peace the

country enjoys and the unattractiveness of the port to attacks from terrorists. However, the study highlighted that it was only during the 2012 Elections that the security level was raised to level 2.

Moreover, the security measures adopted in line with the normal security level are conventional including the use of harbour pass and the post of security personnel at the gangways, to help control unauthorised access to the fishing harbour and vessels respectively. However, it was evident that not all the security measures are enforced particularly with the appointment of the security personnel required by the ISPS Code.

Again, it was discovered that the fishing harbour is yet to meet the ISPS Code's objective of preventing unauthorised access of persons to the fishing harbour and that it has not brought any difference in the requirement to monitor restricted areas and maintain communication protocols. Even though, the research also revealed that the implementation of the code offers a better opportunity to control unauthorised access to the fishing harbour and vessels, the demerits associated with it are not yet experienced but they are being speculated by the implementing authorities.

Finally, the study revealed that the limited coverage of the ISPS Code, the commercial role of the fishing harbour, the community influence and the unwillingness of the vessel operators to comply with security regulations are the factors challenging the effective and efficient implementation of the ISPS Code at the Tema Fishing Harbour.

5.3 CONCLUSIONS

Relating the main objective of this research which is to study the implementation of the ISPS Code at the Tema Fishing Harbour with the specific objectives of finding out how the code is implemented, identifying the impacts of implementation and finding out the challenges confronting the implementation of the code to the findings earlier discussed (both primary and secondary data), the following conclusions can be drawn.

- Attempt is being made to implement the ISPS Code at the Tema Fishing Harbour through the mechanisms, structures and measures mainly established in the main Port of Tema.
- Whiles the Port Authority makes attempts to purposefully implement the ISPS Code, the fishing vessel operators have not.
- The implementation of the ISPS Code at the Tema Fishing Harbour has not significantly impacted on the functional requirements that are embodied in the ISPS Code, and it is worse in the case of the obligations of the security of the fishing vessels excluding the requirement to control access to the fishing vessels
- The limited application of the ISPS Code at the fishing harbour has not only been a major challenge but has also relaxed the interest of the Administration Authority of the ISPS Code to act to overcome the challenges, and also to ensure the effective and efficient implementation of the ISPS Code.

5.4 RECOMMENDATIONS

Following the findings of this research and the conclusions drawn, the researcher makes the recommendations below to help overcome the challenges confronting the effective and efficient implementation of the ISPS Code at the Tema Fishing Harbour:

- ✓ There is the need to first and foremost undertake a conscious effort to sensitise or educate all the fishing vessel operators to which the ISPS Code is applicable, on the requirements and relevance of the ISPS Code towards the development of a lasting interest and confidence in the operators to buy into the effort of guaranteeing the security of the fishing harbour. This could be done through the organisation of frequent symposia or seminars involving the fishing vessel operators, and other relevant stakeholders of the security of the fishing harbour.
- ✓ There is also the need to designate an exclusive berth within the fishing harbour to accommodate only the fishing vessels that fall under the coverage of the ISPS Code, that would ensure that such vessels are excluded from the commercial role that the fishing harbour plays
- ✓ It is also suggested that the Port Authority undertakes to provide shore handling equipment that would operate on compulsory service charges imposed on the fishing vessels under the coverage of the code, or impose sanctions or penalties on such vessel operators who refuse to employ the services of the ship conveyor belt.
- ✓ It is again suggested that an external market be created for the selling and buying of fish to prevent the commercial activities taking place at the quay. The external market could be located at the land area adjacent to the fishing harbour entrance which is made up of

many unused structures. The external market would effectively complement the efforts to prevent unauthorized access of traders to the fishing harbour.

- ✓ Laid up vessels which do not have court cases should be relocated from the fishing harbour to the anchorage to reduce the habitation of people in them, and also ease the congestion they create. This could open up the harbour to allow for the possibility of designating an exclusive berth for the fishing vessels of 500 GT or more.
- ✓ It is also recommended that an alternative security provision be made to regulate the activities of all the fishing vessels less than 500 GT, as far as they use the port alongside the other registered vessels.

REFERENCES

Agnew, David J.; Pearce, John; Pramod, Ganapathiraju; Peatman, Tom; Watson, Reg; Beddington, John R.; & Pitche, Tony J. (2009). *Estimating the Worldwide Extent of Illegal Fishing.* http://www.plosone.org/article/fetchObject.action?uri=info:doi/10.1371/journal.pone.0004570&representation=PDF.

Ameri, M., & Shewchuk, M. (2007). *Maritime Security and Safety.* www.un.org/depts/los/convention.../07unitar_doalos_2007.pd.

AMSSA. (2013). *Maritime Security*. Retrieved July 12, 2014, from http://www.amssa.net/intelligence/risk-prevention-and-maritime-security.aspx

Anyimadu, A. (2013). *Maritime Security in the Gulf of Guinea: Lessons Learned from the Indian Ocean.* https://www.chathamhouse.org/sites/files/chathamhouse/public/Research/Africa/0713pp_maritimesecurity_0.pdf.

Asuliwonno, C. (2011). *Improving Port Efficiency and Customs OPerations in Ghana: The Case of Ghana Community Network Services Limited (GCNet) under Customs Exercise and Preventive Service (CEPS)* . Kwame Nkrumah University of Science and Technology: http://ir.knust.edu.gh/bitstream/123456789/2170/1/Clement%20Asuliwonno%202011.pdf .

Blede, B. (2014, 11 7). *No shortcuts in ship and port security*. Retrieved 4 30, 2015, from Institute for Security Studies: http://www.issafrica.org/iss-today/no-shortcuts-in-ship-and-port-security

Burgess, D. T. (2001). *A general introduction to the design of questionnaires for survey research*. University of Leeds: http://iss.leeds.ac.uk/downloads/top2.pdf.

Burmester, C. (2005). International Ship and Port Facility Security (ISPS) Code – perceptions and reality of shore-based and sea-going staff. *Maritime Security and MET* , P185-194.

Business & Maritime West Africa. (2014, August 29). *ISPS Code Compliance in Nigeria: 10 years after*. Retrieved April 28, 2015, from Business & Maritime West Africa: http://businessandmaritimewestafrica.com/shipping-development/isps-code-compliance-in-nigeria-10-years-after

Canca, H. S. (2014). Defeating Terrorism, Piracy and Armed Robbery against Ships in a Collective Maritime Security System. *International Journal of Human Sciences* , Volume: 11 Issue: 1 P: 1283-1300.

Cochrane, K. L. (2001). Chapter1: Fisheries Management. In K. L. Cochrane, *A fishery manager's guidebook Management Measures and Their Application.* http://www.fao.org/docrep/005/y3427e/y3427e03.htm.

Fiorelli, M. (2014). *Piracy in Africa: The Case of the Gulf of Guinea.* Kofi Annan International Peacekeeping and Training Centtre, Accra: http://www.kaiptc.org/Publications/Occasional-Papers/Documents/Fiorelli-KAIPTC-Occasional-Paper-2014.aspx.

Ghana Maritime Security Act. (2004). *Ghana Maritime Security Act, 2004.* Act 675: http://faolex.fao.org/docs/pdf/gha93381.pdf.

GMA. (2011). *Maritime Security*. Retrieved June 11 2014, from Ghana Maritime Security: http://www.ghanamaritime.org/en/about-us/programmes/maritime-security.php

GPHA. (2013, June 10). *Tema Port*. Retrieved June 9, 2015, from Ghana Port and Harbours Authority: http://ghanaports.gov.gh/files/a161bfded01e46f88d8e09fe19dea2e0.pdf

Graf, A. (2011). *Countering Piracy and Maritime Terrorism in South East Asia and off the Horn of Africa.* http://www.maritimesecurity.eu/fileadmin/content/news_events/workingpaper/PiraT_Arbeitspapier_Nr4_2011_Graf.pdf.

Harvey, L. (2013, April 8). *Research & Consultation Guidelines* . Retrieved from Kirklees Council: http://www.qualityresearchinternational.com/socialresearch/questionnaire.htm

Hogan, J. P., & Chapman, L. (2005). *International Ship and Port Facility Security (ISPS) Code- What does it mean for Fishing Vessel Security?* http://www.spc.int/DigitalLibrary/Doc/FAME/InfoBull/FishNews/113/FishNews113_24_Hogan.pdf.

IMB. (2014). *ICC IMB Piracy and Armed Robbery Against Ships – 2014 Annual Report.* London, UK: file:///C:/Users/max%20doc/Downloads/2013%20annual%20imb%20piracy%20report.pdf.

IMB. (2015). *ICC IMB Piracy and Armed Robbery Against Ships – 2014 Annual Report*. http://www.hellenicshippingnews.com/wp-content/uploads/2015/01/2014-Annual-IMB-Piracy-Report-ABRIDGED.pdf.

IMO. (2002). *Consideration and Adoption of the International Ship and Port Facility Security (ISPS) Code*. ftp://law.resource.org/pub/us/cfr/ibr/004/imo.isps.2003.pdf.

IMO. (2009). *International Convention for the Safety of Life at Sea*. http://www.mar.ist.utl.pt/mventura/Projecto-Navios-I/IMO-Conventions%20(copies)/SOLAS.pdf.

IMO. (2012, June 27). *DP World High-Level Counter-Piracy Conference - "The view from IMO on the current challenge of piracy; A Regional Response to Maritime Piracy: Enhancing Public-Private Partnerships and Strengthening Global Engagement*. Retrieved June 10, 2015, from International Maritime Organisation: http://www.imo.org/MediaCentre/SecretaryGeneral/SpeechesByTheSecretaryGeneral/Pages/dubaipiracyIMOview.aspx

IMO. (2014, December 03). *Regional Information Sharing Centres*. Retrieved June 11, 2015, from International Maritime Organisation: http://www.imo.org/OurWork/Security/WestAfrica/Pages/MTISC-Gulf-of-Guinea.aspx

International Peace Institute. (2014). *Insecurity in the Gulf of Guinea: Assessing the Threats, Preparing the Response*. New York: http://reliefweb.int/sites/reliefweb.int/files/resources/ipi_e_pub_gulf_of_guinea.pdf.

Information Sharing Environment. (2005). *National Strategy for Maritime Security*. https://www.ise.gov/sites/default/files/0509%20National%20Strategy%20for%20Maritime%20Security.pdf.

Ivankova, N. V. (2002). *A Sampled Mixed Methods Dissertation Proposal*. Lincoln, Nebraska: http://www.sagepub.com/creswellstudy/Sample%20Student%20Proposals/Proposal-MM-Ivankova.pdf.

Kajornboon, A. B. (2004). *Using interviews as research instruments*. www.culi.chula.ac.th/e-journal/bod/annabel.pdf.

Kothari, C. R. (2004). *Research Methodology: Methods and Techniques*. New Delhi: New Age International (P) Limited, Publishers.

Lewerenz, C., & Vorrath, J. (2015). *Illegal Fishing and Maritime Security: Towards a Land- and Sea-based Response to Threats in West Africa*. http://www.swp-berlin.org/fileadmin/contents/products/comments/2015C02_LewerenzVrr.pdf.

MarEx. (2013, October 17). Maritime Piracy Falls to Lowest Level in 7 Years, Reports IMB. *The Maritime Executive* .

Marfo, E. A.-M. (2009). *E-Business Adoption in the Banking Industry in Ghana*. Lulea University of Technology: http://epubl.ltu.se/1653-0187/2009/038/LTU-PB-EX-09038-SE.pdf.

Maynard, T. (2002). *Boys and Literacy: Exploring the Issues*. London: Routledge Falmer: https://books.google.com.gh/books?id=RveCAgAAQBAJ&pg=PA49&lpg=PA49&dq=,+data+analysis+is+seen+to+consist+of+three+concurrent+flows+of+activities+%28Miles

+and+Huberman,+1994%29&source=bl&ots=Zv97WAx5Uy&sig=pG__AgiYb1dTA7AAH21Cc1B5NgQ&hl=e.

Mazaheri, A. (2008). *How the ISPS code affects port and port activities.* University College of Borås : http://bada.hb.se/bitstream/2320/3579/1/Arsham%20Mazaheri.pdf.

Meau, I. (2010). *The ISPS Code and the influence on shipping.* http://lib.ugent.be/fulltxt/RUG01/001/458/476/RUG01-001458476_2011_0001_AC.pdf.

MNE7. (2012). *Framework for Regional Analysis Maritime Security Regimes (MSR) Draft.* mne.oslo.mil.no:8080/Multinatio/MNE7produk/RegionalMa1.

Mosely, A. (2009). The Implementation of International Maritime Security.

MOWCA. (2008). *Maritime Security Threats and Responses in the West and Central African sub-region/Gulf of Guinea.* New York: http://www.un.org/depts/los/consultative_process/documents/9_magnusaddico.pdf.

Niglas, K. (2000). Combining quantitative and qualitative approaches. *European Conference on Educational Research.* Edinburgh: www.leeds.ac.uk/educol/documents/00001544.htm.

Nimmich, J. L., & Goward, D. A. (2006). *Maritime Domain Awareness: The Key to Maritime Security* . file:///D:/max%20movies%20ii/vol-83_IV_nimmich_and_goward.pdf.

Onuoha, F. C. (2012). *Piracy and Maritime Security in the Gulf of Guinea: Nigeria as a Microcosm.* http://studies.aljazeera.net/ResourceGallery/media/Documents/2012/6/12/201261294647291734Piracy%20and%20Maritime%20Security%20in%20the%20Gulf%20of%20Guinea.pdf: Al Jazeera Center for Studies.

Osinowo, A. A. (2015). *Combating Piracy in the Gulf of Guinea.* http://www.mphrp.org/publications/ASB-30-Feb-2015-Combating-Piracy-in-GoG.pdf.

Palma, M. A. (2006). *Analysis of the Adequacy of the Philippine Legal, Policy and Institutional Framewok to Combat Illegal, Unreported and Unregulated Fishing* . University of Wollongong: http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1589&context=theses.

Sharma, A. (2011). Methodology. In A. Sharma, *Dynamics of organizational climate on risk and success of software projects* (pp. P.45-54). Jaypee Institute of Information Technology: http://shodhganga.inflibnet.ac.in/bitstream/10603/2428/12/12_chapter%203.pdf.

Singleton, R. A. j., & Strait, B. C. (2010). *Approaches to Social Research, 5th edition.* New York: Oxford University Press.

Sodik, D. M. (2007). *Combating Illegal, Unreported and Unregulated Fishing in Indonesian Waters: the need for Fisheries Legislative Reforms.* University of Wollongong: file:///D:/max%20movies%20ii/02Whole.pdf.

Stolsvik, G. (2008). *Transnational organised fisheries crime as a maritime security issue.* http://www.un.org/depts/los/consultative_process/documents/9_gunnarstolsvikabstract.pdf.

Tesch, P. (2011, 10 312). *Gulf of Guinea: Is pirate fishing the cause of piracy and is it becoming the new Somalia.* Retrieved 05 04, 2014, from Afrcan Arguments: africanarguments.org/2011/10/31/is-'pirate-fishing'-the-cause-of-piracy-and-will-the-gulf-of-guinea-become-the-new-'somalia'-by-pieter-tesch/

Tewksbury, R. (2009). Qualitative versus Quantitative Methods: Understanding Why Qualitative Methods are Superior for Criminology and Criminal Justice. *Journal of Theoretical and Philosophical Criminology* , Vol 1 (1).

The Royal Institute of International Affairs. (2013). *Maritime Security in the Gulf of Guinea.* Chatham House, London: http://www.chathamhouse.org/sites/files/chathamhouse/public/Research/Africa/0312confreport_maritimesecurity.pdf.

Timben, N. R. (2011). *Piracy: A Critical Examination of the Definition And Scope of Piracy and the Issues Arising therefrom that Affect the Legal Address of the Crime Globally.*

Thomas, P. Y. (2010). Research Methodology and Design. In P. Y. Thomas, *TOWARDS DEVELOPING A WEB-BASED BLENDED LEARNING ENVIRONMENT AT THE UNIVERSITY OF BOTSWANA* (pp. 291-334). South Africa: http://uir.unisa.ac.za/bitstream/handle/10500/4245/05Chap%204_Research%20methodology%20and%20design.pdf.

UNCLOS. (1982). *United Nations Convention on the Law of the Sea.* Geneva, Switzerland : UN: http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf.

UNODC. (2013). *Transnational Organized in West Africa: A Threat Assessment.* http://www.unodc.org/documents/data-and-analysis/tocta/West_Africa_TOCTA_2013_EN.pdf.

Williams, S. O. (2014). *Assessing State Jurisdiction and Industry Regulation over Private Maritime Security*. The Arctic University of Norway: http://munin.uit.no/bitstream/handle/10037/7150/thesis.pdf?sequence=1.

Wilson, B. (2015). *Five Maritime Security Developments that will Resonate for a Generation.* Harvard National Security Journal: http://harvardnsj.org/wp-content/uploads/2015/04/Wilson-NSJ-Article-PDF.pdf.

APPENDIX I

RESEARCH QUESTIONNAIRES FOR NAFAG & GPHA

INTRODUCTION

I am a student of the Regional Maritime University studying MA, Ports and Shipping Administration. I am researching on the topic **"The Implementation of the ISPS Code at Tema Fishing Harbour"** as part of my requirement for the award of the master's degree stated above.

I shall be very grateful if you can find time to fill this questionnaire to enable me to successfully complete this research.

I hereby assure that all information given shall be treated as confidential and shall only be used for academic purposes.

Contact: +233243516299

SECTION A: Respondent's Background Information

Name of Organisation: _____

Position in Organisation: _____

Years of work experience: 11-15 [ ] 16-20 [ ] 21-25 [ ] 30 & above [ ]

SECTION B: How the ISPS Code is Implemented at the Tema Fishing Harbour

1. **Are you knowledgeable about the implementation of the ISPS Code at the Tema Fishing Harbour?** Yes [ ] No [ ]
2. **What security level is set for the fishing harbour?**

Level 1 [ ] Level 2 [ ] level 3 [ ] Don't know [ ]

3. List the specific security measures that resulted from the set security level.

a. _____

b. _____

c. _____

4. Has there been any cause to raise or lower the security level? Yes [ ] No [ ]

5. If YES, then give reasons why?

_____

_____

6. Does your organisation have the ISPS Code personnel required to ensure compliance with the code? Yes [ ] No [ ]

7. If YES, mention the ISPS Code personnel you have in your organisation.

a. _____

b. _____

c. _____

SECTION C: The Impact of the Implementation ISPS Code in the fishing harbour

1. Has the implementation of the ISPS Code brought any security requirements that restrict access to the fishing harbour? Yes [ ] No [ ]

2. If YES, briefly state the security requirements that restrict access to the fishing harbour.

a. _____

b. _____

c. _____

3. Has the implementation of the ISPS Code brought any security requirements that restrict access to fishing vessels? Yes [ ] No [ ]

4. If YES, briefly state the security requirements that restrict access to the fishing vessels.

a. _____

b. _____

c. _____

5. Has the security requirements increased their cost of operation of fishing vessels?

Yes [ ] No [ ]

6. If YES, to what extent has the implementation of the ISPS Code increased the cost of operating fishing vessels?

Very much [ ] Much [ ] Little [ ] Very little [ ]

SECTION D: Additional Comments

Any additional comments:

a. _____

b. _____

APPENDIX II

INTERVIEW GUIDE FOR GHANA MARITIME AUTHORITY (flag state officer)

How the ISPS Code is Implemented at the Tema Fishing Harbour

1. How many total registered fishing vessels are licensed to operate in Tema Fishing Harbour?
2. How many of the fishing vessels are 500 GT and above and for which the ISPS Code apply?
3. What were the security arrangements in place at the Tema Fishing Harbour before the coming into force of the ISPS Code?
4. What necessary security preparations were undertaken in the fishing harbour before adopting the code in 2004?
5. To what extent were the security adjustments in the fishing harbour more or less than in other port facilities?
6. In implementing the ISPS Code, what security level is set for the fishing harbour?
7. What factors account for this security level?
8. What specific security measures resulted from the set security level?
9. Has the Authority found a cause to raise or lower the security level and why?
10. How does the Authority maintain or enforce its security measures to effectively implement the code?

The Impact of the Implementation ISPS Code on the Operations of the Fishing Vessels

1. How has the implementation of the code affected the fishing harbour operations with respect to the:

a) Control of access to the fishing harbour and fishing vessels?

b) The performance of security duties in the fishing harbour and on fishing vessels

c) Monitoring of the restricted areas of the fishing harbour and fishing vessels?

d) Handling of cargo and ships' stores?

2. How has the implementation impacted on the cost of operation of fishing vessels?

3. What are the merits and demerits of the implementation of the ISPS Code in the fishing harbour?

Challenges confronting the Implementation of the ISPS Code at the Tema Fishing Harbour

1. What are the factors that challenge the successful implementation of the code at the Tema Fishing Harbour?

2. What actions are being undertaken to overcome the challenges affecting the implementation of the code?

APPENDIX III

INTERVIEW GUIDE FOR GPHA (dock master)

How the ISPS Code is Implemented at the Tema Fishing Harbour

1. What specific security measures are in place to ensure effective implementation of the ISPS Code at the fishing harbour?
2. How do you maintain or enforce these security measures to effectively implement the ISPS Code in the fishing harbour?

The Impact of the Implementation of the ISPS Code on the Operations of the Fishing Harbour

1. How has the implementation of the code affected the performance of security duties in the fishing harbour with respect to the:
    - **a)** Control of the access of both vessels and persons to the fishing harbour?
    - **b)** Monitoring of the restricted areas in the fishing harbour?
    - **c)** Handling of cargo?
    - **d)** Availability of security communication protocols?

Challenges confronting the Implementation of the ISPS Code at the Tema Fishing Harbour

1. What challenges are encountered in the implementation of the security duties relating to the ISPS Code at the Tema fishing harbour?
2. What actions are being undertaken to overcome the challenges affecting the implementation of the code?