

World Maritime University

The Maritime Commons: Digital Repository of the World Maritime University

World Maritime University Dissertations

Dissertations

10-31-2021

Implementation of the ISPS Code: a case study on the Freeport of Monrovia and the Port of Buchanan

Fatu M. Shaw

Follow this and additional works at: https://commons.wmu.se/all_dissertations



Part of the [Transportation Commons](#)

Recommended Citation

Shaw, Fatu M., "Implementation of the ISPS Code: a case study on the Freeport of Monrovia and the Port of Buchanan" (2021). *World Maritime University Dissertations*. 1740.

https://commons.wmu.se/all_dissertations/1740

This Dissertation is brought to you courtesy of Maritime Commons. Open Access items may be downloaded for non-commercial, fair use academic purposes. No items may be hosted on another server or web site without express written permission from the World Maritime University. For more information, please contact library@wmu.se.

WORLD MARITIME UNIVERSITY

Malmö, Sweden

**IMPLEMENTATION OF THE ISPS CODE: A
CASE STUDY ON THE FREEPORT OF
MONROVIA AND THE PORT OF
BUCHANAN**

FATU M. SHAW
Liberia

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

MASTER OF SCIENCE
in
MARITIME AFFAIRS

(MARITIME LAW AND POLICY)

2021

Declaration

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

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

(Signature): 

(Date): 09/21/21

Supervised by: **George Theocharidis**

Supervisor's affiliation. **Maritime Law and Policy**

Acknowledgements

I firstly want to acknowledge the almighty God for giving me the grace, health and life to have reached this far. I would also like to appreciate my husband, Mr. Abraham Shaw Sr. and kids for their unconditional support.

I am extremely grateful to the Liberia Maritime Authority, The World Maritime University, and the Norwegian seafarers for giving me this opportunity in achieving one of my dreams and reaching one of my goals in my education and career. Thanks to my supervisor, Professor George THEOCHARIDIS for his countless and tireless supervisory role throughout the writing of this paper.

To all my family and friends, thanks for helping me withstand the test of time while studying.

Finally, I will like to encourage all Liberian Women in the maritime industry to pursue their MSc at the World Maritime University (UNSDG 5).

Abstract

Title of Dissertation: **Implementation of the ISPS Code: A Case Study on the Freeport of Monrovia and The Port of Buchanan**

Degree: **Master of Science**

The dissertation focused on the Implementation of the International Ship and Port Security Code (ISPS Code): A Case Study on the Freeport of Monrovia (FOM) and The Port of Buchanan (POB). The study assessed the implementation of the ISPS Code in both ports, identified the gaps and analyzed the implementations process on the growth and development. In addition, it looks at the elements that influence the implementation process, as well as identify the players involved.

The numerous stakeholders in charge of maritime activities, such as shipboard employees and companies, are expected to report any threats and take preventative actions to protect the port and operators at all time. As a result, Liberia enacted legislation requiring the Liberia Maritime Authority (LiMA) to administer, supervise, monitor, enforce, and apply the ISPS Code in the FOM and POB. However, the research established that LiMA has been unable to fully implement the ISPS code due to a variety of domestic and political concerns. Respondents were chosen utilizing (QUAN-qual) approaches to engage in a semi-structured open-ended questionnaire sent to respondents through email, and feedback was obtained using the same emails, in order to identify and address activities influencing the execution of the ISPS Code. To increase the researcher's competence on ISPS implementation in the FOM and POB, the researcher looked through books, journals, articles, the internet, and textbooks.

As a result of this study, the researcher has concluded that stakeholder dialogue represents a critical element of addressing challenges facing the implementation of the ISPS Code in the FOM and POB. Consequently, it is proposed that a regular training,

drilling and exercises be conducted with personnel associated with the implementation of the ISPS code.

Additionally, proper lighting systems and beam lights be instilled at the FOM and POB to facilitate night operations at the two ports. The researcher recommends that a fence be constructed to address the inadequate and improper shoreline to prevent ill-intentions people from entering the ports. Also the researcher suggests that a regular evaluation exercise be establish to check the security operations in compliance to the ISPS measures in the both ports. The port facility security plans (PFSPs) should be taken into consideration, and these are the measures that will ensure that the right policies are followed in all the working processes. Subsequently, the Liberian government must ensure the employment of qualified personnel that will effectively implement measures that are undertaken towards the realization of secure ports. The implementation of the ISPS Code requires lot of workforce, planning, and equipment, and these costs are realized through the ports charging it's ISPS surcharge.

Keywords: ISPS Code, Liberia, threats, Security, Maritime Authority, Ports, jurisdiction, FOM, POB.

Table of Contents

Declaration.....	ii
Acknowledgements.....	iii
Abstract.....	iv
Table of Contents.....	vi
List of Abbreviations	ix
Chapter One: Introduction	1
1.1 Background of the Research.....	1
1.2 Motivation of the Research.....	3
1.3 Purpose and Objectives of the Study.....	5
1.4 Research Questions.....	5
1.5 Research Methodology	6
1.6 Scope of the Research.....	7
1.7 Organization of Research	7
Chapter Two: Implementation of the ISPS Code	8
2.1 Introduction.....	8
2.2 Implementation of ISPS Code in Liberia.....	10
2.3 Factors affecting the implementation	11
2.4 Challenges with the implementation.....	17
2.5 Effects of the ISPS Implementation in Liberia	18
2.5.1 Vessel Management	18
2.5.2 Management support	19
2.5.3 Access control	19
2.5.4 Security.....	19
2.5.5 Recognition and Strengthening of International Standards.....	20
2.6 Liberian Vessel Council (LSC).....	20
2.7 Port Security Advisory- Liberia.....	20
2.8 Recommendations.....	21
Chapter Three: Analysis on Implementation of the ISPS Code in FOM and POB ..	22
3.1 Effects of the ISPS Code Implementation on Cargo throughout at the FOM and	
POB.....	22
3.2 Effects of the ISPS Code Implementation on the Ship Traffic Flow at the FOM and	
POB	26
3.3 Effects of the ISPS Code Implementation on the Occupancy Rate of Vessels at the	
FOM and the POB	28
3.4 Effects of the ISPS Code Implementation on the Vessel's Turnaround Time in the	
FOM and POB.....	29
3.5 Challenges in the Implementation of the ISPS Code at the FOM and POB.....	30
3.6 Effectiveness of the Seaborne Security Protocols Implemented in the FOM and POB	
.....	34

3.7 Determination of Causalities Resulting from Lack of full Implementation of the ISPS Code in the FOM and POB.....	36
Chapter Four: Summary, Conclusion and Recommendations	38
4.1. Summary and Conclusions	38
4.2 Recommendations.....	42
References.....	46
Appendices.....	48

List of Figures

Figure 1 Illustrates the diagram of FOM and POB.....	2
--	---

List of Abbreviations

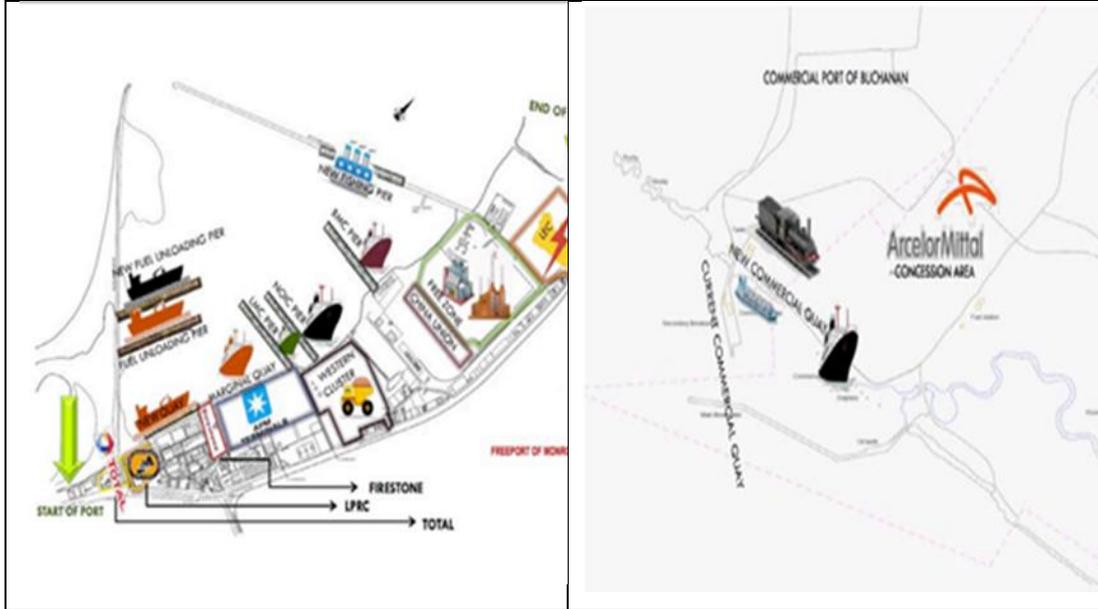
ANOVA	Analysis of Variance
BOR	Berth of Occupancy
CCTV	Closed-circuit television
CSOs	Company Security Officers
FOM	The Freeport of Monrovia
IMO	International Maritime Organization
ISPS	International Ship and Port Security
LSC	Liberian Vessel Council
MET	Organizations of Maritime Education and Training
NPA	National Port Authority
NSC	National Security Council
PFSP	Port Facility Security Plan
PFSOs	Port Facility Security Officers
PFSPs	Port Facility Security Plans
POB	Port of Buchanan
PSA	Port Security Advisory
RSOs	Recognized Security Organization
SOLAS	Safety of Life at Sea
SMM	Safety Management Manual
SSOs	Ship Security Officers
SSP	Ship Security Plan
SPSS	Statistical Package for the Social Sciences
SWOT	Strengths, Weaknesses, Opportunities, and Threats
USCG	US Coast Guard

Chapter One: Introduction

1.1 Background of the Research

The Freeport of Monrovia (FOM) is positioned 6°20.24' North of Monrovia and 10°47.42' West of Montserrado County. While the Port of Buchanan (POB) sits 272 km southeast of the Freeport of Monrovia. In Liberia, the FOM is considered as the industrial port, artificially constructed on the Bushrod Island, Monrovia, Liberia in 1948 (Schulze, 1970) with a 750-hectare port city (3km). Also, the FOM has four (4) piers and a central dock with four (4) cabins, which includes tankers and fishing piers (Authority, 2017). However, the POB is considered as the second-largest harbour, where many of the nation's raw materials are shipped and was opened in 1963 (Franzensburg, 1969). These ports operate under the leadership, management and direction of the National Port Authority (NPA) of Liberia. Additionally, the APM Terminals, China Union, CONEX, SRIMEX, Arcelor Mittal, Total Liberia, and Western Cluster have concession arrangement with the National Port Authority (Authority, 2017).

Structural layout



Freeport of Monrovia

Port of Buchanan

Figure 1: FOM and POB

Source: (Authority, 2017)

However, the International Ship and Port Facility Security Code (ISPS) is primarily concentrated on maritime safety law for ships, ports, cargo, and crew. Before the ISPS code adoption in 2004 by the International Maritime Organization (IMO), the International Convention for Safety Of Life At Sea (SOLAS) was focused on ship protection at sea (Guays, 2020). Since safety and protection are completely separate subjects, new modifications were made to SOLAS and Chapter XI, which contains steps to improve maritime safety by renaming Chapter XI-1 and current Chapter XI-2 emphasize on maritime safety. This new chapter includes the International Code for the Safety of Ships and Port Facilities with the abbreviated title of “the ISPS Code. In the SOLAS convention chapter XI-2, the IMO established the Foreign Ships and Port Facility Security Code ‘ISPS Code’ for ships, ports, seamen, and government departments to aid safety and protection in maritime business (Sun, 2018).

The ISPS Code is an amendment to the Safety of Life at Sea (SOLAS) (1974/1988) on Maritime security including minimum security arrangements for ships, ports and government agencies. Having come into force in 2004, it prescribes responsibilities to governments, shipping companies, shipboard personnel, and port/facility personnel to "detect security threats and take preventive measures against security incidents affecting ships or port facilities used in international trade." "The International Ship and Port Facility Security Code (ISPS Code) is a comprehensive set of measures to enhance the security of ships and port facilities, developed in response to perceived threats to ships and port facilities in the aftermath of the 9/11 attacks in the United States," according to the International Maritime Organization (IMO). In response to the September 11, 2001 attacks and the destruction of the French oil tanker Limburg, development and implementation were accelerated dramatically. As the lead agency in the US delegation to the IMO, the Coast Guard lobbied for the measure. In December 2002, the 108 signatories to the SOLAS convention met in London to agree on the Code. The Code's agreed-upon measures went into effect on July 1, 2004.

After the adoption of the ISPS Code in July of 2004 by the IMO, Liberia ratified and domesticated the ISPS Code in 2010 detailing the collection of foreign security metrics recommending the duties to the army, port authority, shipping firms, and seafarers. It also applies to ships that travel internationally, including cruise ships and freight ships of 500 GT and above. However, this study intends to access the Implementation of the ISPS Code in Liberia with special concentration on Freeport of Monrovia and the Port of Buchanan (Potgieter, 2018).

1.2 Motivation of the Research

The ISPS Code which was adopted by the IMO and ratified by member states of which Liberia is a party, is part of a diplomatic arrangement to address the seaport, ships, seamen, and port authority problems revealed as a result of the implementation of the ISPS Code. Amid heightened movements toward implementing the ISPS Code, ports,

cargo handlers, seaman, port operators have been identified as failing to comply with the steps stipulated in the codes (Ramsaroop, 2016). Nevertheless, actors in the FOM and POB within the maritime industry regard this code as detrimental in various aspects of the governance of actors in the port terrain (Mazaheri, 2008). Notably, opponents have asserted that the measures put into place are often delaying port clearance operations due to increased security measures in the study areas. Consequently, growing port prices and manual work have a detrimental effect on different parties' views of the standards' implementation in several ports (Mazaheri, 2008).

While these security initiatives are meant to immediately enhance port safety, their effective implementations have varied significantly (Guard U. S., 2021). Even as predicted, developed countries have had the most difficulty applying the ISPS Code. Numerous developed nations lacked the capability or collective will to enforce the code (Bichou, 2005). Additionally, Liberia cannot be excluded from the rest of the world as the country faced a conflict between the domestic maritime laws and the common standard (Bennett, 2014). Also, since the adoption of international security policies, effective implementation is challenging leaving vulnerable port conditions and ongoing internal disputes. The ISPS Code is peculiar to the study area and applying safety procedures in the study area cannot overemphasize (Bueger, 2013).

Assessing the procedures and implementation of the ISPS codes in the FOM and BOP are the concentration of the study and to establish whether the implementations are effective or not. However, Liberia's policy and legal literature indicate that the ISPS Code will be implemented in the FOM and POB. Additionally, a selective study of the output of code in the testing areas has been undertaken. This dearth of scientific and analytical research on ISPS application creates an exceptional problem for vessels expecting to berth in their coast (Guard U. S., 2014). Therefore, the US Coast Guard (USCG) designated Liberia as a high-risk country in 2019. (Center, 2019). The

investigator examined the ISPS-execution in the Freeport of Monrovia and the Port of Buchanan.

1.3 Purpose and Objectives of the Study

The purpose of the study is to assess the implementation of the ISPS Code in Liberia, specifically the Freeport of Monrovia and the Port of Buchanan. It identified the gaps and analysed the implementations of the ISPS Code on the growth and development of the study area.

Objectives of the study

- i.** Investigate the factors influencing the implementation of the ISPS Code in the FOM and POB in Liberia.
- ii.** Identify the stakeholders (local and international) involved in the implementation of the ISPS Code in the FOM and POB in Liberia.
- iii.** Review the challenges in the implementation efforts of the ISPS code in the FOM and POB within the Liberian economy, and recommend solutions to address the challenges identified.
- iv.** Assess the effectiveness of the current implementation of the ISPS strategies employed in the FOM and POB relative to the ISPS Code.
- v.** Recognize and address any issues of stakeholders and recommend method to enhance the implementation of the ISPS Code in the FOM and POB in Liberia.

1.4 Research Questions

- i.** What are the effects of the ISPS Code implementation on cargo throughout the FOM and POB?
- ii.** What are the effects of the ISPS Code implementation on the ship traffic flow at the FOM and POB?
- iii.** What are the effects of the ISPS Code implementation on the Occupancy rate of vessels at the FOM and the POB?

- iv. What are the effects of the ISPS Code implementation on the vessel's turnaround time in the FOM and POB?
- v. What are the challenges in the implementation of the ISPS Code at the FOM and POB?
- vi. Are the seaborne security protocols implementations effective or not effective? If not effective, what are the reason(s) of it ineffectiveness in the FOM and POB?
- vii. Were there any causalities resulting from lack of implementation of the ISPS Code in the FOM and POB? If yes, was corrective action taken?

1.5 Research Methodology

The researcher used (QUAN-qual), techniques for analyzing the mentioned study questions. However, the researcher used scientific investigations method to analysed container turnover, vessel cargo flow, vessel accommodation rate, and cargo processing time to obtain quantitative data. The researcher used stratified random sampling approach to respondents associated with the implementation of ISPS code in the Freeport of Monrovia and the Buchanan Port. The study identified strata to display the demographic characteristics of the interviewees, which classified their historical ages, levels of knowledge, and hierarchical positions in the study area. After data collection, IBM-SPSS tools will be used to code and analyse the data. Books, periodicals, the internet, and textbooks were also used to gather secondary data. Secondary data sources were important since they provided insight into the topic (Harreveld et al. 2016).

The questionnaire was divided into two sections: A and B. Part A consisted of the respondents' general identification information, which included their name, employer, year of experience, educational level, and specialism Part B contained the research questions, which consisted of seven questions addressing the following topics: the effects of the ISPS Code implementation on cargo throughout the FOM and POB; the

effects of the ISPS Code implementation on ship traffic flow at the FOM and POB; the effects of the ISPS Code implementation on vessel occupancy rates at the FOM and POB; the effects of the ISPS Code implementation on vessel turnaround time in the FOM and POB; the effects of the ISPS Code implementation on the vessel's turnaround time; The data acquired from responses was presented using causalities deriving from the lack of implementation of the ISPS Code in the FOM and POB, as well as interpretations (Singleton et al. 2018).

1.6 Scope of the Research

The research covered the implementation of the ISPS Code in Liberia specifically the Freeport of Monrovia and the Port of Buchanan. After the 2005 general and presidential elections, the government embarked on improving the infrastructure and superstructure at the FOM and POB. The implementation of the ISPS Code is critically examined to identify gaps in the implementations.

1.7 Organization of Research

The study will consist of five chapters. Chapter one will be the introductory sections: The Background of the research, Motivation of the research, Purpose and Objectives of the research, Research Questions, Scope of the research, and the Organization of the Research (Singleton et al., 2018). Chapter two will consist of related literature on ISPS implementation, which will include the books, articles, reports, and journals that help the researcher in gathering relevant information to assessing the ISPS Implementation in the FOM and BOP. Chapter three focused on the research methodology, comprising research design, sampling and sample size, and data issues. Chapter four-focused analysis, finding, and Interpretation. Chapter five focused on the summary, implications and recommendations, and conclusions (Harreveld et al., 2016).

Chapter Two: Implementation of the ISPS Code

2.1 Introduction

The ISPS protocol, as described by Wankhede (2021), is a critical maritime law for the security and protection of vessels, coasts, freight, and staff. As previously noted, these restrictions were to address increasing questions about maritime safety and terrorist attacks that could be tracked to seaborne arms transportation. The ISPS Code allows ports to be compliant with ship protection standards. To ensure consistency with the stipulations of the protocols, these practical protection specifications must be appropriately communicated and recognized by port personnel (Pardali & Paraschou, 2020).

The ISPS code's instruction criteria are often specified in section 13 of the framework (Gunawan, 2019). Organizations of Maritime Education and Training (MET) are still tasked to educate port staff about the ISPS Code and coastal safety standards (Gunawan, 2019). As per the Standard Training Certificate for Watch keeping (STCW) summit agreements, the parties agree to legitimize all relevant laws, decrees, directives, and rules and take all other action required to give the treaty full effect. As a result, all port connections certified shall adhere to enforcing and strictly implementing the safety protocols; specifications. The International Maritime Organization's agreements and the ISPS Code have defined standards for secure ship manning (Pardali & Paraschou, 2020).

The provisions define basic safety standards for the application of these secure hoisting concepts. Shipping firms and port authorities must share some of the blame for crewing the ships (Novikov, 2009). Numerous contextual reviews concur that the most critical aspect of the ISPS Code implementation mechanism is safety optimization. As a result, protection-manning preparation must adhere to internally accepted counter-terrorism policies. Proper preparation and execution of maritime safety procedures

continue to improve the control and security of ports and global shipping channels. Different ships departing from ports must conform to varying degrees of background checks throughout the operation based on their entry and exit positions (Razali & Dahalan, 2012).

According to Othman and Hawala (2005), a slew of safety measures could be implemented to safeguard and staff the ships' entry. As a result, they emphasize these steps as adding staff to secure deck areas through silent hours to prevent unwanted access. Boosting the duration and thoroughness of inspections of passengers, personal belongings, and vehicles embarking or loading onto the vessel; and forming a confined space on the ship's coast, in close collaboration with the port facility and dissuading waterside access to the dock, including the provision of boat surveillance in cooperation with the port facility (Radonja & Gluji, 2020).

To demonstrate how these protection measures are implemented, staff must be comfortable with the everyday duties they must execute. These responsibilities must be consistent with the specifications set out in the agreement. Additionally, the Safety Management Manual (SMM) details the procedures for implementing security control programs. While this code has significantly increased port protection, it has not been without flaws. The ISPS Code's primary drawback is the increased workload and logistical procedures. Thus, supervising and teaching new hires consumes time and money. The code's introduction in multiple port destinations may be hampered due to the extensive cost and time specifications. Proactive and well-thought-out success has often encountered a variety of logistical obstacles in third-world locations such as Africa. The following parts of this context review should discuss the constraints associated with applying the ISPS Code. The analytical part of this analysis will focus on the Monrovia and Buchanan ports.

2.2 Implementation of ISPS Code in Liberia

There are few empirical findings on applying the ISPS Code on the Liberian Ports (Radonja & Gluji, 2020). Although the nation is currently inconsistent with the Code, insufficient research has been undertaken in Liberia to justify their effective adoption. Other than that, the writers chose to use research from a common view (third world economies) to assess the effectiveness of these restrictions in West African contexts. In Malaysia, the parameters' initial application encountered several impediments in the implementation of the ISPS Code that Liberia can learn said experience (Gunawan, 2019). However, the primary obstacles to adoption this Code were based on political and regulatory reasons. In Liberia, the ISPS Code is implemented through the Liberia maritime Authority and the National Port Authority. In addition, the country's transportation ministry is in charge of those implementation efforts. Although they demonstrate, a readiness to implement improvements aligned with ISPS protocols at ports fully and pro-actively, they show the fundamental shortcomings of emerging economies. Among these disadvantages are infrastructure limitations, cultural disparities, and manpower shortages (Gunawan, 2019).

Additionally, the incoherence of the nation's government procedures has an impact on those attempts at smooth execution. If the transport ministry is responsible for the overall implementation, other bodies such as the National Security Council (NSC) bear responsibility for port security (Gunawan, 2019). The security issue always results in the absence of a single direction during the deployment journey. These leadership defects are often pervasive in a variety of third-world economies. South Africa's position often tends to stand in stark contrast to that of other similar areas. South Africa is one of the best ship destinations on the planet. Strict enforcement of the nation's laws has no discernible effect on vessel traffic or exchange length. Rather than that, the government is enhancing its vessel management and port activities procedures. Additionally, South Africa has a wealth of primary and secondary research to enable applying these guidelines. Although most studies indicate a difficult transition phase

after implementing the strict regulations, they also suggest that the nation's critical ports changed accordingly as soon as more resources were available to implement the recommended security procedures (Gunawan, 2019). Mexico (Radonja & Gluji, 2020) is another emerging and second world destination that has generated significant research on the application of the ISPS Code.

In Nigeria, the guidelines appear to have a significant effect on daily port activities. Though the regulations have little impact on container throughput, shipping traffic, or occupancy levels, vessel processing times improved significantly. According to research, appropriate security agencies can work with the country's coastal agencies to encourage law recognition and staff preparation to ensure the code's complete compliance (Radonja & Gluji, 2020).

2.3 Factors affecting the implementation

The general objective of the ISPS Code is to enhance port security as well as increase ship security. By prescribing compatible responsibilities to the different stockholders, that is, the local and international government and private and public companies that work hand in hand with the ports and vessels staff, the ISPS can achieve this goal. Still, those numerous factors affect the implementation success of the Code. The relationship between the country and the rest of the international community is affected by the security standards of Liberia. It is logical to conclude that the severity of the matter necessitates strategic planning and management (Radonja & Gluji, 2020).

From an international perspective, the fundamental parts needed to make this code work are required and mandatory for the intrinsic value of the implementation process. The ability of all the departmental parts to work together to achieve a common goal is what drives the development and the process itself. Different factors have different roles. The degree of each function is clearly stated. It ensures the smooth running of things within the flow of cargo in and out of the ports. However, the line that defines

the roles of each individual is usually so blatantly bypassed that one can question its relevance (Coggeshall, 2018). To some extent, the government and the staff may have a hand in the lagging of the operation of the port. It could be attributed to several factors varying from political issues to protocol mismanagement. The ISPS in itself is a delicate set of rules that speak volumes about the countries' shipping potential and announce the stand of the country's governance (Radonja & Gluji, 2020).

The Role of the Government of Liberia is common practice in many developed countries to abandon certain administrative powers to subsidiaries such as municipal ports, public or private companies to manage (Coggeshall, 2018). Although, sometimes, these events can be funded by the government in some way. The situation sometimes seems different in many developing lands, where central governments have been very concerned about performance. For the government to maintain the value and strength of internal and external policies, it is paramount that they are involved with some of these activities. To ensure the full apprehension of the severity of the laws set in motion, the government should take action. The action in itself is controlled as not to tarnish its position (Radonja & Gluji, 2020). The role of the country is to enforce the codes. There should exist a fine line between the positions each element of the port management should play. For example, the government can manage the international and national issues affecting the port. In the running, the private organizations and companies are in charge of the day-to-day activities. These two sides work as a single coin and determine the value of a port. To ensure there is no loss of profit, this line must be maintained, and the two work together in tandem (Coggeshall, 2018).

Strife within the heads of the country more often than not creates a ripple effect that affects most of the country's financial sectors. Every nation that enforces the ISPS Code is on a watch list. They are constantly being monitored and assessed on their capabilities as worthy investment sites. Political instability can affect the social stability of a nation. To that end, most investors turn tail and leave unstable sites. A country's ability to keep its heads together also says a great deal about its ability to

enforce laws. These international policies are being implemented. Many countries recognize the code as law. If a government cannot maintain its hierarchy, its ability to implement simple laws becomes questionable (Radonja & Gluji, 2020).

In addition to the different operations of ports and their organizational processes, many countries have adopted a strategy for restructuring their ports and introducing modern trading policies to their organizations. The basic idea of trading is to motivate employees by laying down management functions. The support of port workers is paramount for the success of such a process; however, this will not be possible without official training of the personnel and their active involvement in the decision-making process. Following the devolution of power, there has to be due accountability (Coggeshall, 2018). It encourages and informs the heads of departments and organizations to take responsibility for their actions. In addition, the existing NPA format consists of three leading institutions, namely: administrative, operational, and financial. The author has observed that the functions of these sections are overstretched. Therefore, necessary changes should be made to the organizational structure to reflect the operations of all sections/departments (Radonja & Gluji, 2020).

Conflicting responsibilities have made it challenging to find obligations that have banned several staff positions assigned to these departments. For example, in an equipment malfunction, the technical manager is required to report to the management. However, departmental operations are still linked to the port manager and operations manager (Coggeshall, 2018). The technical manager could be waiting for a report from the port manager that authorizes some actions like purchasing equipment or discounts. As a result, the port functionality becomes complicated as each of them needs to perform a task that a department can only oversee. For the heads of departments to be accountable or for the NPA to be well organized, the process and procedures must be redefined to a point and show the functional value of the departments individually and as a unit. With a better-planned process, it is suggested that the Harbour Master office should be upgraded to a section and spearheaded by the Harbour Master. The port

manager must take responsibility for the management of goods, storage, receipt, and delivery of cargo. The Harbour Master has always been concerned with accommodation, travel safety, air travel, shipping activities, and local laws in the port harbor (Coggeshall, 2018). It is inadvisable for the national port authority to choose another option. Organizational planning and management Rapid transformation in the construction of maritime transport services has become a global and significant issue. Therefore, a thoughtful planning by management is an essential and efficient factor while considering the critical changes in shipping technology, which will cause substantial investments in the port.

The emergence of containers from mass exit has brought about significant changes in the performance of ports and the importance of strategic planning. The outcome of this debacle is the essential proper planning of the management procurement and servicing of equipment. It is necessary to consider the adequate storage and management of the shipped containers and their movements. For the port to provide the best possible services to the port's users, existing facilities, including quay, warehouses, and port equipment, must be repaired and repaired from time to time. Currently, the existing roaming resources are out of date and not working. In both short-term and long-term planning, the management is required to allocate funds necessary for the purchase of equipment needed for port operations (Radonja & Gluji, 2020). The National Port Authority (NPA) is entirely out of the modern operating system of the port. In case proper measures and planning have not been considered, it may lead to creating a complete exit from the port economy, harming the national economy. Managers need to prioritize port operations, and funds must be spent on what is most needed to increase the port's general efficiency and profit value. Without proper planning, funds should not be expended. Therefore, all port operations should be well planned, organized, effective, and efficient.

The position of vessels in the maritime sector, and their long-term profit, depends more on the extent to which it can generate sustainable profits than its competitors. At this

point, the world's most successful ports launch a self-assessment program to analyze their strategic position when dealing with external threats, which is a summary of their strengths and weaknesses. Referred to as SWOT analysis, it has been influential in the decision-making process in port management. This analysis should give a clear depiction of the state of the port and, as a result, provide the procedures that are needed to maintain the port's competitive position. In some cases, however, the true nature of the advantages and disadvantages of the ports about its competition is hard to conclude. To add to that, managers are required to be critically prepared. Well, tough-out plans are necessary to prepare for all and every outcome. As a result, the port will not only operate but will function, as it should (Benamara & Asariotis, 2013).

The National Port Authority is challenged with resources management, which includes and not limited to human and financial management control at the port of Monrovia and Buchanan. In the midst of this, they unintentionally ignore the experiences that are complicated to manage. To give a precise SWOT analysis of the national port authority, management needs to focus on its competitiveness as an organization. In such a scenario, the most commonly considered parameters are the tangible assets in hand that can provide the port management and its staff's services, skills, and experience. It encompasses its investing abilities as well as the potential problems and risks the port may encounter. As the modern concept dictates, strategic planning should be established by including an inventory of equipment, protocols, and vivid objectives. The objectives themselves have to be based on the non-operational activities (Benamara & Asariotis, 2013).

It has been noted that the removal of customs takes a couple of weeks due to the need for documents having to be sent to various offices to bet the go-ahead for implementation. As a result, there is a consequential creation of a problem for hard-working assistants working hard every day as well as the cumbersome tasks of arranging and delivering them in the same environments (John, 2014). The problem s exacerbated by the shortage and frequent damage to the few operational types of

equipment. However, the ports should be kept under cultural control to avoid smuggling. Goods could move freely without the need for extra work. Culture should not hinder the overall productivity of the port. Cultures must maintain the capacity to conduct assessments to ensure that the threshold requirements are met per the ISPS rules. To minimize the lag in cargo movement, many steps of removal, before final approval, double review of documentation should be shortened. The custom viewing area must be different from the security checkpoint by the port authorities, and the port security officer can be assigned to the specified gate to monitor and evaluate the day-to-day operations. Another problem is the procedure followed when it comes to vehicles exiting the exit gate. It is advised that this process should be well devised before the cars arrive and or leave the gates.

Transferring information and documents, most documents are hand-made without the aid of a computer. The low quality of time management and operational delays make the process less effective and lead to unacceptable delays in delivering cargo to and from the port. Unfortunately, the NPA lacks a unified communication system connecting its headquarters and other offices. Instead, clearance agents move to and from offices, desks and wait many times for excessive installation. For proper functionality, it is required for managers to use a computer for the entire recording system, including asset management tasks. The program does not need to be interpreted by anyone. This system increases the functional value, all while reducing the redundancy of documentation processing. The absence of computerized communication connecting asset management services within the port, including the other departments, brings about a problem for the subsequent flow of cargo.

The customers are caught up on an open web of travel between these offices. Informal writing style and unnecessary organization, and the slow flow of information affect the status of the goods when it comes to speed, efficiency, and reliability. This irregular pattern of writing has caused unwanted lags in the operation of the port, and as a result,

there is inefficiency. For fast documentation, administrators need to use the computer for its entire record system at the port (Arof & Khadzi, 2018).

2.4 Challenges with the implementation

Like every project, the implementation of the ISPS Code has its own challenges, the challenges primarily circumvent the idea of integrating a new registry system to run along and or replace the former system that took years to be develop (House, 2016). Many of the original stockholders had to change their strategies and protocols to adapt to the new norm that has become an international standard. However, it is hard to know to a specific degree how a particular challenge impeded the implementation. The ISPS Code is defined as amendment to the maritime safety convention at sea for ships and vessels. It was brought about around 2004 following the terrorist attack in America that was as mark as 9/11 and the bombing of the Russian tanker. To this day, international vessel security is still an issue. Numerous incidents from piracy to terrorism still take place. One problem that pops up is that according to the ISPS, is that the vessels are supposed to have communication systems that directly inform the harbour of vital information like state of origin and vessel number. Knowledge of this type can be used to access the ship and illegally claim the cargo that is being transited. As a solution, there exists a regulation that has been put in place that ensures the security of all information that is considered sensitive. The flow of responsibility is also well defined to ensure that the flow of information and departmental interdependencies are functional.

The shift from an old system to a new one created reforms that were not all well taken by the majority of the staff and other stockholders. Including the numerous requirements that have been imposed, the rise in the funding needed to enact the laws was not well received by some of the concerned parties. New equipment, surveillance systems, communication systems, new staff, and computerized processes made the investment hard to swallow. Many shipping companies reduced their shipping volume

to comply with the Code. To solve this, the government created funds to help the ship-owners. Loans that were explicitly designed for ship-owners were created to ease the burden of the new Code. Moreover, the former regulations were amended to work in hand with the new system of registry, softening the blow of the implementation process.

2.5 Effects of the ISPS Implementation in Liberia

Implementation of the ISPS codes in Liberia has led to the change in various aspects of the ports in Liberia. As a country, the financial and social parts of the country have been affected by the implementation of the Code. Ripple effects are sent throughout the entire sector of the country. The extent in itself could vary, as there are different degrees to the effectiveness of the implementation. Dependencies between the countries government and other departments are natured through the collaboration. As they drive through towards a common goal, they can forge new relations with the international world. The ISPS Code unite many countries and unify them towards the goal of maritime security. The result is astonishing as this relation is indeed effective. In Liberia, specifically, there is a noticeable improvement in a myriad of sectors. This shows how effective the implementation process is and the impacts it has had.

2.5.1 Vessel Management

Liberia is no longer in need of ships manufactured by specific nations. Ship-owners are independently allowed to seek ship-builders out of their preferences such as skill, price, and experience (Schulze, 1970). The requirements for operating defined by the countries' registry have been primarily based on the performance, safety, and the countries stand internationally. Liberia has also authorized eligible segregated communities to compile a comprehensive list of formal research at the time of a general planning study. Eligible segregated communities are not limited to the local communities.

2.5.2 Management support

There is no way that ISPS Code implementation process can be a success if there is no support from the management. Hence, it remains the full responsible of the port management to put in place all mechanism including finances in order to comply to international best practices.

2.5.3 Access control

Access control is one of key factors to the ISPS Code implementation process.

The protection the ports and ships which is an asset that is uniquely valued by the Liberian Government. Therefore, the Designated Authority (DA) and the port Management alongside stakeholders in making sure that these port facilities stay in compliance with the standers set in the ISPS Code for access control (ISPS Code Part B 16.10-1616).

2.5.4 Security

Since the events of 9/11 after the terrorist attack and consequently the bombing of the Russian tanker, the world was put to the test. Security was the top question that was answered in the regulations set place in the ISPS. The Code allows for the identification of not only the ship but its manifest as well. Its destination and its origins are all recorded. Flag states are individually responsible for the actions of the ships as they registered them. To this end, the regulation policies are maintained and implemented to the utmost level. As a result, security is increased.

2.5.5 Recognition and Strengthening of International Standards

The ISPS is an international standard and by upholding the Code, set the country solidifies its position on the international stage. Coincidentally, Liberia is known as an all to the UN as it is involved with the Maritime organization as well as the international labour. Being a template for international standards, the country attracts investors the leading to its continuous growth.

2.6 Liberian Vessel Council (LSC)

Liberia has a ship-owners council that is the LSC. This council provides a platform that shares the views and concerns of the ship owners. Due to the implementation of the ISPS, monitoring the situation with its members is more accessible and safer. The code has also increased its international reach. Moreover, as a member of the international shipping federation, the council can provide its registered members with the benefits that come with operations.

2.7 Port Security Advisory- Liberia

Liberia made history in 2010 when it became the pioneer nation from outside European Union to implement ship database protecting measures (Fredrickson, 2020). Thus, this addition to the nation's coastal regulations will fix overseas ship mortgagees' liquidation. The global community hailed this development as a gesture of solidarity on the country's government against sea traffic. In the same year, the nation's ports started adhering to the ISPS code's counter-terrorism rules (Fredrickson, 2020). The country was delisted from the USCG's 'intensified hazard' port destination list due to this subscription to the protocol (Dekker & Stevens, 2007).

Liberia lately complied with counter-terrorism measures imposed by the Port Security Advisory (PSA). Therefore, ships departing from the Liberian coast can enter the

United States of America without subjecting the PSA's rigorous standards for risky coast routes. As a result, Liberia's ports' stability is expected to increase in the international arena dramatically. Ships visiting the nations mentioned above are often likely to pass the PSA security checks before entering US ports. They must document and report on the safety precautions taken by the vessels to guarantee crew protection and comply with anti-terrorism protocols. Sierra Leone and Equatorial Guinea, Liberia's neighbours, are currently classified as high-risk port routes. As a result of international trade activities, Liberia must strive to distance itself from continuing instability and tension in these nations to maintain compliance with counter-terrorism strategies (Fredrickson, 2020). Port Security Personnel (SSO) at Liberian ports must be well versed in security and capable of performing the appropriate security duties.

2.8 Recommendations

The implementation of the ISPS codes is optimal in its effectiveness. There is a steady rise in the security and management of cargo with in and out of the Liberian port. The new system is slowly having several adverse effects on the culture of the port management staff. The functional value of both the free port of Monrovia as well as Buchanan port has significantly increased. This could be due to the international relations that have arisen from the implementation process. Still there is a lot of room to row. Many are still not satisfied with the system that the ISPS Code was implemented, as companies will pay for their access passes and won't get it in time.as well as poor management response when issues like waterside security, trainings, and better access control procedures are raised and needs attention. Some are not satisfied with the potential risks concerned with tis implementation it is therefore, recommendable to adopt a model based on action learning. Models with this foundation tend to have more results that are precise on what, how, and which part of the implementation process is not working. It is also advisable to run new implementations to work in tandem with the current one. It will therefore allow personnel to create a distinction and give a comparatively descriptive report on the advantages and disadvantages of the implemented project.

Chapter Three: Analysis on Implementation of the ISPS Code in FOM and POB

3.1 Effects of the ISPS Code Implementation on Cargo throughout at the FOM and POB

Following terrorist attacks on the twin towers in the USA and Limburg oil tankers in Yemen, the international maritime organization has defined a supplementary chapter and an appendix named ISPS code to SOLAS X-11 to prevent similar events in maritime transportation (Cooper, 2019). However, the ISPS code forces the ports, ships, and organizations, who work in the marine industry, to keep their security more tightly by putting anti-terrorism measures in place. This situation affects or involved parties in good and bad ways. Good impacts include increasing security level, efficiency, effectiveness, competitiveness, and harmful effects like increased annual costs, administration works, and manning (Cooper, 2019). This situation does not exclude Liberia. The Code came into effect July 2004, signed and domesticated into Law by Liberia in 2005. The ISPS Code implementation has dramatically assisted in securing the movement of Cargos in and out of the two Ports (Iimi & Rao, 2018). Additionally, the primary purpose of ISPS is to regulate and monitor the security and safety of the people traveling through waters, ships, ports, and freight carried by ship as they travel through the international waters (Cooper, 2019).

The ISPS Code brings success in this sector by allotting levels of responsibility to governing bodies of the country, shipping companies, shipping personnel, and people operating in ports to discover or find by careful search of security threats and introduce legalized preventive measures due to that investigation (Cooper, 2019). Moreover, ISPS is an obligatory requirement for ships and ports for better and security-based

operations. Therefore, Companies that work with ships or terminals impose a specific amount of money to customers, termed as an addition of extra charge on the agreed or stated amount to cater to ISPS implementation cost (Iimi & Rao, 2018). Due to this, the party responsible for giving money in return for freight also bears the responsibility for an extra charge. Ordinarily, those amounts of money levied for the service form part of the freight quote (Iimi & Rao, 2018).

The process of cargo throughout the Freeport of Monrovia is better as compared to the past. Currently, cargo brought in by vessels to the Port of Monrovia are sharply delivered and are taken to their respective computerized blocks and are stored until they are brokered by the customs brokers to be delivered to the individual consignee (Cooper, 2019). That goes the same way with the Port of Buchanan. The commercial Port of Buchanan does not store containers and other goods. Still, it rightfully delivers them to its rightful owners upon dockage at the artificial landing place for ships on a shore (Iimi & Rao, 2018).

Consequently, it automatically becomes a pier to Pier delivery process. The implementation of the ISPS since 2004 has brought significant benefits to both ports in Liberia (Cooper, 2019). In addition, the ISPS Code primarily keeps the focus on the security aspects of the ship, seafarers, ports, and its workers to assure that hindering measures can be employed in case of a determination of the security indication of imminent danger (Cooper, 2019). Therefore, the implementation of ISPS in the Freeport of Monrovia and port of Buchanan in Liberia has resulted in immense positive impacts in its shipping operations (Iimi & Rao, 2018).

Furthermore, in strict compliance with the ISPS measures, improvements compared to the past shipping operations will be significantly evidenced in the Freeport of Monrovia and the port of Buchanan (Iimi & Rao, 2018). These advancements include high monitoring of the activity of cargo and personnel in both ports hence facilitating smooth operations and facilitating high compliance to the ISPS measures in the ports

(Cooper, 2019). Additionally, improved devised methods of detecting any security threats have encouraged boosting safety and security in the ports, hence motivating most international shipping operations in the Freeport of Monrovia and the port of Buchanan (Perry, 2017). This will result in the expansion of the Liberia economy because of the increased monetary gains coming from the cargo operations in both ports (Iimi & Rao, 2018). Also, the implementation of the ISPS on cargo operations on both ports will help strengthen the established roles and responsibilities for the port state officers and onboard officers to carry out maritime security threats internationally (Cooper, 2019). There have been witnessed security threats in the past in Liberia ports, hence calling for the effective implementation of the ISPS Code on cargo and the improved policies, which has enhanced quality operations concerning cargo transportation through the sea waters (Iimi & Rao, 2018).

The presence of well-defined and established roles and responsibilities for contracting government agencies, local administrators, and shipping and ports representatives is another effective measure incorporated in the ISPS Code (Iimi & Rao, 2018). Therefore, the various well-outlined roles for each significant stakeholder in the shipping operations about cargo throughout the Freeport of Monrovia and the port of Buchanan will steer up more advancement and reduce any past complexities concerning cargo handling and transportation in both ports (Cooper, 2019). The divided roles for all people having stakes in cargo transportation will ensure that the respective people carry out all functions relating to transporting goods using ships efficiently (Perry, 2017). Moreover, high implementation of the ISPS on cargo throughout the Freeport of Monrovia and the port of Buchanan has played a fundamental role, particularly in the collection of international data concerning security threats and coming up with solutions for each of the cargo transportation problems (Iimi & Rao, 2018). Therefore, there is a high probability of more improved operations in both ports of Liberia and the improvement of the safety and security concerning not only cargo transportation but also all other shipping related operations

shortly if the ISPS Code implementation is supported and all its protocols observed to the fullest (Cooper, 2019).

Implementing the ISPS code on cargo throughout the Freeport of Monrovia and the port of Buchanan has led to the development of various levels of security within the ISPS Code. The ISPS Code comprises three security levels: security level one, security level two, and security level three (Iimi & Rao, 2018). All these levels have distinct guidelines for each. They have contributed a lot in improving shipping operations in the Freeport of Monrovia and the port of Buchanan and international shipping activities. For instance, security level one serves as the standard security level that ships and port facilities operate (Cooper, 2019). It is a level whereby there are fewer protective measures that require be observing and exercising. The measures include equal division and supervision of the loading and unloading process by the ship and port authority. Security level two (Heightened) is applied whenever there is a higher risk of a security-based occurrence, especially during the delivery of the cargo by ship (Iimi & Rao, 2018). Therefore, at this time, extra security strategies are put into practice and maintained for a specific period. It is the role of the security professionals on the ship and port facility to determine the period in which the heightened security measures are to be in existence (Cooper, 2019).

Security level three (exceptional) deals with incidents that consist of a low probability of being missed requiring the need to implement case-specific security measures. Due to this, the security experts on the ship and port carry out their responsibilities, cooperate with government agencies, and adhere to the particular protocols to evade any issues emanating from the almost unavoidable incidents (Cooper, 2019). Therefore, the presence of the above-discussed three levels of security within the ISPS code has played a significant role in developing and improving cargo transportation throughout the Freeport of Monrovia and the port of Buchanan. Besides, it has facilitated solving the security threats concerning sea transport that was very eminent in the past in the various ports of Liberia (Iimi & Rao, 2018).

3.2 Effects of the ISPS Code Implementation on the Ship Traffic Flow at the FOM and POB

The implementation of the ISPS Code has also caused an increase in the Ship traffic at the two Ports, thereby leading to the economic viability of the National Port Authority. Since the inception of the ISPS Code 2005 in Liberia, the ship traffic at the Freeport of Monrovia is more advanced and better than that of the past (Cooper, 2019). There is vast vessel traffic recorded in the history of Liberia. Moreover, the monthly flow of International vessels is more than before, and vessel tabulation puts the year 2020 at 261 international ships (Barnes-Dabban, 2018). This tabulation is just the year 2020, as more were recorded in the past years (Cooper, 2019). The Port of Buchanan did register several 26 vessels for the year 2020 (Cooper, 2019). This indicates how the ISPS code implementation has led to the two ports' increment in ship traffic flow (Cooper, 2019).

The past rampant case of ships terrorist attacks adversely affected the ship traffic flow at the various ports in Liberia and other ports in different parts of the world (Barnes-Dabban, 2018). The ships' security remained a significant challenge to address because of the lack of well-underlined security measures to curb terrorist attacks in the seaways (Cooper, 2019). Liberia remains one of the countries that were negatively affected by the security threats and terrorist attacks at the seaports until the ISPS Code was implemented in 2004 (Cooper, 2019). During that time, there was relatively low ship traffic flow at the Freeport of Monrovia and the port of Buchanan.

The security problem remained the primary contributor to the difficulties and lack of free flow of operations in both ports in Liberia. Therefore, the decision by the International Maritime Organization to come up with the ISPS Code has significantly contributed to the high ship traffic flow at the Freeport of Monrovia and the Port of

Buchanan (Cooper, 2019). Unlike before, the poor infrastructure in the ports, like in the Freeport of Monrovia, unfavoured the shipping operations. For instance, Liberia's government played a fundamental role in reconstructing the Freeport of Monrovia, which was almost coming to a standstill (Barnes-Dabban, 2018). This was achieved through the incorporation of effective reconstruction and re-installation measures by the government through adopting proper personnel hence creating an effective solution to the low ship traffic flow at the Freeport of Monrovia and the port of Buchanan (Barnes-Dabban, 2018) Therefore; the current high ship traffic flow in both ports of Liberia is a clear indication the positive impacts of the implementation of ISPS Code in the two Liberian ports (Cooper, 2019).

The increase in the ship traffic flow in the Freeport of Monrovia and the port of Buchanan has also been steered up by the various advantages of implementing the ISPS Code. The mentioned advantages include the ISPS Code to increase the ship's safety and security, hence lowering the experiencing of risk during the sea transport (Cooper, 2019). Additionally, the availability of reasonable and better control of cargo flow has accelerated high ship traffic flow in the Freeport of Monrovia and the port of Buchanan. Compared to the past, before implementing the ISPS Code with the present undertakings in both ports, there are positive advancements in operations and a decrease in cargo thefts (Barnes-Dabban, 2018). Therefore, such improvements serve as a positive indicator to the National Port Authority of Liberia of the progress made in shipping-based matters and operations (Cooper, 2019). Also, the availability of personal access to the cargo is another contributor to the increased number of international vessels in both ports of Liberia in recent years (Cooper, 2019). Besides, a better documentation procedure and a secure working environment have made it easier for seafarers and port workers to carry out operations in the ports (Barnes-Dabban, 2018). Therefore, all these advantages resulting from implementing the ISPS code have facilitated increasing and enhancing ship traffic flow in the Freeport of Monrovia and the port of Buchanan (Cooper, 2019).

3.3 Effects of the ISPS Code Implementation on the Occupancy Rate of Vessels at the FOM and the POB

The effects of the ISPS Code implementation of vessels at the Freeport of Monrovia have led to unbreakable regulations. At that all vessels berthing at the two ports abide by and observe the ISPS Code (Nordfjeld, 2018). The same applies at the Port of Buchanan, where the same ISPS implementation is followed and obeyed at every level by vessels berthing at the ports. Moreover, all rules are considered as stated by the ISPS Code (Leahy, 2020). However, the number of ships recently docking at the port has decreased like in the Freeport of Monrovia. In most cases, berth occupancy (BOR) level in the port can be used as a significant factor in determining whether the port's services are much or less busy (Leahy, 2020). Therefore, the positive impacts brought up by the ISPS Code implementation on the occupancy rate of vessels at the Freeport of Monrovia and the port of Buchanan surpass the negative ones (Nordfjeld, 2018). The presence of well-outlined measures as per the ISPS Code implementation had played a significant role in reducing the occupancy rate of vessels in both ports compared to the past when the ISPS Code was not in existence (Leahy, 2020).

The National Port Authority of Liberia has made tremendous steps in strengthening the implementation of the ISPS Code in the Freeport of Monrovia and the port of Buchanan hence leading to less complex operations (Nordfjeld, 2018). These activities include the occupancy rate of vessels whereby there used to be a congestion of ships in the docking sites in the past. Furthermore, the ISPS implementation measures have significantly contributed to enhancing smooth operations in the seaports hence favoring the occupancy rate of vessels (Leahy, 2020). There is less berthing time used by the ships in both ports, contributing to high shipping activities. The witnessing of the different kinds of container ships arriving at the ports results in a single service for each container (Nordfjeld, 2018). Therefore, the arrivals of container ships at container terminals are always a stochastic process, which requires improved measures to ensure

that the occupancy rate of vessels in the port does not constitute a significant problem hence affecting the shipping operations (Leahy, 2020).

In most instances, the number of berths required depends on the berth occupancy in the Freeport of Monrovia and the port of Buchanan (Leahy, 2020). As a result, the determination of the number of the required berths in the ports stems from the act of being conversant with the distribution of ship arrivals and the distribution of ship service times, which constitute peak factors and seasonal variations (Nordfjeld, 2018). Although the implementation of the ISPS Code has not solved all the sea transport and operation problems that existed in the past, it has played a cardinal role in developing dynamics and improved measures that have minimized those problems to a large extent (Leahy, 2020). Therefore, implementing the ISPS Code has contributed immensely to enhancing the occupancy rate of vessels in both ports despite the existence of minimal challenges witnessed in the ports like insurance risks and additional surcharges, which end up affecting the customers (Cooper, 2019).

3.4 Effects of the ISPS Code Implementation on the Vessel's Turnaround Time in the FOM and POB

The implementation of the ISPS Code ensures the safety of the ship, its crew, and cargo. The Port Managements require straight adherence to Policies and regulations for the fast turnaround time of the Vessel (Cooper, 2019). Therefore, in keeping with this guideline, there is no effect of implementing the Code to the time of turnaround of the Vessel. The ISPS Code implementation on the vessels' turnaround time with an ever-justified measure of time, which is very expensive, is upheld so importantly by every vessel berthing at the Ports of Monrovia and Buchanan (Cooper, 2019). The turnaround time is out at three or a day or two depending on the cargo brought in-country or in most a week during the dry season. Besides, during the rainy season, vessels with bulk cargo spend a month because of climatic conditions but the strict observance of the ISPS Code (Cooper, 2019).

There has been enhanced security during the turnaround time in both the Freeport of Monrovia and Buchanan's port. The presence of well-strengthened security and safety measures in the ports has highly favored the turnaround time operations concerning the ships (Cooper, 2019). Moreover, the acts of terrorism attacks, thefts of cargo, and unfavorable working environments that existed in the past have seen a positive transformation in Freeport of Monrovia and the port of Buchanan (Cooper, 2019). For instance, ISPS measure requiring the collection of international data relating to the security threats and coming up with solutions to the determined problems has contributed to solving the turnaround time problems experienced before (Cooper, 2019). Besides, the ISPS Code has led to the monitoring of the undertakings of the cargo and personnel in the ports. Therefore, there are highly effective operations concerning the turnaround time in the two ports of Liberia (Cooper, 2019).

3.5 Challenges in the Implementation of the ISPS Code at the FOM and POB

The challenges faced in implementing the ISPS Code at the Freeport of Monrovia are discouraging and unbearable because of the lack of support to the Port Facility Security Officer by the contracting government through the management of the National Port Authority (Iimi & Rao, 2018). The same challenges experienced in the same port, most of them are faced in the port of Buchanan. Therefore, most challenges encountered in the two ports equate to one another. These mentioned challenges include poor illumination at the port facility resulting from the less effective lighting equipment installed in the two ports (Cooper, 2019). This means that night operations face some light challenges since there is little light in the ports hence contributing to the challenge of implementing the ISPS code at the Freeport of Monrovia and the port of Buchanan (Iimi & Rao, 2018).

The above-discussed challenge is a security threat relating to the operations carried out mainly during the night and creating suspicion to the port workers concerning their

safety while operating during the night hours (Iimi & Rao, 2018). Despite the high cost to be incurred while installing improved security lights in the ports, there is a need of ensuring that there is a high-quality illumination facility in the docks in line with the international maritime organization protocols hence eliminating the challenge in the implementation of ISPS code in both ports of Liberia (Cooper, 2019). Moreover, high vegetation adds the list of the difficulties encountered in Liberia ports while implementing the ISPS Code in the two distinct ports in the discussion. The presence of tall vegetation around the ports poses a problem. It hinders the port activities' effective operations, deviating from the international maritime organization protocols, particularly the ISPS Code measures (Cooper, 2019). The presence of high humidity has favoured the growth of tall vegetation in the Freeport of Monrovia and the port of Buchanan (Iimi & Rao, 2018). Besides, the presence of high vegetation makes it hard to implement the ISPS Code since it is a threat to human safety because of the likelihood of the eruption of seaborne diseases (Cooper, 2019). Therefore, solving the high vegetation challenge in both ports requires high incurring costs by the national port authority, leading to financial deficiencies in the port facility operations (Cooper, 2019).

Inadequate shoreline fencing is another challenge experienced in the ISPS code implementation in the Freeport of Monrovia and the port of Buchanan. There is improperly established shoreline fencing between the land and the sea bodies of water (Iimi & Rao, 2018). Therefore, this makes it easier for people with bad intentions to easily find their ways into the two ports, posing security threats to the port workers. The task of detecting any security threats as per the measures of the ISPS Code is deterred by the presence of the ineffective divide between land and the bodies of waters forming the two ports in discussion (Cooper, 2019). Therefore, this calls for the need for improved shoreline fencing in both ports to strengthen the safety and security matters in the international water operations and to curb any minimal chances of the occurrence of terrorism attacks in the Freeport of Monrovia and the port of Buchanan (Iimi & Rao, 2018).

Poor waterside security means ineffective underlined security and safety measures in the ports, hence comprising the challenge of the ISPS Code implementation at the two ports of Liberia (Iimi & Rao, 2018). The waterside security in both ports needs to be improved to prevent various negative occurrences from such challenges. For instance, the installation of an electric fence will play a significant role in facilitating and enhancing the act of putting into practice the ISPS Code in the ports by introducing an effective solution to trespass like problems experienced by people with bad intentions towards the port operations (Iimi & Rao, 2018). This will also help control terrorism attacks and thefts steered up by the availability of inadequate side water security in the two ports (Cooper, 2019).

The presence of an unequipped CCTV facility in the ports makes it difficult for the ISPS Code implementation at the Freeport of Monrovia and the port of Buchanan (Cooper, 2019). The modern advancements in technology have made most organizations employ it because of its great associated benefits (Iimi & Rao, 2018). Besides, increased cases of insecurity have facilitated the installation of the CCTV facility, which plays a significant role in monitoring the security-related matters of most firms. Additionally, for the effective operation of the CCTV facility, there is the necessity of improved equipping of such facility to highly enhance its security and safety-based roles and responsibilities (Iimi & Rao, 2018).

The equipped CCTV facility monitors all the operations of the organizations, the people entering and moving out of the various sectors of the organizations, and detecting any security threats in the organization (Iimi & Rao, 2018). However, the presence of the unequipped CCTV facility in the Freeport of Monrovia and the port of Buchanan form a significant challenge concerning ISPS Code implementation. In cooperation with the government of Liberia, the national port authority should take a step further in ensuring that all the CCTV facilities in both ports are fully equipped to counter the negative impacts, which may result from such deficiencies in the future

(Iimi & Rao, 2018). This will help bring about security stability in the ports and provide a technologically advanced method of detecting any security and safety-threatening activities likely to interfere with the operations in the ports (Cooper, 2019). Therefore, wholly equipped facilities will also strengthen ISPS Code requirements of the established roles and responsibilities for the port state officers and onboard officers in dealing with maritime security threats internationally (Iimi & Rao, 2018). The presence of equipped CCTV facilities in the ports will play a significant role in eliminating the security and safety problems that have been eminent in the past years, hence offering support for implementing the ISPS Code and its strict adherence in the two ports (Cooper, 2019).

Lack of communication equipment constitutes the challenges facing the ISPS Code implementation in the discussed ports of Liberia. Communication is essential in all organizations (Iimi & Rao, 2018). Through contact, the information is passed from one person or party to another. Besides, better and improved modern communication equipment plays a fundamental role in facilitating the efficiency of operations in the organization. The effectiveness of the communication equipment leads to better message delivery and acting following the contents in the unveiled message (Iimi & Rao, 2018).

Moreover, communication is phenomenal in facilitating the progress and smooth running of affairs in the organization. However, acquiring communication equipment in the organization may be costly, but it's significant to have such facilities since they form part of the primary drivers of the organization (Iimi & Rao, 2018). Surprisingly, the mentioned necessary communication equipment is insufficient in the Freeport of Monrovia and port of Buchanan. This poses a significant challenge concerning the exchange of information in both ports, affecting the coordination of activities (Cooper, 2019). For better and effective delivery of information in the docks, communication equipment needs to be used to ensure a free flow of information with minimal challenges (Iimi & Rao, 2018). Also, the simplicity and improvement of the exchange

of information accelerated by communication equipment will highly favour the ISPS code implementation at the Freeport of Monrovia and the port of Buchanan (Cooper, 2019).

The lack of functioning signage at all Port Facilities poses a challenge in the ISPS code implementation in the ports of Liberia (Iimi & Rao, 2018). Therefore, the failure to repair the destroyed signage has become a significant problem on seawater transport. Signage is essential in demonstrating the various signs indicating various aspects of importance concerning water transport matters (Cooper, 2019). Therefore, the National Port Authority (NPA) of Liberia should ensure that the destroyed signage port facilities are repaired and re-installed back to operation for better operations in line with the ISPS code measures (Iimi & Rao, 2018). Lastly, expired access passes in all port facilities in the country requiring urgent renewal end the list of the challenges of the ISPS Code implementation in the ports in this section. Therefore, the involvement of many complex procedures during the renewal time poses a challenge to the Freeport of Monrovia and the port of Buchanan (Cooper, 2019).

3.6 Effectiveness of the Seaborne Security Protocols Implemented in the FOM and POB

The Seaborne security protocol is highly effective in most countries. Liberia practiced interagency appreciation when dealing with the security situation, including in the ports (Nordfjeld, 2018). However, the most important concerning the protocol implementation effectiveness is security. This has affected the ports of Monrovia and Buchanan, respectively. Because of insecurity problems, there is nothing assembled, as effectiveness is Seaborne security at each of these ports due to management's failure to implement every protective measure that will enhance the protection of the port facilities, vessels at anchorage, or in the basin (Cooper, 2019). There is not enough waterside security in the ports, which creates significant security and safety challenges,

hindering the effectiveness of the seaborne security protocols implemented in the Freeport of Monrovia and the port of Buchanan.

The poor waterside security earlier discussed in the challenges section serves as the source of the insecurity in the two ports in the discussion. It is also an unforgettable experience that illegal swimmers swim to not well maned vessels; rob them of their personal effects or drums of engine oil, and the engines of small boats (Cooper, 2019).

Besides, the swimmers end up getting into the water and swimming away with the stolen items from vessels in some of the ports across the world. In Liberia, there has not been a day that piracy in the Liberian waters has been experienced. If that happens, that will be a strange crime in the country's waters (Nordfjeld, 2018). However, there is a need of establishing improved waterside security and installing of better management body by the National Port Authority to facilitate in enhancing efficient coordination of operations in the two ports and advanced side water security in boosting the effectiveness of the seaborne security protocols implemented in the Freeport of Monrovia and the port of Buchanan (Cooper, 2019). The lack of increased waterside security attacks in both ports in Liberia signals the less relative effectiveness of the seaborne security protocols implementation of the ISPS Code despite the security-oriented challenge. Therefore, much has to be done in both ports to ensure high effectiveness of operations hence favouring the seaborne security protocols introduction into practice (Nordfjeld, 2018). Furthermore, exercising high-security practices in the ports is fundamental in strengthening the effectiveness of the seaborne security protocols in the Freeport of Monrovia and the port of Buchanan hence facilitating the ISPS code implementation in the same ports of Liberia (Cooper, 2019). Therefore, the presence of high-quality management and cooperation between the National Port Authority (NPA) and the government of Liberia will play a vital role in ensuring effectiveness pertaining seaborne security protocols in the ISPS Code implementation prevail within the operations of the port, hence enhancing security and

safety aspects as per the international maritime organization (IMO) guidelines (Cooper, 2019).

3.7 Determination of Casualties Resulting from Lack of full Implementation of the ISPS Code in the FOM and POB

There have been casualties in the Freeport of Monrovia occurring at separate locations. All the witnessed deaths resulted from the lack of improved security measures and improved planned methods of carrying out the operations in the port (Cooper, 2019). For instance, at the K&K Rice Importation Company a stack of rice fell on one of the daily hired workers and was taken to the hospital and pronounced dead upon arrival (Nordfjeld, 2018). Moreover, the South West Africa Trading Company experienced an intense armed robbery that resulted in the death of a security guard in a truck and the rest of the securities tied to iron poles and vehicles vandalized due to a very low fence (Cooper, 2019). Poor fencing is one of the earlier discussed challenges concerning the ISPS code implementation in the Freeport of Monrovia and the port of Buchanan. Therefore, if a practical solution earlier provided the challenge, fewer or no casualties resulted from the vandalizing act (Iimi & Rao, 2018). Also, on board a Chinese fishing vessel, a Chinese citizen was accused of beating a black crew to death in the Liberian waters while on a fishing trail hence adding the list of casualties evidenced in the water-related operations (Nordfjeld, 2018). However, more regulations that are protective need to be put in place to counter the occurrence of other deaths in the future, particularly in the Liberian waters.

These companies experienced casualties due to the poor ISPS implementation and ISPS awareness training, resulting in the blows mentioned above. The presence of the training exercise concerning the ISPS Code would have played a significant function in curbing the experiencing of such casualties (Cooper, 2019). Therefore, the presence of diversified deaths in both ports emanates from the lack of advanced security measures restricting attacks, misuse, and mistreatment of the port workers and all other

stakeholders included in the shipping operations (Iimi & Rao, 2018). The international maritime organization should develop highly effective measures and rules to curb the increased numbers of casualties in the ports (Cooper, 2019).

Chapter Four: Summary, Conclusion and Recommendations

4.1. Summary and Conclusions

As this study has shown, the implementation of the ISPS Code on cargo throughout the Freeport of Monrovia and the port of Buchanan has resulted in several levels of security within the ISPS Code. The various security levels of the ISPS Code include security level one, security level two, and security level three. These levels have been very effective in enhancing operations in the Freeport of Monrovia and the port of Buchanan. Besides, they have been effective in international shipping activities.

The study has also found out that the implementation of the ISPS Code has greatly increased the ship traffic at the two ports, which directly impacts the economy of the two ports. Following the increased traffic, the National Port Authority has become a more viable hub for economic activities. More vessels are now flowing to and out of the port, which is an indication that the sea is becoming a better hub for activities. It is to be noted that the more activities and ship traffic on the port, the better the economy. As such, the implementation of the ISPS Code has led to the development and growth of the economy.

Cases of ships being attacked have been witnessed in various ports in Liberia as well as other ports in various other areas of the world. There did not exist well-underlined security measures to curb terrorist attacks in the seaways. As a result, ships could be easily hijacked, and goods were stolen. Besides, the lives of the crew were also threatened, and many people avoided the port. With the increasing cases of terrorist attacks, the sea port was almost nearing its closure since the ship traffic was relatively low. However, with the introduction of the ISPS Code, the security threats were

adequately addressed. The cases of terrorist attacks on ships significantly reduced. Business along the port boomed, and the economy grew. The study found out that the additional security that came as a result of the implementation of ISPS Code has influenced the port community both directly and indirectly. Some of the physical security measures such as fencing, video monitoring, and lighting control the movement of people to and from the port, which enhances proper management of activities and people. Other than that, the study has also found out that these security measures prevent unauthorized access to restricted areas and have also led to the improvement of the port capacity through the identification of risks and countermeasures.

The implementation of the ISPS Code has also had a great impact on the occupancy rate of vessels at the Freeport of Monrovia and the Port of Buchanan. The creation of unbreakable regulations has changed the operation of the port in a great manner. The implementation of the code has been allowed by the United Nations, and therefore, all the seal vessels berthing at the two ports must abide by the ISPS Code. A similar requirement is witnessed in the Port of Buchanan. Here, the ISPS implementation code is adhered to at all levels. Thus, the observance of the ISPS Code has had great benefits to both ports.

The implementation of the ISPS Code, like many other projects, has had its share of challenges. Some of the challenges that projects experience includes lack of adequate funds and long times to achieve the intended outcomes. Besides, many organizations or nations find it difficult to accept changes to change a particular system and replace it with another. Before the decision is made, a lot of time may have been wasted.

In the implementation of the Code, most of the original stakeholders were forced to change their strategies and protocols in order for them to adapt to the new norm, which has become an international standard. While such challenges were experienced, it is not very easy to know to a specific degree how a particular challenge impeded the implementation. The bombing of the Russian tanker and the terrorist attack in America

on 9/11 were some of the incidents that prompted the need to enhance more security in the ports, and this culminated in the implementation of the Code.

Even with the implementation of the ISPS Code various incidents of piracy and terrorism still take place. One of the major challenges that arise is that according to the ISPS, the vessels are supposed to have communication systems that directly inform the harbour of vital information like state of origin and vessel number. Knowledge of this type can be used to access the ship and illegally claim the cargo that is being transited. To address this, a regulation has been developed which ensures the security of all the information that is considered sensitive. Such information is highly scrutinized.

The study identified a major challenge, especially in the cooperation of the staff. Most of the staff members were not ready to accept a new system for they did not understand the new system very well. Therefore, they were highly sceptical of it and therefore doubted it. The implementation of the new system from the old system created reforms which most of the staff were not ready about. Some of the things that were introduced with the new system include new equipment, communication systems, surveillance systems, new staff, and computerized systems. These new changes were more expensive than the old ones meaning more funds were needed to implement the new system. To solve this, the government created funds to help the ship-owners. This was in the form of loans specifically meant for ship owners and were meant to help create funds to ease the burden of the new Code.

Inadequate shoreline fencing is another challenge experienced in the ISPS Code implementation in the Freeport of Monrovia and the port of Buchanan. The erection of a fence to separate the land and the water body has been an issue in the two ports. There is improperly established shoreline fencing between the land and the sea bodies of water. Due to this challenge in the fencing, people with ill intentions can easily reach the sea from the land, which may jeopardize the operations at the harbour or even compromise the security of the ships. Additionally, such intruders may pose great

risks to the port workers and compromise the way in which they do their job. With such forms of insecurity, the productivity of port workers is likely to go down. With decreased productivity, the overall economic impact of the port will go down. It is to be noted that for the port workers to be productive, they need to have their security guaranteed. The task of detecting any security threats as per the measures of the ISPS Code is deterred by the presence of the ineffective divide between land and the bodies of waters forming the two ports in discussion.

The implementation of the ISPS Code, despite the various challenges, has been a success. The ISPS Code has been essential in allotting levels of responsibility to governing bodies of the country, shipping companies, shipping personnel, and people operating in ports to discover or find by careful search of security threats and introduce legalized preventive measures due to that investigation. Besides, the implementation of the ISPS code in ships has enhanced the conducting of security checks by those responsible. Through the implementation of the ISPS Code, the security aspects of the ship, seafarers, ports, and its workers have been improved. A worker at the port feels more comfortable now than they would have felt years ago when the security measures had not been implemented.

If the ISPS Code guidelines are properly implemented, more benefits at the port are expected. Compared to the past, services will be better at the port compared to the past. Some of the advancements to be witnessed include high monitoring of the activity of cargo and personnel in both ports hence facilitating smooth operations and facilitating high compliance to the ISPS measures in the ports. Also, the implementation of the ISPS on cargo operations on both ports will help strengthen the established roles and responsibilities for the port state officers and on-board officers to carry out maritime security threats internationally.

The vessel's turnaround time has also been affected by the implementation of the ISPS Code. As the study found out, the implementation of the ISPS Code has helped to ensure the safety of the ship, its crew, and cargo. However, the study found out that

the implementation of the ISPS Code does not have any effect on the vessel's turnaround time. The reason for this is that the vessel's turnaround time is determined by various factors, such as weather conditions. During the rainy season, vessels with bulk cargo spend a month because of climatic conditions but the strict observance of the ISPS Code. However, during seasons without rain, the turnaround time for the ship is usually shorter. Besides, the implementation of the ISPS Code means that ships have to take more time at the harbour as they comply with the various security measures.

However, the research also identified some studies which show that the enhanced security following the implementation of the ISPS Code has ensured calmness and orderliness during the time the ships are at the harbour. As a result, the presence of well-strengthened security and safety measures in the ports has highly favoured the turnaround time operations concerning the ships. In addition, the acts of terrorism attacks, thefts of cargo, and unfavourable working environments that existed in the past have seen a positive transformation in Freeport of Monrovia and the port of Buchanan, which has ensured proper carrying out of services.

Previously, there used to be several cases of turnaround time. However, the ISPS measures that have been implemented, especially in relation to the collection of international data on the security threats and coming up with solutions to problems, has helped to solve the turnaround time problems which were experienced before. Additionally, the implementation of the ISPS Code has enhanced proper monitoring of the undertakings of the cargo and personnel in the ports, which has greatly influenced the turnaround time in the Freeport of Monrovia and Buchanan's port.

4.2 Recommendations

As noted, the inadequate shoreline fencing in the ISPS Code implementation in the Freeport of Monrovia and the port of Buchanan has compromised the security of the port workers. This has in turn, negatively affected their productivity. To address this challenge, it is recommended that improved shoreline fencing in ports be erected to strengthen the safety and security matters in the international water operations and to

curb any minimal chances of the occurrence of terrorism attacks. Once the shoreline is improved, security of the port workers will be improved tremendously. Consequently, their performance will improve greatly.

It is also recommended that the period the processes within the port take place be expedited to ensure that unnecessary delays are avoided. The study noted that the removal of customs takes a couple of weeks due to the need for documents having to be sent to various offices to get the go-ahead for implementation. As a result, the workers at the port are forced to work for long hours in order to achieve the deadlines. They are also forced to engage in cumbersome tasks of arranging and delivering various commodities within the port. If proper measures are put in place to enhance the flow of goods, it could be possible for the goods to flow smoothly without the need for workers to put in extra effort. The various steps involved in the activities of the port, such as the steps of removal, cargo movement, and the review of the documentations could be shortened effectively. To achieve this, it is advisable that the custom viewing area be separated from the security checkpoint by the port authorities as well as the port security officers who should be assigned the role of operating specified gates to monitor and evaluate the day-to-day operations at the port. This way, it is easier to ensure that tasks are properly completed within the assigned time frame.

This could be done together with procedures followed during the exit of vehicles. When exiting at the exit gate, it was noted that vehicles take a lot of time to get offloaded and cleared at the port. The vehicles that use the exit gate follow a procedure that is complex therefore resulting in unnecessary delays. To address this challenge, it is recommended that proper mechanisms be put in place to ensure that the process followed during the exit of the cars be enhanced to save on time.

The implementation of the ISPS Code has led to various benefits highlighted above. These benefits range, among other things, the improvement of the economy at the port and across the country due to enhanced ways of handling goods at the port and improved security. Cognizant of this, it is recommended that ISPS Code be

implemented to all ports and be extended to the neighbouring countries to enhance regional growth. Through the implementation of the ISPS Code, there has been the elimination of wharf rats, touting, hawking as well as other illicit activities at the port.

Issue of non-compliance should be taken seriously. Even with the ISPS Code being implemented, there could be a time that some of the ports relax the regulations leading to delay of processes and breach of security. As such, full compliance must be enhanced at all times. This calls for the proper training of the concerned personnel. Through proper training, the implementation of the Code, most of the workers at the port will be willing to accept it and be able to realize the importance of using the Code and the associated benefits. The code has several parts. Part A, Section 18.3 stipulates the need for port facilities to carry out various drills and exercises which are concordant with the types of operation of the port facility. The other things that determine the kind of drills and exercise to carry are the type of ship as well as the facility being served.

It is also recommended that a proper lighting system and beam lights be installed at the two ports to facilitate night operations. The study noted that there were various challenges that were faced in both ports due to inadequate lighting. The poor illumination at the port facility makes it difficult for night operations to go on. Without night operations, it means that operations can only be done during the day. Following the implementation of the ISPS Code at both ports, the ship traffic increased meaning that more work needs to be done.

The increased traffic also meant that there was the need to perform tasks for longer hours with increased staff since more ships and cargo were being handled compared to before the implementation of the ISPS Code. Thus, the port workers were required to work even at night to ensure all activities in the port go as planned and that there are no improper delays. It is also to be noted that the lack of adequate lighting in the both is a security threat to the port workers. Additionally, the lack of proper lighting could lead to theft of some of the items within the port. Therefore, it is suggested that

proper lighting be instituted in both ports to allow workers to work at night and also ensure the security of the items at the port.

References

- Arof, A. M., & Khadzi, A. F. A. (2018). A delphi study to identify important factors for determining the level of adherence to ISPS code implementation. *Int.J Sup.Chain.Mgt Vol*, 7(4), 279.
- Athority, N. P. (2017). *The Liberian Seaport Profile*. Montsorrado.
- Ávila-Zúñiga-Nordfjeld, A. &, & Dalaklis, D. (2018). Implementation and Compliance of the International Ship and Port Facility Security Code in Mexico: A literature Review and seleted issues. . *International Journal on Marine Navigation and Safety of Sea Transportation*, 363-373.
- Benamara, H., & Asariotis, R. (2013). ISPS code implementation in ports: Costs and related financing. *Risk management in port operations, logistics and supply chain security* (pp. 315-336). Informal Law from Routledge
- Bennett, N. J. (2014). Why local people do not support conservation: Community perceptions of marine protected area livelihood impacts, governance and management. *Sciencedirect.com*, 107-116.
- Bichou, K. (2005). The ISPS code and the cost of port compliance: an initial logistics and supply chain framework for port security assessment and management. *In Port Management*, 109-137.
- Bueger, C. (2013). Communities of security practice at work? The emerging African maritime security regime. *African security. Tandfonline*, 297-316.
- Center, D. P. (2019). *USCG High Risk Countries*. Port Security Center.
- Dekker, S. &, & Stevens, H. (2007). Maritime security in the European Union—empirical findings on financial implications for port facilities, Maritime Policy & Management. *Maritime Policy & Management*, 485-499.
- Fredrickson, C. W. (2020, 12 28). *Port Security Advisory Liberia*. Coast Guard Maritime Commons Blog.
- Guard, U. C. (2014). Valuable and Vulnerable: Protecting Maritime Infrastructure. *Critical Infrastructure Protection. springer*, 83.
- Guard, U. S. (2021). *Port Security Advarsary (2-20) Liberia*. Maritime Commons.
- Gunawan, E. Z. (2019). The implementation of ship and port facility security policy based on ISPS code at PT Pelindo II (Cirebon branch). *Journal of Management History*, 67-96.

- Hilling, D. (1969). The evolution of the major ports of West Africa. *The Geographical Journal*, 365-378.
- Mazaheri, A. (2008). How the ISPS code affects port and port activities. 5/78.
- Novikov, S. (2009). . Implementation of the ISPS Code in the Russian Federation: Ships and. *Harbour Protection through Data Fusion Technologies NATO Science for Peace*, 23-26.
- Othman, E. &, & Halawa, A. (2005). . Towards Effective Implementation of the ISPS Code Onboard.
- Pardali, A. S., & Paraschou, V. (2020). . Implementation of the ISPS Code at Marinas:. *International Journal of Research in Tourism and Hospitality*.
- Potgieter, T. (2018). Oceans economy, blue economy, and security: notes on the South African potential and developments. *Journal of the Indian Ocean Region*, 49-70.
- Radonja, R. &, & Glujić, D. (2020). Safety Aspects of ISPS Code Onboard Practice. *Naše More*., <https://doi.org/10.17818/nm/2020/2.11>, 178-180.
- Ramsaroop, S. (2016). Understanding the international ship and port facility security (ISPS) code: an examination of the implementation and effectiveness of the ISPS code.
- Razali, N. &, & Dahalan, W. (2012). . The ISPS Code and Its Implementation In Malaysia. *Arena Hukum*. <https://doi.org/10.21776/ub.arenahukum.2012.00501.5>, 42-47.
- Robert, J. (2006). Marine Environment Protection and Biodiversity Conservation. In *The Application and Future Development of IMO's Particularly Sensitive Sea Areas Concept* (p. 287). Springer Science & Business Media.
- Schulze, W. (1970). The Ports of Liberia: Economic Significance and Development Problems. In *Seaports and Development in Tropical Africa*. 75-101. Sun, Z., & Beckman, R. (2018). The development of the Polar Code and challenges to its implementation. In *Global Commons and the Law of the Sea* (pp. 303-325). Brill Nijhoff. Examining the implementation of the International Ship and Port Facility Security Code (ISPS) in the port of Dakar (Senegal

Appendices

RESEARCH QUESTIONS

1. What are the effects of the ISPS code implementation on cargo throughput at the FOM and POB?
2. What are the effects of the ISPS code implementation on the ship traffic flow at the FOM and POB?
3. What are the effects of the ISPS code implementation on the Occupancy rate of vessels at the FOM and the POB?
4. What are the effects of the ISPS code implementation on the vessel's turnaround time in the FOM and POB?
5. What are the challenges in the implementation of the ISPS code at the FOM and POB?
6. Are the seaborne security protocols implementation effective or not effective? If not effective, what are the reason(s) of it ineffectiveness in the FOM and POB?