AN INVESTIGATION INTO THE ILLEGAL MOVEMENT OF GOODS FROM SEAPORTS-OF-ENTRY: A CASE STUDY AT DURBAN HARBOUR

By

Devandran Mogambery Moodley
Student Number: 32313969

submitted in accordance with the requirements for the degree of

MAGISTER TECHNOLOGIAE

in the subject

SECURITY MANAGEMENT

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: Prof AdeV MINNAAR
CO-SUPERVISOR: Prof D GOVENDER

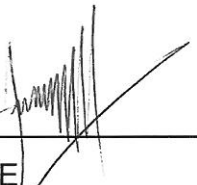
February 2014

COPYRIGHT

DECLARATION FORM

Student number: 32313969

I, **DEVANDRAN MOGAMBERY MOODLEY**, declare that this thesis: ***'AN INVESTIGATION INTO THE ILLEGAL MOVEMENT OF GOODS FROM SEAPORTS OF ENTRY: A CASE STUDY AT DURBAN HARBOUR'*** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.



SIGNATURE
(Mr DM Moodley)

27 FEBRUARY 2014

DATE

ACKNOWLEDGEMENTS

I would like to take this opportunity to express my heartfelt gratitude to the following people who assisted in the successful completion of this dissertation:

My wife, Carol and my two children, Shanice and Kaitlyn, for their unwavering support and patience throughout this study. Thank you for being supportive and allowing me to undertake this research and for all the sacrifices you have made.

My supervisor, Prof. Anthony Minnaar, and co-supervisor, Prof. Doraval Govender, who provided guidance throughout this research study. Thank you for your continual assistance, editing, motivation, understanding and encouragement.

The South African Police Service, Customs and Transnet in Kwazulu-Natal for granting me permission to conduct this research. Thank you to my employer, The South African Police Service, in allowing me permission to conduct this research study at the Durban Harbour in KwaZulu-Natal.

My friend Remone Govender, who was always there to motivate me and support me when I needed him and for his guidance and assistance.

All participants, who willingly and readily aided me with the interviews.

Thank you to all those other people, too numerous to name, that have assisted and aided in the completion of this dissertation

EXECUTIVE SUMMARY

Seaports, or harbours, play a vital role in the logistical supply chain, since they handle the largest volumes of containerised cargo and bulk goods that enter any country. Over the decades, globalisation and free trade have resulted in increased movement of cargo and people through the sea ports. The security functions in all categories of the ports are of paramount importance, seeing that border posts or ports are the main entry and exit points of any country. The marine transport system is responsible for 95-98 per cent of South Africa's imports and exports. South Africa's maritime sector, and in particular its eight commercial ports-of-entry, play a major role in the South African economy, as well as those of South Africa's neighbouring landlocked countries. As a result of the volume of cargo containers passing through these ports, it is often challenging to detect or even examine all of the cargo that enters or leaves the port. A 2007 report titled 'The collective approach to Border Control' states that the movement of illegal goods crossing South African borders is in the amount of 20 billion Rand per year. The illegal movement of goods represents an enormous loss to South Africa in terms of revenue, as well as customs and excise duties, and negatively impacts on the confidence of our international investors. One of South Africa's busiest seaports-of-entry is the Durban harbour. This study sought to investigate the challenges presented by the illegal movement of goods through Durban harbour. The research sought to establish how the goods were being moved illegally through the Durban harbour area. The focus is on the security risk control measures that should control the illegal movement of goods from the Durban Harbour.

The objectives of this study were:

- to examine the existing security risk control measures at the Durban harbour;

- to assess the risks associated with the illegal movement of goods at the Durban harbour; and

- to identify the security risk control measures required to prevent the illegal movement of goods at the Durban harbour.

The study made use of the qualitative research approach to research the unlawful transfer of goods entering through seaports. Three methods of data collection were used. These were a documentary study of police case dockets, an onsite security audit of the Durban harbour, and face-to-face interviews between the researcher and the interviewees in accordance with an interview schedule. Semi-structured interviews were conducted with the SAPS Border Police, customs officials and security officials who were stationed at the Durban harbour. Thirty (30) sample respondents were individually interviewed by the interviewer. An analysis of fifty (50) police dockets which were registered on the SAPS crime administration system for 'Theft and Contraband Smuggling' were also analysed, where the scene-of-crime was the Durban harbour. In addition, an onsite evaluation of the current security measures at the Durban harbour was conducted. All of the data collected was analysed using a data-spiral method, which generated themes and categories. The findings established that there are shortcomings or gaps within the existing security measures for the prevention of, and safeguarding the harbour as a port against, criminal risks or security weaknesses. Accordingly, the researcher has recommended certain measures that should assist in eliminating or reducing the associated criminal risks affecting the harbour.

ABBREVIATIONS

AK47	Avtomat Kalashnikov 47
BCOCC	Border Control Co-ordinating Committee
CAD	Computer Assisted Design
CBD	Central Business District
CSI	Container Security Initiative
DA	Democratic Alliance
GPS	Global Positioning Systems
IP	Internet Protocol
ISPS	International Ship and Port Facility Security Code
JIA	Johannesburg International Airport
MTSA	Maritime Transport Security Act of 2002, Public-Law 107-295
RFID	Radio-Frequency Identification
RIB	Removed-in-Bond
SA	South African
SADC	Southern African Development Community
SANDF	South African National Defence Force
SAPS	South African Police Service
SARS	South African Revenue Services
TEU	Twenty Foot Equivalents
TNPA	Transnet National Ports Authority
TWIC	Transportation Workers Identification Credential
US	United States [of America] [keep it in square brackets]
USA	United States of America

TABLE OF CONTENTS

APPENDICES

LIST OF TABLES

Chapter 1

INTRODUCTION AND MOTIVATION FOR THE RESEARCH

1.1 INTRODUCTION

As a result of the new democratic dispensation in 1994, South Africa rejoined the global economic world. The effect thereof was a substantial increase in the inflow of immigrants and goods, both legally and illegally, into the country (Operational Working Team on Border Control (OWTBC), 1997: 1). The movement of illegal goods entering our borders, coupled with the illegal inflow of aliens, had a significantly negative impact on South Africa's economy and crime rate. Over the past decade, according to police statistics and media reports, the general crime rate in South Africa has increased at a disturbing and disconcerting rate. According to the South African Police crime statistics for the period 2012/2013, during the financial year 2011/12 there were 777 140 serious crime arrests effected and 806 298 in 2012/13. There were 307 580 convictions in 2011/12 and 352 513 convictions for all serious crime during 2012/13. In total, 609 offenders were sentenced to 826 life sentences, while 1 586 offenders were sentenced to a combined total of 2 006 years' imprisonment for serious crimes. The most notable aspect of the crime statistics for 2012/13 is that the violent crimes that cause the most fear and trauma amongst the public have increased.

When considering the global situation for the last twenty years, an increasing number of countries now report statistics concerning traditional crimes (murder, robbery, rape, theft, burglary, fraud and assault) to the United Nations surveys. Even though countries define crimes differently in their criminal codes, no country is without crime (United Nations Office for Drug Control and Crime Prevention (UNODCCP), 2013: 1). This situation can be attributed to factors such as globalisation, economic downturn, as well as better reporting of crimes. According to an internet article '*Top ten countries with the highest crime rates'* (Anon., 2013c: 1), South Africa continues to experience high levels of crime, although it does not feature in the top ten list of countries with the highest reported crime. This is due to a number of factors, such as porous border controls, corruption and an ineffective criminal justice system, amongst others. The increase in crime included drug trafficking, firearm smuggling, human trafficking, contraband smuggling, and smuggling stolen goods and vehicles into South Africa. All of these are known to be

primary business activities of organised crime syndicates. This substantial increase in general crime and the unprecedented growth of organised crime syndicates had a consequential effect on the policing of borders and ports-of-entry (Geldenhuys, 2007: 1).

Seaports, or harbours, play a vital role in the logistical chain, since they handle the largest volumes of containerised cargo and bulk goods that enter any country. South Africa's maritime sector, and in particular its eight commercial ports-of-entry, play a major role in the South African economy, as well as those of South Africa's neighbouring landlocked countries (Khwela, 2009: 31). One of South Africa's busiest seaports-of-entry is the Durban harbour (McCarney & Stren, 2003: 231). According to Minnaar (2003: 71), in a risk assessment conducted in 1997 by the United States Immigration and Naturalization Service (US Immigration and Naturalization Service's report on border control, cited in OWTBC, 1997), the Office of Inspections identified several problem areas at the Durban harbour. These included security issues, such as poor access control to the cargo warehouse areas and gaps in the security fencing, and problems with general crime, such as container thefts, contraband smuggling, illegal movement of goods and stolen vehicles.

1.2 RATIONALE FOR THE STUDY

A rationale statement contributes to the research process since it sets out the basis of why the research is being undertaken and what questions it seeks to answer (De Vos, Strydom, Fouché & Delport, 2011: 80). The rationale of this study was to investigate what type of security risk control measures currently exists at the Durban Harbour, what are the risks associated with the illegal movement of goods and to establish security risk control measures that can be put in place to prevent the illegal movement of goods at the Durban harbour.

In 1997, it was estimated that the value of illegal goods crossing South Africa's borders was in the order of 17 billion Rand (Geldenhuys, 2007: 1). Since 1997, there has been a global escalation in the value of illegal goods that are transferred from one country to another (Minnaar, 2003: 1). A 1997 report titled '*Border control collective approach implementation plan*' states that the movement of illegal goods

crossing our borders is in the order of 20 billion Rand per year (OWTBC, 1997: 1). The illegal movement of goods represents an enormous loss to South Africa in terms of revenue and customs and excise duties, and negatively impacts the confidence of our international investors (Geldenhuys, 2007: 1). Hanrahan (2010: 1) notes that the primary focuses in port security have advanced since the 11 September 2001 terrorist attacks in America, from simply preventing cargo theft to protecting people and critical infrastructure from terrorism. The Minister for Safety and Security, Mr Charles Nqakula, when presenting the 2007/2008 crime statistics, indicated that arrests at ports-of-entry for unlawful firearms, stolen vehicles, drugs, illegal goods, human smuggling, and trafficking in marine life resources, precious metals and stones and non-ferrous metals had intensified from 30 410 in 2006/2007 to 51 856 arrests in 2007/2008 (Nqakula, 2008: 1). According to Martin (2011:1), during the 2010/2011 financial year border patrol successes in South Africa resulted in the seizure of contraband to the value of sixty one million rand being seized, four hundred criminals being arrested and 19 641 illegal immigrants being recorded. These figures undoubtedly indicate the extent of the problems facing ports-of-entry of South Africa and these figures are increasing yearly. The increased criminal activity by organised crime and international syndicates, the ingress of smuggled goods and contraband, fraud committed through non-payment of customs and excise duties, and the round-tripping[1] of vehicles and other manufactured goods, are all spinoffs of weak or poor controls at ports-of-entry (Geldenhuys, 2007: 1).

1.3 PROBLEM STATEMENT

According to De Vos et al (2011: 108), the problem statement serves as an effective point of departure for the study. It also delimits the focus of the study and spells out the specific problem that the researcher wishes to investigate (Fouche & Delport, 2011: 108). This study, therefore, sets out to investigate the challenges around the illegal movement of goods at the Durban harbour. The research seeks to establish how goods are moved illegally through the Durban harbour area. This study will focus on the security risk control measures and risks associated with the threats of

[1] Round-tripping involves the registration of an imported vehicle in a neighbouring country and bringing the same vehicle back to South Africa to be used locally.

criminal conduct that give rise to the illegal movement of goods from the Durban Harbour as a sea port-of-entry.

1.4 RESEARCH QUESTIONS

Research questions are core to the research process, accordingly the manner in which research questions are formulated and phrased is critical, since the objective of the research process is aimed at answering the research questions (Fouche & De Vos, 2011: 89).The research rationale and the problem statement helped develop the research questions for this study. The following research questions were adopted for this study:

1.4.1 What type of security risk control measures are in existence at the Durban Harbour?

1.4.2 What are the risks associated with the illegal movement of goods at the Durban harbour?

1.44 Which type of security risk control measures can be put in place to prevent the illegal movement of goods through the Durban harbour?

1.5 RESEARCH GOAL

The research goal gives direction in a study and indicates the central thrust of the study (Fouche & De Vos, 2011: 91). The goal of this study was to investigate the existing security measures at the Durban harbour and to identify the risks associated with the illegal movement of goods so that appropriate security risk control measures might be recommended to mitigate the threats.

1.6 RESEARCH OBJECTIVES

Research objectives are the steps that a researcher will take within a certain timeframe to achieve his goal (Welman & Kruger, 2005: 196).

The objectives of this study are:

- to examine the existing security risk control measures at the Durban harbour;
- to assess the risks associated with the illegal movement of goods at the Durban harbour and;
- to identify the security risk control measures to prevent the illegal movement of goods at the Durban harbour.

1.7 KEY CONCEPTS

1.7.1 Port of entry

Ports-of-entry are points on a country's border through which people and goods may enter or leave the country. This includes land, sea and air travel. Ports-of-entry are often manned by police officials, home affairs and security officials who have their individual tasks to carry out to ensure compliance with the laws of a country with regard to goods and people entering a country (Beneke, 2001: 1).

1.7.2 Threat

A threat is a negative consequence that can cause a risk to be the likelihood of the occurrence of an event. A threat may also be a natural phenomenon or a man-made incident, such as corruption, smuggling, fraud, and sabotage, etc. (*Oxford South African Dictionary* (*Oxford Dictionary*), 2009: sv threat).

1.7.3 Security survey

Lombaard describes a security survey as involving "… an in-depth, onsite study of a physical facility and its property, environment, activities and procedures" (Lombaard, 2004: 21).

1.7.4 Illegal goods

The term 'illegal' is defined as anything that is not sanctioned by a country's official rules (*Oxford Dictionary*, 2009: sv illegal). However, in the SAPS daily working environment, illegal goods are termed goods which are either unlawful to possess or goods requiring a permit or authorisation to be in lawful possession thereof. Goods that have been stolen or obtained through any illegal means, such as theft fraud or corruption, also fall within this category.

1.7.5 Vulnerability

The term vulnerability means that there is a lack or an absence of security measures in relation to security risks, which in other words means that there are weaknesses or loopholes in the security measures or that the security measures are inadequate to combat the security risks (Rogers, 2005: 109).

1.7.6 Risk

According to Mackenzie, McLoughlin and Twiss (1983: 16), risk can be defined as an exposure to a probability of injury or loss, and can be divided into three categories: dynamic risk, pure risk and speculative risk. Dynamic risk is a risk that a person takes to further his or her own business interests, whilst pure risk involves events that might lead to loss, damage, injury or death. Lastly, speculative risk is a type of risk that, when undertaken, results in an uncertain degree of gain or loss.

1.7.7 Risk analysis

Risk analysis involves assessing the risk, i.e. identifying the potential threats to the organisation and the likelihood or frequency of their occurrence. Depending on the organisation involved, the risks may include disasters, crime, employee disloyalty, white collar crime and other crimes (Rogers, 2005: 102).

1.7.8 Security risk control measures

Security risk control measures are measures that are identified after conducting a comprehensive security survey and a risk analysis exercise for an organisation. Through this process, security weaknesses or loopholes in the existing security measures and assets which are susceptible to risks are identified. Security measures are then recommended to improve security in the organisation (Lombaard, 2004: 45).

1.7.9 Physical Protection Systems

Physical protection systems are measures that involve the use of physical and technological aids in the protection of assets and include policies and procedures, human resources, barriers, equipment and records (Garcia, 2008: 11).

1.8 RESEARCH PLANNING (CHAPTER LAYOUT)

The study is presented as follows:

Chapter 1: Introduction and motivation for the study

This chapter provides a basic introduction to the study and the problem statement in order to give the reader a background to the area under research. Included in this chapter is the rationale for the research, the research questions, the goal and objectives of the research, short definitions of key concepts used throughout the study, and an outline of the dissertation.

Chapter 2: Methodological exposition of the research design

This chapter presents in detail the methodology used in the study, including the research approach, research design and the methodology used to collect and analyse the data. Also included in this chapter is the value of the study to the various stakeholders, the validity and reliability of the data collection instruments, limitations to the study and ethical considerations.

Chapter 3: Security measures to prevent the illegal movement of goods at ports-of-entry

This chapter provides a study of the literature on the issue of illegal goods and contraband which are smuggled through ports-of-entry. In particular, the following aspects are discussed: the international scenario, the South African border environment and the Durban harbour (with regard to the issue of illegal movement of goods and contraband) security at the port, reviewing of the existing border control mechanisms, weaknesses in the current security strategy, prevalent crimes associated with ports-of-entry, factors that contribute to crimes associated with the harbour, the security risk management model, tightening of border controls, and lastly, the implementation of new risk management procedures.

Chapter 4: Collection, analysis and interpretation of research data

This chapter describes in detail how the data was collected and the results analysed and interpreted. The different levels of data analysis and a graphic representation of data are provided. The following characteristics are examined: the biographical

information of all respondents, vulnerabilities and risks in the Durban harbour, security protection systems, and security risk control solutions.

Chapter 5: Findings and recommendations

This chapter critically discusses the outcome of the study and makes recommendations for the practical use of the study's findings, with the aim of improving the security situation at the Durban harbour.

1.9 CONCLUSION

This chapter provided a detailed overview of the problems facing ports-of-entry, more especially seaports with regard to issues such as the illegal movement of goods. The challenges facing seaports or harbours with regard to the illegal movement of goods and the importance of this study, together with the reasons that gave rise to this study were also highlighted. The purpose of this study was to evaluate the existing security measures with the intention of establishing any gaps or problems in the security measures. This problem was highlighted on three levels, namely international, national, and domestic levels (Durban harbour). The research questions, purpose of the research and the objectives for conducting an onsite security assessment of the Durban harbour were discussed and justified.

Chapter 2
RESEARCH METHODOLOGY

2.1 INTRODUCTION

The aim of Chapter Two is to set the context of the approach to the research, the design of the research and the methods used for the research study. The different steps in the qualitative approach are investigated, starting with the viewpoint of why the specific research approach was selected, and resolves with the moral attributes associated with the research. It centres on the procedures of the design, selection of a sampled target group, and the data gathering process and analysis. It also clarifies the data collection methods and the validity and reliability of the data. The chapter also examines the progress of a documentary checklist and an observation checklist. It further examines the qualitative interview schedule for the interviews intended to gather the opinions and viewpoints of all participants through semi-structured interviews. The data analysis strategy is considered and influenced within the background of a data analysis spiral (open coding).

The chapter progresses to present a concise outline of what the assorted categories revealed during the development of the research study and was condensed into the concluding themes represented in the section examining data analysis. The chapter concludes with a discussion on the ethical issues confronted by the researcher.

2.2 RESEARCH APPROACH

Matthew and Ross (2010: 142) are of the opinion that a qualitative research approach involves the sentiments, viewpoints, stories, accounts, thoughts and the particular understandings of the participants. Leedy and Ormrod (2005: 95) and Matthews and Ross (2010: 142) are of a related viewpoint that qualitative research investigates the viewpoints, encounters and behaviours through interview processes or focus groups. In this research study, the researcher utilised the qualitative research approach of one-on-one interviews, observation, documented study, literature study, piloting and personal experience. The rationale for utilising a qualitative approach was to assess the subject of illegal movement of goods from the Durban harbour. The researcher heeded the responses of the participants in order to construct a representation, created on their thoughts and individual experiences (Creswell, 1994: 21). The port-of-entry at the Durban Harbour was used in the

research study to examine the illegal movement of goods through the port. The research study is a factual study, which endeavoured to depict, translate, and explore the illegal movement of goods through the Durban harbour.

2.3 THE RESEARCH DESIGN

According to Creswell (2007: 73), a case study entails the exploration of a bounded system or single or multiple cases over time through the profound collection of data entailing multiple suppliers of information. A data collection method involves interviews, documents, observations or archives and the essence of this research study is a thorough description of case-based themes (Fouche & Schurink, 2011: 321). The research design stipulates what data is required, the methods to be used to gather and analyse the data, as well as how this would ultimately answer the research question (Creswell, 2007: 74).).

A qualitative case study research design was used for this research and the Durban Harbour, as a port, was used for the case study to investigate the illegal movement of goods at the port. The reasoning behind using a qualitative approach was to evaluate the issue of the illegal movement of goods from the Durban harbour. The researcher listened to the participants in order to build up a picture, based on their ideas and personal experiences (Creswell, 1994: 21). This research is a descriptive case study, which strives to describe, analyse and interpret the situation pertaining to the illegal movement of goods through the Durban harbour.

2.4 POPULATION AND SAMPLING

Wellman and Kruger (2001: 46) are of the view that the target population is the objective of the research study, which may include individuals, groups or organisations. Wellman and Kruger (2001: 55) also assert that the population is a collection of possible participants whose opinions are vital to the results of the research study. The population targeted in this study were the SAPS officials, security officials and customs officials positioned at the Durban Harbour. Owing to the size of the target population, comprising eighty (80) security officials, one hundred-and-forty (140) police officials and sixty (60) customs officials in the Durban harbour, the researcher decided to obtain data from only a sample of the population. The intended sample was ten (10) security officials, ten (10) police officials and ten

(10) customs officials. The reason for this is that it is uneconomical and impractical to take into account all the participants of the target population in the research study. Bailey (Bailey, 1987: 82) affirms that a sample population is a subcategory or a fragment of the targeted population. Wellman and Kruger (2001: 55) further assert that the sample must be illustrative for the outcome of the study to be generalised, i.e. the targeted sample should have the precise properties in similar ratios as the population it represented.

In this research study, probability and non-probability sampling methods were utilised to choose the participants for the study. According to Nachmias and Nachmias (1987: 184) and Wellman and Kruger (2001: 56), probability sampling can ascertain the probability that individuals or associates of the population will be incorporated into the sample group, i.e. every individual or member has the equivalent probability of being included in the sample. The type of probability sampling method utilised in this research study was the simple random sampling technique. In simple random sampling, every associate member of the population is offered the same probability of being included into the sample (Welman & Kruger, 2001: 59). Consequently, all members of the SAPS Border Police, Customs and Transnet security sections had an equal prospect of being chosen.

In non-probability sampling, the probabilities of choosing a specific individual are not specified, the researcher does not know the real population size or the participants of the population (Strydom & Delport, 2011: 391). According to Denzin and Lincoln (2005: 378), qualitative researchers utilising the non-probability sampling method pursue individuals, groups and backgrounds where the specific processes being learnt are very probable in occurring. In this research study, the participants or groups intimately associated with the topic of study are in fact the anti-smuggling sections of the SAPS and Customs sections and the security portion specified to offer security in the container terminal areas.

The type of non-probability sampling method utilised in this research study was the purposive sampling technique. Creswell (2007: 79) is of the opinion that with purposive sampling, participants and the sites encompass the maximum features, illustrative or comparable characteristics of the target sample that supply the

research best are sensibly elected and could resolutely form an insight to the research problem. The purposive method was utilised, given that the researcher sought to acquire distinctive and different data from a target group which best aided the objective of the research.

In concurrence with the purposive sampling method, the researcher exercised the snowball sampling technique to decide upon the additional members of the target population, for instance high-ranking managers and professionals of the different divisions or relevant components. According to David and Sutton (2004: 152), the snowball technique is suitable when the target population is concealed and challenging to gain access to. Subsequently, the researcher made contact with a specific individual in the targeted population who thereafter referred the researcher to additional individuals with comparable qualities. The researcher initially convened with the relevant leaders of the Transnet, SAPS Border Police and Customs Anti-Smuggling sections. Subsequent to conducting interviews with the relevant leaders, the leaders then referred the researcher to their managers. The managers subsequently referred the researcher to other people within their relevant divisions, who were in the position to best impart their experience and familiarity on the topic being researched. The researcher continued choosing participants until data saturation occurred.

2.4.1 Sample size

Mason (2006: 136) is of the view that the sample ought to be sizeably sufficient, relative to the research topic, but not so sizeable as to become so dispersed that an exhaustive and distinctive focus on something specific becomes unachievable. However, according to Grinnell and Williams (1990: 127), a ten per cent (10%) sample ought to be adequate enough for governing the sampling errors but maintain that thirty (30) is satisfactory in performing rudimentary statistical techniques.

According Stoker (1989: 130), sample size is determined by practical considerations, such as cost and time, and the researcher should adapt his sampling procedure to these constraints. He adds that if the total population is fifty (50), then the sample size must be sixty-four per cent (64%), which equals thirty-two (32) participants. Alternatively, if the population is one hundred (100), the sample must be forty-five

per cent (45%) or forty-five (45) participants. According to Mathews and Ross (2010: 154), purposive sampling is a sample of chosen cases that would best support the researcher to investigate the research questions extensively.

The researcher limited the target population for one-on-one interviews to a sample of ten (10) Transnet security officials, ten (10) Customs officials from the Anti-Smuggling Task Team, and ten (10) police officials of SAPS Border Police, who are all based at the Durban Harbour. The researcher determined that the target population would be illustrative of the total population of eighty (80) security officials. All these security officials were employed in relation to similar policy conditions, submitted to identical training programmes, and pursued similar career and promotion practices and roles, according to the same policy and procedures nationally. A similar contention followed regarding the target population of one hundred and forty (140) SAPS Border officials and the sixty (60) Customs Anti-Smuggling officers in meeting the benchmarks of being illustrative of the total population of two hundred and eighty (280). In respect of the SAPS members, only those members performing operational duties within the harbour were selected as the target population and not those performing general administration duties. Collectively, the researcher chose a total sample of thirty (30) participants from a combined population of two-hundred-and-eighty (280) from the diverse sectors, which is eligible as the illustrative sample which was greater than 10 per cent.

Written permission to interview the Border Police officials at the harbour was obtained from the SAPS Head Office (which is appended as Appendix D below). A meeting with the head of the Customs Interdiction Section and the section commander of the Customs Anti-Smuggling Section was held and authorisation was obtained to interview the customs officials at the harbour (permission letter attached as Appendix F below). Following a meeting with the head of Transnet Security for terminals 1 and 2, authorisation was permitted to interview the security officials employed at the harbour (permission letter attached as Appendix H below).

2.4.2 Selection of security officers for interviews

The initial sample group comprised security officers deployed at the Durban Harbour. A simple random sampling technique (probability sampling) was used and a sample

size of ten (10) was selected from the population group of eighty (80) security officers positioned at the Durban Harbour. These participants are referred to as A1-A10.

The following method was used to choose the samples:

The names of eighty (80) security officers positioned at the Durban Harbour (population group) were typed on A4 sheets, and the A4 sheets were then cut into eighty pieces each representing the name of each a security officer. The pieces of paper were then folded twice and stapled, put into a box and shuffled by an impartial co-worker. A third co-worker was invited to pull one piece of paper from the box. The researcher then noted the identity of the security official who would be selected as part of the target population. This procedure was conducted ten times to get the desired sample size of ten (10).

2.4.3 Selection for interviews of members of the South African Border Police for interviews

The following target population comprised police officials attached to the South African Police Border Policing Section and deployed at the Durban Harbour. A probability sampling technique was employed and a sample size of ten (10) was chosen from the target group of one-hundred-and-forty (140). These participants are referred to as B1-B10.

The following method was used to choose the samples:

The names of one hundred and forty (140) border police officials positioned at the Durban Harbour (population group) were typed on A4 sheets. Subsequently, the A4 sheets were cut into one hundred and forty pieces, each representing a police official's name. All pieces of paper were then folded twice and stapled, put into a box and shuffled by an impartial co-worker. A third co-worker was then asked to withdraw one piece of paper from the box. The researcher then noted the name of the police official who would then form part of the sample population. This process was repeated ten times to acquire the desired a sample size of ten (10).

2.4.4 Selection of customs officials for interviews

The third target population comprised customs officials positioned at the Durban Harbour. A probability sampling technique was employed and the sample size of ten (10) was selected from the target population of sixty (60) customs officials positioned at the Durban Harbour. These participants are referred to as C1-C10.

The following method was used to choose the samples:

The names of sixty (60) customs officials positioned at the Durban Harbour (population group) were typed on A4 sheets. Subsequently, the A4 sheets were cut into sixty (60) pieces each recording a customs official's name. Each piece of paper was then folded twice and stapled, put into a box and shuffled by an impartial co-worker. A third co-worker was then requested to draw a piece of paper from the box. The researcher then noted the name of the customs official who would form part of the target population. This process was repeated ten times to get a sample size of ten (10).

2.4.5 Selection of case dockets

A selective random sampling technique was employed to select the dockets for the intended analysis. The sampling frame comprised two hundred and fifty (250) theft case dockets and two hundred and fifty (250) contraband smuggling case dockets which had been investigated from 1 January 2011 to 31 December 2011. These included guilty, reserved, undetected cases and cases pending investigation. For the purpose of the research study, the researcher elected to draw a sample of fifty (50) case dockets.

The following technique was used to choose the samples: The station and CAS numbers for each were drawn out, and guilty, not guilty and warrants issued for theft dockets were tabulated on an A4 sheet. A copy of the A4 sheet was made. Subsequently, one of the A4 sheets was cut into five pieces, each denoting a Station and CAS number. The five pieces of paper were then folded twice and stapled, put into a box and shuffled by an impartial co-worker. A third co-worker was then invited to withdraw a piece of paper from the box. The researcher then noted the case docket that would be sampled. This was the initial case docket that would be

sampled. The balance of the case dockets were chosen at intervals of three (3) until the required number of twenty-five (25) dockets were obtained. The same process was followed in respect of the contraband smuggling dockets until the desired amount of twenty five (25) dockets had been obtained. Collectively, both processes resulted in a total sample of fifty (50) dockets.

2.5 DATA COLLECTION INSTRUMENTS AND METHODS

Several approaches, called triangulation, were utilised to observe reality and to gather data from different sides (Berg, 2004: 5). The principal purpose for using the triangulation method was to guarantee that what one technique could not expose, would be exposed by the other technique throughout the research study. The main source of information for this research study was the data collected from interviews and personal observation by means of an observation checklist. The secondary source of information was the material gathered by means of literature and documentary research studies. The researcher also employed his individual experience as a source for collecting information.

The design of this research study is empirical in description, as it required the researcher to scan the field and gather data from the respondents participating in the research. Maxfield and Babbie (1995: 4) are of the view that experience and observation are the vital providers of knowledge in an empirical design. The researcher was able to gather information from those participating by utilising an empirical design for the subject of illegal trafficking of goods through the Durban harbour.

Data gathering is reliant on the category and rationale of the research that is being carried out. Given that this is a qualitative research study, the researcher commenced by carrying out a comprehensive literature review. Furthermore, the researcher carried out a physical security survey (making use of the observation checklist) of the present security control measures at the Durban harbour to ascertain the precise nature of the weaknesses and security threats. In addition, semi-structured interviews were carried out with security, police, and customs officials. Finally, a documentary research study was carried out by examining the data from case dockets which were investigated by the SAPS for thefts and

smuggling of counterfeit goods and contraband during the period 1 January 2011 to 31 December 2011.

2.5.1 Design and development of data collection instruments

The design and development of the data collection instruments is dependent on the overall research strategy. Since this is a descriptive study, it searches for a deeper understanding of the participants' personal experiences of the phenomenon being studied, thus involving case study and field research. The data collection techniques best suiting this approach are participant observation, in-depth interviewing and document analysis. To this end, each instrument was designed and developed to provide adequate information on the research questions and the overall strategy of the study. In the discussion that follows, the design and development of each of the data collection instruments is explained under the respective headings.

2.5.1.1 Semi-structured interviews schedule

A literature review was initially performed to acquire pertinent literature concerning the research study. The widespread matters confronting the ports regarding illegal movement of goods were categorised into themes. The researcher transformed these themes into principle research questions. The researcher then composed a list of the principle research questions and sub-questions which would aid the researcher in attaining a clearer interpretation of the problematic areas during the conducting of the interviews. The questions were then clustered under the diverse categories and formulated part of an interview schedule. The result was a non-specific interview schedule that comprised forty-nine (49) questions which were submitted in the semi-structured interviews (attached as Appendix A below). The researcher utilised semi-structured interviews, given that this was a qualitative research study and needed to uncover the thoughts of the participants, in order to discover what was imperative to the participants and to get an assortment of answers to the questions. The researcher initially piloted the interview schedule among a small group of five (5) border police officials. The questions were assessed and a few small alterations were made. Once confirmation was made that the revised questionnaire could produce the significant data required from the respondents, a generic interview schedule was composed and employed to conduct the interviews of the three different departments, i.e. the SAPS, Customs and

Transnet security officials who were responsible for providing security and law enforcement at the Durban Harbour.

2.5.1.2 Documentary analysis of case dockets

The researcher started off by examining twenty case dockets to establish what were the common issues or trends running through them. Thereafter, with this information, the researcher established a documentary pro forma checklist to be applied to each docket examined, with a specific focus on the importance of the date and time of the incident, the modus operandi used to remove the stolen goods, the description of the goods stolen or trafficked, and the places where the goods were stolen or being trafficked (attached as Appendix B below).

As soon as the draft checklist was composed, the researcher then piloted it with twenty dockets, which were obtained and examined at the Maydon Wharf SAPS offices, in order to determine whether the instrument assessed the correct data. As soon as it was established that the instrument presented valid and reliable data, it was then confirmed and used in gathering data from the relevant target population. The researcher gathered significant data from the research study by holding meetings, and spending many days, with detectives involved in the investigation of case dockets. Data was then analysed and coded through the data analysis phase.

2.5.1.3 Observation checklist

The researcher planned and developed an observation checklist (attached as Appendix J below) to be utilised when performing the field research, which was implemented throughout the onsite inspection of the Durban harbour. During the design phase of the checklist, the researcher took into account the most crucial security measures that needed to be surveyed. The researcher then established a checklist for all the security measures which indicated if the relevant measures were adequate to prevent security risks or if there were vulnerabilities in the affected measures. This was the fundamental nature of the security survey (attached as Appendix J).

A security survey is imperative, given that it will assess the present security measures that are in place at the Durban Harbour, with the purpose of recognising

the gaps, if any, or if the measures are satisfactory and sufficient to guard against vulnerabilities and security risks. As soon as it was finished, the researcher embarked on an onsite inspection of the Durban harbour. This entailed walking around the entire site of the harbour, utilising the observation checklist to make observations and record the findings thereof, in view of the prevailing security measures that are already in place at the harbour. The researcher piloted the checklist by testing it on specific security measures in the Durban harbour, thereafter confirming its validity and creating the checklist.

2.5.2 DATA COLLECTION

2.5.2.1 Literature study

A literature study searches to uncover material that is associated with the topic and to evaluate the subject matter of that material in detail (David & Sutton, 2004: 07). Fouche and Delport (2011: 134) are of the view that a literature review is intended to gain a better grasp of the characteristics and significance of the research problem. The researcher undertook various steps in the implementation of the literature review, following the advice of Fouche and Delport (2011: 135). These were:

- Refine the topic: The researcher restricted the subject matter to only the unlawful trafficking of goods through the port-of-entry so as to avoid squandering time gathering resources that related only indirectly to the research study. In enhancing the topic, the researcher was watchful against gathering a tremendous amount of literature, but was reluctant not to be left with only a limited amount of articles or books.

- Design a search: The researcher utilised a well-defined strategy that embarked on the parameters of the search. The researcher utilised a computer to design a bibliography database. This was done to warehouse information of all authors and references with a concise synopsis of the contents of the source.

- Locate sources of literature: The researcher utilised the expertise of the subject librarian at University of South Africa (UNISA) for purposes of finding indexes, abstracts and computerised databases relating to the research being studied.

The researcher visited the university library, the general library and the organisation that was being researched to obtain sources of literature. The researcher also consulted an assortment of sources which comprised scholarly books, articles in professional journals and publications, research reports, and theses and monographs. Furthermore, the researcher utilised the internet to locate national and international literature in books, journals, theses, government publications, official documents/records/handbooks/directives of the South African Police Service (SAPS) and Customs, as well as in other pertinent literature sources related to the subject being researched.

- Use sources as a source of reference: The researcher emphasised the sources that were referenced in the literature study of books, articles and journals.

- Evaluate the information contained in the various works: The researcher assessed the data of the different authors collectively and deduced the value and failures of the diverse concepts in the literature.

2.5.2.2 Observation

Observation was another method of data collection used by the researcher when conducting this research study. Matthew and Ross (2010: 255) state that observation is the simplest method that a researcher may utilise to gather data by observing and recording the phenomena as they occur in the real time. Gray (2000: 397) is of the opinion that observation is not purely a question of viewing something and then recording 'the facts'. It is a complicated combination of sense (sight, sound, touch, smell, taste) and perception.

2.5.2.3 Interviews

According to Mason (2006: 62), interviewing is illustrated as an interactional exchange of dialogue. Obtaining in-depth information regarding a problem is often the primary purpose of the qualitative research method and an example of this technique is the interview process. With the above in mind, the researcher planned on acquiring ample information from the interviewees with regard to the unlawful

trafficking and movement of goods through the Durban Harbour, from the different viewpoints of the police, customs and security officials.

The researcher pursued various stages in the process of assembling an interview schedule. Rule and John (2011: 65) suggest that every question in the interview schedule should be pertinent to the variables being researched. The researcher performed one-on-one interviews with the aid of an interview schedule. All interviewees were individually interviewed by the researcher, which relieved the difficulty of miscommunication and uncertainty, and aided the researcher in seeking clarity on problem areas as the interview advanced. The same questions were asked to all the participants, which allowed for reliability when gathering data. Regarding validity and reliability, the researcher trusted that the instrument would precisely determine the concept researched and could be utilised by other researchers, and would generate similar results.

2.5.2.4 Documentary study of case dockets

According to Greeff (2011: 376), documentary study signifies the interpretation and analysis of written information about the subject that is being researched. The study was performed on case dockets that were registered on incidents of theft, fraud, contraband smuggling and counterfeit goods at the Durban harbour. The purpose of the research study was to determine the modus operandi of the criminals and the kinds of goods that were susceptible to threats. The aim of commencing this research study was to determine whether the unlawful trafficking of goods happened on certain days of the week or whether the thefts and smuggling occurred more commonly over weekends. Following on from this, the aim was to ascertain the kinds of goods that were most frequently stolen or smuggled and the modus operandi of the criminals. Even though there are various specialised units that perform criminal investigations related to incidents affecting the harbour, it was recognised that the greater part of criminal cases were recorded and investigated by the Maydon Wharf police officials.

A selective, random sampling technique was utilised to choose dockets for the analysis. The sampling frame included 250 theft and 250 contraband smuggling case dockets which had been investigated from 1 January 2011 to 1 January 2012 (a

period of twelve months). These comprised guilty, not guilty, and undetected perpetrator cases, as well as cases pending investigation. The researcher chose to draw a sample of 50 case dockets for the purpose of this research study.

As stated above, the purpose of the documentary study was to ascertain the modus operandi of criminals and syndicates engaged in the unlawful trafficking of goods through the Durban harbour and to identify the types of goods that are vulnerable to theft or smuggling.

2.5.2.5 Piloting

According to Grinnell and Unrau (2008: 336), a 'pilot study' comprises the pre-testing of all facets of a measuring instrument on a minor scale. Barker (2003: 327) describes a pilot study as an approach to evaluate and validate an instrument by administering it to a lesser group of participants from the total envisioned population. For this research study, the researcher initially piloted the observation checklist on a small number of security measures at the Durban harbour to determine if it produced the desired outcome. The researcher thereafter piloted the interview schedule by field testing it among a small number of participants from the total population in order to make modifications or amendments to the instrument, if required. To conclude, the researcher piloted the documentary draft checklist on a few dockets before completing the documentary checklist. The findings of the pilot study indicated that the relevant data could be obtained from the dockets against the criteria contained in the documentary checklist. In addition to this, the pilot study assisted the researcher in estimating the time that it would take to obtain the information from the sample and the costs involved therein, as well as verifying the validity and reliability of the data collection instruments

2.5.2.6 Experience

The researcher has twenty-two years of knowledge in a policing environment, as well as thirteen years practical management experience in the investigation department of the SAPS Organised Crime division of the Directorate of Priority Crimes investigations also known as the *'Hawks'*. The researcher is regularly immersed at the Directorate of Priority Crimes investigations with crime pertaining to investigations of contraband or narcotics that have been unlawfully trafficked through

the various ports. With this experience and knowledge, the researcher conducted inspections on containers and goods that were apprehended or were of a suspicious nature. The researcher's knowledge and experience with Organised Crime Investigations afforded him the insight needed to detect problem areas facing the harbour and also enabled the researcher to distinguish case dockets describing events of theft or contraband trafficking from the harbour.

2.6 Data analysis

All the data that was gathered by the researcher was examined with the purpose of obtaining a general opinion of the data. Patton (2002: 432) states that the aim of data analysis is to formulate findings by condensing volumes of unprocessed data, scrutinising and recognising patterns, and composing a framework for communicating what the data discloses. The researcher used a data analysis spiral (open coding) to organise and conduct an evaluation of the data gathered. Leedy and Ormrod (2005: 151) are of the view that the data analysis spiral is an extensively-utilised technique in qualitative research. In utilising this technique, the researcher undertook the following steps:

- The data analysis commenced with the organisation of the gathered data, which involved creating an inventory of the researcher's findings and establishing how the data was completed. The researcher began by evaluating the raw data that was gathered through the various data collection methods, namely interviews, onsite evaluations (observation) of security practices, and documentary and literature studies. The data gathered from interviews was recorded and grouped into categories and subjects. Data from the docket evaluations was grouped into categories and subjects corresponding to those categories utilised in the pro forma sheets for the analysis of dockets. Lastly, data relating to the modus operandi information was processed differently from other all other data. This information was read numerous times and then grouped according to distinctive categories and subjects of information. For example, the use of a bolt cutter to open the locks on the container, and the method in which access was gained.

- The data was arranged and grouped according to the crucial theoretical concepts: security risks, weaknesses, threats and security control measures. Files were opened for all key concepts and information under all categories was filed appropriately. The researcher considered all information gathered on issues relating to the unlawful trafficking of goods through the harbour and the constant struggles with the present security control measures. Through this procedure, common categories arose which were grouped methodically and classified appropriately.

- Within the categories, the information was contrasted to identify variants and comparable significances. Variants and comparable data were grouped individually. According to Auerbach and Silverstein (2003: 32), a coding method is created on the basis that not one person is adequately intelligent or adequately intuitive to read a series of transcripts and instantly observe the patterns within. To prevail over this limitation, the coding method is used as a process for establishing the manuscripts and uncovering patterns within organisational structures.

- After considering the databases of grouped information, the researcher systematically evaluated the data by incorporating and condensing it to determine findings.

2.7 VALIDITY, RELIABILITY AND ETHICAL CONSIDERATIONS

2.7.1 Ensuring validity

The concept of validity is concerned with data that has been obtained precisely and accurately. According to Denscombe (2002: 301), the data gathered must be honest, trustworthy and not conceal important matters. With regard to validity, the researcher noted that the phenomenon under examination had been previously studied. In this regard, the different forms of validity were applied to all of the instruments.

2.7.1.1 Content validity

This proposes that the complete subject matter of a conceptual definition be represented in the measure (Delport & Roestenberg, 2011: 173). For this purpose,

the researcher tested the content on the data collection instruments and confirmed it was capable of measuring the data which it was intended to measure.

2.7.1.2 Face validity

This concerns the superficial appearance of a measurement procedure and whether the instrument measured the variable that it claimed to measure (Delport & Roestenberg, 2011: 173). The construction and phrasing of the questions and variables in the data collection instruments appeared capable at face value to measure the variables and research questions. The researcher made use of an observation checklist to assess the present security measures at the Durban harbour. The standard set for the assessment was adequate to measure the strengths or vulnerabilities in the security measures.

2.7.1.3 Criterion validity

This is concerned with external standards for determining the concept and is more of an objective form of validity (Delport & Roestenberg, 2011: 173). The questions and variables in the research instruments must collectively be capable of measuring the research questions, goal and objectives of the study. The researcher utilised a semi-structured interview, observation checklist and documentary study checklist and the questions and variables in these research instruments were collectively capable of measuring the research questions, goal and objectives of the study. In the interview schedule, the researcher confirmed that the identical criteria for questions were exercised for all participants, which also which guaranteed consistency. To ascertain the validity of the questions, all questions were verified to establish if all information provided regarding the unlawful trafficking of goods from the harbour was legitimate. This also identified the problematic areas in the present security initiatives. To ascertain the validity of the information obtained from participants, the interviewer did steer or lead the questions. The participants responded to the questions unreservedly and voluntarily.

2.7.1.4 Construct validity

This is related to the meaning of the instrument and how and why it works the way that it does (Delport & Roestenberg, 2011: 174). Questions and variables that evaluated a certain construct were grouped together into categories in the interview

schedule. The design and construction of the interview schedule was set out so as to measure the questions and variables which related to the different themes.

2.7.2 Ensuring reliability

Reliability involves the replicability of findings (Rule & John, 2011: 104). According to Neuman (1997: 138), reliability concerns the dependability and reliability of data throughout the research process. The reliability of data is impelled by four variables, namely the researcher; the participant; the measuring instrument; and the research context and the situation in which the research was conducted (Leedy & Ormrod, 2005: 92). To guarantee reliability, the researcher administered methods that were dependable and unvarying for all individuals and situations. The research was conducted fairly and equitably, since the study was free from personal bias and assumptions of the researcher.

The researcher took precautions to guard against ambiguity and used a variety of methods to check the findings (data triangulation). The researcher also guarded against value judgements in collecting the data and the findings (Marshall & Rossman, 1995: 146). The researcher also ensured consistency in the study by establishing and documenting procedures that were used in the collection and analysis of the data. The data was also preserved and is available for re-analysis, and if other researchers were to make use of similar methods at a different time, they should achieve similar results and findings.

2.7.3 Ethical considerations

It is a requirement that ethical considerations be employed throughout the complete research process. The researcher adhered to UNISA's Policy of Research Ethics when conducting the research study. According to the University of South Africa Research Council's policy on research ethics (2007: 3), the researcher must show consideration for the autonomy, rights and dignity of all research participants. Furthermore, the researcher should not subject participants to processes not linked or associated with the research project or its methodology.

The researcher took cognisance of this whilst conducting the research study and ensured that participants were aware that participation in the research was voluntary.

The participants were chosen, based on their agreement to participate in the research study. The rationale for the research study was explained to all participants. Furthermore, participants were guaranteed that confidentiality and anonymity would be adhered to. Participants were notified about the purpose of the research study and what the intended results would be. All the information that was collected was treated with confidentially and anonymity. When the data had been gathered and evaluated, the researcher scripted the findings precisely and objectively. The UNISA Ethics Committee granted consent for the conduct of the empirical research, and the UNISA Code of Ethics was adhered to, to ensure ethical standards of quality, confidentiality and anonymity. The researcher obtained permission to conduct the research from the Provincial Commissioner of the South African Police Service, KwaZulu-Natal, from the Transnet Port Office, and from the Customs agency stationed at the Durban Harbour. Ethical consideration was duly given to all participants throughout the research process.

2.8 THE VALUE OF THE RESEARCH

2.8.1 The value of the research to Transnet

Presently, there is limited research being undertaken concerning the factors that affect or lead to the unlawful trafficking of goods through seaports-of-entry. Transnet is a government parastatal organisation which is predominately responsible for the management, safety and security all South African seaports-of-entry. The research provided in this study should be valuable directly to Transnet and should establish and create an awareness of the problems concerning the unlawful trafficking of goods through Durban harbour. It will also offer guidelines and recommendations of how to assist in combating or reducing these problems by minimising security and crime risks. Transnet will, therefore, be in a position to provide more effective and efficient services by implementing a co-ordinated and detailed security management programme to lead the maritime sector in the fight against contraband smuggling, unlawful aliens and container thefts.

2.8.2 The value of the research to the private security industry

The private security industry will gain insight into the weaknesses, risks and vulnerabilities identified in the present security measures at the Durban Harbour. This will help to identify fraudulent documentation and combat the trafficking of

goods, smuggling of contraband,, and ingress of unlawful immigrants through the harbour.

2.8.3 The value of the research to law enforcement agencies

Law enforcement agencies, such as the border police unit of the SAPS and the Customs and Excise Division of the South African Revenue Service (SARS), should be able to gain a better understanding of their shortcomings in terms of crime prevention methods. Furthermore, they would be able to comprehend the modus operandi of criminal organisations in the unlawful trafficking of goods and contraband.

Law Enforcement agencies should increase their understanding of the present global trends in the stealing of containers. This information will enable law enforcement agencies to carry out suitable planning sessions and improve operational plans which will aim at limiting crime at South African harbours. This will assist in the implementation of more effective management of policing at the Durban harbour (and consequently at all harbours) and this should decrease the unlawful trafficking of goods, thus decreasing criminal activities. A complete, co-ordinated security management programme involving all role players might finally be developed for all South African seaports-of-entry. Such a security (risk) management programme could then serve to distinguish the role clarification of all security officials at Durban harbour.

2.8.4 The value of the research to UNISA and other academic institutions

Students will be informed and empowered by the knowledge gained when reading this dissertation, which will be accessible at the UNISA library and will also be accessible on the departmental website. This information will be valuable to other students who intend to further their studies in security risk management. It could, therefore, provide an additional foundation to their future post-graduate studies, if they choose to study a related topic.

2.8.5 The value of the research to the community

The findings may, perhaps, be used to help the South African public to recognise the security risks and challenges confronting the harbour at Durban regarding the

unlawful trafficking of goods and contraband. Furthermore, if the community is mindful of the above-mentioned problem, they can assist by offering information to the relevant authorities concerning the individuals or syndicates committing these criminal activities. This community support for crime prevention would, hopefully, assist in decreasing crime and would contribute to a more secure and safe society.

2.9 LIMITATIONS

2.9.1 Issues regarding the Durban Harbour site audit

While conducting a site audit of the Durban Harbour, the researcher was given a general view of the security measures that were in place. This was required for the researcher to put together recommendations for the further enhancing of the measures. However, selected areas of the harbour where access was controlled made it difficult for the researcher to finish the checklist regarding the security measures in place. A security layout plan, though, was obtained from Transnet which helped to alleviate this problem.

2.9.2 Availability of candidates for interviews

The candidates from the different departments had some difficulty in ensuring that they kept their appointments for the one-on-one interviews. This was because of their demanding workload and their flexible working hours. Furthermore, several of the participants were only accessible after working hours or late at night, owing to their working schedules. This made it challenging for the researcher to make appointments to meet after working hours with these specific individuals. Certain customs officials declined to be interviewed, owing to the sensitivity and confidentiality of information in their possession. Divulging such information in an interview could see them being in direct conflict with their work policies.

2.10 CONCLUSION

This chapter described and discussed the research design and the methodology used by the researcher in this study. The qualitative research approach was selected in order to investigate in greater detail and depth the opinions, views and perceptions of the participants. The objective of utilising descriptive research in this research study was to evaluate and illustrate the reasons, causes and manner in which the trafficking of goods from seaports-of-entry has occurred in South Africa, but more

specifically as illustrated by the case study of Durban Harbour. Data was gathered using one-on-one, semi-structured interviews utilising an interview schedule; a documentary study of SAPS case dockets was performed utilising a documentary study checklist; and an on-site evaluation of the present security measures was performed with the help of an observation checklist. It also explained the significance of this research study to the various agencies providing security and law enforcement at the harbour. Validity and reliability was maintained throughout the research and limitations were discussed. All research guidelines, including ethical issues, were correctly followed. Confidentiality, anonymity and the protection of respondents was followed in the process of gathering the relevant data.

Chapter 3

THE ILLEGAL MOVEMENT OF GOODS FROM THE SEA PORTS-OF-ENTRY

3.1 INTRODUCTION

Africa experiences a number of security threats in the maritime arena which negatively impacts on its economic growth. One such challenge is the smuggling of weapons, drugs and people through Africa's porous land borders or the maritime domain (Haveman & Shatz, 2006: 4). Port security, from a South African perspective, can be likened to border control of seaports and the coastal waters of South Africa. It is a broad focus area and includes aspects such as physical security measures, registration of ships, shipboard security, piracy, marine safety issues, illegal immigration, stowaways and terrorism (Pommerin & Potgieter, 2009: 31). The steady increase in organised crime and criminal organisations involved in the cross-border smuggling of drugs, firearms, illegal immigrants, stolen goods and vehicles has also contributed to the rise in the crime rate. This increase in cross-border crimes had a subsequent effect on the policing of borders and ports-of-entry.

The lack of proper controls at borders and ports-of-entry is a key contributing factor to cross-border crimes and South Africa's escalating crime problem. In the case of this research study, access control and egress control were highlighted as the most problematic areas of security at the Durban harbour. This was followed by deficient CCTV cameras, perimeter fencing and X-ray scanners. Other physical protection systems, such as inadequate security guards, are also highly problematic areas. Malfunctioning X-Ray scanners featured as the most problematic area facing the Durban harbour. Where the security principles and practices and the security professionals employed in the Durban ports are not functioning properly, these instituted security systems/measures may prove to be ineffective and unsuccessful in reducing the illegal movement of goods in the ports. This is due to the fact that these illegal goods are not only a port security problem that has to be dealt with by the port authorities, but it also needs the assistance of other role-players, such as SARS, customs, SAPS and government.

This chapter provides a literature study on the illegal movement of goods and contraband smuggled through the ports-of-entry, vulnerabilities and risks that

confront ports-of-entry, and the current security risk measures used at ports-of-entry to prevent the illegal movement of goods.

3.2 DEFINING PORT SECURITY

Port security is defined as the defence, law enforcement and counterterrorism activities that fall within the port and maritime domain and includes the protection of the seaports themselves, the protection and inspection of the cargo moving through the ports, and maritime security (Frittelli, Lee, Medalia, O'Rourke & Perl, 2003: 1). According to a Californian Public Policy Institute report, port security is defined as protective measures that are taken to secure the maritime-related intermodal supply chain from terrorism, the unwitting transportation of terrorism-related assets and crime (Motorola, 2009: 36). A slightly different perspective is held by Haveman and Shatz (2006: 36), who define port security as securing the complete maritime supply chain, starting from the factory gate in a foreign country to the final destination of the product, which stipulates a need to secure ports, as well as the supply chain feeding goods into the ports. As noted above, port security from a South African perspective can be likened to border control of seaports and the coastal waters of South Africa. It is a broad focus area and includes aspects such as physical security measures, registration of ships, shipboard security, piracy, marine safety issues, illegal immigration, stowaways and terrorism (Pommerin & Potgieter, 2009: 31). The Operational Working Team on Border Control (OWTBC, 1997: 1) define border control as the facilitation of legitimate trading and movement of people through the country's borders, which the primary service is accountable for, and includes the:

- avoidance, detection and concern of the unlawful trafficking goods and people across borders;
- avoidance of people in the unlawful trafficking of people and goods across borders and
- apprehension of goods that are trafficked unlawfully across borders.

In contrast, Minnaar (2001: 1), says that border controls should not be viewed as preventing the cross-border movement of people and goods, but rather as assisting in regulating orderly, legal movement. A more specific and detailed definition of

border control is provided by Steinberg (2005a: 1), who sums it up as a comprehensive process that ensures the seamless working together of all functions that set strategies for, regulates and manages the cross-border movement of goods and people.

3.3 AIMS OF PORT SECURITY

In broad terms, good border management seeks to facilitate access for people and goods that are both needed and desired, but also aims at interdicting and stopping 'bad' people and 'bad' things from entering the country (Heyman, 2001: 1). This can be successfully achieved by accurately and efficiently identifying high-risk passengers and cargo for inspection and preventing the entry of dangerous goods and people, without impeding the flow of legitimate cross-border traffic. For this purpose, policy makers should endeavour to identify and promote those policies that will enhance the effectiveness of the filters employed for these tasks (Heyman, 2001: 682).

Hanrahan (2010: 1) notes that the primary focuses in port security have advanced since the September 9/11 terrorist attacks in America, from simply preventing cargo theft to protecting people and critical infrastructure from terrorism. For this purpose, there have been several programme initiatives taken by the federal government in line with those at Canada's ports, related to implementing the ISPS code, including threat assessments, security plans, federal funding for port security, background checks for port workers and the implementation of sophisticated technologies (Hanrahan, 2010: 1). Beneke (2001: 1) states that the objectives of border policing, amongst others, include the control and policing of the illegal movement of narcotics, contraband, vehicles and weapons, as well as the control and policing of the illegal movement of people. In addition to this, Beneke (2001: 1) further states that within these two objectives; the aim is to:

- detect corruption,
- detect and identify fraudulent documents,
- detect the illegal trade in drugs, vehicles, firearms and human beings,

- stop the illegal movement of criminal elements across borders, and
- detect illegal people and goods, with the aim of eradicating their source points within the country.

Pommerin and Potgieter (2009: 31) strengthen this argument by saying that the Transnet National Ports Authority (TPNA) is mandated with the ultimate responsibility of security of the overall port system and should aim to achieve maritime security in the port of Durban by identifying threats and implementing appropriate counter measures in accordance with the following legislative measures:

- The SA Maritime Security Regulations: ISPS Code,
- South African Port Legislative Arrangements, and
- The SA Maritime Security Regulations.

3.4 OVERVIEW OF SECURITY MANAGEMENT AT THE SEA PORTS-OF-ENTRY

3.4.1 International perspective

The 9/11 terrorist attacks against the United States played a pivotal role in prompting a global survey of border security practices and policies. Before the 9/11 terrorist attacks, border security focused on unauthorised immigrants and contraband smuggling, however, after those attacks, the focus was redirected to counteracting terrorism (Heyman, 2008: 315). The United States marine transport system comprises 300 sea and river ports, with 3 700 cargo and passenger terminals (Greenberg, Chalk, Willis, Khilko & Ortiz, 2006: 1).

An attack on any of the major ports could severely disrupt global trade and the global economy by causing a loss of billions of dollars. The security of ports and their deficiencies are numerous and leaves US ports vulnerable to terrorist attacks (Greenberg et al, 2006: 1). There are many vulnerabilities in the US seaports, with a potential risk of security breaches in almost every aspect of the container shipping industry, given the overwhelming number of ships and containers (Frittelli et al, 2003: 1). Containers represent the largest area of concern in terms of security and

vulnerability. More than six million containers enter US seaports annually, of which only two per cent are physically inspected by Customs (Frittelli et al, 2003: 1). A 2000 Interagency report on crime and security in United States seaports concluded that there was a general lack of security at US seaports, coupled with relaxed policies which resulted in the high incidence of cargo theft, as well as other crimes (Grillot, Cruise & D'Erman, 2010: 3). The report estimated the cost of cargo theft to be in the region of $12 billion dollars per annum (Anon., 2000: 73). A similar view is held by Grillot et al (2010: 98), who state that there has been a lack of security policy for physical, procedural, and personnel security for US seaports, as well as a lack of access control within sensitive areas of seaports.

In Australia, border protection is the primary responsibility of the Australian Customs and Border Protection Agency. It is responsible for the security of the border and the legitimate movement of goods and people (Australian Government Border and Protection Service, 2001: 1). Australia has experienced many challenges in the control of its borders as a result of globalisation and the increased cross-border movement of goods and people, which has resulted in an increase in the level of transnational crime, including the illegal movement of drugs, arms and people. Each year, four million people are estimated to be smuggled across Australia's international borders. In this light, the Australian government has endeavoured to enhance its border controls and increase its cooperation with international law enforcement (Australian Government Border and Protection Service, 2001: 1).

In the port city of Rotterdam, border policing is carried out by the local policing agency. Rotterdam is the largest seaport in the world and the threat to the security of the port is viewed in a serious light by the government of the Netherlands. Some of the problems experienced at the port of Rotterdam include drug trafficking, human trafficking, illegal immigration and cross-border crimes (Koslowski, 2011: 2).

Similarly, in Namibia, a performance audit carried out by the Directorate of Customs and Excise established that inspections and observations had not been given sufficient attention and were seen as a less important function (Auditor General Namibia, 2001: 15). Additional findings by the Directorate disclosed a lack of staff and equipment to carry out the inspections and a lack of physical examinations for

preventing the importation and exportation of restricted or prohibited goods (Auditor General Namibia, 2001: 15).

According to the Canadian Security Guide Book on Seaports (Kenny, 2007: 39), Canadian ports channel close to four million containers filled with assorted commodities into and out of Canada every year and any one of these containers could contain chemical, biological, radiological, nuclear or explosive devices designed to lay waste to a large Canadian or US target. Taking into account the huge volumes of container traffic coming into the Canadian ports, no amount of scrutiny would ever be able to guarantee that a renegade container could not get through (Kenny, 2007: 40). This view is supported by Schneider (2009: 366) who states that in Canada's three largest marine ports, Montreal, Vancouver and Halifax, the illegal entry and exit of goods have been assisted by corrupt border officials and dockworkers working at these ports.

In a 2008 report entitled *The United Nations Conference on Trade and Development*, industry analyst 'Gartner Incorporated' concluded that 80 per cent of all world trade is transported on ships via cargo containers (cited in Motorola, 2009: 3). These containers are relocated between the world's major seaports more than 200 million times a year, which suggests that merchandise can be stolen and that there is sufficient opportunity for dangerous disruptions at port operations (Motorola, 2009: 3). It is for these reasons that ports are targeted by organised crime and terrorist organisations. Seaports act as a gateway for plots to disrupt the US, as well as other countries' economies (Motorola, 2009: 3).

On a global perspective, the international community has made significant improvements in protecting the global supply chain through the implementation of Program Global Shield (Department of Homeland Security, USA, 2012: 1). A sub-programme of this initiative is the Cargo Security Initiative (CSI), which aims to increase the security of containers that are shipped to the US from countries around the globe. In this regard, the US customs officials address the threat to border security by potential terrorists who utilise maritime containers to deliver weapons. This initiative also allows US customs officials to work in collaboration with foreign agencies to inspect containerised cargo at the foreign

seaports, before being loaded onto cargo vessels (Department of Homeland Security, USA, 2012: 1).

3.4.2 South African perspective

The port of Durban handles the greatest volume of sea-going traffic of any port in southern Africa (Bhikraj, 2011: 1). During 2008/2009, the Durban container terminals handled 2 560 366 TEUs (twenty-foot equivalents), of which 948 237 were imports, 994 651 were exports, and 617 478 were being transhipped (Ntamutumba, 2010: 61). Forty thousand, nine hundred TEUs were shipped along the coast. During the above period, the amount of containers handled at Durban represented sixty-seven per cent of the total number of containers handled at South African ports. During the same period, the Durban Car Terminal, which is deemed to be the country's largest import and export facility for the motor industry, handled 372 557 motor units (Ports & Ships 2013: 1).

According to Stead, Chitiyo, Potgieter and Till (2010: 8), it is evident that there is inadequate security at South African borders and ports-of-entry. Owing to a lack of information coordination and intelligence, life has become easier for organised crime syndicates to flourish, which in itself has serious implications for the country. In a proposal by the Democratic Alliance (DA) to tackle cross-border crime and illegal immigration, it was stated that the South African borders are so porous that this fails to prevent the illegal flow of aliens and illegal goods being imported or exported through the borders or ports (Democratic Alliance, 2008: 2).

The DA further mentions that the Border Control Coordinating Committee (BCOCC) does not have a strategic plan in respect of border policing and that it has failed in its duties of coordinating and maintaining border control operations and improving the legal flow of goods and persons (Democratic Alliance, 2008: 3). Media reports often publish articles relating to crime in South African ports and harbours and from the negative reports that are published on this issue, it was concluded that the overall lack of control at South Africa's land, sea and air borders was unacceptably high and there was a general lack of security which left the ports vulnerable to the smuggling of goods, weapons, people and drugs. Since 1994, the border policing component of the South African Police Service (SAPS) has increased its efforts directed at dealing

with the increase in these activities. The efforts were mainly centred on the tightening of controls at all ports-of-entry and on the co-ordination of interdepartmental activities (Minnaar, 2001: 1). The illegal flow of goods and people across the borders contributes to significant national problems, such as the availability of illegal drugs, threats of terrorism, increase in transnational organised crime syndicates, growth in population, and crimes such as money laundering, prostitution, vehicle hijackings and cross-border smuggling (Hennop, Jefferson & McLean, 2001: 12).

According to Minnaar (2003: 73), a security threat analysis conducted in 2000 by the National Ports Authority identified the following problems with regard to the illegal movement of goods:

- Cargo theft;
- Illegal or undocumented immigrants and stowaways;
- Vehicle theft;
- Drug smuggling;
- Trade fraud (such as under-valuations and sale of counterfeit goods); and
- Firearms smuggling.

This view is supported by Mayer (2003: 44), who indicates that sea ports-of-entry are a major locus of federal crimes, which include drug trafficking, cargo theft, contraband and alien smuggling. In the United States, there is a nexus between criminal activity and seaports, and this encompasses a broad range of crimes, such as illicit drug trafficking, contraband and counterfeit goods, alien smuggling, trade fraud, bribery, extortion, racketeering, environmental crime and cargo theft (Mayer, 2003: 44).

In 1997 it was estimated that the value of illegal goods crossing South Africa's borders was in the order of US $2.5 billion (Geldenhuys, 2007: 1). Minnaar (2001: 1), states that the illegal movement of goods, contraband, and people in and out of South Africa has dramatically increased since 1994. This is a demonstration that,

without proper border control, crime will continue to increase in South Africa. This viewpoint is supported by Geldenhuys (Geldenhuys, 2007: 1), who points out that after 1994, South Africa was not only influenced in an economic, political and social way, but also developed vulnerabilities to corruption and crime more extensively than previously. The rise in unlawful activities had an influence on the regulation of the country's borders, on criminal activities and criminal organisations aggressively engaged in the smuggling of narcotics, unlawful immigrants, firearms, and the unlawful exporting of stolen vehicles and endangered species and other goods across borders (Geldenhuys, 2007: 1).

3.5 THE CHALLENGES FACING BORDER CONTROL IN SOUTH AFRICA AND GLOBALLY

The challenge of effective border control has grown substantially over the decades. Currently in the United States, over 400 million people cross the border via the ports-of-entry, with hundreds of thousands of these people entering the ports illegally (Koslowski, 2011: 2). The US Government has provided more resources for the enforcing of its border policies in order to enable them to deal with this problem. Although the resources have funded a number of initiatives, including improving border systems, screening procedures and technological aids that assisted in immigration control at border posts, these systems have proved to be expensive and have pushed up costs in implementing these systems (Koslowski, 2011: 2).

Africa endures a number of security threats in the maritime arena which negatively impacts on its economic growth. One such challenge is the smuggling of weapons, drugs and people, which are smuggled through Africa's porous land borders or the maritime domain (Haveman & Shatz, 2006: 4).

In the South African environment, Beneke (2001: 1) has stated that the objectives of border policing, amongst others, include the control and policing of the illegal movement of narcotics, contraband, vehicles and weapons, as well as the control and policing of the illegal movement of people. In addition to this, Beneke (2001: 1) states that within these two objectives, the aim is to:

- detect corruption,
- detect and identify fraudulent documents,
- detect the illegal trade in drugs, vehicles, firearms and human beings,
- stop the illegal movement of criminal elements across borders, and
- detect illegal people and goods with the aim of eradicating their source points within the country.

Pommerin and Potgieter (2009: 31), on the other hand, state that responsibility for security at the ports lies with the Transnet National Ports Authority (TNPA), which is mandated with the ultimate responsibility for the security of the overall port system, and that the TNPA should aim to achieve maritime security in the port of Durban by identifying threats and implementing appropriate counter measures in accordance with the following legislative measures:

- The SA Maritime Security Regulations: ISPS Code,
- South African Port Legislative Arrangements, and
- The SA Maritime Security Regulations.

The problem of illegal movement of goods at the Durban harbour cannot always be compared to illegal movement of goods in other parts of South Africa, or in other countries, owing to the various differences in crimes occurring in other parts of South Africa and around the world, and because of the fact that definitions of the types of illegal goods vary from place to place. However, we can learn from other ports in South Africa and from international experiences and outcomes.

3.6 INSTITUTIONS INVOLVED IN PREVENTING THE ILLEGAL MOVEMENT OF GOODS AT SOUTH AFRICAN SEAPORTS-OF-ENTRY

According to Beneke (2001: 1), the key role-players in terms of regulatory functions at South Africa's borders are:

South African Revenue Services (SARS)

South African Police Service (SAPS)

South African National Defence Force (SANDF)

Department of Home Affairs (DHA)

Department of Trade and Industry (DTI)

Department of Transport (DoT)

Department of Agriculture (DoA)

Department of Health (DoH).

The Border Control Operational Coordinating Working Team (BCOCC) splits the role players at ports and places of entry into two groups, namely the 'key role players' and the 'additional role players'. The key role players are named as the Department of Home Affairs, the South African Revenue Services, and the South African Police Service (Taute, 2007: 1).The additional role players include the South African National Defence Force, the National Intelligence Agency, the South African Secret Service, the Department of Trade and Industry, the Department of Health, the Department of Agriculture, the Department of Foreign Affairs, the Department of Environmental Affairs and Tourism, the Department of Correctional Service, the Department of Transport, the Department of Public Works, the Department of Justice, and the Department of Welfare (OWTBC, 1997: 1).

The police, by virtue of their primary role specified in Section 205 of the Constitution of the Republic of South Africa, 1996, as well as in the Police Act No 68 of 1995, are responsible to ensure effective and proficient policing of South Africa's international borders. The South African Police Service is a member of Interpol and is, therefore, also obligated to liaise with other law enforcement agencies internationally to take action on any issue that affects the security of the state, and this includes border protection. In most instances, the police complement the efforts of the other law enforcement agencies in ensuring security at the borders.

Beneke (2001: 1) states that the control of the borderline is the responsibility of the South African National Defence Force, but will remain the responsibility of SAPS until the SANDF is able to perform this function entirely on its own. Hennop et al (2001: 23) argue that the main functions of the SAPS Border Police are the prevention and detection of cross-border crime and the illegal movement of people and goods into or out of South Africa, both internally and at the country's borders. In addition to this, Beneke (2001: 1), states that the SAPS Border Police also perform functions on an agency basis for the Department of Home Affairs (Immigration) and SARS (Customs and Excise). Port security, on the other hand, is the responsibility of Transnet, which is mandated to manage and control all seven commercial seaports along South Africa's coastline (Transnet National Ports Authority, 2013: 1).

3.7 THE ISSUES THAT CONFRONT SOUTH AFRICAN SEAPORTS-OF-ENTRY

According to Stead et al (2010: 8), it is evident that there is inadequate security at South African borders and ports-of-entry. Owing to a lack of information coordination and intelligence, it has become easier for organised crime syndicates to flourish. This in itself has serious implications for the country. After the September 9/11 terrorist attacks in the USA, there has been an increase in awareness of the security of goods entering and leaving US ports (Stead et al, 2010: 14). In a proposal by the Democratic Alliance to tackle cross-border crime and illegal immigration, it was stated that the South African borders are so porous that they fail to prevent the illegal flow of aliens and illegal goods from being imported or exported through South African borders and ports (Democratic Alliance, 2008: 2).

Furthermore, the Democratic Alliance proposal states that the Border Control Coordinating Committee (BCOCC) does not have a strategic plan in respect of border policing and that it has failed in its duties of coordinating and maintaining border control operations and improving the legal flow of goods and persons (Democratic Alliance, 2008: 3). Media reports often publish articles relating to crime in South African ports and harbours and from the negative reports that are published on this issue, it was concluded that the overall situation at South Africa's land, sea and air borders was unacceptable and that a general lack of security has left the ports vulnerable to the smuggling of goods, weapons, people and drugs.

Since 1994, the border policing component of the South African Police Service has increased its efforts directed at dealing with the increase in these activities. The efforts were mainly centred on the tightening of controls at all ports-of-entry and the co-ordination of interdepartmental activities (Minnaar, 2001: 1). In a report by the South African Auditor General on borderline security, several challenges with respect to various aspects of border security were identified (Democratic Alliance, 2008: 6). According to this report, the following issues were identified:

- There is an absence of an overall strategic plan or divisional policy on border security. No security analysis has been conducted on the state of border fences which has severe implications for controlling the flow of illegal people, smuggled weapons, drugs and vehicles (Democratic Alliance, 2008: 6).

- There is no specific border training curriculum for members performing border duties (Democratic Alliance, 2008: 6).

- The borders are understaffed and under-facilitated and the primary aim of combating the illegal movement of persons and goods cannot be adequately performed (Democratic Alliance, 2008: 6).

- There is no central database for collected and analysed statistics for border crimes, such as illegal immigrants, criminal syndicates linked with the illegal movement of goods, people and weapons (Democratic Alliance, 2008: 6).

3.7.1 Drug trafficking

According to the 2013 United Nations Office of Drugs and Crime world report, maritime trafficking poses challenges to authorities (UNODCCP, 2013). The UN report says, given the large quantities of illicit substances that make their way across

oceans and continents every day, in containers and even small boats, maritime trafficking poses a particularly knotty challenge for the authorities. East and West Africa seem to be gaining in prominence with regard to routes for maritime trafficking. The report further mentioned that maritime seizure is consistently more likely to be larger than a seizure involving transport by road or rail. Maritime seizures constitute no more than 11 per cent of all cases across all drug categories globally, although each maritime seizure was on average almost 30 times larger than seized consignments trafficked by air. Targeted interdiction efforts by the authorities would enable them to seize larger quantities of drugs being trafficked over water (UNODCCP, 2013: ix).

Owing to the large volume of containers moving through the Durban harbour on a daily basis, coupled with the fact that there is a low level of security checks, the volume of contraband being smuggled through the port is relatively high (Minnaar, 2003: 77). Globally, border control agents only search a small fraction of cargo and passengers that pass through a port. At the Durban Harbour, less than one per cent of cargo containers are searched, while at Johannesburg International Airport (JIA), the official figure is three to five per cent of incoming cargo (Steinberg, 2005b: 3). In order to be successful in the detection of contraband goods, it is imperative, then, for border control agents to select the appropriate containers.

According to Dammer (2000: 84), drug smuggling is one of the primary activities of the Chinese Triads, an organised criminal group who in 1997 had two containers containing 2.9 million mandrax tablets with a street value of R112 million seized in the Durban harbour. A similar incident was recorded by *Port and Ships* magazine (Anon., 2006: 1), which reported that a container holding two million mandrax tablets with a street value of R156 million was found at Johannesburg's City Deep terminal. Investigations traced the container back to Durban harbour, where it entered from China. The drugs were concealed inside a hollowed-out section of declared cargo of wooden doors. Another example of the relation between poor border control and drug smuggling is provided by Steinberg (2005b: 10), who states that during 2004, two shipments of cannabis, which originated from the Durban harbour, were seized at the Rotterdam harbour. Steinberg (2005b: 10), is of the view that the modestly-resourced anti-smuggling team based at the Durban harbour primarily focuses its

efforts on profiling imports and not on exports, and it is for this reason that containers containing narcotics such as the above are not detected. In addition, Steinberg (2005b: 10) states that there is a relationship between border control agencies and drug smugglers, which can be likened to playing a cat-and-mouse game, with the odds being in favour of the drug smugglers.

Mayer (2003: 44), confirms that seaports are a major locus of federal crimes, which include drug trafficking, cargo theft, and contraband and alien smuggling. In the United States, there is a nexus between criminal activity and seaports and this encompasses a broad range of crimes, such as illicit drug trafficking, contraband, and counterfeit goods, alien smuggling, trade fraud, bribery, extortion, racketeering, environmental crime, and cargo theft (Mayer, 2003: 44).

3.7.2 Cargo theft

According to Minnaar (2003: 78), there are several ways in which cargo theft takes place at the Durban harbour. One such method is to steal the container while it is removed-in-bond (RIB) and transported to the City Deep (an inland port depot) in Johannesburg, Gauteng. If a container is to be removed-in-bond, then it does not require customs' clearance at the harbour and only requires a bill of lading and manifest in order to be released. The theft occurs when false documentation is produced to release a container from the harbour (Minnaar, 2003: 78). Another method described by Minnaar (2003: 78) is the tampering, replacing and counterfeiting of Customs or Border Police container seals and the removal of the contents while the container is in the harbour or en-route to the City Deep depot. The reduction of import and export tariffs, as well as the deregulation of South African ports, has resulted in an increase in the number of containers moving through the Durban harbour. Organised crime syndicates that have links to established importers are operating significant container theft operations from the deregulated port system (McCarney & Stren, 2003: 231).

As described by Hare (2009: 72), there have been incidences at port terminals where syndicates are stealing full containers. These thefts were not only limited to full containers but included small packages that are shipped in containers. Hare (2009: 72) further mentions that several years ago, an organised criminal group stole

only the obscured centre cartons from palletised cartons of fresh oranges which were shipped from Cape Town to Europe. The theft was only discovered several months later when the recipient noticed that there was a consistent deficiency of three per cent in each load. An investigation into the matter revealed that the theft occurred at the Cape Town harbour at the time of loading the ship (Hare, 2009: 72). In July 2009, four people were arrested by detectives at the Durban harbour for the theft of R200 000 worth of ethanol. Police found drums containing 13 000 litres of ethanol which were stolen from the Durban harbour in a Pinetown warehouse. Two of the four suspects arrested were harbour workers. One was a security guard, another was a crane operator. The third suspect was a truck driver and the fourth was the owner of the storage facility (Anon., 2009: 1).

3.7.3 Illegal or undocumented immigrants and stowaways

According to an article entitled 'Durban stowaways burn down building' which was published in a local magazine, *Ports and Ships Maritime News* (Anon., 2006: 1), it was reported that a group of 30 stowaways were found in a derelict building which was located within the Durban harbour area. Police also found a large quantity of stolen property, some of which is thought to have come from ships along the adjacent Maydon Wharf. This incident highlighted the issue of lax security in sections of Durban harbour, where vehicles are routinely stopped and the occupants are requested to produce a permit before entering, while pedestrians are not subjected to the same scrutiny and are able to walk in and out at their own free will. The lack of security guards on the various entrances to Maydon Wharf, and the lack of control over pedestrian traffic is obvious and constitute some of the causes of this problem.

It sometimes happens that illegal immigrants enter the country without any assistance, but, as described by Väyrynen (2005: 7), there are occasions where some illegal immigrants would require assistance from professional smugglers to bring them in clandestinely. There is a direct link of corruption between border control authorities and smugglers/traffickers, with the latter providing the immigrants with fraudulent documentation, such as passports, visas, and job letters, or in other instances, bribing the immigration officials (Väyrynen, 2005: 7). In a few documented cases, consulate officials of a country sold visas to would-be migrants for a hefty fee (Väyrynen, 2005: 7). Corruption of border officials is the key factor associated with

migrant trafficking (Hoag, Vigneswaran, Araia & Tshabalala, 2010: 465). Immigration inspectors and border guards are poorly paid and trained and are easily bribed to assist illegal migrants who enter through the ports. Certain law enforcement authorities are hesitant to dedicate resources to migrant trafficking cases, since they feel that it is a victimless crime (Hoag et al, 2010: 465).

3.7.4 Vehicle theft

The smuggling of vehicles across South Africa's borders has been a problem since the 1980s and has increased ever since the growth of organised crime syndicates in South Africa (Irish, 2005: 1). Vehicles have been identified as a form of currency and are often used in exchange for other illegal goods (Irish & Qhobosheane, 2003: 103). Border smuggling of luxury vehicles is the most common form of vehicle smuggling from South Africa and numerous methods are used to smuggle vehicles across the borders. In some instances, luxury 4 x 4 vehicles are smuggled across the borders without going through an official port of entry. One scenario is where vehicles are smuggled across without going through the ports-of-entry. Another method of smuggling vehicles through a port of entry involves the use of duplicate documents, where stolen or hijacked vehicles are taken out of the country by using duplicate papers that do not belong to the said vehicle. In such cases, the duplicate documents used actually belong to a vehicle of the same model and make as the one being smuggled out of the country, and often belong to another vehicle that has either been scrapped or disassembled (Irish, 2005: 1).

An example of this is mentioned in a Zimbabwean newspaper, *NewsdzeZimbabwe*, where it was reported that in December 2010 police seized a four million Rand Rolls Royce car that was travelling from the Durban harbour en route to Zimbabwe. According to police, the vehicle was stolen from the Durban harbour in order to take it to Zimbabwe and then to bring it back to South Africa to be sold (Anon., 2010: 1). Another example of luxury vehicles being smuggled through the Durban harbour is set out in a newspaper article in *The Mercury,* dated 18 November 2010. In this article, it was reported that seventeen luxury vehicles, which had been stolen in the United Kingdom, were seized at the Durban harbour. The vehicles were seized in containers which were destined for Mozambique and the neighbouring countries and were already cloned with engine numbers and number plates (Magwaza, 2010: 1).

According to an article contained in the *CAR* magazine, countless numbers of imported, previously-owned vehicles from Japan are being trafficked unlawfully through Durban harbour and these vehicles are being sold locally in South Africa. The vehicles are believed to be 'legally' imported into South Africa as trans-shipments to neighbouring countries. The engine and chassis numbers of these vehicles are subsequently altered and sold locally through car dealerships to gullible purchasers who are uninformed that these vehicles are illegally imported. This influx of used cars coming through the Durban harbour has resulted in a number of opportunities for criminal activity (Anon., 2003: 1).

3.7.5 Trade fraud

According to the 2010 US Interagency report, trade fraud (such as under-valuations and sale of counterfeit goods) is understood to include the diversion of imported merchandise into the commercial industry of the United States, with the undervaluation of imported or exported goods, or the false description of imported merchandise designed to avoid customs and excise duties (Anon., 2000: iv). It also includes the importation, transportation, and distribution of counterfeit goods subject to trademark and copyrights; and the importation, transportation, and trans-shipment of items that pose a threat to consumers or the environment, including tainted or prohibited foodstuffs, medicines, unapproved drugs, and chlorofluorocarbons (Anon., 2000: iv).

In a newspaper article, 'Harbour mafia bust,' an undercover investigation in the Durban harbour exposed a multi-billion dollar syndicate involving corrupt customs and police officials (Nair, 2012: 1). The article mentioned several SARS and police officials who were arrested for allegedly allowing containers of contraband to pass through undetected, in return for bribes amounting to more than R30 000 per container. Police seized more than R1 billion worth of counterfeit goods and contraband during the period of investigation. The chief investigator revealed that the SARS and police officials were integrated and working with teams from other provinces who assisted in the inspection of the containers and granting of the final clearance. It was mentioned that the Durban harbour is the biggest port authority in South Africa that handles 40 per cent of the containers nationally. Several thousands

of containers pass through the harbour daily which makes it is impossible to check each and every one. As a result, counterfeit goods and contraband pass through easily (Nair, 2012: 1). Customs fraud, through the under-declaration of imported goods passing through ports or harbours, is closely linked to the trading of grey products and counterfeit goods. In these instances, fraudulent bills of lading and false documentation are used to get the goods released (Irish & Qhobosheane, 2003: 101).

3.7.6 Firearm smuggling

During the post-1994 period, illicit firearms were still being smuggled across the borders. There are still many opportunities for enterprising smugglers to smuggle AK-47s across the borders, since law enforcement agencies lack the capacity to enforce border controls rigorously (Hennop et al, 2001: 55). According to Minnaar (Minnaar, 2003: 77), firearms are smuggled in containers and smugglers might pack AK-47 rifles in containers containing second hand clothes, as they have the knowledge that such firearms can only be detected by an X-ray scan or by means of a full unpack. Minnaar (2003: 77) notes that if such containers are identified as low risk, then that risk profiling analysis would not identify such containers for further inspection (i.e. by a scan or full unpack action).

3.8 THE FACTORS THAT CONTRIBUTE TO THE ILLEGAL OF MOVEMENT AND GOODS FROM THE SEA PORTS-OF-ENTRY IN DURBAN

3.8.1 Insufficient profiling and inspections done on containers

There is a clear distinction between the terms ‘screening’ and ‘inspection’. Screening a container or person will entail applying a filter to persons or cargo entering the port, while inspection will require some level of physical action in conducting an examination of the contents thereof (Wasem, Lake, Seghetti, Monke & Vina, 2004: 51). According to Steinberg (2005b: 3) and Kenny (2007: 35), border control agents around the world only search a small percentage of cargo and passengers. At Johannesburg International Airport (JIA), for instance, only three to five per cent of the cargo is searched, while at the Durban harbour only one per cent of the cargo is searched. This view is supported by Minnaar (2003: 76), who states that only three per cent of all containers arriving at Durban Harbour are physically inspected by means of tailboard inspections or random searches. In Port Louis, Mauritius, only

two per cent of containers are physically inspected, while empty containers are seldom inspected (Narsoo, Muslun & Sunhaloo, 2009: 1). According to Minnaar (2003: 75), only import containers with contents in the high-risk category are selected for inspection and search. In an article published in the *Port Financial International*, it was stated that the Durban harbour has an annual capacity of 3,6 million TEUs per annum, which is equivalent to 9 863 TEUs per day (Anon, 2013: 1). Owing to the huge volume of containers that are offloaded on a daily basis, only 100-120 containers can be selected for inspection and it is for this reason that the profiling thereof has to be accurate, if contraband and other illegal goods are to be detected. According to the semi-structured interviews conducted with officials employed within the Durban harbour precinct, it was found that electronic goods were at the highest risk of being moved illegally, followed by illicit narcotics, counterfeit cigarettes, and counterfeit clothing and textiles. Precursor chemicals and tools were not in demand and featured low in this study. Contraband that includes counterfeit cigarettes and clothing, as well as narcotics, is high on the agenda of smugglers, as is the increased demand for electronic items at the Durban harbour.

The use of false documentation is the most popular method for removing goods from the Durban harbour. Corruption and the assistance provided by security and police officials are also popular methods for removing goods illegally from the Durban harbour. According to the semi-structured interviews conducted with officials employed within the Durban harbour precinct, it was found that customs officials provided the least assistance in removing illegal goods.

According to Martonosi, Ortiz and Willis (2006: 221), in the US, only five per cent of all incoming containers are selected for security checks, which comprises of a two-stage inspection process. The primary inspection consists of X-Ray or Gamma ray scanning, and if a container still appears suspicious after the first inspection, it is thereafter subjected to a physical inspection, which requires a full unpack. This is a time-consuming process and involves a great deal of manpower (Martonosi et al, 2006: 221). In contrast to their neighbours, the Canadian Border Security Agency relies on its container-targeting regime to recognise suspicious containers, because of its incapacity to scan, open or inspect anything more than a small percentage of containers.

On average, containers go through multiple persons or agencies that handle them, which can sometimes be as many as 17 between the manufacturer and the final seller. This situation provides ample opportunity for would-be criminals or terrorists to tamper with the contents (Kenny, 2007: 30). A 'hit-and-miss system' of profiling and securing containers entering Canada is not a responsible way to protecting Canadians or the residents of any other country to which the contents may be transhipped (Kenny, 2007: 30). According to Wasem et al (2004: 17), customs' inspections of high risk shipments are based on a risk assessment system, which requires timeously delivered, accurate manifest information in order to execute the risk assessment and targeting procedures before the shipments reach the border. However, one of the challenges in this area is the use of the cargo manifest document as the primary document from which information is obtained to conduct risk assessments (Wasem et al, 2004: 17).

3.8.2 The lack of proper security policies and procedures

According to Minnaar (2003: 21), a 1997 assessment of South African ports by the US Immigration and Naturalization Service, Office of Inspections, found that the greatest challenge confronting border control is the actual deployment of staff at these ports who handle the actual border control. The assessment team found that there was an absence of security personnel and, with the exception of the police, the other agencies responsible for border control were not physically situated within the confines of the harbour areas. The report concluded that a lack of security measures made the ports vulnerable to security risks, such as illegal immigrants and the theft of goods (Minnaar, 2003: 21). Taute (2007: 2) supports Minnaar's view to say that the insufficient security at borders and ports-of-entry and the absence of effective information coordination leave the ports vulnerable to organised crime. This view is further supported by Kenny (2007: 28) who states that the transfer of the security function of seaports and airports to the local authorities has failed and that the security services at seaports and airports are under-staffed and are not able to deal with organised crime and terrorism. According to Mayer (2003: 44), an unsecured environment breeds opportunities with serious consequences which can be accessed freely, making it easy for terrorists to retrieve illegal arms and explosives or to even to commit acts of piracy, such as the hijacking of ships.

3.8.3 Ineffective and insufficient security systems for restricted areas

According to the 'Border Control Collective Approach Implementation Plan' (OWTBC, 1997: 31), the US assessment of border control in South Africa established that in 1997 there was a shortage of technical tools and basic equipment to aid in border control at all South African border posts. These include:

- UV lights and portable document verification equipment;
- Four-wheel drive vehicles;
- Binoculars;
- Sensors;
- Radios;
- Devices for night vision.

Some border posts lack the basic facilities to undertake effective border policing, such as decent accommodation for border officials, storage facilities, proper search areas, vehicles, and even facsimile machines (Hennop et al, 2001: 9). In 2003, Minnaar found that the Durban harbour lacked a central container terminal, which results in containers being offloaded in all areas of the harbour (Minnaar, 2003: 77). According to the onsite security audit of the Durban harbour, it was that found the situation has not changed since 2003 and that containers are still being off-loaded in different areas of the Durban harbour, owing to the poor design and layout of the harbour. The lack of physical protection systems, internal and external threats, as well as poor design and layout of the harbour, are some of the issues experienced currently at the Durban harbour. The current method of randomly scanning containers is responsible for the large amounts of contraband moving through the Durban harbour without being detected.

3.8.4 The lack of on-going (security-specific) training pertaining to the Durban harbour for law enforcement agencies

According to the 1997 US Assessment report quoted by Minnaar (2003: 71), security officials assigned to the ports lacked proper training in access control in order for them to effectively maintain the high levels of security necessary for control and

deterrence. This view is supported by Kenny (2007: 44) who states that customs officials at seaports have often not received the training they require to operate equipment, especially newer equipment for searching cargo containers. A parallel view is held by US Interagency Commission on Crime and Security in US Seaports (Anon., 2000: 36), which asserts that most US ports do not have security forces and therefore rely on contract security to provide security at the gates, cargo areas, and passenger embarking and disembarking areas. The personnel who are employed by the security contractors might, or might not, be trained in security matters.

According to the semi-structured interviews conducted with officials employed within the Durban harbour precinct, it was found that problems of imbalances of work procedures and inadequate distribution of information exist between the various enforcement agencies appointed to protect the Durban harbour. The absence of the required levels of training and regular on-the-job training is evident through the poor performance of the security officers at the Durban harbour. The findings obtained from the semi-structured interviews also indicated that the security officers were provided with the just the basic skills to do a job which they do not thoroughly understand. In order to reduce some of the factors contributing to the illegal movement of goods, security measures can be put in place to mitigate and prevent some of security weaknesses and the factors that contribute to them. The security measures should not be used in isolation, but rather in conjunction with one another in an integrated manner.

3.8.5 Corruption and bribery

In this section, corruption and bribery involving shipping agents, police officials, customs and security guards will be discussed in some detail. Corruption is defined in section 1 of the Prevention and Combating of Corrupt Activities Act, 12 of 2004, as “the unlawful, international giving or offering to give any benefit not legally due in circumstances where there is a prohibition, or any offer or acceptance of such benefit, in return for commission or omission of an act in relation to certain powers and duties” (Department of Justice, South Africa, 2004).

According to the Border Control Collective Approach Implementation Plan (OWTBC, 1997), the types of corruption taking place at South African borders are as follows:

- Bribes are unlawfully obtained by officials/police, customs officers, and immigration officers;
- Official documents/stamps are illegally dispensed by officials who do not have authority to do so;
- Officials accept fictitious or forged permits, certificates, written authority or other document (ID, passports, etc.) for personal advantage;
- Officials gain favours during line of duty without declaring it.

Minnaar (2003: 76) is of the opinion that corruption might take place in any leg of the container handling process and this includes people in the chain of offloading, transportation and storage of containers, as well as the customs officials involved in the inspection and stamping of documentation, who could be bribed or subjected to acts of corruption. A similar viewpoint is held by Hennop et al (2001: 13), who state that corruption and officials working at border posts, go hand-in-hand. Criminal organisations often bribe police, customs, immigration and South African National Defence Force (SANDF) officials to overlook crimes at borders that involve the smuggling of drugs, cars, prostitutes, endangered species products, and firearms. This issue was highlighted in a newspaper article published in the *Daily News* titled '*Corruption at the Durban harbour - The Plot thickens'*, where it was reported that alleged corrupt South African Revenue Service (SARS) and police officials were believed to be working in teams between Kwazulu-Natal and Gauteng (Anon., 2012b). According to the article, these officials were allegedly paid bribes of up to R30 000 for each container that was allowed to pass through customs undetected. A member of the SARS anti-corruption unit in Durban was arrested on 25 April 2012 on 80 counts of corruption for allegedly allowing contraband through the Durban harbour in return for receiving substantial benefits (Anon., 2012b: 1). Although the findings from the onsite security survey indicated that the general lack of security risk control measures contributed largely to the crime problem, the findings from the semi-structured interviews conducted with officials within the Durban harbour precinct suggested that bribery and corruption of port officials as well as poor salaries paid to law enforcement agencies and security officials was a major contributory factor to the occurrence of crime at the Durban harbour.

3.8.6 The significant presence of organised crime syndicates within the harbour

Several factors exist for the presence of organised crime in South Africa, such as modern infrastructure, growth potential and transformation processes. However, the existence of these criminal groups at ports-of-entry can be linked to factors such as porous borders, the global positioning of South Africa as a major maritime trade and air traffic route, and the corruption of port officials (Irish & Qhobosheane, 2003: 83). A similar argument is contained in the international crime threat assessment report which states that South Africa's modern financial system, coupled with its infrastructure of modern airports and seaports at Durban, Cape Town, Port Elizabeth, and East London, attract criminal organisations to use the country for the smuggling of narcotics and other contraband (Anon., 2013c: 1). According to the United Nations Office on Drugs and Crime, South Africa's sea-ports were being used by organised criminal groups to transport illicit commodities into and out of the country. These criminal groups favour the use of commercial containers to ship commercial goods and to conceal and transport contraband, using the assistance of criminal associates within the port industry and the corruption of port officials (UNODCCP, 2013: 1).

The Durban harbour is the busiest port in Africa and the largest in terms of container capacity. Approximately forty-four per cent of South Africa's break bulk cargo and sixty-one per cent of all containerised cargo move through the Durban harbour. In 2010 alone, the port handled 2 5 million TEUs (Poverello, 2013: 1). The Durban harbour is also a sub-continental hub, acting as a trans-shipment port for countries as far away as Tanzania (Steinberg, 2005b: 1). If Durban is the hub of legal trade, then it is also a hub for illicit trade or contraband. The integrity of border control is necessary for collecting government revenue and to protect legal businesses against illegal structures, such as organised criminal groups. The lack of border control, ill-trained security officials and the lack of physical security measures have resulted in the general public gaining access to cargo areas, vessels and warehouses, which favours the presence of organised crime syndicates (Steinberg, 2005b: 9 & Govender, 1999: 1).

The Chinese Triads, which are a more sophisticated criminal group, are involved in customs fraud and dealing in 'grey products'. Grey products are replicas of an original item, which is not covered by any guarantee or customer support by the manufacturer or its agent. Customs fraud occurs through the incorrect or under-declaration of imported goods to avoid customs duties. Such goods are termed 'grey goods', which are 'legal goods' sold by companies other than the manufacturer or registered supplier. It often involves branded items, which if the goods were declared, would attract higher customs and import tariffs. This occurs in collusion with the syndicates' own clearing or forwarding agents, as well as corrupt customs officials. The reason for South African ports being targeted by organised crime syndicates is due to their geographic positioning as a major maritime and air traffic-route between the western and eastern trading blocs (Irish & Qhobosheane, 2003: 83).

Internationally, in a country such as Canada, the ports are riddled with organised crime and the problem with widespread criminality is that it requires holes in the security system to be successful (Kenny, 2007: 14). In addition, it is stated that seaports are exploited by organised crime to move contraband in and out of Canada, particularly illicit drugs. Even in instances where these criminal elements are not based in the port, they show their presence by means of hiring, coercing or otherwise influencing port workers who have access to cargo (Kenny, 2007: 14). In the case of this research study, it was found that the presence of organised crime syndicates and the collusion between the various role-players increase the risk of corruption at the Durban harbour. If the port is well maintained and has a safe and secure physical environment, it would be more difficult for criminals to move illegal goods out of the port.

3.8.7 Tampering with containers

According to Minnaar (2003: 78), a portion of the containers arriving at Durban Harbour are removed-in-bond (RIB). These containers are moved either by road or rail to City Deep, which is an internal port in Johannesburg, where they are cleared by customs. While in transit, these containers are tampered with, stolen or broken into. Customs and Border Police have experienced problems where the respective container seals are tampered with, replaced or counterfeited (Minnaar, 2003: 78).

The customs wire seal pin needle can be pulled out and a duplicate seal with the same number then reinserted, after the container has been opened and the goods removed (e.g. drugs coming from Brazil into South Africa). With regard to aluminium seals, they can be loosened and a replica seal then put on with the same number. Plastic seals can be broken and resealed using superglue to fix the break. Bolt-type seals can be sawed through and thereafter resealed with the insertion of a pin and superglue. Lastly, containers can be opened with the seal still intact. This is achieved by merely taking out the whole bolt, without breaking the seal. The bolt is later replaced and a nut welded on top (Minnaar, 2003: 78).

In the United Kingdom, a security company specialising in container security has identified several new methods of container tampering, such as the removal of the actual door locking mechanisms, the cloning of container seals, and the removal of the security bar/bracket locks (Hawkins, 2013: 1)

3.9 Possible solutions to security risks at ports-of-entry

In broad terms, good border management seeks to facilitate access for people and goods that are both needed and desired, but also aims at interdicting and stopping 'bad' people and 'bad' things from entering the country (Heyman, 2001: 1). This can be successfully achieved by accurately and efficiently identifying high-risk passengers and cargo for inspection and by preventing the entry of dangerous goods and people without impeding the flow of legitimate cross-border traffic. It is within this context that policy makers should endeavour to identify and promote those policies which will enhance the efficacy of the filters employed for these tasks (Heyman, 2001: 682). Koslowski (2011: 1) has emphasised and strengthened the view of Heyman by saying that the ultimate objective of port security is to be able to reduce the likelihood that dangerous people and dangerous capabilities enter the ports-of-entry. In Canada's sea-ports, there have been several programme initiatives taken by the federal government related to implementing the ISPS code, including threat assessments, security plans, federal funding for port security, background checks for port workers and the implementation of sophisticated technologies (Hanrahan, 2010: 1).

The Container Security Initiative (CSI) is a programme implemented in 2002 by the US Customs and Border Protection agencies which aims to increase the security for containerised cargo that is shipped globally into the United States. This initiative addresses the potential threat of terrorists using a maritime container to deliver weapons. In addition to this, this programme also allows US Customs and Border agencies to work with other host countries and inspect or examine high risk maritime containerised cargo even prior to them being loaded onto ships destined for the United States (Department of Homeland Security, USA, 2012: 1).

Another initiative in cargo security is that of the Container Trade Partnership Against Terrorism (C-TPAT). This initiative has been recognised as one of the most important methods of providing the highest levels of cargo security through the close coordination and cooperation between all role-players involved in the maritime sector, such as importers, carriers, shipping agents and manufacturers. All role-players are required to maintain high security measures and also to communicate these measures and security practices with others within the supply chain (Minarro, 2013: 1). According to the semi- structured interviews conducted with officials employed within the Durban harbour precinct, it was found that the levels of cargo security are very low, owing to insufficient container searches and profiling, as well as a lack of communication and coordination between all responsible agencies within the maritime sector. The implications of this is that it results in large amounts of contraband and other illegal goods entering or leaving the country, with the consequence that it creates a serious security risk, as well as negative economic implications for the country.

According to Fleming (2005: 1), technology plays a major role in providing solutions to enhancing border control at US ports and borders. One such initiative is the US ‘visit program’, which utilises a biometric identification system, whereby foreign visitors are required to have their index fingers scanned and their photographs digitally taken for travel document identification purposes. Another initiative is the implementation of the ‘PRAETORIAN’ surveillance software, which integrates multiple cameras and sensors into a single, 3D ‘game-like’ display, permitting fly-through abilities. Users of this software have full situational awareness, even in complex security environments such as borders and ports. This will resolve the

problem of human security guards not being able to be everywhere at the same time Fleming (2005: 1).

According to the onsite security audit of the Durban harbour, it was ascertained that the key to improving access control involves drafting an appropriate access control policy, with procedures, followed by increasing the number of security guards at access/egress control points. The proper searching of visitors and vehicles entering Durban harbour is another way of improving access control. Other methods, such as the monitoring of all persons entering the harbour and the installation of a biometric identification system, were identified in the study as ways to improve access control at the Durban harbour. The implementation of an access control policy and an increase in the number of trained personnel deployed for access control would improve the current situation at the Durban harbour. Having policies in place and ensuring that all law enforcement agencies operating in the harbour are aware of the crime problem in the Durban harbour could assist in reducing the number of illegal goods entering the Durban port.

A similar view on technology is held by Motorola Incorporated (2009: 1), which reports that new technology, equipment and integrated solutions would significantly increase port security;, while at the same time enhancing the synchronisation of port operations. According to this source, there are five categories of wireless technologies which can provide solutions to improving port security, which are as follows:

- **Access management:**

Wireless technology is used in a program termed ‘The Transportation Workers Identification Credential’ (TWIC), whereby all port workers are issued with a biometrics-enabled smart ID card, featuring leading-edge technology, such as fingerprint scanning. This system uses wireless, hand-held devices to verify workers’ credentials, improve employee access control, and unescorted access to secure areas of the port, thereby reducing the number of security officials needed. The use of this system should result in increased security and improved operational efficiency.

- **Asset tracking and controlled movements:**

Assets are monitored using Radio-Frequency Identification (RFID), bar coding and optical scanning. These systems assist in identifying each container and can remotely control the movement of the containers using advanced technology, thereby reducing human intervention and keeping container areas secured. In this way, the containers and port assets can be tracked and the system also assists in prevents thefts.

- **Video security and management:**

Video security is a highly sophisticated program with advanced video software that allows a person to analyse what the camera is seeing and provide information on global positioning systems (GPS location), as well as all available information on the incident.

- **Real-time mobile communications:**

This system uses dedicated internet protocol (IP) networks, which enables individuals and groups to communicate with each other and to analyse data in a more uniform manner. This system uses real-time streaming video and data from other sources to provide more actionable intelligence to security teams attending crime scenes or security incidents.

- **Integrated command and control centres:**

This measure refers to a 24-hour, centralised command and control centre where information from all security technology and operational applications is collected, consolidated, coordinated, stored, managed and distributed. This centre will utilise sophisticated computer systems and technologies to enable command centre personnel to analyse problems and data, and then distribute it to the nearest team of security personnel or law enforcement officials, providing them with real-time information on the situation.

3.10 CONCLUSION

There are two main aspects to border control. The first is the handling of tourists entering South Africa, which involves ensuring that tourists have the correct documentation in terms of their visas and that they will adhere to the terms stipulated

by their relevant visa in order to curb illegal immigration (South African Borders, 2013: 1). The second aspect, with regard to the proper management of ports-of-entry and border posts, is the handling of goods for import and export. This involves ensuring that no illegal goods are imported or exported, which include weapons, drugs and contraband, and that the proper collection of customs duties and taxes takes place.

Seaports are highly attractive targets for terrorist organisations and organised crime syndicates. According to the United Nations Conference on Trade and Development, 80 per cent of all world trade is shipped via cargo containers (cited in Motorola, 2009: 1). These containers move among the world's major seaports more than 200 million times a year, which in essence means that there are large amounts of merchandise that can be stolen, which presents a huge opportunity for dangerous disruption to port operations. Seaports are an inviting gateway for terrorists to further their plots for disrupting a country's economy. Terrorists have knowledge on global economies which rely on the movement of goods and are aware that striking a port facility could significantly impact a nation's economy. For organised crime syndicates, containers make inviting targets for wholesale theft of valuable products, ranging from electronics to apparel. It is for this reason that port security has become such a high priority for governments around the world (Motorola, 2009: 1).

This chapter provided a review of literature on the challenges and problems facing ports-of-entry with regard to the illegal movement of goods. The chapter also provided an understanding of what constitutes port security and the aims thereof. It also provided a discussion on the challenges and the causes of crime at ports-of-entry. An overview of the issue of the illegal movement of goods from seaports on a global, national and regional perspective was discussed. A background of how the Durban harbour operates, the current state of security at the port, the prevalent crimes associated with the Durban harbour, and finally, a discussion on security risk management models and security solutions on how to curb the issue of illegal goods moving in and out of the harbour was discussed.

Chapter 4

COLLECTION, ANALYSIS AND INTERPRETATION OF COLLECTED RESEARCH DATA

4.1 INTRODUCTION

This chapter discusses how the data was collected by means of different instruments, analysed and interpreted. It is divided into three sections, the first dealing with the information that was collected from the analysis of the case dockets. This is followed by a section that deals with the information from the observation checklist complied during the onsite inspection of the Durban harbour. lastly, the chapter deals with the information collected utilising a semi-structured interview schedule. The researcher analysed and interpreted the data, resulting in specific deductions being formulated. The collected and analysed data is presented in the form of frequency tables, together with interpretations and deductions.

4.2 COLLECTION OF DATA

The researcher employed three methods of data collection during this study, namely a docket analysis (documentary study), an onsite security audit of the Durban harbour, (observation checklist) and semi-structured interviews with security, customs and border police officials deployed at the Durban harbour. Dockets of cases of theft and contraband smuggling, which had been registered on the SAPS Crime administration system at the Maydon Wharf police station, were selected for this study. A thorough review of the contents therein was conducted with the aim of answering the identified variables on the documentary checklist. An onsite security audit or risk analysis of the Durban harbour was conducted to obtain data on the state of existing security measures at the harbour (Onsite security audit is the terminology that is used in security management studies at UNISA). Regarding the semi-structured interviews, the data was collected by means of one-on-one interviews in which respondents from the security, customs and border police components, all of whom were stationed at the Durban harbour, participated in the study. A total of thirty (30) respondents participated in this study, giving an intended response of one hundred per cent. The researcher conducted observations at the Durban harbour and evaluated the existing security measures against an observation checklist.

4.3 DATA ANALYSIS, INTERPRETATION AND DEDUCTION

A documentary checklist was used to collect data from the case dockets. Upon completing the analysis for each docket, the data was then coded and categorised according to the following variables: date of reported incident, time, place of theft, method used, and type of goods involved. The data was then analysed with the aim of identifying similarities or differences and trends within the data, which was then interpreted according to the results and thereafter presented in the form of frequency tables.

4.4 DOCKET ANALYSIS

Each docket which formed part of the sample was analysed from the front cover which provided information on the day, date, time and place of the incident, as well as the type of incident (crime) and the goods taken, with the respective value. The "A" clip of the docket was then analysed, which contained all statements pertaining to the respective offence. Information from this section was extracted by the researcher concerning the modus operandi and as to how the crime took place. The information obtained from the perusing the contents assisted the researcher in completing the docket analysis checklist. All of the data collected from the case dockets were primary data. The researcher then categorised and coded the following variables according to the docket analysis:

- Time frame for incidents of Theft/Contraband Smuggling, i.e. weekdays or weekends; period when theft was committed; and time of occurrence.
- Methods used to commit the thefts or smuggling of contraband (modus operandi).
- Place where the theft/smuggling occurred.
- Type of goods that were stolen or smuggled.

This section contains an examination of all the results obtained from the docket analysis.

Table 4.1: Day of the week that theft/contraband smuggling took place (N=50)

Docket Analysis: Day of the week that Theft/Contraband Smuggling took place.		
	Frequency	**Percentage**
Monday	6	12%
Tuesday	5	10%
Wednesday	9	18%
Thursday	7	14%
Friday	8	16%
Saturday	9	18%
Sunday	6	12%
TOTAL	**50**	**100%**

If we examine the docket analysis in Table 4.1 above, it can be seen that the highest incidents of theft/contraband smuggling occurred on Wednesday and Saturday, followed by Friday and Thursday. It can also be observed that thirty-five (70%) of the incidents took place on weekdays, while fifteen (30%) took place over a weekend. However, upon closer analysis of the figures, it can be established that the majority of the incidents took place from Wednesday to Sunday, a total of thirty-nine (78%) incidents. An inference can be drawn that the number of incidents increases with the approach of weekends.

Table 4.2: Period when theft occurred (N=50)

Docket Analysis: Period when theft occurred		
	Frequency	**Percentage**
Same day	44	88%
Over a period of days	6	12%
TOTAL	**50**	**100%**

In analysing the period over which the respective crimes took place, it was established that 88 per cent of the crimes took place on the same day, as opposed to 12 per cent which took place over a period of two days. Upon closer analysis of the dockets, it was established that those crimes which took place over two days were in fact ones which were committed late on Sunday evenings and only discovered on a Monday morning, hence the longer period.

Table 4.3: Time of occurrence of theft/contraband smuggling incidents (N=50)

Docket Analysis: Time of occurrence of theft/contraband smuggling incidents		
	Frequency	**Percentage**
06h00-11h59	18	36%
12h00-17h59	22	44%
18h00-23h59	8	16%
00h00-05h59	2	4%
TOTAL	**50**	**100%**

In analysing the times over which the respective crimes took place, it was established that 44 per cent of the crimes took place between 12h00-17h59, 36 per cent between 06h00-17h59, 16 per cent between 18h00-23h59, and 4 per cent between 00h00-05h59. It can be deduced that 80 per cent of the crimes took place

during working hours of 06h00-18h00, while the remaining 20 per cent occurred after normal operational hours.

Table 4.4: Methods used to commit the thefts or smuggling of contraband (Modus Operandi) (N=50)

Docket Analysis: Methods used to commit the thefts or smuggling of contraband (Modus Operandi)		
	Frequency	**Percentage**
Passed through security control check point	0	0%
Did not go through security control checkpoint	3	6%
False documentation used	11	22%
Assisted by security officials	6	12%
Assisted by Law Enforcement officials	5	10%
Container door forced open	6	12%
Container locks picked or cut open	3	6%
Container Seals removed	4	8%
Container seals tampered with	4	8%
Gate locks forced open	3	6%
Climbed over perimeter fence	2	4%
Access gained through unmanned security checkpoint	3	6%
TOTAL	**50**	**100%**

According to Table 4.4 above, the most popular methods are the use of false documentation (22%), container doors being forced open (12%), assistance by security officials (12%) and assistance by law enforcement officials (10%). Another key aspect was the issue of container tampering (8%), which included the locks being picked or seals being removed. This is an indication of the poor security measures that are in place at the harbour, where criminals have access and

sufficient time to tamper with containers and remove the cargo without being detected.

Table 4.5: Place of Theft (N=50)

Docket Analysis: Place of Theft		
	Frequency	**Percentage**
General Storage area	20	40%
Hazardous Goods storage area	2	4%
Bonded Warehouse	6	12%
Container terminal area	13	26%
Customs Warehouse	1	2%
Customs Detention Facility	8	16%
SAPS Scanning area	0	0%
TOTAL	**50**	**100%**

In analysing the areas of the harbour where the crimes predominantly took place, the general storage area for containers was at the highest risk (40%) in terms of theft, followed by the container terminal area (26%), the customs detention facility (16%), and the bonded warehouses (12%). In these areas the security aspect is minimal, hence the high incidence of thefts. Incidents of theft were minimal in the customs warehouse and the SAPS scanning area, owing to the heightened sense of security in those areas.

Table 4.6: Type of Goods being smuggled or stolen (N=50)

Docket Analysis: Type of Goods being smuggled or stolen		
	Frequency	**Percentage**
Electronic goods	14	28%
Textiles	9	18%
Manufactured clothing items	11	22%
Machinery or tools	3	6%
Stationary or books	0	0%
Furniture	1	2%
Tobacco	7	14%
Alcohol	2	4%
Spices	0	0%
Meat	0	0%
Maize/Sugar/Wheat	1	2%
General grocery items	2	4%
TOTAL	**50**	**100%**

The analysis of the dockets revealed that the highest incidence of thefts involves goods of an electronic nature (28%), followed by manufactured items of clothing (22%), textiles (18%), and tobacco (14%). General grocery items (4%), as well as wheat and sugar (2%), featured at the lower end of the scale. According to the findings in this study, there is a great demand for electronic equipment, such as cell phones, and it was noted that a demand for televisions has contributed to the increase in the theft of these items. In addition, items of imported clothing (both counterfeit and original items) have been seized in large quantities at various flea markets and shops in the Durban area. The huge demand for contraband, such as counterfeit cigarettes, has also created a market, and organised crime syndicates are increasing their efforts to bring in containers of these goods to supply the market.

4.5 ON-SITE AUDIT OBSERVATION ANALYSIS

In accordance with the UNISA Security Risk Management Model (as developed by Rogers, (2005) and revised by Olckers, (2007) and Kole, (2010)), a site audit of the Durban harbour was conducted to evaluate the existing security measures at the harbour. The researcher physically inspected the state of the existing security measures against a security survey checklist by walking around the harbour and making observations and notes on these measures ('security survey checklist' is the terminology used in security studies at UNISA). The collected data was then entered onto the checklist to establish the security weakness factor of the respective measures. This section provides an analysis of the information gathered during the examination of the Durban harbour, as elaborated with the aid of the researcher's observations with regard to the prevailing security measures that are employed at the Durban harbour.

4.6 FINDINGS FROM DURBAN HARBOUR SITE AUDIT AND OBSERVATION ANALYSIS

During the site audit of the Durban harbour, the following existing security measures were surveyed and evaluated in terms of their effectiveness against security risks or threats: security policies and procedures, perimeter fencing, security lighting, access control and Closed Circuit Television (CCTV). In evaluating these measures, it became apparent to the researcher that there was a general lack of security within each of these measures.

4.6.1 Security policies and procedures

The research established that there are currently no existing security policies in place for any of the security measures being evaluated at the Durban harbour. It was found that the harbour did not have any written security policy or procedure effectively in place. The study found that without an access control policy, the security officers posted at the access points are limited in the performance of their duties and will not be effective at any access or egress control point in preventing any illegal goods or persons entering or leaving the harbour.

The key issue highlighted by the respondents was that they only received verbal instructions from their management on how to conduct their duties because there is no written policy issued by the Durban ports authority to the security service providers on how to conduct their duties. The researcher is of the view that the necessary security policies and procedures will become increasingly critical as the reliance on security systems continues to increase in order to prevent the illegal movement of goods at the Durban harbour. This is a serious shortcoming as a written policy should dictate what needs to be done and the manner in which it should be done in order to render effective security services against any risks or vulnerabilities.

4.6.2 Parking areas

The researcher surveyed the parking areas and established that there are four official parking areas within the Durban harbour. These parking areas accommodate staff parking and visitors to the Durban harbour. The study found that all four of the parking areas were not sufficiently protected by physical security measures, such as security officials or CCTV surveillance. The study further found that the lighting does not provide sufficient illumination at specific areas in the parking areas so as to adequately monitor security risks. The research found that access into the parking areas was not controlled and that some of these parking areas were within close proximity to the storage areas.

4.6.3 Access control

Access control is a system which enables an authority to manage access to a specific area. Applied in the context of this study, the Durban ports authority should provide written and clear instructions to the security officials as to how people should be allowed to access the Durban harbour. The study found that access control at the main points of entry and exit are controlled by security officials who work on a 12-hour shift cycle and that the number of personnel at each of these entry and exit points varies between two to four personnel, depending on the size of the gates. A total of 80 PSIRA registered security officials are utilised on these shifts. The study found that this number is far too low to provide an effective level of security in respect of access and egress control.

4.6.4 Security lighting

The study found that although most of the perimeter is equipped with security lighting, there are some points along the perimeter fence in the container depot where there is a lack of security lighting. The container depot is an area which is used for the loading and off-loading of containers. Another shortcoming was that the existing lighting does not provide a sufficient degree of illumination for the inspection of goods and vehicles. In addition, the high-risk areas within the harbour are not equipped with emergency standby lighting, which is necessary in the event of power failures. The study further found that although the lighting was installed at critical areas in the Durban port, the lights were not being switched on, possibly because of human neglect and a lack of electronic day and night automatic switches.

4.6.5 Closed circuit television

The study found that not all areas of the harbour are monitored by CCTV cameras. The storage areas and certain access control points were not fitted with CCTV cameras. The study found a total of 120 cameras which were positioned along the perimeter of the Durban harbour, and which included 13 PTZ (Pan, Tilt and Zoom) cameras. These cameras report to a central control room, which the study found to be not sufficiently manned. The study found that these devices record poor images, which creates difficultly in analysing the number plates of vehicles and in allowing the facial recognition of people. The study found that the cameras were not tamper proof, since their power connections were easily accessible and could be tampered with by rogue elements. The cameras were not linked to an alarm which would activate the recording of images in the event of an alarm, nor were the cameras connected to a backup power supply or battery, which would enable them to record images in the event of a power failure.

These findings were reinforced when it was established during the docket analysis that in most of the cases, there was no available CCTV footage, which tends to indicate that the cameras are not operational at all times. The benefits of properly functioning security cameras at the Durban port are that they will mitigate theft because studies have shown that visible security cameras are known to deter theft. Security guards could perform more patrols and actively protect the assets, instead of watching monitors for hours on end. The cameras could also be viewed remotely

from any location so as to trigger the transmission of footage from the surveillance system over the internet.

4.7 INTERVIEW SCHEDULE ANALYSIS

4.7.1 Biographical Information

The following is a representation of the biographical information of all the respondents (30) who were interviewed for the study.

4.7.1.1 Present employer

Table 4.7: Sector of employment (N=30)

Respondents (30)		
	Frequency	**Percentage**
Security	10	33.3%
Customs	10	33.3%
Border police	10	33.3%
Total	**30**	**100%**

This question was asked in order to ascertain the representivity of the respondents employed at the Durban harbour during this research. A total of thirty (30) respondents were interviewed for this study, with an equal number of ten (33.3%) per sector. It can, therefore, be deduced that there will be equal input from all sectors, which will lead increased validity and reliability.

4.7.1.2 Current position in company

Table 4.8: Current job description of respondents (N=30)

Respondents (30)		
	Frequency	**Percentage**
Guard	5	16.67%
Patrol officer	10	33.3%
Investigator	10	33.3%
Supervisor	3	10%
Manager	2	6.67%
Total	**30**	**100**

This question identified the type of work that was performed by the respondents at the time of the study. Ten respondents (33.3%) indicated that they performed patrol duties at the harbour, followed by investigators (33.3%), guards (16.67%), supervisors (10%) and managers (6.67%). The data in Table 4.8 above indicates that the study will be well balanced, since the majority (83%) of the respondents are made up of guards, patrol officers and investigators, and it is these persons who come into contact daily with security weaknesses and risks.

4.7.1.3 Period in which the respondents are employed at the current employer

Table 4.9: Number of years with current employer (N=30)

Respondents (30)		
	Frequency	**Percentage**
Less than one year	4	13.33%
Between one to two years	4	13.33%
Between two and three years	5	16.67%
More than three years but less than five years	10	33.33%
More than five years	7	23.33%
TOTAL	**30**	**100%**

In terms of years employed with the current employer, 33.3% of the respondents indicated that they were with the current employer for more than three years, followed by 23.3% who were employed for more than five years, and 16.7% for more than two years. Only a small minority (26.6%) were employed for less than two years. In analysing the data, it can be established that a large majority (56.66%) of the respondents were employed in the same jobs for more than three years. This means that these individuals have more experience at the Durban harbour as a result of their years of service with the current employer

4.7.1.4 Duties performed by the respondents at the Durban harbour

Table 4.10: Duties performed at the harbour (N=30)

Respondents (30)		
	Frequency	**Percentage**
Access Control	4	13.33%
Patrol Duties	6	20%
Guard Duties	7	23.33%
Inspection of Goods/Permits	11	36.66%
Surveillance/Control room	2	6.67%
TOTAL	**30**	**100%**

In terms of the duties performed, 36.66% of the respondents indicated that their duties involved the inspection of goods/permits, while 23.33% performed guard duties, followed by patrol duties (20%), access control (13.33%) and surveillance duties (6.67%). A large majority (43.33%) of the respondents are involved in patrolling and guarding of the harbour, while only 13.33% conduct access control duties.

4.7.1.5 Security training pertaining to the Durban harbour

The respondents were asked if they had undergone security training pertaining to Durban harbour (see Appendix A, Question 1.5). The respondents were given a Yes or No option to indicate their answer to this question. The results were as follows:

Table 4.11: Security related training (N=30)

Respondents (30)					
Responses	**Security Officers**	**Border Police**	**Customs Officials**	**Total**	**Percentage**
Yes	4	5	10	19	63.33%
No	6	5	0	11	36.67%
Totals	**10**	**10**	**10**	**30**	**100%**

This question was asked in order to find out if all of the respondents had undergone any security-related training pertaining to security risks and border control issues. All 30 (100%) respondents answered this question. Nineteen of the respondents (63.33%) indicated that they had received some form of security training, while eleven (36.67%) indicated that they had never received any training. This indicates that the majority of the respondents should have an understanding of what constitutes security risks and weaknesses at the harbour. According to Kenny (2007: 44), customs officials at seaports have often not received the training they require to operate equipment, especially newer equipment for searching cargo containers. A parallel view is embraced by the US Interagency Commission on Crime and Security in US Seaports (Anon., 2000: 36), which asserts that most US ports do not have security forces and therefore rely on contract security to provide security at the gates, cargo areas, passenger embarking and disembarking areas.

4.7.1.6 Frequency of training

The respondents were asked to provide information on the frequency of training provided by their company (see Appendix A, Question 1.7). The results were as follows:

Table 4.12: Frequency of training provided by company (N=30)

Respondents (30)					
Responses	**Security Officers**	**Border Police**	**Customs Officials**	**Total**	**Percentage**
Daily	0	0	0	0	0%
Weekly	0	0	0	0	0%
Every Fortnight	0	0	0	0	0%
Monthly	4	2	5	11	36.67%
Quarterly	6	8	5	19	63.33%
Totals	**10**	**10**	**10**	**30**	**100%**

In terms of onsite training on security and crime-related issues pertaining to the Durban harbour, nineteen of the respondents (63.33%) indicated that they only received training once in three months. Eleven of the respondents (36.67%) stated that they received training once a month. None (0%) of the respondents reported that they received training daily, weekly or fortnightly. Although every PSIRA registered security officer should have completed a basic security officer's training course, it does not, however, equip him or her to deal with security and crime-related risks at the Durban harbour, which essentially requires advanced or specialised training courses. In a report by the South African Auditor General into borderline security, several challenges with respect to various aspects of border security were identified (Democratic Alliance, 2008: 6). One of the challenges was the lack of a specific border training curriculum for members performing border duties.

4.7.1.7 Skills and abilities possessed for working at the harbour

The respondents were asked what skills and abilities they possessed to work at the harbour (see Appendix A, Question 1.9).

Table 4.13: Competencies of respondents (N = 30)

Respondents (30)		
Theme	**Frequency**	**Percentage**
Security Supervisor (Grade A)	1	3.33%
Security Supervisor –first line (Grade B)	2	6.67%
Asset and Reaction officer (Grade C)	2	6.67%
Access Control officer (Grade D)	2	6.67%
Patrol security officer (Grade E)	6	20%
Fire risk training	4	13.33%
Security threat Assessment	2	6.67%
Risk Analysis and assessment	2	6.67%
Intelligence gathering and Informer handling	3	6.67%
Investigation of Crime	3	10%
Drug interdiction	2	6.67%
Patrol Duties	4	13.33%
Skippers licence	1	3.33%
Identification of counterfeit goods	5	16.67%
Occupational health and safety	5	16.67%
Totals		

In terms of competencies, all thirty (30) respondents answered this question. This was a multiple-response question and the respondents provided more than one response per variable. All of the respondents (100%) indicated that they possessed some form of security-related training to work in the harbour. All security officials (100%) stated that they had only completed their basic security course (PSIRA Grade 'C'), while more than half (60%) of the police and the customs officials reported that they had only completed basic training modules at their respective academies. However, of concern was the fact that only 14 per cent were trained in security or risk assessment. It was established that the respondents had attended more than one training course or were in possession of more than one skill to work at the harbour.

4.8 SECURITY WEAKNESSES

4.8.1 The concept 'security weakness'

The respondents were asked what they understood by the concept 'security weakness' (see Appendix A, Question 2.1). All 30 respondents answered this question.

Table 4.14: The concept 'security weakness' (N=30)

Respondents (30)		
Theme	**Frequency**	**Percentage**
Problems within the existing security systems	6	20%
Inadequate security physical protection systems	5	16.6%7
Poor design and layout of the harbour	4	13.33%
Understaffing of law enforcement and security officials	4	13.33%
Lack of training for law enforcement and security officials	5	16.67%
Poorly paid security officials	3	10%
Internal and external threats affecting the harbour	3	10%
Totals	**30**	**100%**

In terms of security weakness, 20 per cent of the respondents indicated that security weakness constitutes problems within the existing security measures, while 16 per cent cited inadequate security measures as a weakness. Other respondents (16.67%) cited the lack of training of law enforcement and security officials, internal and external threats (10%) and poorly paid security officials (10%). As it has emerged from this study's findings, all the respondents are aware what constitutes a security weakness at the Durban harbour. It can be deduced from this that there are several categories of security weaknesses facing the Durban harbour.

4.8.2 Security weaknesses observed by respondents

The respondents were asked the question: "Can you identify some of the security weaknesses observed by you?" (See Appendix A, Question 2.7.)

Table 4.15: Security weaknesses encountered at the Durban harbour (N=30)

Respondents (30)		
Theme	**Frequency**	**Percentage**
Lack of Access Control in some areas of the harbour	6	20%
Lack of coordination between law enforcement and security	4	13.33%
Ineffective security measures	5	16.67%
Insufficiently trained law enforcement and security officials	5	16.67%
Shortage of manpower to effectively carry out duties	4	13.33%
Lack of equipment such as scanners, metal detectors and x-ray machines	6	20%
Totals	**30**	**100%**

In terms of observed weaknesses, 20 per cent of the respondents cited the lack of access control in certain areas of the harbour, coupled with a lack of equipment as the main security weaknesses, followed by insufficiently trained law enforcement and security officials (16.67%) and ineffective security measures (16.67%). In assessing the respondents' responses, it is evident that these are clear examples of security weaknesses at the Durban harbour which presents a problem to the security of the harbour. The human resource problem of insufficient manpower, coupled with a lack of training and coordination between the various departments to work together in providing effective security at the port, is the major weakness at the harbour. Minnaar (2003: 21) mentions that an assessment of South African ports by the US Immigration and Naturalization Service, Office of Inspections, found that the greatest challenge confronting border control is the actual deployment of staff at these ports who handle the actual border control. The assessment team found that there was an absence of security personnel and, with the exception of the police, the other agencies responsible for border control were not physically situated within the confines of the harbour area.

4.8.3 Areas in which security weakness contribute to the illegal movement of goods

The respondents were asked the question: “Can you tell me in which area is the security weakness which contributes to the illegal movement of goods?” (See Appendix A, Question 2.6.)

Table 4.16: Area of security weakness in the harbour (N=30)

Respondents (30)		
Theme	**Frequency**	**Percentage**
Access Control	6	20%
Harbour Perimeter	4	13.33%
Container Terminal	7	23.33%
Container storage areas including warehouses	9	30%
Parking areas	4	13.33%
Totals	**30**	**100%**

This question was aimed at identifying the areas of weakness at the Durban harbour in relation to security risks. In terms of the responses, 30 per cent of the respondents indicated that the container storage areas were the most vulnerable to security risks. This was followed by the container terminal (23.33%) as the second highest vulnerable area according to the respondents. Access control (20%) was again highlighted as an area of weakness in terms of security measures, in conjunction with the perimeter fencing (13.33%) and the parking areas (13.33%). It can be deduced that there are serious problems in the areas where goods or containers are being stored, such as the container storage areas and the container terminals, hence the thefts and contraband smuggling.

4.8.4 The period of time that they observed the vulnerability to be in existence

The respondents were asked to indicate the period of time that they observed the vulnerability to be in existence. (See Appendix A, Question 2.8). The responses of the respondents are contained in the Table 4.17 below.

Table 4.17: Period of existence of security weakness (N=30)

Respondents (30)					
Responses	**Security Officers**	**Border Police**	**Customs Officials**	**Total**	**Percentage**
0-3 months	2	0	0	2	6.67%
4-6 months	2	2	3	7	23.33%
7-12 months	3	5	4	12	40%
More than 1 ye	3	3	3	9	30%
Totals	**10**	**10**	**10**	**30**	**100%**

In terms of the period of existence of security weaknesses, 40 per cent of the respondents indicated that they had observed the weakness to exist for more than seven (7) months, while 30 per cent indicated that some weaknesses had existed for more than one year without any intervention. The majority of the respondents (93.33%) indicated that specific weaknesses had existed for more than six months without any intervention. This means that security weaknesses exist for extremely long periods of time without any intervention from the respective authorities.

4.8.5 Awareness of any illegal movement of goods taking place at the Durban harbour

The respondents were asked the question: “Are you aware of any illegal movement of goods taking place at the Durban harbour?” (See Appendix A, Question 2.4.)

Table 4.18: Officials’ awareness of goods being moved illegally through the Durban harbour (N=30)

Respondents (30)					
Responses	**Security Officers**	**Border Police**	**Customs Officials**	**Total**	**Percentage**
Yes	6	8	9	23	76.67%
No	4	2	1	7	23.33%
Totals	**10**	**10**	**10**	**30**	**100%**

A large majority of the respondents (76.67%) indicated that they were aware of illegal goods being moved in and out of the harbour, while 23 per cent indicated that they were unaware of the situation. It can be deducted that there is indeed a problem of illegal goods being moved through the harbour. The small minority of respondents (23.33%) who indicated otherwise were in fact those who had only a short period of employment with their current employer. Organised crime syndicates that have links to established importers are operating significant container theft operations from the deregulated port system (McCarney & Stren, 2003: 231).

4.8.6 Type of goods are being moved illegally

If the respondents answered "YES" to question 2.4., they were asked a follow up question, "What type of goods are being moved illegally?" (See Appendix A, Question 2.4.1.) The responses were as follows:

Table 4.19: Type of goods being moved illegally at the Durban harbour (N=30)

Theme	Frequency	Percentage
Electronic goods	7	23.33%
Counterfeit Cigarettes	5	16.67%
Counterfeit clothing	5	16.67%
Illicit Narcotics	6	20%
Precursor Chemicals	2	6.67%
Tools and machinery	2	6.67%
Textiles	3	6.67%
Totals	**30**	**100%**

In response to this question, 23.3 per cent of the respondents indicated that electronics goods were at highest risk of being moved illegally, followed by illicit narcotics (20%), counterfeit cigarettes (16.67%), counterfeit clothing (16.67%) and textiles (10%). Precursor chemicals and tools featured at the bottom of the list (6.67%). It can be deduced that contraband, which includes counterfeit cigarettes, clothing, and narcotics, were high on the agenda of smugglers, as well as the increased demand for electronic items. Hare (2009: 72) reports that there have been incidences at port terminals where syndicates are stealing full containers. These

thefts were not only limited to full containers, but included small packages that are shipped in containers.

4.8.7 Methods used to move the illegal goods through the harbour

The respondents were asked the question: “What methods are used to move the illegal goods through the harbour?” (See Appendix A, Question 2.4.2.)

The responses were as follows:

Table 4.20: Methods used to move illegal goods through the harbour (N=30)

Respondents (30)		
Theme	**Frequency**	**Percentage**
False Documentation	6	20%
Concealment	4	13.33%
Theft	6	20%
Corruption	5	16.67%
Assistance by Security officials	4	13.33%
Assistance by Police Officials	3	10%
Assistance by Customs officials	2	6.67%
Totals	**30**	**100%**

In response to this question, the respondents indicated that theft (20%) and the use of false documentation (20%) were the most popular methods for removing goods from the harbour. Corruption (16.67%) and the assistance provided by security officials (13.33%) and by police officials (10%) were also popular methods. Customs officials (6.67%) provided the least assistance in removing illegal goods. The modi operandi, as indicated by the figures in Table 4.20 above, include the use of false documentation, theft and the concealment of goods. According to Minnaar (2003: 78), theft occurs when false documentation is produced to release a container from the harbour. Minnaar (2003: 78) also refers to occurrences of tampering with, replacing and counterfeiting Customs or Border Police container seals and the removal of the contents while the container is in the harbour or en route to City Deep depot.

4.9 SECURITY RISKS

4.9.1 Security risks facing the Durban harbour

The respondents were asked what they understood to be a security risk facing the Durban harbour. (See Appendix A, Question 3.1.)

Table 4.21: The concept 'security risk' (N=30)

Respondents (30)		
Theme	**Frequency**	**Percentage**
A situation that negatively affects the harbour	5	16.67%
Internal and external threats affecting the harbour	3	10%
Inadequate physical protection systems	5	16.67%
Poor design and layout of the harbour	3	10%
Inadequate technical protection systems	4	13.33%
Crimes affecting the harbour	8	26.67%
Financial losses due to thefts and other crimes	2	6.67%
Totals	**30**	**100%**

In examining the responses, 26.67 per cent of the respondents indicated that a security risk means crimes which affect the harbour, while 16.67 per cent of the respondents referred to it as any situation that negatively affects the harbour. Other respondents (16.67%) considered the lack of physical protection systems as a security risk, (10%) internal and external threats, and poor design and layout of the harbour (10%). As has emerged from this study's findings, all the respondents are aware of what constitutes a security risk at the Durban harbour. It can be deduced that there are several categories of security risks within the Durban harbour.

4.9.2 Numbers of incidents of crime discovered during a month

The respondents were asked the question: "How many incidents of crime do you discover during a month?" (See Appendix A, Question 3.2.) The results thereof are indicated in the Table 4.22 below.

Table 4.22: Incidents of crime discovered during the month (N=30)

Respondents (30)					
Responses	**Security Officers**	**Border Police**	**Customs Officials**	**Total**	**Percentage**
1-5 incidents	5	2	3	10	33.33%
6-9 incidents	4	4	6	14	46.67%
10-14 incidents	1	4	1	6	20%
15-19 incidents	0	0	0	0	0%
20 and more incidents	0	0	0	0	0%
Totals	**10**	**10**	**10**	**30**	**100%**

A large majority (46.67%) of the respondents indicated that they witnessed between 6-9 incidents of crime a month, while ten (33.33%) of the respondents indicated that they experienced five (5) or less incidents of crime and 20 per cent indicated that they observed over ten (10) incidents per month. It can be deduced that the majority (66.67%) of the respondents discovered just under 15 incidents of crime during their tour of duty in a single month.

4.9.3 The most prevalent crimes affecting the harbour

The respondents were asked the question: "What are the most prevalent crimes affecting the harbour?" (See Appendix A, Question 3.4.)

Table 4.23: Crimes associated with the harbour (N=30)

Respondents (30)		
Theme	**Frequency**	**Percentage**
Theft	8	26.67%
Corruption	4	13.33%
Bribery	3	10%
Fraud	5	16.67%
Trespassing	3	10%
Drug Smuggling	5	16.67%
Illegal immigrants	2	6.67%
Totals	**30**	**100%**

In answering this question, 26.67 per cent of the respondents cited theft as the most prevalent crime associated with the harbour, while fraud and drug smuggling (16.67% each) ranked joint second in the list of crimes identified by the respondents. The issue of corruption (13%) and bribery (10%) also often go together and made up of almost 24 per cent, or one quarter, of the replies by respondents.

4.9.4 Causes of crimes associated with the harbour

A follow-up question was put to the respondents with the aim of understanding the causes of the respective crimes identified in question 3.4. (See Appendix A, Question 3.5.)

Table 4.24: Causes of crimes associated with the harbour (N=30)

Respondents (30)		
Theme	**Frequency**	**Percentage**
Poor Salaries of Law enforcement and security officials	3	10%
Corruption involving shipping agents, police officials, customs and security guards	5	16.67%
Bribery of Port security and law enforcement officials	3	10%
The presence of Organised Crime syndicates within the harbour	2	6.67%
Insufficient security measures such as proper access control which reduces the issue of trespassing	7	23.33%
Untrained port officials to detect contraband and illegal goods	3	10%
Lack of equipment i.e. container scanners	4	13.33%
Staff shortages	3	10%
Totals	**30**	**100%**

In terms of the causes of crimes, most of the respondents (23.33%) cited the general lack of security risk control measures as the primary factor resulting in crime at the harbour, followed by the corruption of port officials (16.67%), the lack of equipment, such as container scanners (13.33%), poor salaries of law enforcement and security officials (10%) and bribery (10%). According to Steinberg (2005b: 3) and Kenny

(2007: 35), border control agents around the world only search a small percentage of cargo and passengers. At Johannesburg International Airport (JIA), for instance, only between three to five per cent of the cargo is searched, while at the Durban harbour only one per cent of the cargo is searched.

4.9.5 Methods used to smuggle goods through the harbour

The respondents were asked to indicate by means of a number (1-5) which method is used to smuggle goods through the harbour. (See Appendix A, Question 3.6.) The responses were as follows:

Table 4.25: Method which is used most often used to smuggle goods through the harbour (N=30)

Respondents (30)					
Responses	**Security Officers**	**Border Police**	**Customs Officials**	**Total**	**Percentage**
Concealment	1	2	1	4	13.3%
False Documentation	3	2	2	7	23.33%
Counterfeit Goods	1	1	1	3	10%
Assistance by Security Personnel	2	2	2	6	20%
Corruption by Port Officials	3	3	4	10	33.33%
Totals	**10**	**10**	**10**	**30**	**100%**

In terms of the smuggling methods, the most common method to smuggle goods via the harbour is through the corruption of port officials (33.33%), followed by the use of false documentation (23.33%), concealment of goods (23.33%), with assistance of security personnel (20%), and concealment (13.33%). Counterfeit goods, according to the respondents, is the least-used method to smuggle goods through the harbour. The use of false documentation is the most popular method for removing goods from the Durban harbour. Corruption and the assistance provided by security and police

officials are also popular methods for removing goods illegally from the Durban harbour. This study further found that customs officials provided the least assistance in removing illegal goods.

4.9.6 Methods most often used for the theft of containers from the harbour

The respondents were asked to indicate by means of a number (1-5) which method is most often used for the theft of containers from the harbour. (See Appendix A, Question 3.7.) The responses were as follows:

Table 4.26: Method which is most often used for the theft of containers from the harbour (N=30)

Respondents (30)					
Responses	**Security Officers**	**Border Police**	**Customs Officials**	**Total**	**Percentage**
Poor access/egress control	2	1	1	4	13.33%
False Documentation	3	3	3	9	30%
Corruption by Port Officials	3	3	3	9	30%
Assistance by Security Personnel	1	2	1	4	13.33%
Container tampering	1	1	2	4	13.33%
Totals	**10**	**10**	**10**	**30**	**100%**

In response to this question, the respondents indicated that the use of false documentation (30%) and corruption of port officials (30%) are the most common methods for committing the theft of containers from the harbour. Poor access control, the assistance of security guards, and container tampering have all been rated equally (13.3%) as methods for the theft of containers from the harbour.

4.9.7 Methods most often used for the theft of goods from the harbour

The respondents were asked to indicate by means of a number (1-5) which method is most often used for the theft of goods from the harbour. (See Appendix A, Question 3.8.) The responses were as follows:

Table 4.27: Most common reasons for theft of goods from the harbour (N=30)

Respondents (30)					
Responses	**Security Officers**	**Border Police**	**Customs Officials**	**Total**	**Percentage**
Poor access/egress control	2	1	1	4	13.33%
False Documentation	2	3	3	8	26.67%
Corruption by Port Officials	2	3	3	8	26.67%
Assistance by Security Personnel	1	1	1	3	10%
Container tampering	3	2	2	7	23.33%
Totals	**10**	**10**	**10**	**30**	**100%**

In terms of the responses, the use of false documentation (26.67%) and corruption of port officials (26.67%) are the most common reasons why goods are stolen from the harbour, followed by container tampering (23.33%), poor access control (13.33%), and assistance by security guards (10%). It can be deduced that the lack of training in detecting fraudulent documentation is a primary reason for containers and goods leaving the harbour illegally. In 2003, Minnaar found that the Durban harbour lacked a central container terminal which results in containers being offloaded in all areas of the harbour (Minnaar, 2003: 77). In the case of this research study, it was that found that the situation has not changed since 2003 and that containers are still being off-loaded in different areas of Durban harbour owing to the

poor design and layout of the harbour. The lack of physical protection systems, internal and external threats, and poor design and layout of the harbour are some of the problems experienced currently at the Durban harbour.

4.9.8 Factors that lead to crimes such as contraband smuggling through the harbour

The respondents were asked, “What are the factors that lead to crimes such as contraband smuggling through the harbour?” (See Appendix A, Question 3.8.)

Table 4.28: Factors that lead to contraband smuggling through the harbour

Respondents (30)		
Theme	**Frequency**	**Percentage**
Corruption and bribery involving shipping agents, police officials, customs and security guards	5	16.67%
Collusion between border police and customs officials in releasing goods	5	16.67%
Insufficient scanning of containers and inspection of cargo	7	23.33%
The presence of organised crime syndicates within the harbour	2	6.67%
Insufficient security measures such as proper access control	4	13.33%
Untrained port officials to detect contraband and illegal goods	3	10%
Lack of equipment i.e. container scanners	4	13.33%
Totals	**30**	**100%**

In terms of the respondents’ responses, insufficient container scanning (23%) was the key factor responsible for the smuggling of contraband through the harbour. Another key factor which had been identified was the corruption of police, customs and security officials (16.67%) as well as the collusion between officials (16.67%) to release contraband and illegal goods. Insufficient security measures such as proper access control (13.33%) and untrained port officials were also identified as

significant factors contributing to this problem. In analysing the responses, it can be deduced that the current method of randomly scanning containers is responsible for the large amounts of contraband moving through the harbour without being detected.

4.9.9 Factors that lead to crimes such as theft of containers from the harbour

The respondents were asked the question: “What are the factors that lead to crimes such as theft of containers from the harbour?” (See Appendix A, Question 3.10.)

Table 4.29: Factors that lead to the theft of containers from the harbour

Respondents (30)		
Theme	**Frequency**	**Percentage**
Corruption and bribery involving shipping agents, police officials, customs and security guards	8	26.67%
Collusion between border police and customs officials in releasing goods	4	13.33%
The presence of Organised Crime syndicates within the harbour	3	10%
Insufficient security measures such as proper access control	6	20%
Untrained port officials to detect false documentation	4	13.33%
The use of false documentation in the release of containers	5	16.67%
Totals	**30**	**100%**

In response to this question, the respondents highlighted corruption as the key factor responsible for the theft of containers from the harbour, followed by insufficient security measures (20%), the use of false documentation in the release of containers (16.67%), and port officials who are untrained in detecting false documentation (13.33%). The presence of organised crime syndicates within the harbour (10%) did also contribute to the theft of containers. It can be deduced that the presence of organised crime syndicates and the collusion between the various role-players increases the risk of corruption at the harbour. According to Hennop et al (2001: 13), corruption and officials working at border posts go hand-in-hand.

Criminal organisations often bribe police, customs, immigration and South African National Defence Force (SANDF) officials to overlook crimes at borders that involve the smuggling of drugs, cars, prostitutes, endangered species products and firearms.

4.10 SECURITY PROTECTION SYSTEMS

4.10.1 Physical protection systems in place to reduce or eliminate the illegal movement of goods from the Durban harbour

The respondents were asked the question, “From your experience please tell me what physical protection systems are in place to reduce or eliminate the illegal movement of goods from the Durban harbour?” (See Appendix A, Question 4.3.)

Table 4.30: Physical security protection systems at the Durban harbour (N=30)

Respondents (30)		
Theme	**Frequency**	**Percentage**
Security officials employed by Transnet	6	20%
Fencing and Boom Gates	5	16.67%
Security Lighting	4	13.33%
Patrol duties of the harbour by Border police officials	5	16.67%
Establishment of Anti-Smuggling task teams	6	20%
Advance profiling of containers prior to their arrival at port	4	13.33%
Totals	**30**	**100%**

In terms of physical protection systems, 20 per cent of the respondents referred to the security function carried out by the guards employed by Transnet, and 16.67 per cent referred to the patrols carried out by the police. Another important measure was the establishment of Anti-Smuggling Task teams (20%) to combat threats and risks within the harbour area. Fencing and boom gates (16.67%) were also cited by the respondents as an important measure in place to combat such risk.

It can be established that the respondents view physical security measures as a responsibility of the security department. According to the ‘Border control collective approach implementation plan’ (OWTBC, 1997: 31), a US assessment on Border

Control in South Africa established that there is a shortage of technical tools and basic equipment to aid in border control at all border posts.

4.10.2 Adequacy of physical security protection systems to combat the risks and vulnerabilities facing Durban Harbour

The respondents were asked the question: “From your experience can you tell me if the physical security protection systems are adequate to combat the risks and vulnerabilities facing the Durban Harbour?” (See Appendix A, Question 4.7.) The results are shown in Table 4.31 below, from which it will be seen that 80 per cent replied ‘no’.

Table 4.31: Are the physical protection systems adequate to combat risks or vulnerability?

Respondents (30)					
Responses	**Security Officers**	**Border Police**	**Customs Officials**	**Total**	**Percentage**
Yes	3	2	1	6	20%
No	7	8	9	24	80%
Totals	**10**	**10**	**10**	**30**	**100%**

4.10.3 Shortcomings or problems in physical protection systems

The respondents were asked the question: “Can you tell me if there are shortcomings or problems in any of the physical protection systems mentioned below? Indicate your answer by inserting a number (between 0-3) alongside each measure. 0= no risk & 3 = high risk.”

Table 4.32: Shortcomings or problems in security measures

Respondents (30)					
Responses	**Security Officers**	**Border Police**	**Customs Officials**	**Total (n/90)**	**Percentage**
Access Control	27	28	27	82	91.11%
Egress Control	28	26	27	81	90%
Perimeter Fencing	26	27	27	80	88.89%
Perimeter Lighting	25	19	21	65	72.23%
Human Security/Guards	23	27	26	76	84.44%
CCTV cameras	25	28	27	80	88.89%
X Ray Scanners	25	27	28	80	88.89%
Metal Detectors	26	25	27	68	75.55%
Security Flood Lighting	23	26	21	70	77.78%
Alarm systems	26	24	21	71	78.89%
Totals	**10**	**10**	**10**	**30**	**100%**

(Maximum points = 30 (10 responses x3)) (N=30)

In terms of shortcomings in the security measures, access control (91.11%) and egress control (90%) were highlighted as the most problematic areas, followed by CCTV cameras (88.89%), perimeter fencing (88.89%) and X-ray scanners (88.89%). Other physical protection systems, such as security guards (84.44%), are also highly problematic areas according to all categories of respondents. In analysing the results in Table 4,32 above, it can be established that access control, egress control and CCTV surveillance and X-Ray scanners feature as the most problematic areas, according to all three categories of respondents.

4.10.4 Security policies and procedures in place to combat security risks at the harbour

The respondents were asked the question, “From your experience please tell me what security policies and procedures are in place to combat security risks at the harbour?” (See Appendix A, Question 4.5.) The responses were as follows:

Table 4.33: Security policies and procedures at the Durban harbour (N=30)

Respondents (30)		
Theme	**Frequency**	**Percentage**
Access Control	3	10%
Search and seizure Policy	5	6.67%
No policy or procedure	17	56.67%
Non response	5	16.67%
Totals	**30**	**100%**

In terms of security policies and procedures, in excess of half of the respondents (56.67%) specified that there is no security policy or procedure in place, followed by five respondents (16.67%) who did not respond. Three respondents (10%) indicated that there was an access control policy, followed by 6.67 per cent who indicated that there was also a search policy. In analysing the responses of the respondents, it can be established that, with the exception of a few Customs policies that govern the import and export of goods together with the procedure to detain and inspect goods, other security policies and procedures are almost non-existent in the harbour to prevent the illegal smuggling of goods and contraband.

4.10.5 UPS (uninterrupted power supply) for electronic security systems in the event of power outages

The respondents were asked the question: “In your experience, can you tell me if there is a UPS (uninterrupted power supply) for the electronic security systems in the event of power outages? Kindly indicate either YES or NO.” (See Appendix A, Question 4.8.)

Table 4.34: Uninterrupted power supply (UPS) for the electronic security

Respondents (30)					
Responses	**Security Officers**	**Border Police**	**Customs Officials**	**Total**	**Percentage**
Yes	4	2	4	10	33.33%
No	6	8	6	20	66.67%
Totals	**10**	**10**	**10**	**30**	**100%**

In analysing the responses of the respondents to the question of whether the electronic security systems have a backup UPS system, 66.67 per cent of the respondents said 'NO', while the remaining 33.33 per cent indicated that the harbour is equipped with a backup UPS system. With regard to the respondents who indicated 'YES', it was established that the battery backup systems were not sufficient to power up the entire electronic security system, including the security flood lighting and CCTV surveillance, which are vital components in the provision of security and protection in the harbour.

4.10.6 Access control in the harbour

The respondents were asked the question: "How would you describe access control in the harbour?" (See Appendix A, Question 4.9.)

Table 4.35: Access control in the Durban harbour (N=30)

Respondents (30)		
Theme	**Frequency**	**Percentage**
Ineffective implementation of access control	5	16.67%
No proper policies and procedures on access control	6	20%
No monitoring of visitors gaining access o the harbour	4	13.33%
No verification of documentation by security officials of goods and persons entering or leaving the harbour	6	20%
No visitors register at access control points	2	6.67%
No searching of visitors and vehicles by security officials	4	13.33%

Respondents (30)		
Theme	**Frequency**	**Percentage**
Visitors are not escorted to their destinations within the harbour	3	10%
Totals	**30**	**100%**

In answering this question, 20 per cent of the respondents indicated that there is no verification of documentation by security officials with respect to people entering and leaving the harbour. Another 20 per cent of respondents stated that there were no access control policies or procedures in existence, while 16.67 per cent indicated that there was ineffective implementation of access control, followed by 13.33 per cent of respondents who indicated that there was no searching and monitoring of visitors entering or leaving the harbour. In analysing the responses, it can be established that no positive feedback was received from any of the respondents regarding access control.

4.10.7 Effectiveness of the current system in access control

The respondents were asked the question: “Can you tell me if the current system is effective or not in access control and give reasons for your answer?” (See Appendix A, Question 3.12.)

Table 4.36: Effectiveness of current access control system (N=30)

Respondents (30)					
Responses	**Security Officers**	**Border Police**	**Customs Officials**	**Total**	**Percentage**
Yes	3	2	2	7	23.33%
No	7	8	8	23	76.67%
Totals	**10**	**10**	**10**	**30**	**100%**

In answering this question, 76.67 per cent of the respondents indicated that the current access control system was ineffective, while 23.33 per cent indicated positively. It can be established from the responses that a large majority of the

respondents were in agreement that the current system was ineffective in protecting the harbour against any risks or vulnerability.

4.10.8 Measures suggested to improve the current system

A follow up question was asked in relation to the responses provided to question 4.11.1: “In the event of the access control system being ineffective, what measures can you suggest to improve the current system? (See Appendix A, Question 4.12.)

Table 4.37: Measures to improve access control (N=30)

Respondents (30)		
Theme	**Frequency**	**Percentage**
Drafting of an access control policy with access control procedures	6	20%
Increasing the number of security officials at access/egress control points	6	20%
Upgrading the lighting conditions at access/egress control points	3	10%
Monitor all visitors gaining access by completing a visitors control register and escort them to their point of destination	4	13.33%
Installation of a biometric identification system to identify all persons entering the harbour	3	10%
No visitors register at access control points	3	10%
No searching of visitors and vehicles by security officials	5	16.67%
Totals	**30**	**100%**

In answering this question, 20 per cent of the respondents indicated that the key to improving access control involves drafting an access control policy with procedures, followed by another 20 per cent who indicated that the number of security guards at access/egress control points should be increased. The issue of searching of visitors and vehicles entering the harbour was highlighted by 16.67 per cent of respondents as another way of improving access control. Other methods, such as the monitoring

of all persons entering the harbour (13.33%) and installation of a biometric identification system, were also identified as ways to improve access control at the harbour. It can be deduced that the implementation of an access control policy and an increase in the number of personnel in access control would improve the current situation. In the case of this research study, it was found that the key to improving access control involves the drafting of an access control policy with procedures, followed by an increase in the number of security guards at access/egress control points. The searching of visitors and vehicles entering the harbour is another way of improving access control.

4.10.9 Suggested training for officials employed at the Durban harbour

The respondents were asked the question: “What training do you suggest that needs to be provided to officials in your department employed at the Durban harbour?: (See Appendix A, Question 4.13.)

Table 4.38: Training needs of respondents (N=30)

Respondents (30)		
Theme	**Frequency**	**Percentage**
Identification of narcotics, contraband and stolen goods	6	20%
Criminal law, security law and port procedures	3	10%
Identification of security risks	5	16.67%
Identification of false documentation	3	10%
Access control and search procedures	4	13.33%
Home affairs and immigration system	2	6.67%
Investigation of Organised Crime	2	6.67%
Effective search procedures	3	10%
Intelligence gathering and profiling methods	2	6.67%
Totals	**30**	**100%**

In terms of training needs, 20 per cent of the respondents indicated that they required training in the identification of narcotics, contraband and stolen goods, followed by 16.67 per cent who required training in the identification of security risks,

13.33 per cent in access control and search procedures, and 10 per cent in effective search procedures and the identification of false documentation. A small minority of 20 per cent of the respondents (3 groups of 6.67%) required training in the investigation of organised crime, intelligence gathering and profiling methods, and on the Home Affairs and immigration systems. It can be established that training in security risks and weaknesses is lacking in both the security and law enforcement environments.

4.10.10 Measures to reduce security risks and vulnerabilities concerning illegal movement of goods and persons

The respondents were asked the question: “What do you feel should be done to reduce the security risks or vulnerabilities that threaten the harbour with respect to the prevention of the illegal movement of goods and persons in and out of the harbour?” (see Appendix A, Question 4.14.)

Table 4.39: Measures to reduce security risks and vulnerabilities (N=30)

Respondents (30)		
Theme	**Frequency**	**Percentage**
Regular security risk assessments to be conducted	4	13.33%
Establish a joint risk steering committee comprising of all role-players	3	10%
Drafting and implementing security policy and procedures	3	10%
Overall security measures to be improved	6	20%
Strengthen the Border police function with a crime intelligence or profiling component	5	16.67%
Strengthen the Customs section with an increased Anti-smuggling section	4	13.33%
Increase the total number of security officials at the harbour	5	16.67%
Totals	**30**	**100%**

In answering this question, 20 per cent of the respondents recommended that the overall security measures at the harbour be improved. followed by 16.67 per cent of the respondents who recommend that the policing and the security functions be upgraded with additional staff members. Another 16.67 per cent of the respondents suggested that the total number of security officials be increased at the harbour, and 13.33 per cent of the respondents suggested that regular risk assessments be conducted. A further 13.33 per cent agreed that the Customs section be empowered by increasing the anti-smuggling component and by conducting regular security risk assessments, and 10 per cent recommended that a joint risk-steering committee, comprising all the relevant role-players, be established. It can be deduced from the responses that there are several measures that can be implemented to reduce the security risks at the harbour. The implementation of an access control policy and an increase in the number of trained personnel in access control would improve the current situation at the Durban harbour. Having policies in place and ensuring that all law enforcement agencies operating in the harbour are aware of the crime problem in the Durban harbour could assist in reducing the number of illegal goods entering the Durban port.

4.10.11 Measures to combat the illegal movement of goods and persons at Durban harbour

The respondents were asked the question: “What do you feel should be done to improve the security measures at the harbour to combat the illegal movement of goods and persons in and out of the harbour? (See Appendix A, Question 4.15.).

Table 4.40: Measures to improve security situation at the Durban harbour

Respondents (30)		
Theme	**Frequency**	**Percentage**
Increase the number of security officials deployed at access/egress control points and goods storage areas.	6	20%
Implement digital security systems such as biometrics for access/egress control	5	16.67%
Establish a central permit issuing authority for all persons visiting the harbour	3	10%
Invest in acquiring better equipment such as CCTV digital systems, container scanners and X-ray machines	7	23.33%
Enhance the Border police function with a crime intelligence and narcotics detection component	4	13.33%
Improve the physical security measures such as perimeter fencing and security lighting	5	16.67%
Totals	**30**	**100%**

In terms of measures to improve the security situation at the Durban harbour, 23.33 per cent of the respondents recommended increasing the numbers of technological equipment, such as container and X-ray scanners and CCTV, followed by 20 per cent who suggested increasing the number of security officials posted at access/egress control points, while 16.67 per cent suggested improving the state of the perimeter fencing and lighting. Another 16.67 per cent recommend the implementation of digital security systems, such as biometrics for access/egress control and the centralisation of a permit control office for all persons working and visiting the harbour. It can be deduced from these responses that there are several measures that can be implemented to improve the security measures at the harbour.

4.11 CONCLUSION

This chapter dealt with the issue of how the data which had been collected from the different sources was to be analysed, presented and interpreted. The chapter was divided into three primary sections, each one dealing with the analysis of a specific data collection instrument. The first section dealt with the data that was collected from the analysis of SAPS dockets from the Maydon Wharf police station pertaining to incidents of theft and contraband smuggling that had occurred at the Durban harbour. The second section dealt with the information collected during the onsite audit of the Durban harbour with respect of the existing security measures in place at the harbour. The last section dealt with the data that was obtained from the one-on-one interviews with security officials, customs officials and border police who are deployed at the Durban harbour. The analysed data was presented in the form of frequency tables, together with researcher's interpretations and deductions.

Chapter 5
RESEARCH FINDINGS, RECOMMENDATIONS AND CONCLUSIONS

5.1 INTRODUCTION

The aim of this study was to investigate the existing security measures, identify shortcomings and gaps at the Durban harbour, and to identify the crime risks associated with the illegal movement of goods so that appropriate security risk control measures may be recommended to mitigate the threats. For this purpose, the researcher collected data through a variety of sources, namely a literature study, a documentary study of police case dockets on theft and contraband smuggling, an onsite evaluation of the existing security measures at the Durban harbour, one-on-one interviews with customs, security and police officials working at the harbour, and lastly, from the researcher's personal experience. This chapter concludes with the findings and recommendations made in this study.

5.2 RESEARCH OVERVIEW

Seaports or harbours play a vital role in the logistical chain, since they handle the largest volumes of containerised cargo and bulk goods that enter any country. South Africa's maritime sector, and in particular its eight commercial ports-of-entry, play a major role in the South African economy, as well as those of South Africa's neighbouring landlocked countries. One of South Africa's busiest seaports-of-entry is the Durban harbour. This study set out to investigate the challenges with the illegal movement of goods from the Durban harbour. The research sought to establish how the goods were being moved illegally through the Durban harbour area. The focus was on the security risk control measures and risks associated with the threats of criminal conduct that gave rise to the illegal movement of goods from the Durban Harbour.

5.3 RESEARCH FINDINGS

5.3.1 Findings related to the research rationale

The rationale of this study was to identify the gaps in security measures at the Durban Harbour, as there was a lack of research on the factors contributing to this problem. Although there is an abundance of literature on problems associated with ports-of-entry, it has been found that no previous research had been undertaken on

the evaluation of security measures at ports-of-entry, or on the identification of any gaps within these measures. In addition to the above, the researcher's personal observation, as well as the results of the security risk assessment exercise, revealed that there are indeed several gaps within the existing security measures resulting in the existing security protection systems being ineffective. Confirmation of this result was obtained during the penetration exercises of the actual security measures which displayed certain shortcomings within each measure, thereby confirming the existence of gaps within these measures.

5.3.2 Findings related to the problem statement

This study set out to investigate the challenges associated with the illegal movement of goods from the Durban harbour. It sought to establish how the goods were being moved illegally through the Durban harbour area and focused on the security risk control measures and risks associated with the threats of criminal conduct that gave rise to the illegal movement of goods from the Durban Harbour. The challenges associated with the illegal movement of goods at the Durban harbour were investigated and the modus operandi on how goods were being moved illegally through the harbour was established. The security risk control measures were evaluated and the specific risks within each measure were identified.

5.3.3 Findings related to the research questions

The first question was to establish what type of security risk control measures are in place at the Durban harbour. The researcher intended to gain an understanding of the current situation in the Durban harbour in terms of existing security protection systems and to identify any shortcomings or problems within those measures.

The second question was aimed at identifying the risks associated with the illegal movement of goods at the Durban harbour. The research sought to establish the reasons why the problem existed with regard to the unlawful transfer of goods through the port's harbour and to discern the specific problem areas or factors which resulted in, or contributed to, this problem.

The third question was aimed at identifying the different types of security measures that could be put in place at the Durban harbour to prevent the illegal movement of

goods. By means of this question, the researcher proposed to identify resolutions to the difficulty of the illegal movement of goods through the harbour.

The following findings are based on the documentary analysis of police case dockets, the onsite security audit of the Durban harbour, and the responses received from the respondents during the semi-structured interviews and were evaluated in terms of the research questions of this study.

Research question 1:
What type of security risk control measures are in existence at the Durban Harbour?

It was found from the data collected during the onsite security audit and the semi-structured interviews, that different classes of security measures existed at the Durban harbour, namely physical security measures and aids, technical security aids, and human resources. The physical security systems included measures such as perimeter fencing around the harbour, access control points, security lighting, and high fencing in certain warehousing areas, safes, security doors and window guards. The human resources included the in-house security officials employed by Transnet, SAPS border police officials, and customs anti-smuggling officials. It was also found that all human resources were equipped with security aids, namely two-way radios, handcuffs and cell phones. However, only half (50 %) of the human resources were equipped with torches and batons. The study found there are no formal written security policies and procedures in place at Durban harbour.

Despite the harbour being equipped with several categories of security measures, such as security personnel and CCTV, the study found that there were several problems with these measures. The measures concerned were inadequate in providing sufficient protection against any crime risk or vulnerability. Firstly, the shortage of security personnel and customs officials deployed per shift, coupled with the lack of training on harbour-related issues, crimes and security risks, indicate the ineffectiveness of this measure in combating any crime or security risks that the harbour is faced with. Secondly, the harbour does not have sufficient technological aids to effectively support the physical security measures, such as container scanners, X-ray machines, CCTV and alarm systems which are needed to deal with

security or crime risks. It was found that the Durban harbour was equipped with only one container scanner, despite it being the busiest port in South Africa. As a result, only a small percentage of containers can be scanned for contraband and illegal goods, thereby increasing the risk of contraband and illegal goods going through the port without being detected. Thirdly, there was no broad security policy in place, nor any specific security procedures for any of the security measures concerned, e.g. access control policy, fraud and corruption prevention policy, and asset removal policy. Security procedures were also lacking, such as rotation of staff procedures, and goods removal procedures.

Although the primary function of providing security rests with Transnet, which is mandated to administer all seaports along the South African coastline, it is complemented by the SAPS Border Policing and Customs Anti-Smuggling components, which are responsible for the inspection of goods and persons entering or leaving the harbour. It was also found that all of these agencies work in silos, resulting in a lack of communication, cooperation and coordination between all the role-players in attending to security-related issues. Information on security risks and vulnerabilities is not shared amongst these components, which results in a gap within the existing security system.

Research question 2:
What are the risks associated with the illegal movement of goods at the Durban harbour?

It was found that several security-related risks existed at the Durban harbour concerning the illegal movement of goods. The risks identified during the analysis of data, and ascertained during the interviews and the onsite audit, included ineffective security protection systems. It was established firstly that the security measures offered inadequate protection against security risks. Secondly, internal threats, such as the opportunity to commit fraud, and corruption between staff members or staff members who have not been vetted but are in key security positions, are some of the other threats facing the harbour. Owing to the amount of money associated with cargo containers, the external risk of corruption also exists where staff members can fraudulently release containers in exchange for money.

It was found that, of the several categories of crime risks that were identified by the respondents, the most prevalent crime risks were that of theft, corruption and fraud. Theft was the priority crime which affected the harbour, because of the number of containers and items of cargo that had been stolen. In certain instances, the theft occurred with the aid of corrupt security or law enforcement officials or through the use of fraudulent documentation.

It was found during the interviews that 23 per cent of the respondents highlighted poor or insufficient security measures as primary cause of these security risks. As mentioned above, the poor security measures included the lack of access control, insufficient human resources, such as security officials and customs officials, insufficient security lighting, and a damaged perimeter fence, as well as the lack of a broad security policy. Other poor measures include difficient technological assets, such as the inadequate CCTV systems intended to cover the entire harbour area. This finding is also supported by the results obtained from the documentary study of police dockets on theft and contraband smuggling.

Research question 3:
Which type of security risk control measures can be put in place to prevent the illegal movement of goods through the Durban harbour?

In undertaking the security audit, the researcher identified certain security measures, such as security lighting, security policies and procedures, parking areas and access control points in relation to the security risks and vulnerabilities identified in the Durban harbour. The most effective security control measures identified were improving the access and egress control, as well as improving the digital surveillance system that would then assist in preventing the illegal movement of goods from the harbour.

The first issue that needs to be addressed is access control, which if performed correctly, would eliminate almost 60 per cent of the crime and security risks within the harbour, such as thefts, contraband smuggling and illegal movement of goods through the ports. Another desirable security measure would be the installation of a

new CCTV surveillance system to cover all high-risk areas within the ports, as well as the access and egress control points. The introduction of a biometric system controlling access to high risk areas within the port would also go a long way in reducing the number of containers being stolen or tampered with. Some of the other measures include the drafting of a comprehensive security policy with procedures which encompasses all security-related activity at the Durban harbour, the conducting of regular security risk assessments at the harbour, and improving the overall security measures at the harbour. Another measure is to increase the capacity of security and law enforcement agencies and to establish a joint steering committee on security comprising the aforementioned role-players. An integrated approach is urgently needed to resolve the issue of the illegal movement of goods from the harbour.

5.3.4 Findings related to the research objectives

The first objective was to examine the existing security risk control measures at the Durban harbour. The second objective was to assess the risks associated with the illegal movement of goods at the Durban harbour.

The third objective was to identify the security risk control measures to prevent the illegal movement of goods at the Durban harbour.

5.3.5 Findings related to the docket analysis

It was found that most incidents of theft and contraband smuggling took place over weekdays, as opposed to weekends, although it can be seen that the number of incidents do increase with the approach of the weekends. The majority of the incidents occurred within a 24-hour period, while a few (12%) of the incidents occurred over a number of days. The recorded times of the incidents indicated that most crimes took place between 06h00 and 18h00 and that the areas of the harbour which were most vulnerable to these crimes were the general storage area, which had the highest number of incidents, followed by the container terminal area, both of which are located within the harbour boundaries. The methods used by criminals to execute these crimes involve the use of false documentation and tampering with container locks and seals, as well as being assisted by law enforcement and security officials to perpetrate these crimes. Lastly, the types of items that were at the

greatest risk were electronic goods, textiles and tobacco. This finding suggests that the high risk areas are easily accessible and not properly secured, indicating that access control is either poor or lacking at the harbour.

5.3.6 Findings related to the security audit of the Durban harbour

In respect of the physical and technical security protection systems at the harbour, it was found that they were lacking in many respects, rendering them ineffective in providing adequate levels of security. The key findings are discussed below:

Security policies and procedures:

It was found that the harbour did not have any written security policy or procedure in place. This is a serious shortcoming as these dictate what needs to be done, and the manner in which it should be done, to render effective security against any risks or vulnerabilities. It was found that, without an access control policy or a search and seizure policy, there was very little a security official could do at any access or egress control point to prevent any illegal goods or persons entering or leaving the harbour. In addition to this, no security measure can be effectively implemented without a proper policy and procedure document.

Parking areas:

It was established that most of the parking areas were either unguarded or only monitored by means of CCTV surveillance. It was also found that that some of these parking areas were within close proximity to storage areas and that there was no access control to these parking areas. The researcher surveyed the parking areas and established that there are four official parking areas within the Durban harbour. These parking areas accommodate staff parking and visitors to the Durban harbour. The study found that all four of the parking areas were not sufficiently protected with physical security measures, such as security officials or CCTV surveillance. The study further found that the lighting does not provide for sufficient illumination at specific areas in the parking areas to adequately monitor security risks. The researcher found that access into the parking areas was not controlled and that some of these parking areas were within close proximity to the storage areas.

Access Control:

The lack of access control is core to many of the problems within the harbour, as it was pointed out by 91 per cent of the respondents during the interviews. This finding was confirmed during the onsite security audit, which established that access control was almost non-existent at the harbour, hampered by a lack of an access control policy, unstaffed and characterised by ill-equipped access control points. The analysis of the police dockets also indicated that 66 per cent of the thefts took place from the container terminal and general storage areas within the harbour, which indicates the lack of access control to these high-risk areas.

Security Lighting:

The study found that although most of the perimeter is equipped with security lighting, there are some points along the perimeter fence in the container depot where there is a lack of security lighting. The container depot is an area which is used for the loading and off-loading of containers. Another shortcoming was that the existing lighting does not provide a sufficient degree of illumination for the inspection of goods and vehicles. In addition, the high-risk areas within the harbour are not equipped with emergency standby lighting, which is necessary in the event of power failures. The study further found that although lighting was fitted to critical areas in the Durban harbour, the lights were not being switched on, possibly owing to human neglect and a lack of electronic day and night automatic switches.

Closed Circuit Television:

The study found that not all areas of the harbour are monitored by CCTV cameras. The storage areas and certain access control points were not fitted with CCTV cameras. The study found a total of 120 cameras which were positioned along the perimeter of the Durban harbour, which included 13 PTZ (Pan, Tilt and Zoom) cameras. These cameras report to a central control room, which the study found is not being adequately manned. The study found that these devices record poor-quality images, which creates difficultly in analysing the number plates of vehicles and the facial recognition of people. The study found that the cameras were not tamper proof, since their power connections were easily accessible and could be interfered with by rogue elements. The cameras were not linked to an alarm which would activate the recording of images in the event of an alarm, nor was the camera

connected to a backup power supply or battery which would enable it to record images in the event of a power failure. These findings were reinforced when it was established during the docket analysis that in most of the cases, there was no available CCTV footage, which tends to indicate that the cameras are not operational at all times.

5.3.7 Findings related to the semi-structured interviews

Security training:

It was found that a large majority of the respondents only underwent basic training at their respective institutions and were not equipped with any specialised harbour-related training. The frequency of training took place quarterly, according to most of the respondents, which indicates that there are shortcomings in this aspect and that only a small minority of the respondents were trained in assessing security threats and conducting a security risk analysis.

Areas of vulnerability:

It was found that the main areas of weakness were the lack of implementation of access control, owing to the lack of an access control policy, and the insufficient number of security personnel deployed at the main access and egress control points within the harbour. Poorly-trained law enforcement and security officials were also cited as another major weakness, coupled with ineffective security protection systems. Areas of weakness within the harbour included the container storage areas and the container terminal area, which were often subjected to crimes of theft and container tampering. Another aspect with this area was the issue of containers being left unattended for long periods of time, thus making them vulnerable to theft and tampering.

Type of goods at risk: Illegal movement of goods through the harbour:

It was found that the type of goods which were at the highest risk was electronic items, followed by illicit narcotics, counterfeit cigarettes and counterfeit clothing. The methods used most often to either steal the containers or smuggle contraband were through the use of false documentation and outright theft.

Crimes associated with the Durban harbour:

It was found that the most prevalent crimes affecting the harbour were corruption, theft and the smuggling of narcotics. In determining the causes for these crimes, it was found that factors, such as insufficient security measures, corruption involving shipping agents, law enforcement and security officials, as well the lack of equipment to detect contraband, such as scanners, were the principle issues related to the specific problem of illegal goods and the Durban harbour.

Most common methods to commit theft or smuggle contraband:

It was found that the corruption of port officials by criminals was the most popular method for committing thefts and smuggling contraband. Other popular methods used by criminals included the use of false documentation to remove goods from the harbour and gaining the illicit assistance of port officials in either stealing goods and containers or smuggling the contraband. Another method of how goods were either smuggled or removed from the harbour was conceal the contraband to avoid detection.

Factors leading to theft/contraband smuggling at the harbour:

It was found that the most common factors leading to the theft of containers and goods or the smuggling of contraband from the harbour were the insufficient number of containers being scanned and inspected to detect contraband, insufficient security control measures, such as proper access and egress control, corruption and bribery involving shipping agents, law enforcement and security officials, and the lack of training of security and law enforcement officials in detecting false documentation. Only between 3 to 5 per cent of containers are being scanned at the Durban harbour on a daily basis, which in effect means that 95 per cent of containers are being allowed to enter the Durban port without proper inspection.

Shortcomings in existing security measures:

It was found that all security measures had, to a certain degree, shortcomings within themselves. The major shortcoming identified with regard to all existing security measures was the lack of proper access and egress control, which is responsible for most of the security-related risks, such as container theft and contraband smuggling from the harbour. Another important security measure linked to the issue of access

control was the perimeter fence, which was damaged in certain sections and also not properly secured. Also associated with access control was the CCTV surveillance equipment, which was firstly lacking in certain high-risk areas and access and egress control points. Secondly, some of the cameras were not capable of recording at night and were also not tamperproof. Other shortcomings include the lack of scanning equipment and metal detectors and the lack of alarm systems linked to perimeter fences and high risk areas so as to alert security officials in the event of a security breach.

5.4 RECOMMENDATIONS

5.4.1 Recommendations to Transnet

It is recommended that Transnet, which is mandated with the responsibility for securing the Durban harbour, improve the existing security measures at the Durban harbour by undertaking the following:

- Increasing the number of security officials at the harbour.

- Improve the access/egress control points by installing a guard house, boom gate and installing Pan, Tilt and Zoom (PTZ) surveillance cameras, and hydraulic spikes linked to the boom gate and an alarm system.

- Secure all access/egress control points with a minimum of two security officials who are equipped with hand-held metal detectors and two-way radios.

- Improving the layout and design of the harbour with the aim of minimising the access/egress control points and by moving the parking areas away from the storage areas.

- Improving the security lighting at the harbour by increasing the illumination at access control points, the perimeter fencing, container terminals and storage areas.

- Drafting a security policy and procedures for all security measures.

- Ensuring that all personnel are fully trained in the identification and detection of contraband, counterfeit goods and false documentation.

5.4.2 Recommendations to SAPS Border Police:

It is recommended that the SAPS Border Police increase their capacity in dealing with crimes affecting the harbour, by doing the following:

- Increasing the number of detectives by 25%, crime intelligence officers by 50%, and the patrol officers by 30%. These officers should be attached to the Border policing section of the Durban harbour.

- The number of scanners should be increased from one to four and placed at the container terminals and storage depots. This will effectively increase the numbers of containers being scanned, which in essence will reduce the illegal movement of goods and contraband. Four X-ray scanners should be purchased and installed at the main access and egress points. All border, customs and security personnel performing duties at these points should be trained in the operation of this equipment. The cost to implement these measures would cost the ports authority about R10 million rand to implement over a three year period. The return on the investment would far outweigh the smuggling of contraband which is in the region of R100 million rand per year.

- Regular vetting of border police officials by means of submitting them to integrity testing, polygraphs, and lifestyle audits.

- Increasing the investigative and intelligence capacities of the border policing section by purchasing high-tech equipment, introducing members to specialised training, the use of more informers to obtain insider information, and the infiltration of undercover agents into organised crime syndicates.

- Ensuring that all personnel are fully trained in the identification and detection of contraband, counterfeit goods and false documentation.

5.4.3 Recommendations to customs officials:

It is recommended that Customs increase their capacity in dealing with crimes affecting the harbour by doing the following:

- Increasing the personnel at container profiling and anti-smuggling components.
- Increasing the number of containers for the purposes of inspection.
- Profiling and audits on importers and exporters.
- Ensuring that all personnel are fully trained in the identification and detection of contraband, counterfeit goods and false documentation

5.4.4 General Recommendations:

- It is recommended that all role players work together in providing a risk-free environment at the Durban harbour by establishing a joint steering committee on risk and security.

- All security and law enforcement officials undergo an Anti-corruption training program and are regularly vetted to establish their integrity.

5.5 CONCLUSION

The goal of this study was to evaluate the existing security measures at the Durban harbour and to identify the risks associated with the illegal movement of goods, so that appropriate security risk-control measures may be recommended to mitigate the threats. In order to achieve this goal, the researcher made use of a qualitative approach and several data collection methods, such as a documentary study of theft and contraband smuggling cases, an onsite audit of the existing security measures, and finally, one-on-one interviews with security, police and customs officials employed at the Durban harbour.

The results of the study indicate that there are indeed risks that exist that are associated with the illegal movement of goods, such as theft and contraband smuggling. These were caused by security weaknesses or gaps within the existing security measures, such as lack of access control, lack of communication and coordination of security-related activities between security and law enforcement agencies, and the employment of untrained staff at Durban harbour. The study has made recommendations on how to improve the situation to ensure that the harbour is free from vulnerabilities and security risks and to reduce the number of illegal goods and contraband that move through Durban harbour.

LIST OF REFERENCES

Abbot, P.S. 2011. Effective security must focus on collaboration, technology: Bolstering supply chain security. *AAPA Seaports Magazine*. Available at: http://aapa.com (accessed on: 27 March 2011).

Anon. 2000. *Report of the interagency commission on crime and security in U.S. seaports: 2000*. Available at: http://www.securitymanagement.com/archive/library/seaport1200.pdf (accessed on: 13 January 2013).

Anon. 2003. Car smuggling racket in Durban. *CAR Magazine*, 16 August. Available at: http://www.carmag.co.za/news/car-smuggling-racket-in-durban (accessed on: 12 August 2012).

Anon. 2006. Durban stowaways burn down building. *Ports and Ships Maritime News*, 12 May. Available at: http://ports.co.za/news/article_2006_05_11_5852.html (accessed on: 17 August 2012).

Anon. 2009. 4 held for Ethanol theft. *News24*, 22 July. Available at: http://m.news24.com/news24/Africa/News/4-held-for-ethanol-theft-20090722.

Anon. 2010. Mystery of impounded R4m Rolls Royce bound for Zimbabwe. *NewsdzeZimbabwe*, 28 February. Available at: http://www.newsdzezimbabwe.co.uk/2013/02/mystery-of-impounded-r4m-rolls-royce.html (accessed on: 13 March 2013).

Anon. 2012b. Corruption at Durban Harbour- The plot thickens. *Daily News (Durban)*, 29 August.

Anon. 2013c. *Top ten countries with the highest crime rates*. Available at: http://www.mapsofworld.com/world-top-ten/countries-with-highest-reported-crime-rates.html (accessed on: 16 February 2014).

Auditor General Namibia. 2001. *Performance Audit Report on the Ministry of Finance: Directorate Customs and Excise for the period 1998 to 2001*. Republic of Namibia, Namibian Authority.

Auerbach, C.F. and Silverstein, L.B. 2003. *An introduction to Coding and Analysis. Performance Audit Report on The Ministry of Finance- Directorate Customs & Excise for the period 1998 to 2001*. New York: University Press/ Auditor General of Namibia.

Australian Government Border and Protection Service. 2001. *Protecting our Borders*. Available at: http://www.customs.gov.au/site/page5799.asp (accessed on: 12 April 2013).

Bailey, K.D. 1987. *Methods of social research*. (3rd edn.). New York: The Free Press.

Barker, R.L. 2003. *The social work dictionary*. (5th edn.). USA: NASW Press.

Beneke, D. 2001. The role of the SAPS in South African border control mechanisms (Ch. 2, p. 19). In E. Hennop, C. Jefferson and A. McLean (Eds). *The challenge to South Africa's borderline*. ISS Monograph Series No. 57. Pretoria: Institute for Security Studies.

Berg, B.L. 2004. *Qualitative research methods for the social sciences*. (5th edn.). Boston: Pearson.

Bhikraj, R. 2011. *Ports & Ships. Shipping and harbour news out of Africa*. Available at: http://www.ports.co.za/durban-harbour.php (accessed on: 26 June 2011).

Creswell, J.W. 1994. *Research design, qualitative and quantitative approaches*. New Delhi: Sage.

Creswell, J.W. 2007. *Qualitative Enquiry and Research Design: Choosing amongst five traditions*. Thousand Oaks, CA: Sage.

David, M. and Sutton, C. 2004. *Social research – the basics*. London: Sage Publications.

De Vos, A.S., Strydom, H., Fouché, C.B. and Delport, C.S.L. (Eds). 2011. *Research at grass roots: For the social sciences and human service professions*. (4th edn.). Cape Town: Van Schaik Publishers.

Delport, C.S. and Roestenberg, W.J. 2011. Qualitative data collection methods: questionnaires, checklists, structured observation and structured interview schedules (Pp. 171-174). In A.S. de Vos, H. Strydom, C.B. Fouche and C.S.L. Delport (Eds). *Research at grassroots: For the social sciences and human service professions*. (4th ed.). Cape Town: Van Schaik.

Democratic Alliance. 2008. *Sealing our Borders: A Democratic Alliance proposal to tackle cross-border crime and illegal immigration*. Available at: http://www.da.org.za/docs/606/Sealing%20Our%20Borders_document.pdf (accessed on: 10 July 2012).

Denscombe, M. 2002. *Ground rules for good research: A 10 point guide for social researchers*. Philadelphia: Open University Press.

Denzin, N.K. and Lincoln, Y.S. 2005. *The Sage handbook of qualitative research*. (3rd edn.). California: Sage Publications.

Department of Homeland Security, USA. 2012. *Cargo screening: A multilayered approach to cargo screening*. Homeland Security. Available at: http://www.dhs.gov/cargo-screening (accessed on: 14 December 2013).

Flemming, A.M. 2005. *Protecting our borders and ports through biometric, RFID, Sensor and Surveillance*. USA: Department of Homeland Security.

Fouche, C.B. and De Vos, A.S. 2011. Selection of a researchable topic (Pp. 89-91). In A.S. de Vos, H. Strydom, C.B. Fouche and C.S.L. Delport (Eds). *Research at grassroots: For the social sciences and human service professions*. (4th ed.). Cape Town: Van Schaik.

Fouche, C.B. and Delport, C.S.L. 2011. Writing the research proposal (p. 108). In A.S. de Vos, H. Strydom, C.B. Fouche and C.S.L. Delport (Eds). *Research at grassroots: For the social sciences and human service professions*. (4th ed.). Cape Town: Van Schaik.

Fouche, C.B. and Schurink, W. 2011. Qualitative research designs (p. 321). In A.S. de Vos, H. Strydom, C.B. Fouche and C.S.L. Delport (Eds). *Research at grassroots: For the social sciences and human service professions*. (4th ed.). Cape Town: Van Schaik.

Frittelli, J.F., Lee, M.R., Medalia, J., O'Rourke, R. and Perl, R. 2003. *Port and maritime security: Background and issues*. New York: Novinka Books.

Garcia, M.L. 2008. *Design and evaluation of physical protection systems*. (2nd edn.). Burlington: Butterworth-Heinemann.

Geldenhuys, K. 2007. Controlling land ports of entry. *Servamus Safety and Security Magazine*.

Govender, G. 1999. *The role of the criminal justice system in combating organised crime in South Africa*. Pretoria: Institute for Strategic Studies.

Gray, M.M. 2000. Social work and the new social service professions in South Africa. *Social Work: a Professional Journal for the Social Worker*, 36(1): 99-109.

Greeff, M. 2011. Information collection: Interviewing (p. 376). In A.S. de Vos, H. Strydom, C.B. Fouche and C.S.L. Delport (Eds). *Research at grassroots: For the social sciences and human service professions*. (4th ed.). Cape Town: Van Schaik.

Greenberg, M.D., Chalk, P., Willis, H.H., Khilko, I. and Ortiz, D.S. 2006. *Maritime terrorism: Risk and liability*. Santa Monica: RAND Corporation.

Grillot, S.R., Cruise, R.J. and D'Erman, V.J. 2010. *Protecting our ports: Domestic and international politics of containerized freight*. United Kingdom: MPG Books Group.

Grinnell, R.M. and Unrau, Y.A. 2008. *Social work research and evaluation: Foundation of evidence based*. New York: Oxford University Press.

Grinnell, R.M. and Williams, M. 1990. *Research in social work: A primer.* United States: FE Peacock Publishers.

Hanrahan, S. 2010. Canadian ports stay at forefront in new age of maritime security. *AAPA Seaports Magazine*. Available at: http://www.aapaports.org/Publications/SeaportsDetail.cfm?itemnumber=17710 (accessed on: 7 January 2013).

Hare, J. 2009. *Shipping Law and Admiralty Jurisdiction in South Africa*. (2nd edn.). Kenwyn: Juta.

Haveman, J.D. and Shatz, H.J. 2006. *Protecting the nation's seaports: Balancing security and cost*. California: Public Policy Institute of California.

Hawkins, M. 2013. *Container tampering*. Available at: http://www.ukpandi.com/fileadmin/uploads/uk-pi/LP%20Documents/Signum_Reports/Signum%20Container%20Tampering.pdf (accessed on: 16 February 2014).

Hennop, E., Jefferson, C. and McLean, A. 2001. *The challenge to control South Africa's borders and borderline*. Monograph 57. Pretoria: Institute for Security Studies.

Heyman, J.M. 2001. U.S. ports of entry on the Mexican Border: Border cities and culture. *Journal of the Southwest*, 43(4): 681-700.

Heyman, J.M. 2008. Theorizing cross-border mobility: Surveillance, security and identity. *Surveillance & Society*, 5(3): 315-333.

Hoag, C., Vigneswaran, D., Araia, T. and Tshabalala, X. 2010. Criminality or monopoly? Informal immigration enforcement in South Africa. *Journal of Southern African Studies*, 36(2): 465-481.

Irish, J. 2005. *Illicit trafficking of vehicles across Beit Bridge border post*. Monograph 109. Pretoria: Institute for Security Studies.

Irish, J. and Qhobosheane, K. 2003. *Penetrating state and business organised crime in southern Africa*. Chapter 3. Monograph No. 89. Pretoria: Institute for Security Studies.

Kenny, C. 2007. *An update of security problems in search of solutions at seaports*. Canadian security guide book. USA: Standing Senate Committee on National Security and Defence.

Khwela, C. 2009. The importance of port security to maritime security. In T. Potgieter and R. Pommerin (Eds). *Maritime security in South African waters*. Stellenbosch: Sun Media.

Kole, J. 2010. *An examination of security measures for the protection of petrol stations: An analysis of case studies from Gauteng*. Unpublished MTech: Security Management Dissertation. University of South Africa, Pretoria.

Koslowski, R. 2011. *The evolution of border controls as a mechanism to prevent illegal immigration*. Washington, DC: Migration Policy Institute.

Leedy, P.D. and Ormrod, J.E. 2005. *Practical research: Planning and design*. (8th edn.). Ohio: Merrill Prentice Hall.

Department of Justice, South Africa. 2004. Prevention and Combating of Corrupt Activities Act No. 12 of 2004. *Government Gazette*, Vol 466. (26311). Cape Town: Government Printing Works.

Lombaard, C. 2004. *Study Guide Industrial Security: SEP281H.* Florida: Technikon SA.

Mackenzie, G., McLoughlin, A.A. and Twiss, G. 1983. *The security handbook*. Cape Town: Butterworth.

Magwaza, N. 2010. Luxury vehicles seized in car cloning racket. *The Mercury*, 18 November.

Marshall, C. and Rossman, G.B. 1995. *Designing qualitative research*. (2nd edn.). Thousand Oaks, CA: Sage.

Martonosi, S.E., Ortiz, D.S. and Willis, H.H. 2006. *Evaluating the viability of 100 per cent container inspection at America's ports*. USA: Rand Publication Reprints.

Mason, S. 2006. Authentication of electronic evidence. *Information Age*. Available at: http://www.infoage.idg.com.au/index.php/id;1288698068;fp;4;fpid;675408222 (accessed on: 2 February 2009).

Mathew, B. and Ross, L. 2010. *Research methods: A practical guide for the social science*. Edinburgh Gate: Pearson Education.

Mayer, E.L. 2004. Protecting America's seaports: The vulnerability of intermodal commerce. In M.W. Ritz, R.G. Hensley and J.C. Whitmire (Eds). *The homeland security papers: Stemming the tide of terror.* February. Maxwell Air Force Base, Ala.: USAF Counter-proliferation Centre

Maxfield, M.G. and Babbie, E. 1995. *Research methods for criminal justice and criminology*. Boston: Thomson-Wadsworth.

McCarney, P.L. and Stren, R.E. 2003. *Governance on the ground: Innovations and discontinuities in cities of the developing world*. Washington, DC: Woodrow Wilson Centre Press.

Minarro, J. 2013. *C-TPAT: Building safer supply chains*. Inbound logistics. Available at: http://www.inboundlogistics.com/cms/article/ctpat-building-safer-supply-chains/ (accessed on: 21 November 2013).

Minnaar, A. 2001. Border control and regionalism: The case of South Africa. *African Security Review*, 10(2): 9.

Minnaar, A. 2003. *Policing the ports: Reducing illicit trafficking in South Africa*. Chapter 2. ISS Monograph series No 84. Pretoria: Institute for Security Studies.

Motorola. 2009. *Port security: Organizing and controlling complex environments with wireless connectivity*. Available at: www.motorola.com/us/government (accessed on: 21 June 2012).

Nachmias, C. and Nachmias, D. 1987. *Research methods in social sciences*. (3rd edn.). New York: St Martin's Press.

Nair, Y. 2012. R400 million container theft syndicate smashed. *Daily News* (Durban), 18 June. Available at: http://www.iol.co.za/dailynews/news/r400m-container-theft-syndicate-smashed-1.1321227 (accessed on: 12 September 2012).

Narsoo, J., Muslun, W. and Sunhaloo, M.S. 2009. *A Radio Frequency Identification (RFID) container tracking system for Port Louis harbour: The case of Mauritius*. Issue in informing science and information technology. Mauritius: University of Technology.

Neuman, W.L. 1997. *Social research methods: Quantitative and qualitative approaches*. (3rd edn.). USA: Allyn and Bacon.

Nqakula, C. 2008. *Crime situation in the Republic of South Africa for the 2007/08 Financial Year*. Crime Trends Report. Pretoria. Available at:

http://www.saps.gov.za/_dynamicModules/internetSite/newsBuild.asp?myURL=840 (accessed on: 26 June 2011).

Ntamutumba, C. 2010. *Study for the establishment of a permanent regional corridor development working group in Pmaesa region*. United Nations.

Olckers, C. 2007. *An examination of the impact of residential security measures on the incidents of residential burglary in two selected northern suburb of Johannesburg: A security risk management approach*. Unpublished MTech Security Management Dissertation, University of South Africa, Pretoria.

Operational Working Team on Border Control (OWTBC). 1997. *Border control collective approach implementation plan*. Pretoria. Available at: http://www.queensu.ca/samp/sampresources/migrationdocuments/documents/1998/border.htm (accessed on: 27 January 2013).

Oxford South African Dictionary (*Oxford Dictionary*). 2009. (2nd edn.). Sv "threat". Cape Town: Oxford University Press.

Patton, M.Q. 2002. *Qualitative research & evaluation methods*. (3rd edn.). California: Sage.

Pommerin, R. and Potgieter, T. 2009. *Maritime security in South African waters*. Stellenbosch: SUN MeDIA.

Poverello, M. 2013. *Durban harbour – A pictorial history from 1835 to the present day*. Available at: http://mpoverello.com/category/durban-harbour/ (accessed on: 27 June 2013).

Rogers, F.C. 2005. *Security Practice III/Security Risk Management IV: SEP361S/SRM401S*. (2nd edn.). Florida: Technikon SA.

Rule, P. and John, V. 2011. *Your guide to case study research*. Pretoria: Van Schaik.

Schneider, S. 2009. *Iced: The story of organized crime in Canada.* Canada: Friesens.

South African Borders 2013. *Border control in South Africa. Exploring South Africa's ports of entry*. Available at: http://www.rsaborders.co.za/. (accessed on: 4 January 2013).

Stead, S., Chitiyo, K., Potgieter, J. and Till, G. 2010. *Maritime development in Africa: An independent specialist's framework*. Discussion paper 2010/03. Johannesburg: The Brenthurst Foundation.

Steinberg, J. 2005a. *An overview of South African border control: 1994-2004*. Occasional Paper 103. Pretoria: Institute for Security Studies.

Steinberg, J. 2005b. *Drug smuggling and border control at Johannesburg International*. Paper 104. Pretoria: Institute for Security Studies.

Stoker, D.J. 1989. Basic sampling methods. In J. Schnetler (Ed.). *Survey methods and practice*. Pretoria: Human Sciences Research Council, Opinion Survey Centre.

Strydom, H. and Delport, C.S.L. 2011. Sampling and pilot study in qualitative research (Pp. 390-396). In A.S. de Vos, H. Strydom, C.B. Fouche and C.S.L. Delport (Eds). *Research at grassroots: For the social sciences and human service professions*. (4th ed.). Cape Town: Van Schaik.

Taute, J.E. 2007. *Integrated control of the South African border environment*. Lostsajads: National Border Coordinating Centre.

Transnet National Ports Authority 2013. *Transnet National Ports Authority*. Available at: http://www.transnetnationalportsauthority.net/AboutUS/Pages/Corporate-Profile.aspx (accessed on: 24 February 2012).

University of South Africa (Unisa). 2007. *Policy on research ethics*. Pretoria: University of South Africa.

United Nations Office for Drug Control and Crime Prevention (UNODCCP). 2013. *World drug report 2013*.

Väyrynen, R. 2005. *Illegal immigration, human trafficking and organized crime*. Finland: University of Helsinki.

Wasem, R.E., Lake, J., Seghetti, L., Monke, J. and Vina, S. 2004. *Border security: Inspections practices, policies, and issues*. USA: Domestic Social Policy Division.

Welman, J.C. and Kruger, S.J. 2001. *Research methodology – for the business and administrative sciences*. (2nd edn.). Cape Town: Oxford University Press Southern Africa.

Welman, C. and Kruger, F. 2005. *Research methodology*. Cape Town: Oxford University Press.

Appendix A

INTERVIEW SCHEDULE

AN INVESTIGATION INTO THE ILLEGAL MOVEMENT OF GOODS FROM PORTS-OF-ENTRY: DURBAN HARBOUR

Instructions:
Please answer all of the questions as honestly as possible. The information collected for this study will be analysed in order to develop an accurate picture for this research project on the "THE ILLEGAL MOVEMENT OF GOODS FROM PORTS-OF-ENTRY: DURBAN HARBOUR". It will assist the researcher to make findings and recommendations to reduce the illegal movement of goods through the ports. You do not need to identify yourself and, similarly, the researcher will uphold anonymity in that there will be no possibility of any respondent being identified or linked in any way to the research findings in the final research report. Where required please indicate your answer with a cross (X) in the appropriate box or write a response in the space provided, using a black ballpoint pen. For the open ended questions please write your responses clearly and legibly in the space provided. If there is not sufficient space for your response please number a blank sheet of paper with the question number and continue writing your response on the extra piece of paper.

SECTION 1.

BIOGRAPHICAL DATA

1.1 Indicate your present employer:

Security	Customs	Border Police
1	2	3

1.2 What is your current position at your company?

Guard	Patrol Officer	Investigator	Supervisor	Manager
1	2	3	4	5

1.3 How long have you been working in this position with your current company / employer?

Less than one year	One to two years	Between two and three years	Over three years but less than five years	More than five years
1	2	3	4	5

1.4 What duties do you perform at the harbour?

Access Control	Patrol Duties	Guard Duties	Inspections of Goods/Permits	Surveillance/Control Room
1	2	3	4	5

1.5 Have you undergone security related training pertaining to the Durban Harbour?

YES	NO
1	2

1.6 Was the training beneficial to improving your work performance at the Durban Harbour?

YES	NO
1	2

1.7 How often is on-site training provided by your company?

Daily	Weekly	Twice a week	Once a month	Once in three months
1	2	3	4	5

1.8 How often should on- site training be provided in order to improve work performance?

Daily	Weekly	Twice a week	Once a month	Once in three months
1	2	3	4	5

1.9 What skills and abilities do you possess to work in the harbour?

_____-

_____

_____

_____

_____

SECTION 2

SECURITY WEAKNESSES

2.1 What is your understanding of the concept “Security Weaknesses”

_____

_____

_____

_____

2.2 Where in the Durban harbour are you deployed?

_____

_____

_____

2.3 What are your responsibilities?

_____

_____

_____

_____

_____

2.4 Are you aware of any illegal movement of goods taking place at the Durban harbour?

YES	NO
1	2

If (YES), answer the following:

2.4.1 What type of goods are being moved?

_____

_____

_____

_____

2.4.2 What methods are being used to move these goods identified in question 2.4.1

_____

_____

_____

_____

2.5 Have you have encountered any security weakness whilst working at the Durban harbour?

_____

_____

_____

_____

_____

2.6 Can you tell me in which area of the harbour is the security weakness that contributes to the illegal movement of goods?

_____

_____

_____

_____

2.7 Can you identify some of the security weaknesses observed by you?

_____

_____

_____

_____

_____

2.8 For how long has this been a security weakness?

0-3 months	4-6 months	7-12months	More than 1 year

Section 3

SECURITY RISKS

3.1 What is your understanding of the concept “Security Risks”

_____

_____

_____

_____

_____

3.2 How many incidents of crime do you discover during a month?

1-5 incidents	6-9 incidents	10-14 incidents	15-19 incidents	20 and more incidents
1	2	3	4	5

3.3 Which specific crimes are associated with the harbour?

_____

_____

_____

3.4 Which are the most prevalent crimes affecting theharbour?_____

_____

_____

__

3.5 What are the causes of the crimes mentioned under question 3.4 ?

_____

_____

_____

3.6 Some of the more common methods of goods smuggling have been listed below. From your own experience, indicate by means of a number (1-5), which method is used for the smuggling of goods through the harbour?

Concealment	False documentation	Counterfeit goods	Assistance by Security Personnel	Corruption by Port Officials
1	2	3	4	5

3.7 Some of the more common methods of container theft have been listed below. From your own experience, indicate by means of a number (1-5), which method is used for the theft of containers from the harbour?

Poor access/egress control	False documentation	Corruption by Port Officials	Assistance by Security Personnel	Container Tampering
1	2	3	4	5

3.8 Some of the more common methods pertaining to the theft of goods have been listed below. From your own experience, indicate by means of a number (1-5), which method is used for the theft of goods from the harbour?

Poor access/egress control	Concealment	False documentation	Corruption by Port Officials	Assistance by Security Personnel	Container Tampering
1	2	3	4	5	6

3.9 What are the factors which lead to crimes such as the smuggling of illegal goods (contraband) through the harbour?

_____

_____

_____

_____

3.10 What are the factors which lead to crimes such as theft of containers from the harbour?

_____

_____

_____

_____

3.11 Can you tell me if there are shortcomings or problems in any of the physical protection systems mentioned below? Indicate your answer by inserting a number (between 0-3) alongside each measure? 0= no risk & 3 = high risk

PHYSICAL PROTECTION SYSTEMS	**RISK CATEGORY**
Access Control	
Egress Control	
Perimeter Fencing	
Security Lighting	
Human Security/Guards	
CCTV cameras	
X Ray Scanners	
Metal Detectors	
Alarm systems	
Parking areas	
Storage areas	

SECTION 4

4. SECURITY RISK CONTROL MEASURES

4.1 What is your understanding of the concept “Security Risk Control Measures”

4.2 From your experience, can you tell me what physical security risk control measures are in place to reduce or eliminate the illegal movement of goods at the Durban harbour?

4.3 What is your understanding of the concept “Physical Protection Systems”

4.4 From your experience, can you tell me what physical protections systems are in place to reduce or eliminate the illegal movement of goods at the Durban harbour?

4.5 From your experience, can you tell me what security procedures or policies are in place to reduce or eliminate the illegal movement of goods at the Durban harbour?

4.6 From your experience can you tell me if all of the areas in the Durban harbour are secured with physical protection systems?

4.7 From your experience can you tell me if the physical security protection systems are adequate to reduce or eliminate the illegal movement of goods facing the Durban Harbour?

4.8 In the event of power outages, is there an uninterrupted power supply for the electronic security systems?

4.9 How would you describe access control at the Durban harbour?

4.10 What physical security system is in place to assist in access control?

4.11 Are the current systems effective in providing access control?

YES	NO
1	2

4.11.1 If your answer to question 4.11 is NO, give reasons for your answer?

4.12 In the event of the access control system being ineffective, what measures can you suggest to improve the current system?

4.13 What training do you suggest that needs to be provided to officials in your department who are employed at the harbour?

4.14 What should be done to reduce the security risks that threaten the harbour in respect of the illegal movement of goods at the Durban harbour?

_____
_____
_____
_____
_____
_____

4.15 What should be done to improve the security measures with regard to the illegal movement of goods at the Durban harbour?

_____
_____
_____
_____
_____
_____

4.16 Is there anything else that you can think of or feel that is important or can be done in curbing the illegal movement of goods into and out of the harbour?

_____
_____
_____
_____
_____

Thank you for the opportunity to allow me to conduct this interview with you. Your cooperation is highly appreciated.

Appendix B

CONSENT FORM

1. I_____, hereby agree to participate in this research project: Title: *An investigation of the illegal movement of goods into-and-from seaports-of-entry: A case study at Durban harbour*.

By filling in the survey sheet/questionnaires	Yes	No
Granting permission to be interviewed	Yes	No
Granting permission for the interview to be recorded either in writing or using a tape recorder	Yes	No
Agreeing that follow up interviews may be conducted	Yes	No
Agreeing that the information I provide may be used in the research report	Yes	No
Agreeing to cancel or opt out of the interview at any point in time should the need become necessary	Yes	No
Accept that the information obtained up until this point during the interview could still be used by the researcher	Yes	No
Agree that specific information should not be revealed during the interview by the researcher	Yes	No
Accept that I will not in any way be reimbursed for the information rendered or for my participation in the research project	Yes	No
Agree that I will not derive any personal benefit from taking part in this research project;	Yes	No
Agree to answer all questions honestly and not to mislead the researcher	Yes	No
Agree that I will receive a copy of the interview upon signing it	Yes	No
Agree that the aims and objectives of this research project was explained to me by the researcher	Yes	No
Agree that I understand the contents of this agreement and the implications of signing it	Yes	No

2. I, **Mr Devan Moodley** in co-signing this agreement:

Agree to treat all information received from the respondent in a confidential manner	Yes	No
Agree to preserve the respondent's anonymity.	Yes	No
Agree to protect the identity and the subject and the information provided by the interviewee	Yes	No

Signed at----------on ----------

Signature of respondent ----------

Signature of researcher ----------

Appendix C

19 October 2012

Brigadier Gopaul
Ports-of-entry
South African Police
Durban

Dear Mr Gopaul

REQUEST FOR PERMISSION TO DO RESEARCH FOR THE MTECH DEGREE (SECURITY MANAGEMENT) ON THE SECURITY MEASURES AT THE DURBAN HARBOUR

Mr **Devandran Moodley** is currently a Masters student at the University of South Africa (UNISA), busy with his research study for a MTech in Security Management. His research title is **"AN INVESTIGATION INTO THE ILLEGAL MOVEMENT OF GOODS FROM SEAPORTS-OF-ENTRY**

The research goal is:
To evaluate the security risk control measures at the Durban Harbour

Research Objectives are as follows:

- To identify vulnerabilities and risks associated with the illegal movement of goods at the Durban Harbour

- To determine the type of physical security systems that are in place at the Durban Harbour to detect the illegal movement of goods

- To implement security risk control measures to prevent the illegal movement of goods through the Durban Harbour

The research study seeks to identify the type of commodities that are being trafficked and stolen from the port by means of conducting probes, evaluating analytical data and studying the incidents involving the movement of illegal goods into and out of the country via the Durban sea port of entry. In addition to this, the researcher wanted to establish whether there was any pattern in relation to this, with a view to establishing if such incidents were as a result of lack of security measures at the port.

The researcher will conduct interviews with the use of an interview schedule (for SAPS Border Police members, SARS Customs and Excise officials, Transnet In-house Security Officers, Contract Security Officers and Immigration Officials) at the Durban Seaport of Entry. The researcher will develop specific interview questions to inform the participants of the three key objectives of the research study.

These interviews will focus on the problems associated with the illegal movement of goods through the port with the aim of identifying the root causes of theft and fraud which results in such losses at the Durban Seaport of Entry.

Follow-up interviews or telephone interviews will be done if necessary received from the participants will be treated with confidentiality (eg. Respondents will remain anonymous and no reference will be made as to where they are employed.

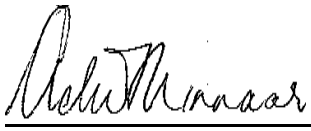
Currently, there is very limited research that has been undertaken in this field, more particularly at sea borders in South Africa. This study will contribute to the existing database of research in this specific area.

The research findings may improve policing methods in the area of Organised Crime at the sea ports. Although, research has been conducted into the policing of borders and ports within South Africa, it was not sufficient to address the problem of goods and people being moved illegally through the ports and to develop a comprehensive security management programme for the ports. This study will identify any shortcomings in current security measures with respect to each department's responsibility and provide guidelines on improving these measures which will ultimately reduce or minimise the illegal movement of goods through the port. This research will contribute to existing and previous research that has been undertaken in this specific field.

The private security industry will also benefit from this research as shortcomings will be identified in the current security measures and in the technology being utilised. Hopefully, the private security industry can improve on security methods and technology which can be utilised to enhance security and prevent the smuggling of contraband, illegal aliens and assist in the identification of fraudulent documentation.

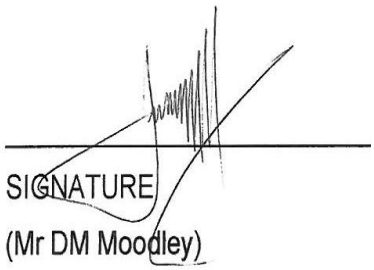
The research study will prioritize the problems at the Durban seaport so that they can be addressed in order to minimize illegal movements. The research findings may improve policing methods in the area of Organised Crime at the sea ports.

Attached for your information is the research proposal, inclusive of the draft interview questions.



(Prof)

A. de V. Minnaar
Programme Head: Security Management
Department of Criminology & Security Science
School of Criminal Justice, College of Law



MTech Student
Programme: Security Management
Department of Criminology & Security Science
Student No: 32313969
Tel: 082 567 4189

Appendix D

SUID-AFRIKAANSE POLISIEDIENS

SOUTH AFRICAN POLICE SERVICE

Posbus/Post Office P O BOX 49378, EASTEND 4018

Verwysing Reference	**RESEARCH**
Navrae Enquiries	**BRIGADIER A. GOPAUL**
Telefoon Telephone	**(031) 319 2002**
Faksnommer Fax number	**(031) 319 2086**
E-Mail	**Orsbdnhbr.commcmdr@saps.gov.za**

Office of the Section Head
Operational Response Services
4th Floor Maritime House
143 Salmon Grove
Border Policing - Durban Harbour

DURBAN

2012-10-19

Captain Moodley
Organised Crime
DURBAN

REQUEST FOR PERMISSION TO DO RESEARCH FOR THE MTECH DEGREE (SECURITY MANAGEMENT) ON THE SECURITY MEASURES AT THE DURBAN HARBOUR

1. This office hereby gives permission and has no objection to you conducting any research in the Durban Harbour.

2. Should you have any questions do not hesitate to call Brig Gopaul on 031-3192002.

SECTION HEAD
A GOPAUL

BRIGADIER
OPERATIONAL RESPONSE SERVICES
BORDER POLICING DURBAN HARBOUR

Appendix E

08 August 2012

Mr P Moodley
Tax and Customs Enforcement investigations
South African Revenue Service
Pretoria

Dear Mr Moodley

REQUEST FOR PERMISSION TO DO RESEARCH FOR THE MTECH DEGREE (SECURITY MANAGEMENT) ON THE SECURITY MEASURES AT THE DURBAN HARBOUR

Mr **Devandran Moodley** is currently a Masters student at the University of South Africa (UNISA), busy with his research study for a MTech in Security Management. His research title is **"AN INVESTIGATION INTO THE ILLEGAL MOVEMENT OF GOODS FROM SEAPORTS-OF-ENTRY: A CASE STUDY AT DURBAN HARBOUR."**

The primary aims of this research project include:

- To identify the causes of the illegal movement of goods via the sea ports-of-entry and the persons/departments involved
- To identify the modus operandi or methods of smuggling goods and people through the sea ports-of-entry.
- To examine and evaluate the security measures which are currently in place at the Durban Harbour.
- To recommend control measures and security management plans to manage the risk of smuggling and theft at the ports-of-entry.

The research study seeks to identify the type of commodities that are being trafficked and stolen from the port by means of conducting probes, evaluating analytical data and studying the incidents involving the movement of illegal goods into and out of the country via the Durban sea port of entry. In addition to this, the researcher wanted to establish whether there was any pattern in relation to this, with a view to establishing if such incidents were as a result of lack of security measures at the port.

The researcher research interviews with the use of an interview schedule (for SAPS Border Police members, SARS Customs and Excise officials, Transnet In-house Security Officers, Contract Security Officers and Immigration Officials) at the Durban Seaport of Entry.
and administer will develop specific interview questions to inform the four key objectives of the research study.

These interviews will focus on the problems associated with the illegal movement of goods through the port with the aim of identifying the root causes of theft and fraud which results in such losses at the Durban seaport –of-entry. Follow-up interviews or telephone interviews will be done if necessary received from the participants will be treated with confidentiality (eg. Respondents will remain anonymous and no reference will be made as to where they are employed.

Currently, there is very limited research that has been undertaken in this field, more particularly at sea borders in South Africa. This study will contribute to the existing database of research in this specific area.

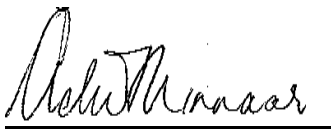
The research findings may improve policing methods in the area of Organised Crime at the sea ports.
Although, research has been conducted into the policing of borders and ports within South Africa, it was not sufficient to address the problem of goods and people being moved illegally through the ports and to develop a comprehensive security management programme for the ports. This study will identify any shortcomings in current security measures with respect to each department's responsibility and provide guidelines on improving these measures which will ultimately reduce or minimise the illegal movement of goods through the port. This research will

contribute to existing and previous research that has been undertaken in this specific field.

The private security industry will also benefit from this research as shortcomings will be identified in the current security measures and in the technology being utilised. Hopefully, the private security industry can improve on security methods and technology which can be utilised to enhance security and prevent the smuggling of contraband, illegal aliens and assist in the identification of fraudulent documentation.

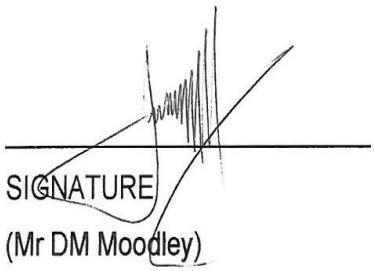
The research study will prioritize the problems at the Durban seaport so that they can be addressed in order to minimize illegal movements. The research findings may improve policing methods in the area of Organised Crime at the sea ports.

Attached for your information is the research proposal, inclusive of the draft interview questions.



(Prof)

A. de V. Minnaar
Programme Head: Security Management
Department of Criminology & Security Science
School of Criminal Justice, College of Law



MTech Student
Programme: Security Management
Department of Criminology & Security Science
Student No: 32313969
Tel: 082 567 4189

Appendix F

Zimbra **online2213998@telkomsa.net**

RE: PERMISSION LETTER: MTECH DISSERTATION

From:	Kumaren Moodley <pmoodley@sars.gov.za>	Wed, July 31, 2013 09:49 AM
Subject:	RE: PERMISSION LETTER: MTECH DISSERTATION	
To:	online2213998@telkomsa.net	

Dear Mr. Moodley

Unfortunately, I am away from the office currently and trust that the email will suffice, if not please advise accordingly.

Your request to interview the members of the Tactical Intervention Unit is establishing methodologies and approaches to dealing with smuggling activities related to imported or exported goods is acknowledged and it would be requested that any recommendations and observations on improvement in addressing the risks of smuggling is duly provided to this office for further consideration.

Regards

Kumaren Moodley
Executive: Tactical Interventions Unit
Tax and Customs Enforcement Investigations
Fax: +27 86 546 7957
E-mail: pmoodley@sars.gov.za
Cell: +27 82 465 5964
Office: +27 12 4226557
Le Hae La SARS, 299 Bronkhorst Street, Brooklyn, Pretoria, 0075, Block G, Ground Floor

From: online2213998@telkomsa.net
To: pmoodley@sars.gov.za
Sent: Wednesday, July 31, 2013 8:50:45 AM
Subject: PERMISSION LETTER: MTECH DISSERTATION

Good Morning Mr Moodley

Please find request for permission to conduct research, as discussed.

Kind regards
DM MOODLEY

Appendix G

10 August 2012

Mr Bongi Nzuza
Transnet Security
Durban Harbour

Dear Mr Nzuza

REQUEST FOR PERMISSION TO DO RESEARCH FOR THE MTECH DEGREE (SECURITY MANAGEMENT) ON THE SECURITY MEASURES AT THE DURBAN HARBOUR

Mr **Devandran Moodley** is currently a Masters student at the University of South Africa (UNISA), busy with his research study for a MTech in Security Management. His research title is **"AN INVESTIGATION INTO THE ILLEGAL MOVEMENT OF GOODS FROM SEAPORTS-OF-ENTRY: A CASE STUDY AT DURBAN HARBOUR."**

The primary aims of this research project include:

- To identify the causes of the illegal movement of goods via the sea ports-of-entry and the persons/departments involved
- To identify the modus operandi or methods of smuggling goods and people through the sea ports-of-entry.
- To examine and evaluate the security measures which are currently in place at the Durban Harbour.
- To recommend control measures and security management plans to manage the risk of smuggling and theft at the ports-of-entry.

The research study seeks to identify the type of commodities that are being trafficked and stolen from the port by means of conducting probes, evaluating analytical data and studying the incidents involving the movement of illegal goods into and out of the country via the Durban sea port of entry. In addition to this, the researcher wanted to establish whether there was any pattern in relation to this, with a view to establishing if such incidents were as a result of lack of security measures at the port.

The researcher research interviews with the use of an interview schedule (for SAPS Border Police members, SARS Customs and Excise officials, Transnet In-house Security Officers, Contract Security Officers and Immigration Officials) at the Durban Seaport of Entry.
and administer will develop specific interview questions to inform the four key objectives of the research study.

These interviews will focus on the problems associated with the illegal movement of goods through the port with the aim of identifying the root causes of theft and fraud which results in such losses at the Durban Seaport of Entry.

Follow-up interviews or telephone interviews will be done if necessary received from the participants will be treated with confidentiality (eg. Respondents will remain anonymous and no reference will be made as to where they are employed.

Currently, there is very limited research that has been undertaken in this field, more particularly at sea borders in South Africa. This study will contribute to the existing database of research in this specific area.

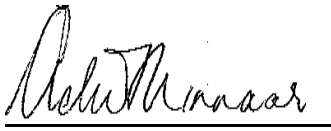
The research findings may improve policing methods in the area of Organised Crime at the sea ports.
Although, research has been conducted into the policing of borders and ports within South Africa, it was not sufficient to address the problem of goods and people being moved illegally through the ports and to develop a comprehensive security management programme for the ports. This study will identify any shortcomings in current security measures with respect to each department's responsibility and provide guidelines on improving these measures which will ultimately reduce or

minimise the illegal movement of goods through the port. This research will contribute to existing and previous research that has been undertaken in this specific field.

The private security industry will also benefit from this research as shortcomings will be identified in the current security measures and in the technology being utilised. Hopefully, the private security industry can improve on security methods and technology which can be utilised to enhance security and prevent the smuggling of contraband, illegal aliens and assist in the identification of fraudulent documentation.

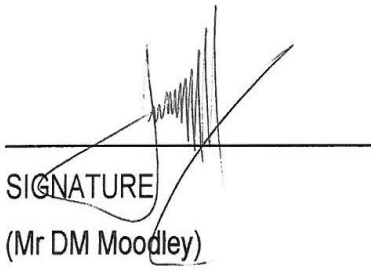
The research study will prioritize the problems at the Durban seaport so that they can be addressed in order to minimizie illegal movements. The research findings may improve policing methods in the area of Organised Crime at the sea ports.

Attached for your information is the research proposal, inclusive of the draft interview questions.



(Prof)

A. de V. Minnaar
Programme Head: Security Management
Department of Criminology & Security Science
School of Criminal Justice, College of Law



MTech Student
Programme: Security Management
Department of Criminology & Security Science
Student No: 32313969
Tel: 082 567 4189

Appendix H

TRANSNET
port terminals

Mr. D M Moodley
14/08/2012

Permission Letter

I have taken note of your request to conduct research at the Durban Harbour.

Permission is hereby granted to conduct interviews with the respective security officers on site for the purpose of your research

Should you encounter any problems please do not hesitate to contact me. Cell :083 452 3463 .

B Nzuza

Security Manager
Cont. Terminal
DBN Harbour

DBN CT QMS FORM 110 REV: 00

Appendix I

DOCUMENTARY STUDY CHECKLIST

DAY OF THE WEEK WHEN THEFT WAS COMMITTED	
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	
PERIOD WHEN THEFT OCCURRED	
Over a period of days	
Same day	
WEEKDAYS OR WEEKENDS ON THEFT INCIDENTS	
Weekdays	
Weekends	
TIME OF OCCURRENCE	
06h00 – 11h59	
12h00 – 17h59	
18h00 – 23h59	
00h00 – 05h59	
METHODS USED TO REMOVE GOODS FROM THE HARBOUR	
Passed through security control check point	
Did not go through security control checkpoint	
False documentation used	
Assisted by security officials	
Assisted by Law Enforcement officials	
Container door forced open	
Container locks picked or cut open	
Container Seals removed	
Container seals tampered with	
Gate locks forced open	
Climbed over perimeter fence	
Access gained through unmanned security checkpoint	
Other methods used	
PLACE OF THEFT	
General Storage area	
Hazardous Goods storage area	
Bonded Warehouse	
Container terminal area	
Customs Warehouse	
Customs Detention Facility	
SAPS Scanning area	
Other places	
TYPE OF GOODS STOLEN	
Electronic goods	

Textiles	
Manufactured clothing items	
Machinery	
Stationary	
Furniture	
Tobacco	
Alcohol	
Spices	
Meat	
Maize	
General goods	
Other	
INSURANCE	
Were goods insured?	
INVESTIGATION	
Name of criminal charge investigated	
Who was arrested? Custom officials/ private security/border police officials or private persons.	
Motive for the illegal activity.	
Result of the investigation	

Appendix J

OBSERVATION CHECKLIST

ACCESS CONTROL				
OBSERVATION DATE:				
		ALLOCATED WEIGHT	SECURITY EFFECTIVE NESS	COMMENTS
1	Is access control needed for this asset/risk?	1-10		
2	Is there an access control register at the entrance/exit?	1-10		
3	Is there a security official monitoring the access control register?	1-10		
4	Is the access control register inspected on a daily basis by the security supervisor?	1-10		
5	Is every port worker in possession of an access control permit?	1-10		
6	Is every visitor issued with a access control permit?	1-10		
7	Is there a central office established for the issuing of these respective permits?	1-10		
8.	Is there a intercom system at the security gate/checkpoint?	1-10		
9	Are all offices/companies linked to the intercom system at	1-10		

	the main access point?			
10	Is there a digital photo system located at the entrance?	1-10		
11	Is the access control point fitted with number plate recognition software?	1-10		
12	Is there a X-ray scanner located at the access point?	1-10		
13	Is there firearm safe located at the access point?	1-10		
14	Is the access /egress control points monitored by means of CCTV cameras	1-10		
15	Are visitors escorted to their destinations?	1-10		
16	Are visitors /employees searched when entering/exiting the premises	1-10		
17	Are records kept of all employees visiting the port office outside of working hours?	1-10		
18	Are all goods leaving or entering the harbour accompanied by documentation?	1-10		
19	Are the security officials trained in the detection of fraudulent documentation?	1-10		
20	Are physical examinations carried out on container seals?	1-10		

21	Are the security officials trained in the identification of tampered container seals?	1-10		
22	Is there an alarm panic button at the access control desk?	1-10		
Desired Security:				
Current Security':				
Percentage shortfall or security weakness:				
Security effectiveness factor: divided by 100 =				

PARKING AREAS				
OBSERVATION DATE:				
		ALLOCATED WEIGHT	**SECURITY EFFECTIVENESS**	**COMMENTS**
1	Is a parking area needed for this asset/risk?	1-10		
2	Is there more than one parking area at the harbour?	1-10		
3	Is the employees' parking area situated outside the perimeter?	1-10		
4	Is the employees' parking area situated inside the perimeter?	1-10		
5	If situated inside, is the parking area sited away from any storage or production area?	1-10		
6.	Is the visitor's parking situated outside the perimeter?	1-10		
7.	Is the reception office sited close to the visitor's parking?	1-10		
8	Is there a security control point sited at each parking area?	1-10		
9	Is there a security official placed at each parking area?	1-10		

10.	Is there a intercom system at the security gate/checkpoint?	1-10		
11	Is the parking area fitted with a CCTV camera?	1-10		
12.	Is the parking area equipped with security lighting?	1-10		
Desired Security				
Current Security:				
Percentage shortfall or security weakness:				
Security effectiveness factor: divided by 100 =				

PERIMETER FENCING				
OBSERVATION DATE:				
		ALLOCATED WEIGHT	**SECURITY EFFECTIVENESS**	**COMMENTS**
1	Is the Harbour fitted with a perimeter fence?	1-10		
2	Is the fence securely positioned?	1-10		
3	Is the fence fixed securely means of concrete/steel poles	1-10		
4.	Is the material used in the construction of the fence of high strength steel?	1-10		
5	Are the gaps between the steel bars less than 100mm	1-10		
4	Is the fence designed to withstand high impact from collisions by heavy duty vehicles?	1-10		
5	Is the fence 2, 6metres high?	1-10		
6	Is the fence fitted with a microwave alarm?	1-10		
7	Is the fence monitored by CCTV cameras?	1-10		
8	Are all openings/gates in the fence secured with burglar resistant locks?	1-10		
9	Is the perimeter patrolled every two hours during a twelve hour shift?	1-10		

10	Are all adjoining walls to the fence fitted with spikes?	1-10		
11	Is the fence fitted with barbed wire overlap at the top of the fence?	1-10		
12	Is the fence fitted with security lighting?	1-10		
13	Are any security notices displayed on the general public side of the fence?	1-10		
14	Is there a gate/gates in the perimeter fence?	1-10		
15	Are all gates the same height as the perimeter fence?	1-10		
16	Are all drainpipes and cableways beneath the fence secured?	1-10		
17	Is the fencing wire in good condition?	1-10		
18	Are all vehicles or other objects that could aid climbing over the fence at least 5 metres away from it?	1-10		
19	Is a record (register) of fence inspections kept?	1-10		
20	Is there a budget to provide for the maintenance and replacement of the fence?	1-10		
21	Is the fence subjected to a penetration exercise once a year?	1-10		

Desired Security:
Current Security:
Percentage shortfall or security weakness:
Security effectiveness factor: divided by 100 =

SECURITY LIGHTING				
OBSERVATION DATE:				
		ALLOCATED WEIGHT	**SECURITY EFFECTIVENESS**	**COMMENTS**
1	Is security lighting needed for this asset/risk?	1-10		
2	Is the perimeter of the harbour equipped with security lighting?	1-10		
3	Are all perimeter lights equivalent or greater than 10 lux of luminance?	1-10		
4	Are all floodlights along the perimeter aimed towards the outside of the perimeter fence?	1-10		
5	Is the access/egress control point fitted with security lighting?	1-10		
6	Is the lighting at the access/egress control point a minimum of 300 lux luminance?	1-10		

7	Are all general areas of the harbour equipped with security lighting?	1-10		
8.	Do these areas require continuous lighting at night?	1-10		
9	Are these areas equipped with high pressure sodium lamps?	1-10		
10	Are these lights mounted on high towers and housed in deep parabolic reflectors?	1-10		
11	Are all high risk areas equipped with standby emergency lighting systems?	1-10		
12	Is the emergency lighting linked to a standby generator or automatic secondary battery system?	1-10		
13	Is there a generator or back up battery for all floodlights at the harbour?	1-10		
Desired Security:				
Current Security:				
Percentage shortfall or security weakness:				
Security effectiveness factor: divided by 100 =				

STORAGE AREAS				
OBSERVATION DATE:				
		ALLOCATED WEIGHT	**SECUIRTY EFFECTIVENESS**	**COMMENTS**
1	Is a storage area needed for this asset/risk?	1-10		
2	Is there more than one container storage area at the harbour?	1-10		
3	Are the container storage areas fenced or barricaded?	1-10		
4	Are the container storage areas demarcated?	1-10		
5	Are the container storage areas covered by CCTV cameras?	1-10		
6.	Are the container storage areas patrolled at regular intervals?	1-10		
7.	Is there an inventory control system in place for each container storage area?	1-10		
8	Is the inventory control system monitored at daily at regular intervals?	1-10		
9	Is the entire fence near the storage area well lit?	1-10		

10	Is there a security control point sited at each storage area?	1-10		
11	Is there a security official posted at each storage area?	1-10		
Desired Security:				
Current Security:				
Percentage shortfall or security weakness:				
Security effectiveness factor: divided by 100 =				

CLOSED CAMERA CIRCUIT TELEVISION				
OBSERVATION DATE:				
		ALLOCATED WEIGHT	**SECURITY EFFECTIVENESS**	**COMMENTS**
1	Is CCTV measures needed for this asset/risk?	1-10		
2	Are there any CCTV cameras installed in the harbour?	1-10		
3	Is a CCTV camera fixed at the access/exit point of the harbour?	1-10		
4	Is a CCTV camera fixed at the entrance/ exit point of each storage area?	1-10		
5	Are all areas of the harbour covered with CCTV camera surveillance?	1-10		

6	Are the cameras fixed on the uppermost part of the wall?	1-10		
7	Are the CCTV cameras tamper proof?	1-10		
8.	Is the CCTV system linked to a back up battery in the event of power failure?	1-10		
9	Is the CCTV system linked to an alarm that will activate the recording of images?	1-10		
10	Are the cameras linked to a security control room?	1-10		
11	Are the cameras linked to a 24 hour recording device	1-10		
12	Are the cameras capable of recording images at night?	1-10		
13	Are the areas that are being monitored properly lit?	1-10		
Desired Security:				
Current Security:				
Percentage shortfall or security weakness:				
Security effectiveness factor: divided by 100 =				