AN INVESTIGATION OF SUSTAINABLE LEADERSHIP PRACTICES OF PORT EXECUTIVE IN THE PORT OF DURBAN

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DECLARATION

I, Nontobeko Londiwe Zungu, declare that:

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ABSTRACT

Ship and port activities in a port such as Durban in South Africa are key in ensuring sustainability and growth of the economy in acceptable ways that meet the needs of industries and all citizens. While the practices of sustainability by strategic leaders of a port are critical in ensuring sustainable operations in every part of port activity, little is known about what members of the port executive actually do when it comes to leading sustainability at the port of Durban in South Africa. The objective of this qualitative study is to explore the sustainable leadership practices of Port Executives at the Port of Durban in South Africa. This exploratory study was conducted using qualitative in-depth interviews with nine experienced members of the port executive to explore their day-to-day practices of sustainable leadership in the port environment with multiple stakeholders whose activities have various environmental impacts at societal level while others relate to organisational sustainability of the port of Durban. The participants in this study were selected using purposive sampling technique because they are involved in shaping the strategic direction of shipping and port activities which affect sustainability and operations in the long term. Data were gathered using semi structured interviews and analysed using thematic analysis to get dominant themes depicting sustainable leadership practices, practices of reinforcing green management, challenges of becoming sustainable leaders and key competences of sustainable leadership of a hybrid port. Results reveal a variety of four sustainable leadership practices by port executives at the port of Durban. These include prioritisation of environmental sustainability, commitment to strategic partnerships, strategic thinking about the business and people, and community building and corporate social responsibility. The key gaps in the sustainable leadership practice of port executive include silo behaviour, poor communication and strategic failure to develop green human capital. Port executives enforced green management practices by driving and reinforcing waste management practices and green innovation. However, this was predominantly operational, weak, but also poorly strategized to create and develop a lasting sustainability culture at the port. More importantly, lack of sustainability literacy within the upper echelon and sustainability expertise among employees undermined the practice of sustainable leadership by Port Executive. The study has proposed a framework of sustainable leadership competences for a port and also areas of future research.

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CHAPTER ONE
INTRODUCTION OF THE STUDY

1.1. Introduction

Any kind of industrial and economic activity has a particular impact on the environment. For example, the Port of Durban, which is one of South Africa's oldest ports, face increasing port-induced environmental issues such as traffic congestion in eThekwini municipality, which requires the attention of strategic leadership of the largest container port in Sub-Saharan Africa's, the Port of Durban (Henning, 2019). Strategic leaders of the port of Durban have a critical economic and sustainability responsibility. The port handles large container ships and trucks drawn from the entire Southern African region to pick up and drop off containers at this port in South Africa (Kinyua, 2020). Generally, strategic leaders such as those running and controlling ports are central in determining strategic direction, influencing organisational culture, ethics, and strategy implementation. However, not all of them sustainably lead ports. Sustainable leadership is about leading self and others to minimise the adverse impact of activities of the organisation and shape a sustainable future. Many organisations, including ports, face enormous economic, social, and environmental pressure that leadership at the top can no longer continue to lead themselves and others by placing primacy on profits only at the expense of people and the planet. Stephen (2021) is clear that as the world becomes progressively aware of the organisation's impact on the triple bottom line, commonly known as the three P's – planet, profit, and people – members of the upper echelon of the organisations will start to embrace sustainable leadership. Sustainable leadership is about adopting a responsible approach to the way that leaders lead in ways that consider the broader impact of business or organisational activities on society and the environment (e.g., the natural systems within which they operate, wider stakeholder group, and the limits) (Stephen, 2021). The activities of ports like the Port of Durban impact various stakeholders, natural systems, society, and the environment such that sustainable leadership is critical (Henning, 2019).

This study explores the sustainable leadership practices of the Port Executive (PE) of the Port of Durban in South Africa. In this way, the context of the study is a port in Durban and its top leaders to fathom their practices of sustainable leadership. Seaports like Durban in South Africa play a significant role in the growth and development of countries, cities and improving transport efficiency. Ports are a gateway for transferring passengers and goods between ships and shore

through efficient measures to minimise transport costs of goods through transport (Munim and Schram, 2018). They play a significant role towards national development by providing access to gateway economic functions and enabling effective and efficient trading. In cities and regions where ports are located, they enable business growth, assets for facilitating local development, catalysts for port clusters and providers of efficient transport services. Sustainable leadership is essential in port operations. Often, environmental impacts on air, water, and land are common at ports. The question of how top leaders of a port exercise sustainable leadership is interesting to scholars of economics, business, and environment. While proficient ports are significant to the economic development of ports surrounding areas, they are also related to several negative environmental impacts caused by the handling of goods in the ports, ship traffic and the hinterland distribution. In this way, shipping impacts the environment both in ports and in the immediate areas of the ports. Seaports depend on an extensive range of diesel engine vehicles, which are a source of greenhouse gas emissions and impact climate change (Balasubramanian, 2018). Additional environmental challenges arise as a result of road and rail traffic to and from the port region.

The environmental impact of ports can thus be separated into three categories: problems caused at sea by ships calling at the port; emissions from inter-modal transport networks serving the port hinterland; and problems caused by the port activity itself. (Roh et al., 2016). The question of how leaders in the upper echelon of key seaports, which are a gateway for transferring both goods and passengers between ships and the shore, lead themselves and others in supporting and shaping a sustainable future is central to sustainable leadership. In this study, the current chapter introduces the entire qualitative study on sustainable leadership practices of Port Executives at a port in Durban in South Africa. Firstly, it presents the background of the study, which focuses on the economic importance of the Port of Durban, the environmental impact of port and ship activities, and the socio-economic relationships between the Port of Durban and the City of Durban to provide a clear context of this exploratory study primarily. After that, the chapter discusses the motivation of the study, the problem statement, followed by the research objectives and questions. Furthermore, the chapter presents the significance of the study, delimitations of the study, and the entire structure of this study before closing with the chapter summary.

1.2. Background of the Study

The Port of Durban is considered the largest seaport in Africa. The contemporary Port of Durban may be traced back to 1824 when a group of British men from Cape Colony arrived on the shores of the Bay of Natal to establish a trading base (Kinyua, 2020). These days the Port of Durban is in the heart of the Durban economy. It is part of the ports system, which comprises eight commercial ports along the coastline of South Africa, all operated and controlled by the Transnet National Ports Authority (TNPA) (Transnet Investor Report, 2020). TNPA is one of the Transnet SOC limited operating divisions in South Africa. The commercial Port of Durban is located in the municipality of eThekwini in KwaZulu Natal province. This port operates on a typical user basis. It comprises five business units managed by Transnet Port Terminals - Pier 1 Container Terminal, Maydon Wharf Terminal, Multi-Purpose Terminal (also known as the City Terminal), Durban Car Terminal (three berths) and Durban Container Terminal (Africa's busiest) (Transnet Investor Report, 2020). Durban is a hybrid port, meaning a limited separation between landlord and operational functions (Kinyau, 2020). However, it allows some private terminal operators to undertake landside operations. The Durban harbour consists of a single buoy mooring point and 59 berths. It accounts for 70% of South Africa's ports (Transnet Investor Report, 2020). In terms of capacity, the Port of Durban handles more than 5000 vessels per year, with container traffic of about 2.69 million with Twenty-foot Equivalent Unit (TEU) containers growing at 1.2% as of 2013 and reefer cargo at 4.2% (Transnet, 2020). Containers, liquid bulk, agricultural products, vehicles, steel, passengers, forestry, grains and coal are the primary commodities handled at the Durban harbour in South Africa (Transnet Investor Report, 2020).

As the busiest container port in South Africa, Durban is the gateway to metropolitan areas around South Africa, such as Gauteng and the sub-Saharan African countries, primarily those in the Southern African Development Community (SADC) (Transnet Investor Report, 2020). The Port of Durban is a source of substantial economic benefits to the city and South Africa country. Kinyau (2020) reveals that the Durban economy might suffocate without the expansion and proper management of the port. Though the Durban Harbour is recognised as dominant in South Africa, its performance has been identified as sub-optimal for several reasons (Kinyau, 2020). Firstly, the port has high cargo dues making it the most expensive in the world. Secondly, inefficiencies at the terminal and port gate have increased congestion, increasing ships' waiting times (Venter, 2020).

Furthermore, Venter (2020) adds that the Port of Durban has long been criticised for lowering South Africa's productivity rather than assisting the country's efforts to grow and prosper. Venter (2020) asserts that records from 2019 suggest that ships outside the port experienced significant delays, while others were compelled to bypass the facilities. There were multiple go-slows by discontented staff. In this regard, port leadership needs to be mindful of emotions and sensitive to the motivations of others who are critical in the value chain. Mindful leaders see themselves and their work as part of a larger purpose, which motivates them to use business to improve society (Stephanie, 2020).

It is also noteworthy that truck drivers are miserable as stakeholders of the Port of Durban (Jansen, 2019). When the ideal waiting target is 90 minutes, they must wait for up to eight, nine, or even ten hours for a single uplift or delivery at the terminal. It is reported that trucks in 2019 needed to queue for extended hours along Bayhead Road in a line that stretched for several kilometres as they delayed entering the port (Jansen, 2019). Some truck drivers and international companies also complain about theft of copper power cables directly from refrigerated containers trucks along access roads like South Coast Road, which effectively disable the refrigeration unit and risk damage to the product (Jansen, 2019). These are some of the factors that increase "costs of imports and exports and thus undermine the South African economy" (Munim and Schram, 2018). Venter (2020) posit that there are three sources of congestion affecting the Port of Durban. The first emanate outside Transnet (outside Transnet's control) within secondary industries. The second source is within Transnet, and the third source is the interdependence between industry and Transnet. Venter (2020) adds that a multidisciplinary decongestion task team was formed, including representatives from Transnet, the KwaZulu-Natal provincial government, the Department of Public Enterprises, the eThekwini municipality, and the South African Police Service and the Durban Metro Police, the South African Association of Ship Operators. Agents organised business through the Durban Chamber of Commerce and Industry, the trucking Industry, Shipping lines representatives, depot operators, the South African Association of Freight Forwarders (SAAFF), and other industry associations and bodies. The decongestion team has identified a misalignment in operating hours and team inefficiencies between the container warehouses, depots and the port as some depots were unwilling to operate 24/7 (Venter, 2020). Systemic thinking is critical to prevent the port from facing challenges when the port terminals

are working 24/7, but the industry is working an 8 to 12 hours' day shift. Furthermore, mandatory truck pre-trip bookings for the dropping off and collecting cargo is vital to reduce congestion at the port. Nonetheless, this system presents some difficulties as transporters are not accustomed to it while some transporters complain that the Port of Durban booking system does not work entirely as it should.

Another area of attention for the Port of Durban's decongestion is the increased formalisation of truck driving operations. Transnet intends to induct truck drivers into the new port's operations through a comprehensive program established by the Maritime School of Excellence in consultation with industry (Venter, 2020). Transnet must also overcome several challenges to improve productivity at the Durban harbour (Venter, 2020). Amongst these challenges is the efficiency of processes and productivity from each piece of equipment at the terminals (Venter, 2020). It is essential to underscore that the work of the decongestion team within Transnet is already bearing fruits, such as a better procurement process that ensures spares availability and improved lead time. Sustainable leadership shapes organisational culture through their actions and how they involve and include others (Stephanie, 2020). This type of leadership also looks up and out beyond its role, sector, and organisation to lead in a way that always limits the negative impact of organisational activities on people, planet, and profit (Stephanie, 2020). Sustainable leaders develop their mindfulness and consider their relationship with societal, economic, and environmental issues (Stephanie, 2020). They also reflect on how their organisational strategy contributes a net positive effect on the world and what changes they can make to contribute more sustainably over time (Stephanie, 2020). Senior leaders build an environment where clients, employees, and stakeholders can work together to shape a more sustainable future (Stephanie, 2020).

At the Port of Durban, privatisation opportunities that would have improved competition and thus efficiency were not seized when they arose. Although private enterprises operate in the port, Transnet Port Terminals has a monopoly in the container terminals. (Munim and Schram, 2018). eThekwini Municipality and Transnet have engaged in a joint initiative to plan and expand the Port of Durban to ensure sustainability. The lack of alignment and consensus between the city and Transnet in development must not create a climate of growing uncertainty. The Port of Durban's

medium- to long-term solutions includes increasing road capacity around the facility and law enforcement to manage traffic flows (Molelu and Enserink, 2018). The port's growth and expansion will be key for job creation, increasing trade, increasing supply chain capacity (rail, road, pipeline and port) and maximising opportunities and benefits while reducing conflict and wasted resources. The plan and process to develop the Durban harbour were started in 2007 by eThekwini Municipality and Transnet. However, delays in port development are partly attributed to corruption and poor public-private partnership. Molelu and Enserink (2018) posit that the Port of Durban remains affected by poor governance of social and ecological impacts of the port expansion and development. One of the significant issues is that community members complain that port development decisions and planning are reached without prior consultations (Molelu and Enserink, 2018). The policies on expanding and developing the infrastructure of the ports in South Africa are old and lack implementation (Venter, 2020).

1.2.1. Environmental impact of ship and Port activities

There are various activities at any port that can create an environmental impact on the port and its vicinity. Sustainable leaders demonstrate sustainability literacy in terms of awareness of current and emerging social and environmental trends and the risks and opportunities they create for business (Stephanie, 2020). They influence employees and relate with peers based on a complete understanding of the changing role of business in society, how peer organisations respond to the volatile, uncertain, complex, and ambiguous (VUCA) environment, and available methods to revise business models (Stephanie, 2020). Sustainable leaders need to be aware of the various cause of environmental impact by various port stakeholders. Sustainable leadership demonstrates a strong capability of externally influencing others, awareness and appreciation of trends, risk awareness, assessment and management, which require flexibility and adaptability to change (Stephen, 2021). In sustainably leading a port, sustainable leaders need to be aware of the two broad categories of activities with different environmental impact types, namely ship and port activities. First, ship activities are responsible for air pollution, waste production, noise generation, and water pollution (Giuffrida, Stojakovic, Twrdy, Ignaccolo, 2021). For example, air pollution comes from tanker loading and unloading, ships' hotelling phase (heating, lighting, ventilation, and refrigeration) and ship movement in port. As these various forms of pollution arise from different activities by different ships within the port, sustainability leaders in ports encourage

collaboration to shape sustainable port and its environment. The magnitude of sustainability challenges necessitates a fundamental business reengineering. Within organisations, sustainable leadership encourage innovation of products and processes among workers and prioritise interdisciplinary teams. Oil, motor fuel, gasoline, diesel and chemical leakages in the loading and unloading of products are vital in causing water pollution. Notably, water pollution may also come from residuals of chemical products contained in the tanks, the product used in the washing operations and paints used to coat the bottoms of ships (Hossain et al., 2019).

Onboard the ship, waste products are generated. The ship must collect waste to be dumped onshore when ships call, depending on the trade and area it operates. A ship's operations also generate noise mainly through the propeller, the auxiliary engines, the central propulsion machinery, the heating, ventilation, air conditioning system, and transverse propulsion unit. The emissions are loading and unloading petroleum products, dry docks, passenger cars, heavy vehicle traffic, and railway traffic in the port environment. There is also pollution of water by port operations on terminals and fuel deposits (loss from deposit pipeline and tankers, accidental discharge of oil in the ocean,); ships demolition (accidental discharge of oil and other chemicals in the ocean); dry docks operations (accidental discharge of oil and other chemicals in the ocean); stormwater runoff from port parking lots; and water stagnation are sources of water pollution in port and its neighbourhood. Soil also suffers from pollution through port operations. The different sources of soil pollution include spills from the bulk handling device, loss from deposit pipelines and tankers, and accidental discharge of oil in the soil, to mention a few. Lastly, sources of noise from port activities include road traffic, goods movement, and rail traffic noise. Given the variety of ship and port activities, it is imperative that top executives as leaders at a port, regardless of whether they hold a sustainability title, must manage systemic change, influence, and navigate complex, interdependent business networks (Stephen, 2021). Leading and managing a port is not simply about the financial and commercial dimensions of the port system, but also leading with ethics and integrity if the various stakeholders of the port are to contribute to the reduction of the impact of shipping and port activities on people and planet. Sustainable leadership goes beyond mere compliance with the variety of port and ship requirements for a sustainable port and its vicinity. Organisations could incorporate sustainability and long-term into their competency models to develop current leaders and attract leaders of tomorrow who place value on profit, people, and the

planet. A competency model is a helpful guide when developing ideal leaders and employees. At the port of Durban, it is tough to develop and maintain a healthy pipeline of future sustainable port leaders. Sustainable leaders are key in driving sustainability talent management in the organisation (Stephen, 2021). Sustainable leadership entails a shift in thinking of the organisation as a stand-alone entity to an organisation as part of a broader value network or economic ecosystem. Furthermore, sustainable leaders develop a shift in perspective from a shareholder orientation to a social purpose (Stephen, 2021).

The Port of Durban is strategic as a natural deep-water port, making it the most accessible port with enough capacity to provide the needs of the country's industrial hub in Gauteng. Despite all this, the port has been facing deteriorating effects due to expensive cargo fees. According to Jansen (2019), poor human relations between labour and port authorities also affect the port's efficiency as employees go on a go-slow to get what they want. Hancock (2020) highlights that the poor transport network needs development to address congestion and enhance the efficiency of port operations.

The port is expanding its territory and operations to ensure effective trade and provide efficient and dependable gateway business that can contribute to supply chain competitiveness and flexibility. Since 2007, the Port of Durban expansion program has been underway and led by the eThekwini Municipality and Transnet. The increased efficacy is expected to reduce emissions by 2033, assuming economic sustainability (Transnet Investor Report, 2020). The environmental effects of this expansion also include the upgrading of Transnet's new multi-product pipeline and Island View/SAPREF oil refineries (Transnet Investor Report, 2020). A reduction in pollution leaks will be achieved by relocating the oil petrochemical complex and infrastructure modernisation that support energy efficiency (Roh, Thai and Wong, 2016). The port will also initiate other environmentally friendly developments such as dust control and monitoring scanners. This is done with the interest to reduce dust from construction and soundproof walls, to reduce noise pollution from the port activities, establish vibration times to reduce the collateral damage of any kind and use LED/solar lights to reduce light pollution and preserve energy costs (Hossain et al., 2019). It is essential to highlight that sustainable leadership is characterised by

future-oriented thinking, prioritising sustainability issues as opportunities rather than obstacles for growth.

Progress towards port development has been stalled by corruption and poor public-private relations. According to Mabiletsa (2016), there is a need to implement sustainable leadership practices to help speed up progress and address the sustainability gaps affecting the Port of Durban. However, not all stakeholders are happy about the expansion. For example, community members regard the Port of Durban expansion as a selfish move by the government that does not consider the environment around it (Kinyau, 2020).

1.2.2. Socio-economic relationships between the Port of Durban and the city

The Port of Durban is inextricably connected to the city of eThekwini such that it is essential to have a holistic understanding of the context behind the strategic issues and problems of the port and city, respectively, and their relationship to broader trends. A sustainability leader must understand the relationships in which business is embedded: Industries, regions; ecosystems; cities; and supply chains.

External collaboration is critical for sustainable leaders of a port in a city. This means that top leaders of a port like Durban must be keen to work with institutions beyond business. A substantial portion of a business's environmental impact may be found downstream of business operations, meaning collaboration with customers, suppliers, and even competitors is necessary. Collaboration assists organisations explore new market opportunities, build capital and shape the contexts in which they operate (Roh et al., 2016). There is a solid socio-economic bond between the Port of Durban and the city, manifest in various ways. According to Molelu and Enserink (2018), Durban has the highest poverty rate and the highest rate of individuals living on grants, while the employment numbers are meagre. Molelu and Enserink (2018) further outline that the city of Durban also has the lowest per capita income, and it is characterised by high youth reliance and the maximum migration rate of skilled labour. The port is an essential economic player in the city and the country at large. The Port of Durban accounts for 10% of the city's employment. In Durban, the port is responsible for more than 100 000 jobs (Transnet Investor Report, 2020). Jobs directly related to the port are estimated to be around 10% (approx. 53000) of employment in the

eThekwini Municipality Area. Added value jobs in the automotive industry, logistics, transport services, warehousing, and various maritime cluster jobs, making up 8 to 14% (approx. 55000) of employment (Roh et al., 2016). Molelu and Enserink (2018) stress that it is hard to determine the number of jobs in the agriculture, manufacturing, and trade sectors that are in the proximity of the Durban Municipality zone due to the correlated advantages of the port (companies that operate in Durban for the sake of getting close to the port) (Maharaj, 2013). It is essential to note that the port sustains the economy of Durban.

eThekwini has the highest rate of poverty-stricken individuals but the lowest number of service delivery complaints (Transnet investor Report, 2020). However, the performance of the city is worrisome. Unless there are urgent measures to improve and ensure sustainability, the social burden will worsen and threaten the financial feasibility of the municipality (eThekwini Municipality Report, 2020). Proper job creation should be catalysed to combat unemployment, poverty, and disparity (eThekwini Municipality Report, 2020).

Notably, the development and operations of the Durban port and the city are correlated at many stages. However, the planning of port and city development is done separately from each other. A collaborative and partnership approach are critical to achieving a shared vision for sustainable development and successful co-existence since they stand to benefit more together than apart (eThekwini Municipality Report, 2020). Growth in the Port of Durban is key for the economic success and the city. The Port of Durban is central for the eThekwini Municipality's goal of becoming Africa's most caring and liveable city, where all inhabitants live in harmony (Transnet Investor Report, 2020). The ship and port activities need to help the city sustainably achieve its vision by growing it is economy and meeting industries' and citizens' needs. South Africa is highly dependent on international trade. The Port of Durban must be recognised as an international trade hub while the city reinforces its image as an international destination for tourists and business conferences (Port Strategy, 2018). With this background, the study explores how the Port Executive at the Port of Durban practices sustainable leadership in leading their organisation and other key stakeholders to shape sustainable ship and port-related activities and sustainable society in its vicinity.

1.3. Problem statement

As the Port of Durban is Africa's busiest port, it is surprising that extant research on leadership has not explored much on sustainable leadership.

The port's slow development, low productivity, and poor maintenance have been identified as significant factors affecting Africa's busiest port. On top of these issues, environmental reports reflect how to port activities often pollute and affect the environment and water quality (eThekwini Municipality, 2020). Considering that the Port of Durban is a source of substantial economic benefits for both the city and South Africa, it faces deteriorating effects with increased congestion and expensive cargo dues. As a result, solutions towards the economic sustainability of the port has been suggested to expand its infrastructure to enable effective trade, promote efficient and reliable gateway business, and contribute towards supply chain competitiveness and resilience. With these identified problems, it is essential to note that improving the capacity and ability of sustainable leadership of the port is essential for organisational sustainability of the port controlling and operating organisation, the vicinity of the port and societal sustainability.

1.4. Research objectives

The research objectives in this exploratory study on the sustainable leadership practices of Port Executives at the Port of Durban in South Africa were:

(i) To identify sustainable leadership practices that are displayed or not displayed by Port Executive

(ii) To evaluate how Port Executive are enforcing green management practices at the Port of Durban

(iii) To identify the challenges faced by Port Executive to become sustainable leaders

(iv) To propose a sustainable leadership competency framework for port leaders of a hybrid port

1.5. Research questions

Based on the above research objectives, the following were the relevant research questions:

(i) To what extent does the Port Executive display or not display the sustainable leadership practices at the Port of Durban?

(ii) How are the Port Executives at the Port of Durban enforcing green management practices?

(iii) What challenges are the Port Executives at the Port of Durban facing to become sustainable leaders?
(iv) What are the critical competencies of sustainable leadership at a hybrid port?

1.6. Motivation of the study

This study is motivated by three important aspects. The first aspect is the research gap in the exploration of sustainable leadership practices in port leadership. There has not been any study that qualitatively focuses on Port Executives' views on implementing sustainable leadership practices, especially at the Port of Durban. In an era where organisations are under pressure to embed sustainability in their value chains, reduce their environmental impacts and build a sustainable society, sustainable leadership of ports such as Durban is critical (Henning, 2019). The role of top leaders in organisations is no longer just about leading others to generate profit for the shareholders but includes sustainability of the environment and people.

Secondly, the study was motivated with interest to understand the use of sustainable leadership practices in leading a busy port such as that of Durban, which has multiple stakeholders whose respective activities contribute to the environmental impact of the port. It is essential to note that a port is an economic asset and a liability as it brings different environmental challenges. Thus, the researcher was motivated to understand the Port Executives' display of sustainable leadership practices in leading the Port of Durban.

The third and final motivating factor for the study was that the researcher's work at the Port of Durban triggered an interest in understanding the importance of the interface between sustainability, green management, and strategic leadership practices. However, also the integration of these aspects is crucial in improving the operations in the development of the port. A sustainable leadership competency framework derived from the lived experiences of strategic leaders of the Port of Durban is valuable in informing talent development strategies to ensure leadership that shape both a sustainable business and society.

1.7. Significance of the study

This exploratory study sought to gain a deep and nuanced understanding of sustainable leadership practices in leading the seaport of Durban in South Africa.

First, the study gives insight into green management practices, which are key regarding sustainable leadership of a hybrid port. Specifically, this study is valuable towards guiding leadership decisions towards green solutions in the management and development of ports because the study provides practical insight into how sustainable leadership practices play a significant role in shaping green management decisions. It provides insight into the practical strategies and specific thinking patterns being used by Port Executives in addressing green challenges and reflects on different recommendations.

Second, this study is significant to leaders of critical parastatals and practitioners such as Port Executive leaders. It brings sustainability to the centre of strategic direction and leads a port with concern for the current and future organisational and societal sustainability. It is imperative that sustainable leadership, which integrates sustainability and leadership, is practised by every leader in a port championed by those at the top. The challenge for organisational leaders is to create, nurture and sustain a culture of sustainable leadership fuelled by the sustainable leadership competence framework proposed in this study. Furthermore, the framework is essential to guide human resources and train sustainability-conscious leaders and employees to shape sustainable shipping and port activities.

Lastly, this study is significant to scholars of leadership and sustainability as it has revealed the use and practice of sustainable leadership by the Port Executive in the Port of Durban. The study also signals the need for leadership scholars to shift from a mere focus on general functions of leadership in different contexts to start situating organisational and societal sustainability at the core of what it means to lead self and others in an organisational context.

1.8. Research methodology

This exploratory study was conducted using qualitative in-depth interviews with experienced port executives to explore their sustainable leadership practices in a port environment with multiple stakeholders whose activities have an environmental impact and organisational sustainability in the Port of Durban and society. The participants in this study were members of the upper echelon who were selected using the purposive sampling technique. The selection criteria for research participants included

1. Being a member of the Port Executives committee and involved in strategic issues shaping the strategic direction of shipping and port activities;
2. Minimum of three years' experience as a strategic leader to have hands-on experience of leading self and others at the port; and
3. Willingness and openness to reflect own leadership practices and a variety of critical incidents about green management issues, challenges of becoming a sustainable leader and the practice of sustainable leadership.

The researcher purposively and conveniently sampled nine (n=9) Port Executive members from the Port of Durban for the interviews. To get an in-depth understanding of the practices of members of the Port Executives regarding sustainable leaders, data were gathered using semi-structured interviews and analysed using a thematic approach. The thematic analysis involved identifying, processing, and presenting related themes that were used to sort and organise collected data into similar ideas and broad themes. Issues of research data quality and research ethics were followed in line with Covid-19 requirements.

1.9. Delimitations of the study

The delimitations of this study focus on three key aspects. This first aspect is that this study is purely qualitative and exploratory in research. Therefore, the study focuses on the perspectives of strategic leaders on how they practice leadership which shapes and implements a strategic direction that places value on sustainability in the execution of current activities and pursuit of future goals of the port in South Africa.

The second delimitation issue relates to geographic choice as there are eight commercial ports controlled and operated by TNPA in South Africa. The current study is confined to the Port of Durban in eThekwini because it is the busiest and likely to face more sustainability-related issues in its day-to-day operations and shape its strategic direction.

The third issue is delimitation in terms of the level and variety of those with hands-on experience of strategic leadership at the port environment. This study focuses exclusively on the strategic leadership of TNPA at the Port of Durban in South Africa. The study focuses on members of the upper echelon of the port as they have hands-on experience of leading the port to reflect on their

practices regarding what is called sustainable leadership in this study. In focusing on the view of the Port Executive, the study has excluded other employees who are not members of the Port Executive committee as they are less engaged in strategic issues. Future studies might need to consider widening the research scope to include the practice of sustainable leadership at other levels of the organisation by departmental or team leaders in the execution of functional activities. The major limitation of this exploratory study is that the sample size is small as it is only limited to members of the Port Executive in one organisation. As there are eight commercial ports, future research may include more ports and their respective executive teams if the results are generalisable. Nonetheless, the results of this exploratory study are transferable to ports with similar contexts.

1.10. Research structure

This exploratory study consists of six chapters which are as follows:

Chapter 1: Introduction of the study

It introduces the research and provides a detailed overview of how the study was conducted. It provides an understanding of the study's background, motivation, problem statement, key questions and objectives, and methodology used in conducting the study.

Chapter 2: Literature Review

The chapter reviews relevant literature for the study. It defines key concepts and traces literature on sustainable leadership practices. The chapter also discusses the theoretical framework of the study.

Chapter 3: Research Methodology

The chapter summarises the methodological processes used in conducting the study. It outlines the research design, the research approach and the research instruments used in collecting the data. It reflects on the data analysis approach that was used in presenting and analysing the findings.

Chapter 4: Presentation of Findings

The chapter presents and analyses the critical study findings gleaned from the participants.

Chapter 5: Discussion of Findings

The chapter offers a detailed discussion of the findings. It reflects on the interactions that exist between the literature, theory, and the views of the participants. It draws conclusions and implications of the results of the study.

Chapter 6: Conclusions and Recommendations

The chapter concludes the research. It presents the summary of findings, a summary of chapters, and offers recommendations that can be utilised to address the challenges and guide future studies.

CHAPTER TWO
LITERATURE REVIEW

2.1. Introduction

This chapter aims to review relevant literature on leadership and sustainability to understand the concept of sustainable leadership. In pursuit of this aim, the chapter has four major sections which explore the phenomenon of sustainability at the organisational and societal levels. The chapter also discusses the concept of green management and practices which are relevant in a port environment. As the focus of this study is at the level of Port Executives, it is essential to discuss the upper echelon and strategic leadership theory, roles and functions of strategic leaders in an organisation.

2.2. Unpacking the concept of sustainability

The concept of sustainability has increasingly become a buzzword in the global development processes. According to Rack (2014), the concept can be applied in various contexts and practices, which include business, agriculture, or energy, to mention a few. Du Pisani (2006:85) traces how "the terms' sustainability' and 'sustainable' appeared for the first time in the Oxford English Dictionary during the second half of the 20th century the equivalent terms in French (*durabilite'* and durable), German (*Nachhaltigkeit*, literally meaning '*lastingness*', and *nachhaltig*) and Dutch (*duurzaamheid* and *duurzaam*) have been used for centuries". Though these terms were formally introduced in the 20th century, their existence can be traced back to Mesopotamia, Egypt, Greek and Roman's ancient civilisations with the main interest to protect the environment from degradation. Du Pisani (2006:85) traces how scholars such as "Plato in the 5th century BC, Strabo and Columella in the 1st century BC and Pliny the Elder in the 1st century AD" discussed different sustainable practices to protect the earth from environmental degradation. In the 1960s and 1970s, the idea of sustainability started taking a new direction of growth and development. Hence definitions of sustainability show how the concept involves preserving the future and interests towards growth and development, as indicated in the paragraphs below.

The standard definition of sustainability is the ability to ensure productivity using methods that do not endanger the future. This is evidenced by definitions provided in the literature; for instance, Samimi, Cortes, Anderson and Herrmann (2019) define sustainability as initiatives that can be achieved without compromising future developments of current occupants or future occupants in

the environment. Sustainability in general terms implies growth that does not sabotage the chance of future generations to develop themselves, and this works in three tiers, namely, environmental conservation, economic development and social justice (Tam and Taruna., 2016). This is echoed by Strandberg (2020), who argues that sustainability is the capacity of an organisation to operate during difficulties and still maintain its ethical culture.

For this study, sustainability will be defined as the ability of an organisation to reach its objectives and carry out all its functions and processes in a manner that preserves the environment, does not compromise the health and safety of the society, and promotes social equity. The term "sustainability" is defined in various ways that may apply in different contexts, depending on different fields of literature. This provides literature with different dimensions/types of sustainability, namely, corporate sustainability, business definitions, and environmental based discussed in the next section.

2.2.1. Dimensions of sustainability

Corporate sustainability

This refers to the ability of organisations to create long term value in the society, environment and the economy through supporting cooperate responsibility (Ashrafi, Acciaro, Walker, Magnan, and Adams, 2019). According to Tam and Taruna (2016), corporate sustainability implies the ability of organisations to offer long term solutions to improve the quality of the work environment. They go on to identify three Ps that guide corporate sustainability, which is: people, planet, and profit. Corporate sustainability attempts to balance these three in its application.

Environmental-based sustainability

Strandberg (2020) argues that the term sustainable grew from environmental conservation pioneers, and he goes on to explain that sustainability cannot be realised without implementing social justice practices that no organisation can survive with no form of social justice. Kanyangale (2017) suggests that sustainable organisations must encourage their employees to understand the origin of injustices that motivate them to pursue justice, ethical behaviour and environmental conservation.

Business-related sustainability

Literature shows that the relationship between business and society has been thoroughly researched in management theory. This definition asserts that business, to be sustainable, has to accept its connection to the natural world. According to Strandberg (2020), this view of sustainability has four dimensions: societal, physical, ethical, and business reasons connect and support the concept that organisations must ensure value in the economy, social and environmental spheres. Sustainability has recently become a measure of organisational success and durability. Therefore, sustainability can be viewed as the concept that allows growth and competitiveness while connecting the environment and society.

Sustainability in education

Here sustainability is seen as the capability of students and school institutions to continuously adapt and overcome different variables and complexities presented to them; thus, human development is achieved in the process of personal or institutional improvement (Strandberg, 2020). All literature, discipline or field, agree on the underlying principles of sustainability, which require an understanding of the connectivity between environmental, economic, and societal values.

2.2.2. Organisational sustainability

The Ford Board of Directors established a Sustainability Committee to focus on sustainable growth, which it defines as the ability to meet the needs of current customers while also considering the needs of future generations (Ford, 2012). Kantabutra (2019) defined sustainability as the concept of preserving the life of an organisation; that is, sustainability keeps the business going. According to Balasubramanian (2021), sustainability alludes to attaining success now without jeopardising future needs. Therefore, sustainability involves creating long-term value while emphasising preservation of the environment, social justice and economic success for the organisation. According to Hansen (2017), the notion of enhancing the environmental, societal and economic systems within which a business operates is the essence of sustainability in an organisational context. This introduces the concept of a three-way focus for organisations striving for sustainability. Thorpe, Arthur & Souza (2018) posit that sustainability is a simultaneous focus on social, economic, and environmental performance. Organisations are adopting sustainability

policies to cultivate a sustainable culture and create a balance between these policies, social, environmental, and financial performance (Hansen, 2017). These policies are vital in shaping the culture of sustainability through clearly articulating the firm's vision and mission that aligns with an organisation's environmental objectives.

For this study, organisational sustainability will be defined as the ability of a business to remain profitable while ensuring that its processes do not harm the environment, the citizens within the societies they operate but instead empowers them through policies of social justice. This definition is commonly used in the literature and is consistent with the technical use of the word. The definition chosen in this study is relevant as it is general.

2.2.3. Understanding the meaning of green management

The concept of green management can be traced to the emergence of the industrial revolution 250 years ago when the need to balance human activities in business and the environment became more urgent (Loknath and Azeem, 2017). Hence most definitions of green management are often associated with industrial and environmental sustainability, as discussed in the following paragraphs.

Every aspect of an organisation's operation, from raw material inputs to manufacturing processes, packaging, and waste disposal, is linked to environmental concerns. As a result, environmental management practices combine organisational activities aimed at reducing resource consumption and improving waste management (Aronson, Lepczyk, Evans, Goddard, Lerman, MacIvor, Nilon, and Vargo, 2017). Environmental management practices include technological options, product design, manufacturing, and waste management (Mishra, 2017).

Green management is a new organisational strategy that strives to implement sustainable and green practices throughout a company with the visible result, both in the impact on the environment and financially (Tang, Yang, Yuan, Pascal, and Jin, 2017). Anwar, Nik Mahmood, Yusliza, Rmayah, Faezah, and Khalid (2020) define green management as a company's systematic management practices for resolving environmental challenges through environmental protection and limiting the negative environmental impact of the company's products throughout their life cycle. They expand on this notion by going into more depth on how different organisations have adopted green

management. Anwar et al. (2020) maintain that this can be achieved by developing new products and services, developing control systems to monitor and measure performance, or compliance with government regulations.

Green management is a model that incorporates renewable energy sources and environmentally friendly technologies, improving environmental awareness, recycling activities, and reuse of wastes starting from the company's production activities to packaging and delivery to customers (Lee, Jai, and Li, 2016). Businesses have increased their awareness and understanding of how their activity has eroded the environment and are now looking toward green management to preserve and manage the environment to mitigate climate change and pollution (Mishra, 2017). Thus, organisations have transitioned from traditional management to environment-oriented green management. The aim of green management is to ensure activities in operation are performed in accord with the environment, preserve the environment in organisation visions, goals, objectives, and operation functions, select technologies following sustainability principles, and enable continuous development (Anwar et al., 2020).

Over time, there has been an emphasis on shifting organisational goals from profit-making toward the need for social and environmental sustainability. Financial and economic success must be accompanied by increased attention to social aspects and the minimisation of ecological footprints. (Jehan, Hussai, Batool, and Imran, 2020).

Jovita, Chibuzor and Onyemchi (2019) define green management as a type of management where an organisation tries to keep destructive processes to the environment to a minimum. Through engaging in recycling practices and using renewable energies to reduce the amount of waste and carbon emission into the atmosphere. Ashraf, Doytch, & Uctum (2020) define green management as the practices such as green production, green research and development, and green marketing that produce environmentally friendly products and reduce environmental impact. Anwar et al. (2020) defined green management as an organisation-wide process of administering innovation to achieve sustainability, social responsibility, waste reduction, and competitive advantage through ongoing human development and the implementation of environmental strategies and goals aligned with the organisation's strategies and goals. Green management is the process through

which an organisation shapes its environmental strategy management to protect the environmental aspects (Saeed, Jun, Nubuor, Priyankara & Jayasuriya, 2018).

Green management focuses on building sustainability for businesses without compromising future needs. As a result, a balance between industrial growth and environmental sustainability is required (Mishra, 2017). Hence, it is crucial to figure out how green management is implemented and re-enforced by Port Executives at the Port of Durban to reduce environmental degradation and remain competitive. For this study, green management will be defined as the strategies and activities employed by an organisation to limit pollution, reduce harm to the environment, and support environmental sustainability.

2.2.4. Green management practices relevant in a port environment

Organisations are increasingly aware of the need to balance their bottom line with the needs of the environments they operate. This has resulted in most organisations adopting green management practices limiting pollution and supporting environmental sustainability. Implementation of sustainable practices is essential for the durability of the shipping industry (Lee, Hashim, Ho, Fan, & Klemes, 2017). Shipping companies are expected to implement green practices and eco-friendly systems and processes (Lun et al., 2016). Green Management Practices, often known as Green Shipping, are environmental management practices used by shipping companies that focus on reducing waste and pollutants generated during operations (Lee et al., 2017). Lee et al. (2017), define it as the sustainable use of resources and energy required to handle and transport products and people by sea.

Port expansions are advantageous and comes with different opportunities, however, the growth of ports presents many challenges. For instance, a study by Balasubramanian (2018) on the Port of Melbourne expansion reveals that with the expansion and implementation of the development plan, there has been complaints by the Port People Inc., the society within the port of Melbourne and Garden city in Australia, that there is no transparency and involvement of the community in the port's expansion plan during the consultation procedures. With the insight of, Roh et al. (2016), clarifies that though the modernisation of ports is necessary, it does not come at no price. Hence, though it certainly improves the trade and financial performance of the economy, but it also brings

societal and ecological challenges, which may result in contradictions and congestion. Thus, despite their significant role in coastal development and the ocean, ports directly or indirectly affect green management of the seas and the seaside.

According to Balasubramanian (2018), the construction and development at ports present broad challenges to the sea habitats and environment. There are many adversities related to port expansions, and these include oil pollution from oil spills, air pollution, and the transfer of dangerous aquatic bacteria from one region to another. The anthropogenic threats of this include climate change, extinction of endangered species and habitat loss. Other researchers indicate that water pollution sometimes becomes a problem as contaminants from ballast water, cargo residue, oil waste, garbage disposal and petroleum spills are discharged (Hossain et al., 2019). These vulnerabilities will always present health hazards to the community.

Various authors have researched the ecological effect on water and air pollution caused by ship operations. Lun et al. (2016) state that air and water pollution are the major negative ecological impacts of shipping, and it is established that shipping is a significant source of a variety of harmful chemicals. Maritime activities such as bunkering may produce oil spills with dangerous effects on seashores, food chains, sediment and fishermen while anchoring, and this may cause permanent destruction to the environment. According to Lee et al. (2017), oil spills in an oil terminal are unavoidable, and port authorities must know this fact. Therefore, antipollution practices must be put in place, focusing on preventing spilt oil from getting to the seashores.

Recently port safety has become a common aspect of port management since it is impossible to have no accidents or sustain damage in a port where thousands of tonnes of cargo are handled. Also, with the increased knowledge of the adverse effects of port activities by consumers, most ports have adjusted to sustainability measures to keep their reputation. Thus, port authorities are confident that protecting the environment highly benefits them and the community at large. There has also been an increase in international regulatory bodies that advocate for positive environmental management. For instance, the International Convention for the Prevention of Pollution from Ships (MARPOL) focuses on chemical and other hazardous substance pollution

prevention, lessening the use of hazardous paints, ballast water treatment, reducing emissions from port activities and recycling (Lun et al., 2016).

According to PIANC (2014) cited in Balasubramanian (2018), the green port supports a long-term vision over a manageable environmental footprint, transparent engagement with stakeholders, willing sustainable participation and steady development in innovation and technology. Environmental management and corporate sustainability are sometimes used to refer to green management, and both concepts go beyond just reducing waste. Loknath and Azeem (2017) state that the basic principle of sustainability is making sure that you leave the world in a better state than you found it. Thus, rationality is one element that is consistent in sustainable practices. Sustainability encourages the use of ecological, societal and economic resources harmoniously to safeguard the needs of future generations, which is referred to as the triple bottom line (Kantabutra, 2019).

Ports should manage their operations and future development sustainably to cope with limited environmental space and intense interactions with their hinterlands. Sustainability can enhance green management by promoting green marketing strategies and environmental programs (Mishra, 2017). Sustainable measures encourage that port leaders continuously partner with shipping firms to decrease the ecological damage they produce. Therefore, sustainability can help ports achieve green management by promoting the reduction of carbon dioxide emissions for the sake of ecological conservation. Ports can also charge exorbitant amounts for shippers with high sulfur content emissions to motivate green shipping practices around the port (Roh et al., 2016). This is supported by Balasubramanian (2018). They suggest that many sustainable practices can be introduced for green management enhancement, for instance, implementing the use of low-sulphur fuels that burn cleanly, green materials and equipment, and ecologically harmless shipbuilding designs that have a good impact on green performances.

It's also recommended that consistent practice of port state authority for sustainable development, ship inspection is required, and green management of the port. Port authorities need to consult urban authorities to assess operations to ensure that nothing can unsettle residents around the port area, leading to future contradictions between the port and the residents. This will surely help

achieve green management since this will decrease any chances of protests, thereby avoiding noise pollution in the community (Roh et al., 2016). An example of authorities trying to use sustainability to encourage green management of ports is the government of India which implemented 'Project Green Ports' to preserve its environment (Balasubramanian, 2018). This entails securing necessary equipment for maintaining the environment, dust eliminating systems, introducing garbage disposal plants, sewage plant, wastewater treatment plant, establishing a biogas plant/renewable energy plant, enhancing the oil response facilities, control and discourage waste disposal into the sea (Balasubramanian, 2018).

Green management practices include optimising shipping routes to reduce carbon footprint, using alternative fuels, using eco-friendly ship paint and digitalising shipping document handling (Lee et al., 2017). These practices should be applied throughout the business and not only focus on the business's operational side (Chang & Danao, 2017). With this view, the following section discusses several green management practices that are relevant in port environments.

Company policies and procedures related to the organisation's goals and vision of sustainability and their enforcement thereof. They include environmental protection policies, ISO 14001 certifications, and management systems that support green practices. (Lun et al., 2016).

Shipping documentation: refers to all recorded documentation in the shipping operation and the possibilities of electronically handling it (Chang & Danao, 2017).

Shipping equipment: involves introducing eco-friendly innovations in equipment, methods and infrastructure such as battery technology to power the ships, eco-friendly containers, designing more efficient ship hulls (Lun et al., 2016).

Stakeholder cooperation/engagement: this relates to the active development of relationships between port authorities or executives and their tenants so that there may be a sensible partnership that focuses on achieving shared environmental objectives (Saeed et al., 2018).

Shipping materials and design: this refers to recover used shipping materials and improving their design to optimise recovery or disassembly procedures (Lee et al., 2017). Shipping design and

compliance minimise environmental damage from these activities to ensure compliance with environmental regulations (Lun et al., 2016). This practice also includes ship route optimisation and waste recycling (Lee et al., 2017).

2.2.5. The role of Sustainability in Port Performance and Social Impact

Research shows that sustainability has become a popular concept among many industries, it is still shallow in ports. However, those who practice sustainability activities such as sustainability training programs, sustainability awareness, sustainability reporting, and standards within their ports have improved stakeholder relations mainly with the authorities (Ashrafi et al., 2019). Though research shows that sustainability is considered as critical in most sports, it is still not utilised fully in ports' strategic decision-making procedures and operations. This is mostly because sustainability actions are considered costly by some while others lack sustainability efficiencies, and for others, they have difficulties implementing sustainable practices or their clients are indifferent about sustainable practices. Nevertheless, those who manage to implement sustainable strategies achieve growth, return on investment, corporate citizenship and risk aversion (Ashrafi et al., 2019).

Many ports report an increased return on investment motivated by reduced costs and increased efficacy through the use of sustainable practices and added value chain. Ports also gain non-monetary benefits by using sustainability strategies. For instance, they gain credibility and customer loyalty and improved stakeholder relations as a result of their ecological practices such as waste management and reduced emissions, water and energy conservation which in turn also cuts operating costs, thereby reducing port expenses (Ashrafi et al., 2019).

According to DeLong and Mehalik (2013), cited in Ashrafi et al. (2019), ports have a chance to achieve a sustainable value chain by forming partnerships or collaborating with other sectors or industries, thereby gaining traction and maximising return over a more extended period. However, it is hard to measure the exact impact that sustainability has on returns, but it is established that these practices may improve cost minimisation and profitability. That is why larger ports practise it as it will improve the return on investment and achieve or outperform other market players, thereby achieving port competitiveness and long-term advantages (Ashrafi et al., 2019). The

sustainable strategies also strengthen relations between societal, environmental, and economic states by practising green port activities, which minimise the port activities' damage to the environmental surroundings while enhancing human capital and capacity, leading to social cohesion. Therefore, embedding sustainability in a port will not only enhance organisational performance, but it will also create shared value.

Sustainability allows ports to add value to society and the environment while balancing profitability and development. Therefore, to fully realise the advantages of sustainability, ports need to implement these strategies in their day-to-day operations. Some research measures the benefits of sustainability by shaping the industry's success in the competitive market while being the centre of ecological and communally dependable transportation systems (Ashrafi et al., 2019)**.** Having discussed and situated the notion of sustainability in the port environment, the following section focuses on leadership which is critical in entrenching sustainability in a port. As sustainability is about the short and long term, the role of strategic leaders is key in ensuring that its implementation and alignment with organisational activities.

2.3. Upper Echelons theory

The origin of the upper echelon theory is in the seminal works of Hambrick & Mason (1984). This seminal work is clear that the Upper echelon theory suggests that "organisational outcomes – both strategies and effectiveness – are viewed as reflections of the values and cognitive bases of powerful actors in the organisation" (Hambrick & Mason 1984:193). It is equally essential to note that strategic leadership is about the symbolic role and the relational and social construction of top executives (Hambrick & Mason 1984:193-195). The Upper echelon theory focuses on the relationship between managers, organisational processes, and performance outcomes. This study will use this theory to understand how the Port Executives at the Port of Durban display or fail to display sustainable leadership practices. The theory is grounded on the assumption that key senior leaders at the Port of Durban influence the organisation's outcomes depending on their backgrounds, knowledge, expertise, experience, and individual traits or characteristics (Hambrick & Mason, 1984). Hambrick and Mason (1984) further argued that emergent issues in organisations are handled by senior managers whose strategic choices are highly influenced by their unique characteristics, knowledge, and experience. The Upper echelons theory seeks to understand why

organisations behave or act as they do (Hambrick & Mason, 1984:193). As a result, the strategies and organisational performance at the Port of Durban will reflect the values and cognitive bases of the top leadership within the organisation. However, the upper echelon theory is criticised in many ways. First is the criticism for using demographic proxies (e.g., age, functional background, top team size and characteristics) to infer strategic leadership behaviours. In this way, critics are not convinced that the upper echelon theory is strategic in the leadership study. The seminal work on the Upper echelon theory is also faulted as a "theory of group composition", – which fails to focus on the behaviour of strategic leaders and their effect on the organisational outcomes. With these criticisms in mind, the current study focuses on practices of ports executives related to sustainability in a port environment.

Samimi et al. (2019) maintained that the senior leaders' ability or kind of influence and support is controlled by team processes, incentives, environment and integration with others. Therefore, the external environment is not the only determining factor of organisational actions and outcomes; the individual senior managers also play a key role. This theory is beneficial in understanding the organisational outcomes by simply studying the leadership of that institution; competitors may also predict the strategic plans of their rival firms and selection of competent leaders (Hambrick and Mason, 1984).

According to Hambrick and Mason (1984), strategic decisions and choices are usually subjective and biased because they are made by humans whose ability to perceive the environment is limited to what they can see, belief, value, preferences, education and experience. Therefore, those individual leaders' characteristics are mirrored by their strategic choices, which influence the strategic performance of organisations (Hambrick & Mason, 1984). However, Hambrick (2007) criticised the theory arguing that it was not conclusive on the relationship between the traits of managers and the organisational outcome. Also, the assumption that similar characteristics yield similar strategic actions has not been confirmed. Despite these limitations, the theory explains how managerial perceptions and characteristics can influence the organisation's performance.

In addition to the standard Upper echelon model proposed by Hambrick and Mason (1984) original work, Hambrick (2007) also suggested two moderators of the relationship between management

traits and organisational outcomes: managerial discretion and executive job demands. The freedom of action that top managers have while making strategic decisions is managerial discretion (Hambrick and Finkelstein 1987). Manager characteristics will be better predictors of organisational outcomes if managerial discretion is high than if managerial discretion is low (Hambrick, 2007). The second moderator, i.e., executive job demands, refers to the top managers' levels of challenge encounter or complexities (Hambrick et al., 2005). Hambrick (2007) posited that when faced with a high level of challenges, top managers have less time to think about decisions, so they adopt mental shortcuts and depend on their backgrounds. As a result, he envisages that when managerial challenges are high, there will be a stronger relationship between managerial characteristics and organisational outcomes (Samimi et al., 2019). In situations where managers face lower challenges, the prediction is that their decision-making will be more comprehensive and depend less on their individual characteristics (Samimi et al., 2019). Therefore, there should be a weaker relationship between upper echelon characteristics and organisational outcomes (Hambrick, 2007).

2.3.1. Strategic Leadership

The business environment is constantly changing rapidly; therefore, organisations need competent leaders with advanced strategic leadership competencies. The study and scope of strategic leadership focus on a limited number of executives known as the top management teams (TMT), board of directors, and chief executive officers (CEO), who charge an organisation's overall duties. (Lord et al., 2016). In their Upper echelons theory, Mason and Hambrick identified strategic leadership as the absolute responsibility and reflection of top management teams (TMTs), focusing on these individuals (Hambrick, 2016). The upper echelon theory (UET), which is based on strategic leadership, is used in this study. Bass (2007) describes strategic leaders as a group of chief executive officers (CEOs) who develop policies for obtaining and integrating resources for a company. Kanyangale (2017) hypothesise a set of distinct capabilities that include anticipating, envisioning, strategic thinking, remaining flexible and empowering individuals to generate innovative ideas that contribute to high performance. Pitelis and Wagner (2018) defined strategic leadership as the ability to anticipate, predict, strategic planning and inspire others to formulate innovations that support the organisation's sustainability.

According to Kanyangale (2017), strategic leaders are vital in setting the long-term strategic direction of an organisation and ensuring that it is achieved. A strategic leader ensures the alignment of strategy with the mission and vision of the organisation, including its goals and objectives (Bailey, Mankin, Kelliher & Garavan, 2018). Pitelis and Wager (2018) define strategic leadership as an activity of clearly communicating and articulating the shared values and vision of the organisation down to low-level workers and decision-making ability with minimal supervision. Therefore, strategic leadership emphasises a leader's ability to anticipate, envisage, maintain flexibility, and think strategically while encouraging employees to create new ideas that lead to organisational transformations or change and performance improvement (Kanyangale, 2017).

Samimi et al. (2019) argue that strategic leadership involves particular competencies within a leader that enables them to assimilate new information and ideas through different learning processes and apply this knowledge to effectively provide solutions to complex situations in the external business environment. They further explain that such competencies will allow flexibility, enabling strategic leaders to re-adjust the organisation in response to uncertainties. The widespread consensus amongst scholars summarises strategic leadership as a combination of practices that include formulation of the long-term goals of the organisation; maximising the organisation's resources; human resources management, social responsibility, developing a culture of organisational sustainability and emphasising ethical values to support the long-term future of the business (Samimi et al., 2019). This definition encompasses most characteristics of strategic leadership and, therefore, was used for this study.

2.3.2. Levels and scope of leadership

The seminal work of Katz and Kahn (1966) brings to the fore the notion of levels or categories of leadership in organisations – the strategic, operational and tactical. First, "strategic theories of leadership are concerned with leadership 'of' organisations… and are marked by a concern for the evolution of the organisation as a whole, including its changing aims and capabilities …". A slightly different view is that strategic leadership theory also focuses on the dominant coalition or top "executives who have overall responsibility for an organisation, their characteristics, what they do, and how they affect organisational outcomes" (Finkelstein & Hambrick 2009:4). Strategic leadership is involved in strategic decisions. The characteristics of strategic decisions show that

these decisions are about the long term, complex in nature, affect the entire organisation in terms of scope of activities and involve considerable change. It is crucial to note that strategic leadership refers to the overall leadership of an organisation or division. Strategic leaders may use transactional punishments and incentives to achieve their company goals while focusing on the longer term. Therefore, building strategic leadership based on transformational factors is far more effective and efficient. While a strategic leader must provide a vision of the future and the idealised company, he or she does not need to be highly charismatic.

Second, tactical leadership focuses on the "here and now," with short-term decisions and risk management for immediate gains. This is a transactional situation. At the tactical level, leaders must balance team members needs and mission or situation needs. This frequently entails negotiating and cajoling followers to participate in order to attain the aim. It also entails building an environment in which they are willing to make sacrifices or contribute to the team because they have a strong sense of loyalty to the leader and the other team members. As a result, tactical leadership is highly transactional. This is because the leader does not have many transformative leadership tools at his or her disposal. At the coalface, the tactical leader works, and the tactical leader's level of idealised influence, or charisma, is the only factor truly under his or her control.

Lastly, building the systems and structures that enable the strategic leader's vision and objectives to become a reality is what operational leadership is all about. Organisations' unsung heroes are operational leaders. Why? Because they create the systems and structures that enable the strategic leader(s) to achieve their vision and objectives while also providing a framework for inspired action by the tactical leaders of the organisation. In other words, they develop systems to support the organisation's values and leadership and encourage a culture and behaviour patterns consistent with these values and leadership.

Operational leaders guide teams in analysing and comprehending the organisation's strategic and tactical realities. They must design the infrastructure and framework that will enable everyone to work tactically toward the organisation's strategy through the operational framework of processes, structures, systems, and incentives. To do so, they must comprehend the organisation's business and its technical and financial characteristics and limits. They also necessitate a thorough

awareness of the advantages and disadvantages of transactional and transformational leadership approaches.

2.3.3. Functions of strategic leaders

Samimi et al., (2019) classified the responsibilities of leaders and refined them into eight (8) managerial roles, which were mainly adopted from what scholars have discussed in the literature. This section discusses the eight leading roles and functions of strategic leadership as follows:

Making strategic decisions

Strategic leaders influence organisations through their participation in high-level decision-making processes (Hambrick & Mason, 1984). Upper echelons are involved in crucial organisational functions of planning, human resources management and budgets allocations; these are key and consequential to the organisation's health (Wang et al., 2016). Scholars have explored the roles of strategic leaders in making decisions regarding acquisitions, innovation and strategic change. According to research into this function, the strategic decision-making process is guided by a wide range of drivers, and such decisions have significant effects on organisational outcomes (Wowak et al., 2017).

Leiblein et al. (2018), characterised strategic decisions and their alternatives thereof due to remedying prior commitments and decisions. Therefore, it may also be necessary to examine changing patterns in strategic decision processes to acquire an in-depth understanding of strategic leadership, as these changes in an organisation's strategy could signify substantial efforts by leaders to change the organisation's direction.

Engaging with external stakeholders

Strategic leaders are responsible for building and managing partnerships with external stakeholders outside the organisation and perform ambassadorial roles to promote the brand and image of the organisation (Samimi et al., 2019). The external leadership role involves interacting and cooperating with external partners crucial to the firm in providing strategic advantages (Westphal et al., 2012). External relationships create a rapport with stakeholders, which is critical to avoid, mitigate or navigate crises (Jabbour, 2016).

Performing human resource management activities

Strategic leaders influence corporate performance through strategic human resource management systems (Samimi et al., 2019). They are also involved in fundamental human resources functions such as recruitment and selection, evaluation, compensation, and development of other employees (Anwar et al., 2020). Top-level managers are responsible for making the necessary appointments, delegating and evaluating work, and, if need be, dismissals where appropriate (Samimi et al., 2019). They also control and manage compensation and reward systems that influence their subordinates' behaviour and organisational-level outcomes (Anwar et al., 2020). These compensation incentives are administered differently depending on employee ranking, and therefore, inequalities may emerge among employees, affecting morale and negatively impacting firm performance (Ridge et al., 2015).

Motivating and influencing

Strategic leaders are also responsible for inspiring and motivating others in lower levels of management to achieve organisational goals and objectives (Kayangale, 2017). These leaders are more likely to gain a following from their subordinates through setting performance and ethical standards. This conduct is critical in unifying teams to work around a common purpose, motivating others, and encouraging followers to pursue a strategic vision of green sustainability (Samimi et al., 2019). This leadership style is a characteristic of transformational leadership and may impact organisational performance, innovation, or environmental sustainability (Kanyangale, 2017).

Managing information

Information management is a vital function for any organisation; it helps communicate the vision and mission of the organisation to employees and external parties clearly and effectively (Samimi et al., 2019). Therefore, strategic leaders are involved in collecting data, processing this data, and providing feedback to people within the internal or external environments of the business (Kanyangale, 2017). Leaders also incorporate this data or information in strategic planning, implementation, and decision-making processes (Samimi et al., 2019).

Overseeing operations and administration

Strategic leaders may establish policies and procedures to keep track of other organisation members (Kanyangale, 2017). This oversight is essential in ensuring that low-level employees comply with rules and regulations and achieve ethical and performance standards. The ability of these initiatives to influence reporting relationships, procedures, and controls can have a significant impact on strategy implementation, adapting to changing environments, and company performance (Wang et al., 2016). These oversight activities are essential to this function and crucial for strategic leadership because they set the organisational framework and influence the execution of initiatives (Kanyangale, 2017).

Managing social and ethical issues

In addition to performing oversight functions, strategic leaders are also responsible for guiding social or ethical issues, including environmental sustainability and corporate social responsibility (CSR) (Petrenko et al., 2016). These initiatives are essential in attracting stakeholder funding, reputation, and organisational performance (Tang et al., 2017).

According to Ghanem & Castelli (2017), a major ethical scandal is the accountability of strategic leaders. This function is therefore necessitated by increasing stakeholders' demands for higher ethical standards from organisations.

Managing conflicting demands

Strategic leaders also include conflict management and conflict resolution, whose outcomes promote collaborations amongst teams, which may increase employees' involvement in decision-making processes and ultimately improve firm performance (Samimi et al., 2019). Some conflict strategies employed by leaders include behavioural integration, transactive memory, leadership styles, and TMT and CEO shared experience (Kanyangle, 2017). Eisenhardt's (2017) research on power imbalances between Garg and co-CEOs and qualitative inquiry into CEO/BOD relationships may be valuable in understanding how strategic leaders perceive and reconcile conflicting information to make firm-level decisions.

2.4. Defining sustainable leadership

Before one gets to understand what sustainable leadership entails, it is essential to define leadership in general. First, leadership may be defined by an individual's values, traits, behaviour, authority, communication habits and charisma that support organisational objectives through others (Samimi et al., 2019). Therefore, an effective leader must possess traits including emotional intelligence to always make favourable decisions, with a sense of objectivity and motivation to achieve the desired results. According to Altman and Tushman (2017), leaders can motivate and inspire others in achieving clear organisational goals. Anwar (2017) defines leadership as the ability to guide, empower, and motivate others to contribute to the productivity and advancement of the organisation. They may also reorganise workplace functions, such as apportionment of resources and modifying communication patterns, to make it easier for employees to achieve organisational objectives (Ali, 2020).

Kanyangale (2017) argues that leadership is a social process whereby a person can encourage others to support him in a common goal without force or threat. For instance, leaders are understood to be those who influence society, people are ready to follow, and people look up to for guidance or instruction. Other scholars formalise the definition by explaining that leadership is when a group of people come together to reach a shared objective (Kanyngale, 2017).

Leadership is not a skill that can be taught to someone, though it can be mastered and improved through mentoring (Al-Shaiba, Al-Ghamdi, and Koc, 2019). There are different kinds of leadership styles mentioned in the literature, these include bureaucratic, autocratic, charismatic, laissez-faire, participative, relation oriented, task-oriented, transformational, servant leadership and transactional leadership, to name a few (Al-Shaiba et al., 2019). Different leadership styles have a unique impact on an organisation's performance. Some leadership styles support organisations in reaching their objectives, while others result in low employee morale and inconducive workspaces, impeding progress (Kanyangale, 2017). Therefore, the performance of an organisation is highly dependent on the type of leadership and its principles, including beliefs, morals, expectations and constraints (Samimi et al., 2019). Leadership styles refer to how leaders deliver their directives, implement plans, and motivate people towards shared objectives (Kanyangale, 2017).

Suriyankietkaew (2016) states that sustainable leadership retains and deepens the holistic knowledge that spreads continuously, ensuring a good effect on current and future operations. Sustainability leadership prefers to build internal employees rather than bring outside help, and this is done to keep employees or particularly to employee retention to promote employee loyalty and avoid employee turnover in the company. This will provide a company with a unique competitive advantage derived from the connection between long-term workers, allowing ideas and skills to be shared and retained within the company. Thus, by practising sustainable leadership, employees feel secure and satisfied, leading to the high productivity of the workers (Zulkiffli and Latiffi., 2016).

According to Suriyankietkaew (2016), sustainable leadership is based on seven principles, namely depth, endurance, breadth, justice, diversity, resourcefulness, and conservation. Depth means that it promotes the deep and broad nurturing of its employees in all fairness. Endurance refers to how it preserves and advances the most valuable aspects of education and life over time, yearly and from predecessor to successor. The breadth of sustainable leadership is seen by how it spreads and sustains, as well as rely on the leadership of others. This kind of leadership practices social justice and is for environment conservation and preservation, it deceases from exercising damaging activities on the environment and improves the surrounding ecological systems by educating others, it also encourages diversity among team members, it renews people and resourceful leadership that does not waste money nor its people and lastly, it conserves, meaning that it respects and builds the past in its quest to create a positive future. Thus, it honours the past in improving the future.

According to Zulkiffli and Latiffi (2016) sustainable leadership practices consists of complex management systems, principles, procedures and values that can create continuing organisational positive performance. In short, adopting sustainable leadership in a company will improve employee satisfaction with the firm and contribute to increasing organisational performance. Hossain et al (2019) suggest that a company can appeal to investors by maintaining a guided long-term perspective committed to adaptive and innovative measures. Suppose a firm is adaptive to changes in its market sphere and new competitors. In that case, employees are retained, training can continue, and the firm's image and quality will be maintained together with

its knowledge and stakeholder interests are recognised, resulting in improved economic growth and port performance.

For the purposes of this study, sustainable leadership will be defined as the ability of a leader to formulate and implement green strategies to reduce harm to the environment and influence other employees, to engage in these strategies to maintain the long-term profitability of the business.

2.4.1. Sustainable leadership pyramid

The sustainable leadership pyramid was adopted from the work of Avery and Bergsteiner (2011). This pyramid is centred on the 23 'honeybee' or sustainable leadership practices which were designed and arranged in the form of a pyramid to allow management teams to formulate interventions. These 23 sustainable practices may be divided into three groups in the pyramid that is: foundation practices, higher-level practices, and key performance drivers (Avery and Bergsteiner, 2011). The fourth tier on the pyramid represents the performance outcomes that contribute to sustainability:

Foundational practices - forms the lowest tier of the pyramid. This level comprises fourteen foundation practices, including programmes for training and development, succession planning, staff retention (avoiding unmitigated turnovers), valuing employees' experience and contribution to customer loyalty and positive labour relations (Avery and Bergsteiner, 2011). It also includes innovation ensuring ethical behaviour, long-term thinking, managing organisational change, financial market independence, promoting social and environmental responsibility, balancing multiple stakeholder interests, and ensuring that the firm is driven by a shared vision (Avery and Bergsteiner, 2011).

Higher-level practices- form the pyramid's second tier. Six practices are included here: decentralised and consensual decision making, creating self-managing workers, harnessing the power of teams, developing a trusting environment, forming an organisational culture that allows for sustainable leadership, and sharing and retaining the firm's knowledge (Avery and Bergsteiner, 2011). The pyramid was created on the idea that higher-level practices are facilitated and support emergence by putting in place relevant foundation practices.

Key performance drivers- these occupy the third level. Innovation, staff engagement, and quality are the practices that fundamentally provide what end customers experience and drive organisational performance. It is important to note that these performance drivers are interrelated (Avery and Bergsteiner, 2011).

Performance outcomes- Five performance outcomes that create sustainable leadership are included at the top of the pyramid: brand and reputation integrity, improved customer satisfaction, solid operational finances, long-term shareholder value, and long-term value for multiple stakeholders.

The pyramid is dynamic in all directions, which means that interactions between elements or practices occur not only from the bottom-up and top-down. Practices at the same level of the pyramid interact and, as a result, influence one another.

The Sustainable Leadership Pyramid serves as a baseline for evaluating a company's current practices (Avery and Bergsteiner, 2011). It illustrates a system in which the elements interact and influence each other in different ways (laterally or horizontally). For example, one of the higher-level practices, knowledge and retention, can be predicted to develop in the presence of certain other practices and to be impaired in the absence of them. People development, empowered decision making, long-term staff retention, and training are all practices that improve knowledge and retention. These practices interact with each other on both sides of the pyramid. For example, when recycling practices may interact with the profitability of a business, savings from recycling result in a boost in financial performance. Therefore, the practices at each level of the pyramid are reinforced by other practices at that level (Avery and Bergsteiner, 2011).

2.4.2. The Role of Sustainable Leadership Practices in Port Management

The question of how leaders practice sustainability is at the core of sustainable leadership practices. In this regard, sustainable leadership practices deal with the actions and interactions within and around sustainability. Practices represent patterns of repetitive social interactions, behaviours, and know-how to interact within a particular context.

According to Zulkiffil and Latiffi (2016), sustainable leadership practices improve workers' satisfaction, affecting workers directly. The introduction of workers' safety and improvement of working conditions and communal projects may improve the firm's social performance and credibility. Also, maintaining good relations with the communal people will promote the brand and build trust among stakeholders, together with increased sustainability reports which improve transparency and gain goodwill for the company (Rogers, 2016).

The recommended sustainable leadership practices include reducing economic and ecological risks in ports, port infrastructure and equipment upgrades to reduce operating costs and ensure the long-term viability of operations, and port safety and security, retention of workers, resource preservation and improving relations with the stakeholders as well as providing incentives for environmental management (Zulkiffil and Latiffi, 2016).

According to Hossain et al. (2019), workers' sustainability awareness and training initiatives exist in ports to integrate sustainability wholly as a fundamental value in their strategic planning. This can sometimes extend to training and career development for port workers and external stakeholders, such as teaching and training the community about the effect of excessive water usage by hiring a specialist to provide the training and teaching. Many ports have indicated that they hold sustainability awareness conferences for their workers, including managers and union members (Hossain et al., 2019). These ports guide their workers through all initiatives to improve and develop awareness and attitudes towards the environment. Most researchers claim that enforcing and encouraging ports to practice sustainability is a time and cost-effective measure.

Research done by most shows that ports with sustainability measures attract many workers as they are specified among the "best places to work". Also, the higher the level of cooperation among port stakeholders within the supply chain, the higher the sustainability of the whole supply chain and port (Ashrafi et al., 2019). Iqbal et al. (2020) also agree with this. Their paper stated that employee involvement is vital in environmental management programs since they will require knowledge and information to be competent in their work and improve ecological awareness for ports' long-term sustainability. They help ports respond fast to requests or a changing environment and consistently improve a business's operational performance and distribution network over a

longevity duration of sustainability with increased efficacy and service distinction. This is relayed by Al-Shaiba et al., (2019), who argues that through business process background, ports can mitigate risks and manage sustainable development of naval processes indicating the significance of informative dimensions and stakeholder engagement for the sustainability of port operations. They also emphasise the significance of staff involvement as it will reflect on the firm's profitability.

Sustainable practices of a firm include monitoring and upgrading of facilities continuously, process and quality enhancements from the workforce internally, active involvement and collaboration that may be reinforced through delivery mechanisms that promote resource efficacy. Sustainable practices can be viewed as new process innovation in the shipping and ports segments, where innovation is defined as a critical change that embodies new creative ideas that are not consistent with the current perception of port business and is intended to shape changes in the external environment. These innovative developments are a driving force behind the organisation's sustainability (Iqbal et al, 2020).

Sustainable practice can be identified by constant technical and technological upgrades of equipment and machinery, facility upgrades for the purpose of reducing activity costs, port sustainable construction building and surrounding area, the use of renewable and alternative energy sources as well as the development of port region facilities (Mccann., 2010; Rogers., 2016). Thus, significant development of ports has been realised as a result of wide-ranging factors which are apparently also sustainability measures (Al-Shaiba et al., 2019).

As said by some researchers, the mantra for sustainability is that companies "do well by doing good" (Al-Shaiba et al., 2019). Taking from this, one may say that developing seashores and creating employment in the city can lead to high efficiency and increase trade activities of the ports. Therefore, as stated by Al-Shaiba et al. (2019), the direction of the port can positively affect the city development as well as the port itself. This includes the health of the firm, capacity to achieve goals and develop plans that encourage the firm innovation. Also, sustainable firms practice ethical behaviour that can improve its reputation and promote a good attitude that fosters a culture of innovation, consequently ensuring the development of a balanced economy and

society (Rogers., 2016; Al-Shaiba, 2019). For instance, a port can promote ethical and ecological helpful practices such as recycling, and this will help the city and the port to achieve long-term cleanliness, thereby reducing pollution, meaning that the fishers can benefit from vast amounts of fish. In contrast, the port avoids conflicts with the community, and this will ensure their co-existence in the future where they can focus on improving their financial activities. Thus, this non-monetary act will position them both in an advantageous position.

Sustainability strategies and exercises can enable competitive advantage while reducing the harmful impacts of environmental operations (Kang and Kim, 2017). This will consequently provide possibilities for improving the company's competitiveness in a greatly competitive market. As cited by Kang and Kim (2017), sustainable elements enable cost and energy saving, risk management, capturing new customers, keeping brand reputation, maintaining moral values and less ecological effects, intent to continue and grow in the future, as well as new business ventures. Through consistent developments in SLT, the port can attain financial stability and constant growth in subsequent performance within boundaries of the ecological principles.

According to Kang and Kim (2017), green ports help conform to environmental rules and give the firm a chance to evaluate their own actions, engage workers in environmental concerns, and plan for future environmental development activities. Through the continued, environmental, and firm improvements of such actions can help ports reach possibilities to expand their internal operations and higher efficiencies.

Sustainable leadership practice in a port translates to continual development by all stakeholders involved. Ports need to efficiently attend to stakeholder grievances, worries or requests and practice dialogue on sustainable measures and plans because ports must keep up with innovations to satisfy stakeholder needs. Thus, the potential benefits influencing growth also include the constant improvement of quality service and creating service distinction through continued evaluations and developments. This can also better the port's credibility and reduce risk by being eco-friendly and creating a socially acceptable brand image (Kang and Kim, 2017).

Sustainable leadership is a shared responsibility that does not excessively exhaust resources and maintains and avoids damaging the surrounding environment (Hargreaves and Fink 2003). Most

researchers agree that sustainable leadership improves the performance of the business. According to Iqbal et al. (2020), sustainable leadership creates current and future profits for a firm while enhancing the livelihood of the stakeholders. For instance, a firm might offer a stock option to its employees to improve employee morale and improve quality. The employees will benefit from owning stock, and the company will benefit by getting quality products since the employees will work on increasing the stock value (Suriyankietkaew, 2016). Thus, everyone that is related to the firm gains from shared success.

Haroon et al., (2019) gathered evidence that shows that sustainable leadership is likely to contribute to the positive performance of businesses than any other leadership type. For instance, leaders do not aimlessly dismiss their staff and retain useful human resources in sustainable leadership. Retaining workers supports positive outcomes as it allows knowledge to be safeguarded, thereby supporting trust, quality and creativity while improving financial performance and employee and consumer satisfaction (Woo & Kang, 2020). Therefore, employees consider themselves part of the family, motivating them to work harder towards collective goals. This is concurred by the Global Sustainability Competitiveness Index (2020) which states that sustainable strategies increase access to valuable human resources since companies associated with sustainability are preferable to many and in addition, they promote identification of staff with the company which consequently results in improved staff morale, thereby increasing staff performance which will positively lead to consumer satisfaction. This is echoed by Iqbal et al., (2020) who claim that other stakeholders, specifically employees also gain from long term relations with a firm.

According to Rogers (2016) sustainable leadership is a magnet for workers and investors. He goes on to say that individuals are attracted to positivity, especially when it retains the ecological and social welfare. According to the Global Sustainability Competitiveness Index (2020) part of the requirements by stakeholders includes the firm's adherence to moral behaviour and eco-friendly behaviour as well as maintaining an amicable relationship with the community. In return, stakeholders support the firm by being loyal customers and investors might leave their dividends in the business while workers are ready to accept lower payments.

The GSCI (2020) also states that sustainable organisations improve stakeholder relations, including surrounding communities and civic groups such as non-governmental organisations. This is the best way to afford smooth operations since good relations guarantee easy access of "license to operate" and also minimises clashes. Minimal conflicts ensure reduced costs through quick approvals and deliveries of authorisations (Suriyankietkaew, 2016). Moreover, amicable relations with stakeholders avoids any kinds of boycotts by the consumers and helps in identifying future business partners or prospects (Suriyankietkaew, 2016).

Sustainable leadership enhances the firm's brand image. According to Rogers (2016) consumers consider a firm's environmental effect when deciding where to shop, they are likely to buy from firms that practice sustainable behaviours. Rogers (2016) claims that customers also prefer shopping from organisations that openly promote their communities, therefore, organisations perform well by doing good. However, enhancing the organisation's image can be meaningless if the organisation does not practise what it preaches.

According to Rogers (2016), promotion and exercise to conserve resources also influences employees as well as their family members and the community at large. This is concurred by the GSCI (2020) which also states that high brand value, credibility and corporate image are some of the outcomes of sustainable leadership. Strategic management of non-monetary issues separates a firm from other firms and promotes a positive image of the corporation with the consumers and other relevant stakeholders, thus giving the company a competitive edge over other companies. Iqbal et al. (2020) supports this, who claims that sustainable leaders are good at negotiating and forging binding and lifelong symbiotic relationships with various stakeholders. For instance, an organisation might select a supplier not just based on prices but because of other meaningful and beneficial advantages that long-term relationships with creative and dependable suppliers can provide to each party (Haroon et al., 2019).

Thus, sustainable leadership also increases a firm's competitiveness in the market since it helps build a company's image as well as practice risk minimisation. This is supported by the GSCI (2020), which states that innovation increases sustainability companies' competitiveness since they can capitalise on new ideas, try new challenges, and turn them into possibilities.

Sustainable management practices lead to the efficient operation of the business that streamlines effort and saves resources while improving workers' productivity and reducing cost (Rogers., 2016). Thus, increasing profitability of the firm. Reducing costs can mean doing simple things such as turning off lights in order to conserve energy. These efforts have a greater effect in the long run and will prove to be a worthy activity in the future. According to GSCI (2020) eco-efficiency results in low operating costs and improved life cycle, and optimisation of procedures lowers costs of adjusting to future changes in environmental regulations. This is in accordance with Rogers (2016) who states that assimilating sustainability in the organisation will better meet changing regulations timeously.

According to Rogers (2016), not only does sustainability reduce costs but it also improves the profitability of the firm. He argues that firms with high rankings in ecological, societal and governance factors succeeded more than those that didn't, by far. Most of all sustainable leadership ensures that the company thrives even after their departure. It goes beyond an individual's ability and connects the actions of the leaders to their forerunners and replacements (Rogers, 2016). It plans and prepares for a smooth leadership transition way before it even happens, this is done through the training of junior staff members and delegating of challenging tasks that encourage individual growth among the team members (Masri & Jaaron, 2017). This also regulates the frequency of successions so that employees are not negatively affected by cynicism that comes with a new leadership post (Ashrafi et al., 2019).

Thus, in all-natural facts sustainable leadership encourages environmental multiplicity and capacity. It fosters and recreates an environment that has the capability to stimulate ongoing development (Hossain et al., 2019). It allows people to familiarise and thrive in their complex environment by learning from each other's unique capabilities (Roh et al., 2016).

There is little information on ports that are already practising green management and its benefits to port expansion and port cities. Or if they have been successful in their attempt to adopt green management and to what extent. There is also less information on how the Port of Durban has aided in developing the city of Durban. The expansion of port activities has increased due to a rise in globalisation. This is concurred by Munim and Schram (2018:1), who state that the

“globalisation of different industrial production procedures has increased the significance of ports in the international supply chain operations”.

Research does not fully disclose the impact of sustainable leadership practices on the performance of ports in detail. Current port research concentrated on daily port activities, research on port-region connectivity has gone down significantly since the 1990s (Munim and Schram, 2018). Most research that has been done focuses on the benefits of port activities. There is a shortage of information regarding comparative studies on a global scale due to lack of relevant information. There is an inadequate amount of comparability studies that show the projected effect. There is not enough research on long-term development strategies of universal ports. Most studies focus on specific individual countries or ports. There is no disaggregated measure of city-related port traffic and port-related urban traffic (Munim and Schram, 2018). This also applies to the case of Durban, where no follow up of the development or expansion of the Port of Durban has been done since 2018.

Though most ports across the world have signed agreements for environmental sustainability and green management, there is no indicator that these practices are actually being adopted or concrete evidence that suggests so. Signing the agreement itself is considered compliance but in reality, there is very little to show for this compliance and actual intentions of strengthening green management practices. For instance, the PERS certification, a region-specific standard certification for ecological management, is accessible online to all countries, but only 46 ports worldwide have got it (Hossain et al., 2019; Ashrafi et al., 2019; OECD, 2011). There are two important issues in this study on the sustainability practices of strategic leaders at the port of Durban in South Africa. First, it is noteworthy practice researchers aim to uncover the specific actions and interactions to understand practice simply as "what actors do".

In this regard, practice refers to customary action; habitual performance or a series of similar acts (e.g., rising early, the practice of daily exercise). Second, there is a need for clarity of the actor engaging in the practice as organisations have many internal and external actors. As actors in a port environment are involved in reproducing a series of practices within a port's organisational life draws on the precise set of rules and resources fundamental for those practices. The current

study examines how strategic leaders or members of the port executive engage with social and physical context in the daily activities that constitute the practice of sustainable leadership. It is also worth noting that, as a result of the emphasis on practices as "shared behavioural routines," the individual is no longer at the centre of the analysis. Practices, instead of individuals, become the units of analysis that matter most. Lastly, the various tools, rules and procedures of work are referred to as practices. In the case of sustainability, practitioners are involved in, or seeking to influence, sustainability-related activities, processes, or outcomes. The focus on strategic leaders or members of the upper echelon as the actors is very important to develop research which focus more solidly on the pattern of what practitioners of sustainable leadership at the apex of an organisation actually do. In understanding what strategic leaders of the port of Durban actually do in terms of sustainability, it is important to always bear in mind that an organisation comprises three main constituents: actors, collective social structures, and the practical activities they engage in. The next section focuses on the competences of sustainable leaders.

2.4.3. Competencies of sustainable leaders

As this study also seeking to unravel the key competences of sustainability in a hybrid port, it is key to understand the concept of competencies in general. Notably, the term "competence" has a variety of definitions and descriptions. in literature that it is impossible to cover all the variations.

Schroeter (2008) assert that competence refers to a capability and/or a potential ability to function in each situation. It is different from competency which focuses on an individual's *actual performance* in a certain context. In this regard, before one is expected to achieve competency, one must first demonstrate competence. According to Schroeter (2008) the term competency is frequently used to define the knowledge required to do a specific task. Competency is determined by comparing current work functioning to established performance criteria developed in the workplace for a specific role and setting (Bryne and Waters, 2008). Competency encompasses more than just knowledge; it also incorporates technical, communication, and problem-solving abilities.

The current study focuses on competence which makes one capable of fulfilling his/her job responsibilities. Competence is the ability to successfully perform a certain task, action, or

function (Trakšelys, Melnikova and Martišauskienė, 2016). Competencies are used to set distinctive standards within disciplines and specialties. The acquisition of competencies can be through talent, experience, or training.

It is critical to elaborate that competence is the capability to perform well in a variety of situations including in differing and unexpected contexts. However, there is lack of evidence that good performance is always a reliable indicator of high levels of competence even if performance can be measured (Schroeter, 2008). For example, a false positive arises where a nurse answers a question properly on an exam but based on a false premise (Schroeter, 2008). A nurse who has the skills or expertise to perform a task but fails to do so correctly in a real-life situation is a false negative example. These examples demonstrate that performance alone may not be a sufficient indicator of competence. Competence can be defined in two senses (Schroeter, 2008). The first is competence equating to performance, which is the ability to perform tasks, and the second is competence as a 'psychological construct.' That is, the ability to effectively integrate cognitive, affective, and psychomotor skills when executing a task (Schroeter, 2008).

Competence does not exist in a vacuum. Mentoring, ethics, system and environmental issues, and competence evaluation are only a few of the many factors that have been recognised as having an impact on competence (Schroeter, 2008). First, mentorship is a highly effective tool for developing competence, self-awareness, leadership skills, and morale. For some time, the United States military has used mentoring successfully to promote competence (Johnson and Anderson, 2019). Mentoring is also common in many business organisations to foster competence in the workplace. The strategy of using mentoring groups or circles can assist mentees in completing two tasks. These are for the purpose of establishing important development goals and developing competence and character in order to achieve those goals.

Second, system and environmental issues are also key in developing and maintaining competencies (Schroeter, 2008). While there is a demand for more managers and leaders with sustainability competences in the business world, it is not clear whether the existing organisational leaders are competent to practice sustainability. The development and maintenance of competence is an important part of practice. The current organisations such as ports need more leaders who

are strategic in the business domain and competent practicing sustainable leaders. The organisational context is key to creating an environment (e.g., philosophy, sense of environment consciousness, emphasis on quality, safety, collaboration across traditional boundaries, accountability, recognition) for different leaders at the organisation's apex to practice sustainable leadership to their full potential. Thus, the type of organisational system in which one works and learns can have an impact on one's ability to build competence. Learning and competence appear to thrive in environments where employees feel empowered and able to freely learn.

Third, it is important to understand the practitioners who practice competently and second; there is a component of being ethically competent (Schroeter, 2008). When reducing practice errors and retaining employees who are conscious of sustainability, ethical competence is essential. Intervening in high-risk situations may be motivated by practice standards, professional duty, beliefs, and ethical values. There is a responsibility to report sustainability errors when they occur, where the ethical imperative enters sustainable leadership practice. Ethical practice is critical to sustainable leadership because it provides an action guide and an alert to take appropriate action in the event of incompetent, illegal, unethical, or impaired activity (Schroeter, 2008). The concept of ethics as a guideline action is inherent in the practice of the triple bottom line view of sustainability. Employees may feel powerless to practice sustainability if their top managers or organisational system perceives a lack of support.

Lastly, the development and maintenance of competence is also affected by how competence is evaluated in an organisation (Schroeter, 2008). In nursing, licensing laws and professional standards ensure practice qualification, licensing examinations for practice admission, continuing education (CE) for practice license renewal, work-based orientation programs, and graduation from a recognised program of study (Schroeter, 2008). In the domain of sustainability in organisations, the competence of employees or managers may sometimes be included as part of individual performance criteria, sustainability guidelines, Laws and rules are often considered to maintain the lowest minimum standard for practice (Schroeter, 2008). Patients are protected by licensing rules, but professionals are not held accountable to a skill level that promotes quality. Competency is a complex construct that necessitates a variety of measures. Competent practise requires adherence to external competency measures as well as ethical reflection on competence.

A review of the overall issue of competence must also include the method through which competence is evaluated. To ensure competence in the practice of sustainability, there must be reliable methods for assessing this practice.

Currently, to validate skills, knowledge, and abilities, a variety of methods are used to evaluate competence, including continuous competency assessment, simulation, portfolios, skills checklists, peer and self-evaluations (Schroeter, 2008). Portfolios are a "portable mechanism for evaluating competencies that may otherwise be difficult to assess, such as practice-based improvements, use of scientific evidence in practice, professional behavior and creative endeavors" (Schroeter, 2008).

Self-reflection is the first, ongoing, and integral step in ensuring competence (Burns, 2016). When speaking broadly of competency as the skills, knowledge, and values required in carrying out one's function, or more precisely defined as the capacity to perform a given skill correctly, self-reflection is essential (Trakšelys, Melnikova and Martišauskienė, 2016). Reflection is linked to experience and job role and intimately influenced by one's physical, spiritual, emotional, and intellectual well-being. Self-reflection on practice can take various forms, but it is always an active process. Competence is a complex notion to define and difficult to measure. Although it may infer competence, direct measurement of performance is not always a robust indicator of competence. Suppose competence is viewed as a normative term that encompasses more than just task performance. In that case, indicators that suggest the possession of a broad variety of normative items, such as cognitive, emotional, and psychomotor skills and capacities, should be considered (Johnson and Anderson, 2019; Trakšelys et al., 2016). It is suggested that if this term is to be useful in measuring the degree to which top management can be considered as safe practitioners with an adequate skill and knowledge base to practice sustainability, these elements need to be integrated into the concept of competence (Burns, 2016; Trakšelys et al., 2016). A holistic definition of competence is critical, especially since sustainable leadership requires complex knowledge, performance, skills, and attitudes. This could enable greater acceptance of the concept and pave the way for the development of competency standards and tools for evaluating sustainable leadership practices.

Knight and Paterson (2018) considered competencies as a behavioural approach to emotional, social, and cognitive intelligence while The British Standards Institution (2020) described competencies as a combination of skills, knowledge and attitudes. Strandberg (2020) argues that sustainability leadership competencies relate to a leader's knowledge, skills, abilities, and personality characteristics. There is a strong correlation between leadership competencies, organisational performance and corporate social responsibility (The British Standards Institution 2020). Some researchers have emphasised the need for sustainability leadership competencies, and this has led to a focus on which leadership competencies are most appropriate for sustainability. Sustainability competencies are a complex of skills, knowledge, and attitudes that enable successful task performance and problem solving in the context of real-world sustainability challenges, problems, and opportunities.

With this view, Strandberg (2020) presented the five core competencies of sustainability that prepare HR for developing sustainable leaders:

Systems-thinking competence

This refers to a leader's ability to attain holistic thinking; a sustainability leader understands the system of relationships in which business is embedded, i.e., industries; supply chains; regions; cities; and ecosystems (Strandberg, 2020). Leaders that are systems thinkers are aware of the context of a problem and how it relates to broader trends, and often have multidisciplinary backgrounds that combine technical and creative fields (Strandberg, 2020). They also have expertise in systems management principles such as resilience and managing for emergence. They also have the capability to analyse complex systems in a variety of sectors (society, environment, economics, etc.) on a local and global scale, considering systemic features and problem-solving frameworks (Knight and Paterson, 2018). To understand present environmental concerns and the fundamental causes of complex sustainability problems, system-thinkers assess the direct and indirect impacts of a variety of inputs or interventions on the system (Strandberg, 2020). Leaders that are competent in systems thinking can analyse sustainability issues across several domains (or sectors) and scales (from local to global), using concepts such as systems ontologies, cause-effect structures, inertia, cascade effects, structuration, feedback loops, etc. They can articulate the importance of systemic thinking in addressing sustainability issues. Finally, these leaders are able to describe how various professional activities contribute to or mitigate/solve sustainability issues.

Sustainability literacy/ Future thinking (Anticipatory) competence

Leaders that are well-versed in sustainability are continually aware of emerging environmental, social trends, risks and opportunities these trends create for business (Strandberg, 2020).

They understand the concepts of corporate social responsibility, its relevance to society, and how sustainability is critical for an organisation's economic performance (Yarbrough, 2020). They may also be involved in reviewing green strategies of peer organisations by undertaking environmental and social cost accounting or employing scenario planning, back-casting, hot spot, and materiality analysis tools (Strandberg, 2020). This allows them to revise their own strategies for sustainability and business models and gain considerable competitive advantage.

Anticipatory competence also enables those in leadership to forecast through a sustainable outlook that anticipates and prevents harmful environmental consequences (Knight and Paterson, 2018). Therefore, leaders must be able to analyse, assess, and communicate the long-term future of various sustainability challenges, such as inter-generational equity and unintended consequences (Strandberg, 2020). Competent leaders in futures thinking can anticipate how sustainability problems will evolve or occur over time (scenarios), considering inertia, path dependencies, and triggering events; in addition, creating and crafting sustainable and desirable future visions, taking into account evidence-supporting alternative development paths. Finally, leaders can foresee how specific jobs or activities will change over time, and how various operational activities will contribute to or mitigate future sustainability issues.

Values Thinking (Normative) Competence

This refers to competent people in value thinking, are capable to specify, compare, reconcile, apply, and negotiate sustainability values, goals, target, principles, informed by concepts of justice, responsibility, equity, etc., in a variety of processes such as visioning, assessment, and evaluation (Evans, 2019). This is a leader's ability to clearly articulate, convey, and apply sustainability objectives (Yarbrough, 2019). Leaders need to be able first to evaluate the current ecological issues and create a more sustainable vision through innovation (Guia, 2020). The magnitude of sustainability challenges necessitates a fundamental reengineering of business and leaders must develop innovative ways to redesign products and processes that create both business

and social value (Strandberg, 2020). Employees are encouraged to engage in social entrepreneurship, and interdisciplinary teams are given priority (Knight and Paterson,2018). Therefore, normative competence aims to evaluate sustainability challenges in a way that balances organisational performance, social-ecological integrity, and the ethical requirements of sustainable development (Brundiers et al, 2020).

Strategic thinking competence

Strategic thinkers can design and implement systemic interventions, transformative actions, and sustainable transition strategies that account for unintended consequences and cascading effects (Evans, 2019). They can develop deliberate plans that leverage assets (carriers) and stakeholder coordination (alliances) to overcome systemic inertia, path dependencies, and other barriers to the desired objectives. According to Strandberg (2020), skills in strategy allow leaders to design, implement interventions and transformative strategies toward positive sustainability. Leaders should link learned ecological principles to green initiatives that enable shifts toward a sustainable future (Strandberg, 2020). Strategic leaders should also look to forming meaningful relationships with external entities. An organisation and its operations do not exist in isolation, a significant portion of a business's environment is influenced by external forces hence the need to form strong partnerships with suppliers, customers, and relevant stakeholders (Knight and Paterson, 2018). Companies benefit from collaboration because it allows them to build social capital, explore new market opportunities, and shape the environments in which they operate (Guia, 2020).

Interpersonal (collaboration) competence

This refers to a leader's ability to inspire, motivate and facilitate collective and participatory sustainability problem-solving (Strandberg, 2020). The ability to enable, motivate, and facilitate collaboration towards sustainability is referred to as interpersonal competency. This requires core skills related to project (group) management, deliberation, communication, collaboration, negotiation, empathetic listening and engagement in teams and with diverse groups of stakeholders. Therefore, leaders need to understand and critically evaluate the differences that occur across social groups, cultures, individuals and communities (Yarbrough, 2019). Interpersonal competence is a key component of the other competences, which all rely on collaborative and inclusive problem-solving processes (Strandberg, 2020). A leader with

interpersonal skills is aware of his or her own emotions and motives, as well as those of others. As a result, such leaders see themselves and their work as part of a larger purpose, which drives them to harness business to improve society. According to Strandberg (2020), co-workers and external stakeholders benefit from emotional intelligence because it fosters resiliency, trust, and reciprocity.

Integrated Problem-Solving Competence

Guia (2020) posit that as sustainability issues relate to a wide range of issues, integrated problem-solving competence is key for strategic leaders in their day-to-day practices. This calls for familiarity and ability to apply different problem-solving frameworks to complex sustainability problems and develop viable solutions. At the core of this competence is the ability to meaningfully integrate problem analysis, sustainability assessment, visioning, and strategy building. This competence also enables strategic leaders to define the necessity for integrated problem-solving activities and how the various competencies enable this effort to foster sustainability ((Pálsdóttir &Jóhannsdóttir, 2021).

2.5. Previous research on sustainable leadership in South Africa

Dzwairo, Nombela and Perumal (2017) conducted a study to investigate the role of sustainable leadership within organisations and how this sustainable leadership impacts desired organisational outcomes or performance. They also explore the relationship between sustainable leadership and gender. In their study, Dzwairo, Nombela and Perumal (2017) review the literature on sustainable leadership before and within the twenty-first century, by using the following distinctions: (1) selected dynamics attributable to socio-demographics, (2) the role of cultural norms and values in leadership practices and processes within organisation, and (3) implications and barriers that skew gender and leadership bias. Their research was mainly based on a review of existing literature where data was primarily collected.

Their findings concluded that, while progress has been made in addressing social equity issues, particularly gender equality, more work still needs to be done by looking for more opportunities for women to engage in, contribute to and benefit from sustainable development (Dzwairo, Nombela and Perumal, 2017). Offering fresh opportunities to women will enable them to occupy

leadership positions and allow them to become participants and agents of change. They discovered that women's full and equal participation in decision-making and management at all levels should be supported by the removal of barriers to their full and equal participation in decision-making and management (Dzwairo, Nombela and Perumal, 2017). Therefore, integrating socio, economic and ecological discussions with the concept and practice of development will enhance the view to advancing equitable, inclusive, and sustainable development (Dzwairo, Nombela and Perumal, 2017). This will be crucial for women, particularly those in positions of leadership. Furthermore, promoting environmental integrity conversations would help to foster an environment that is favourable to sustainable development (Dzwairo, Nombela and Perumal, 2017). Discussions that highlight women's capabilities to harness, develop, grow, and promote dialogue within the occupancy of gender and sustainable leadership have affirmed this (Dzwairo, Nombela and Perumal,2017).

A study by Khotsa and van Rooyen (2020) on *Sustainability Leadership as a Requisite Skill for Waste Management in the South African Post Office: A Case of the North Region*, argue that accountable waste management practice is increasingly becoming a challenge to many service industry organisations with a particular focus on the South African Post Office (SAPO). The primary objective of this study was to establish which strategies are effective in this area and to recommend sustainability leadership acumen that may be employed/developed to ameliorate the impact of waste in the postal sector in similar settings. Khotsa and van Rooyen (2020) argue that SAPO requires effective strategies that will improve environmental sustainability by the very nature of its business. Such strategies should be integrated into operations as part of its comprehensive waste management intervention plan. Efficient waste management practice requires significant sustainability leadership. Their study found that to enhance operational strategies against waste management, the SAPO had developed waste management policies which should be operationalised to mitigate possible negative environmental impact(s) associated with postal services. Their research was also based on a study that was conducted in the SAPO (North Region). The study investigated if the SAPO's waste management policies are executed by sufficiently capable sustainability leadership. The study was carried out through secondary research and included the analysis of documents obtained from the North Region headquarters in

Limpopo, South Africa. Much of the research was conducted "*ad locum domicilii*" (at the place of the respondent).

Their study recommended that the SAPO improve sustainability leadership proficiency to implement effective waste management strategies that should be affected throughout their postal outlets. They concluded their study by providing specific suggestions to make the SAPO an environmentally accountable institution contributing to South Africa's green energy plans to achieve the United Nations sustainable development goals. These suggestions include increasing employee awareness of the importance of waste disposal, providing merit awards to postal outlets that comply with waste disposal policies, and allocating waste dumping spaces at the branch level.

Another study by Fatoki (2021) on *Sustainable Leadership and sustainable performance of hospitality firms in South Africa*, investigated the link between sustainable leadership and sustainable performance of hospitality companies. To assess sustainable performance, social, financial, and environmental indicators were used. The cross-sectional survey method was utilised to collect data from 192 respondents in the study, which used the quantitative research method. Data analysis methods included descriptive statistics, Pearson correlation, and regression analysis. The results revealed substantial positive relationships between sustainable leadership and the social, financial, and environmental performance of hospitality firms. According to the results, there is a substantial positive link between sustainable leadership (SL) and sustainable practices (SP). In theory, the study linked company financial and non-financial indicators to sustainable leadership. The study linked sustainable leadership to sustainable performance (social, financial, and environmental measures), not simply financial performance. This offered a comprehensive picture of how SL can affect firm performance. As a result, the study's findings demonstrate that a sustainable leader would enhance not just a company's financial success, but also its social and environmental performance. A sustainable leader will be able to create value for all stakeholders, not just shareholders (Fatoki, 2021). The study contributes to empirical research on sustainable leadership and company performance, particularly in the context of hospitality firms in developing countries. The research provides several ideas for improving hospitality firms' sustainable leadership. This includes SL training for business owners, managers, employees, and vendors. In addition, (Fatoki, 2021) suggested that hospitality firms should assess performance by using both

financial and non-financial indicators. The operation and performance of hospitality firms should incorporate sustainability practices and reporting. The study recommended that leaders develop sustainability policies and guidelines for their organisations and introduce a reward system in hospitality firms that focuses on sustainable leadership and performance. Thus, this study was essential in reflecting on some of the practical measures to improve sustainable leadership practices.

2.6. Chapter summary

Sustainable leadership often relates to a variety of practices of green management or environmental management embedded in keeping the balance between people, profitability and the safeguarding the planet while achieving growth all at once. Sustainable leadership aims to accomplish good outcomes for firms and other stakeholders for a longevity of time without harming the environment or its inhabitants. Thus, it is the pursue of current developmental long-term activities without jeopardising future generations to come. Implying that SL considers both the current situation and the one to come, exploring all envisaging prospects of a single action. Research shows that companies with strong sustainability measures have outperformed those that do not and they have managed to reduce expenditure whilst making important strides in delivering service and environmental conservation. Sustainable leadership can bring together strategies to ensure that positive performance correlates to the firm, the environment, and society. However, it is also apparent that sustainability is an ever-changing concept that may differ in different contexts and is used by businesses to plan and make decisions. Thus, sustainability in management has various corporate and social responsibility, and research shows that larger ports find it easier to implement sustainability in their core competences since they have higher capacity, while smaller ports struggle to do the same. Having discussed the notion of sustainability, sustainable leadership in general and within the context of a port, the next chapter focuses on the research methodology used in this study.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1. Introduction

The chapter presents the research methodology used for the study. It aims to discuss the methodological processes followed to address the key research objective to identify sustainable leadership practices that are displayed or not displayed by Port Executive. Firstly, the chapter discusses the research design of this qualitative study. After that, it focuses on sampling, description of research participants, data collection procedures and interviews. The research process discussion will also entail data analysis, research quality control, and research ethical standard. Finally, it will unpack the limitations of the study and then the concluding summary.

3.2. Research Philosophy

Saunders et al. (2016: 726) defines research philosophy as a "system of beliefs and assumptions about the development of knowledge and the nature of that knowledge in relation to research". Research philosophy is selected based on the researcher's perceptions and assumptions which impact the research strategy, research methods and interpretation of findings. Within the field of business, the main research philosophies are:

- *Positivism* - uses scientific evidence such as experiments and statistics, to produce law-like generalisations.
- *Critical realism* - uses elements of positivism and postmodernism to understand social constructs and suggest recommendations to address social problems.
- *Interpretivism* -argues that people are distinctive from the phenomena as their actions influence the outcomes.
- *Postmodernism* - highlights the role of language and power dynamics when challenging traditional ideas with alternative marginalised views.
- *Pragmatism* - this approach supports the idea that concepts are relevant where they support action. Therefore, the approach is non-restrictive allowing the researcher the flexibility to make changes or adjustments where necessary.

An interpretivist philosophy is utilised in this study because the researcher sought to gain in-depth insight into the sustainable leadership practices that are displayed or not displayed by Port Executives at the Port of Durban and how they reinforce these practices.

3.3. Research Design

A research design is the blueprint that guides how the research project will be conducted, it informs the procedures to obtain relevant information and guides the structure used to solve the research problems (Saunders et al., 2016). A research design can also be explained as a procedural plan used by researchers to supply a detailed response to the key questions and objectives of the study in a more accurate, economical and trustworthy manner (Creswell, 2009). Creswell (2009) presents a research design as a primary plan used by the researcher to funnel to activities of gathering relevant data.

There are mainly three types of research design namely descriptive design, explanatory design, and exploratory design. Descriptive research design answers what and how, explanatory design explains the subject of the research and thereby answers what, why, and how and the exploratory design explores the subject matter thus also answers what and how. This research adopted exploratory research design.

3.4. Exploratory Research Design

Exploration research is conducted to gain new insights and knowledge on the study phenomenon (Creswell, 2009). Exploratory research design in this study helped in exploring new problems surrounding sustainable leadership practices in the management of ports. Considering that there are no studies that have been done in exploring the issues surrounding Port Executives (PE) in their leadership practice at the harbour since it investigated the background of the research problem. This design also made it possible for the researcher to conduct an in-depth exploration to inquire from Durban port leadership on the sustainability practices they have adopted. Hence, the exploratory study provided the researcher with an advantage to understand the views of participants' approaches to sustainable leadership to explore practices being both engaged and neglected.

3.5. Research Approach

There are three broad and well-known approaches to research: qualitative, quantitative, and mixed methods. Quantitative research deals with statistical values to measure and express numerical explanations that represent specific variables defined by the study objectives (Saunders & Tosey 2013). According to Creswell (2009) this renders data collected using quantitative research statistically reliable and the results of quantitative research projectable to populations. Qualitative research on the other hand aims to provide detailed textual information generated from views and interaction with participants towards understanding a particular phenomenon (Creswell, 2013). So unlike quantitative data, which deals more with statistical data, qualitative data is descriptive in nature, it utilises information that can be gained through observations, focus groups, case studies or interview questions (Jovancic 2019). Mixed methods combine quantitative and qualitative research. This study used the qualitative research approach since it sought to explore the leadership role of sustainable leadership in facilitating development and growth in the Port of Durban. Qualitative research was more suitable in providing answers to questions such as why and how, to the whole phenomenon.

3.6. Research methodology choice

This study utilized qualitative research approach. Qualitative methods as a research approach offer a plethora of benefits. For starters qualitative data collection methods are an excellent way to gain insight into the participant's thoughts and behaviour not possible with quantitative research (Creswell, 2015). Data gathered through qualitative data collection methods can be utilised to formulate predictions and explore crucial information on the phenomenon in a more detailed manner (Flick, 2018). Qualitative data collection methods are usually concerned non-quantifiable data which includes thoughts, feelings, sounds, and words. It is often seen as more subjective but allowing a greater depth of understanding (Saunders et al., 2016). Thus, because of the flexibility of the approach, in the case that useful insights could not be captured in the study, interview questions were modified to better understand how sustainable leadership practices impacted the Port Executives in the Port of Durban.

This research followed a qualitative research methodology as the researcher sought to gain an in-depth understanding of the sustainable leadership that are displayed or not displayed by top executives at the Port of Durban.

3.7. Research strategies

According to Sanders et al., (2016:177), a research strategy is a set of methods that may be used by a researcher in answering their research questions. Thus, a research strategy assists a researcher in achieving the aims of their study. These research strategies include surveys, action research, grounded theory, case studies and narrative inquiries. This study is a phenomological study. It employed an exploratory method to determine which sustainable leadership practices are displayed or are not displayed by Port Executives at the Port of Durban.

3.7.1. Observation

Observation is one of the most passive qualitative data collection methods. Debois (2019:1) defines observation as "a systematic research method in which researchers look at the activity of their subjects in their typical environment". Though observation may take many forms including participation, it mainly involves studying participants from a safe distance so as not to influence the outcome of the results. In observation information can be captured that participants may not think to reveal or see as important during interviews or focus groups.

In this type of data collecting method, the researcher captures information by taking down notes, video or audio recordings, and photos of what will be transpiring in the natural setting. It is a well-known fact that human memory is deceptive and with the passage of time things start to become blurry and forgotten thus the need to capture data for future referencing. Observation as a data collection method have various benefits, as participants are observed in their normal environment, they are more likely to react in a realistic way thus the data collected is first-hand and less biased.

Also from observation, data can be gathered where intervention is considered unethical and cooperation from participants is unlikely. However, if a researcher is compromised the participants may start acting in a manner they think the researcher expects hence the results become biased. Also in observation since it is carried out in a natural setting, environmental influencers can be difficult to control on the part of the researcher hence rendering the results invalid.

3.7.2. Open-ended surveys or questionnaires

Open-ended surveys or questionnaires are other methods of collecting data in qualitative research. Debois (2019:2) regards a questionnaire as "an instrument for collecting data which always involves asking a given subject to respond to a set of oral or written questions". A questionnaire may be open-ended or multiple choice but as Dillups (2020) notes, "open-ended surveys allow the respondents freedom and flexibility when providing their answers" in research unlike in closed-ended surveys where a respondent is offered an option to choose from a set of predefined answers. This type of research method can be administered physically to a participant through mail, sent via email or telephone.

Questionnaires have the advantage in research to collect large data samples from many people in a short period of time and in a relatively cost-effective manner. However, when using questionnaires, there is a high chance that some questions will be entirely ignored, left unanswered or falsely answered. The issue that different participants may have different interpretations of a given set of questions may be the greatest challenge in this data collection instrument.

3.7.3. Documentary analysis

This is also known as secondary data analysis and is a qualitative data collection method which entails extracting relevant data from existing documents. Secondary analysis thus involves the researcher working on existing data that was collected by someone else for different purposes. On the same note, the same researcher who collected data after analysing it in a primary study may decide to work on the same data but answer different research questions. This means that the same data set can be a primary data set to one researcher and form secondary data to the same researcher or others (Creswell, 2009).

According to Lou (2020) secondary analysis is more advisable when the researcher want to synthesize existing knowledge, analyse historical trends or identify patterns on a large scale. Thus, using secondary data is more economical as the data analysed is already in the reach of the researcher, there is no need for transportation expenses, office space, equipment, and other overhead costs. This also gives the researcher more time to analyse data than being out in the field, hence have a rich research outcome. However, secondary data may not be able to answer the

researcher's specific research questions or have detailed information that the researcher would like to have (Creswell, 2009). There may be greater chances that the information may not have been collected in the geographic region or during the years wanted or within the specific population that the researcher is interested in studying (Creswell, 2009).

3.7.4. Interviews

Interviews are a conversation-based inquiry whereby questions are utilised to inquire relevant study information from participants to respond to the key objectives of the researcher. The most common type of data collection methods in qualitative research is one-on-one (or face-to-face) interviews (Willamson, 2018). In this instance the researcher collects data directly from participants in line with specific interests, the interview can be "informal, unstructured, conversational, and even spontaneous [as if talking to a friend], or it can be semi-structured and standardized to a certain extent" (Jovancic, 2019). This data collection technique is perfect when the researcher needs to gather highly personalized data. Interviews are also more personal compared to questionnaires, allowing higher response rates to be achieved. Interviews also allow more control over the order and flow of questions. However, interviews have their limitations in instances where there is a lot of qualitative data to be analysed. There can also be risks of bias due to fatigue and situations where the researcher becomes too involved with interviewees. Interviews can be categorised into five that is structured interviews, unstructured interviews, semi-structured interviews, in-depth interviews, and focused group interviews (Abawi, 2014).

Structured interviews

Reddy (2017) views structured interviews as a quantitative research method in which the interviewer asks a particular set of predetermined close-ended questions. So basically, in structured interviews, the questions and their order are already scheduled, and an interviewer or researcher is not to divert or modify them. A structured interview is an interview process that follow a pattern, plan or a particular standard. However, a researcher may be compelled to explain more to the interviewee what the question entails in instances that clarity is needed. The respondent may also be probed to supply more explanation if the answer they provide is vague.

Structured interviews can be conducted face to face, through the internet that is Skype, video calling and other computer programs and through the telephone. Since structured interviews are predetermined, it makes the process efficient and more straightforward, the interviewer does not have to formulate new questions on the spot. Also, as all participants will be answering the same questions data is easily quantified (McLeod, 2014). Structured interviews are repeatable and thus offer reliability, they are quick in conducting research with a large sample which results in the findings being equally representative of the general population. However, since structured interviews are not flexible, answers from participants may lack detail and clarity. This means some phenomenon may not be availed and the real purpose of research invalidated.

Unstructured interviews

Unstructured interviews are a type of interview in which the interviewer asks questions that are not prepared in advance. The interviewer will engage in open-ended questions based on a specific research topic trying to make the interview as natural as possible (Willamson, 2018). In this type of interview, the questions are modified to suit a candidate's specific experiences.

Unstructured interviews are sometimes referred to as discovery interviews or informal interviews. These interviews can be conducted face to face, through video calling or other social media platforms or on the telephone. Therefore, unstructured interviews can be argued to be flexible, as questions can be adapted and changed depending on the interviews' answers. Qualitative data is easily generated in unstructured interviews since the questions will be open-ended and enable the respondent to talk at depth regarding a subject matter, in their own words. This type of interview also grants the interviewer the opportunity to probe for a better understanding of a topic for clarification can be easily asked for and the interview steered in the direction the interviewer may deem fit. However, conducting an unstructured interview is time consuming especially when it comes to analysing the data using such methods as thematic analysis.

Semi-structured interviews

Semi-structured interviews are also referred as in-depth interviews whereby a set of predetermined set of carefully worded questions in an interview guide are used to ask questions from key

informants (Longhurst, 2003). Thus, the interviewer does not strictly follow a formalised list of questions hence it becomes more of a discussion.

In a semi-structured interview, the interviewer can prepare questions beforehand to help guide the conversation and keep respondents on topic though he or she can change or develop more questions from the answers. According to Baumbusch (2010), using a semi-structured data collection strategy involves developing the interview guide, conducting the interview, and analysing the interview.

Thus, semi-structured interviews provide qualitative data that may be used to compare previous and future data. It also encourages a two-way communication in which the interviewer is afforded the chance to probe for answers and the interviewee clarifies some of the responses (Longhurst, 2003). Again, this type of interview allows respondents time to open about sensitive issues not possible in structured interviews. However open-ended questions are difficult to analyse and cannot guarantee honesty responses from participants.

Focus group interviews

Lotich (2011), describe a focus group interview as "a form of qualitative research consisting of interviews in which a group of people are asked about their perceptions, opinions, beliefs and attitudes towards a product, service, concept or idea". Focus groups are moderated discussions with a group of participants led by a trained moderator. Temkin (2020) notes "that the main purpose of focus group interviews is to draw upon respondents' attitudes, feelings, beliefs, experiences, and reactions that would not be feasible using other types of interviews". Focus group interviews can be conducted physically in a controlled environment using web-conferencing, teleconferencing, or other online collaboration tools. Jovanic (2019) clarifies that "a focus group should have 3-10 people, plus a moderator and depending on the research goal and what the data obtained is to be used for; there should be some common denominators for all the members of the focus group such as income, education, or career".

Focus groups interviews create an atmosphere where group sharing of opinion is facilitated whether the participants are agreeing or not, thereby probing in-depth discussions enables various topics to be discussed and many insights to be gained. Thus, the advantage of focus group

interviews is that information is collected more quickly than if people were interviewed separately. However, focus group interviews require objectivity and sensitivity on the part of moderators which may be difficult thus making the group difficult to control for the moderator. The moderators' skill in phrasing questions can also negatively affect responses thereby invalidating the results. This study did not use focus group interviews.

In-depth Interview

Having explained the other different interview types of this study made use of in-depth interviews. In-depth interviews can be viewed as loosely structured interviews. They are qualitative research techniques that involve conducting intensive individual interviews comprising of "a small number of respondents to explore their perspectives on a particular idea, program or situation" (McGrath., 2018).

The interviews are carried out by aid of a discussion guide that triggers the starting point of an interview, thereby probing responses that will shape the direction of the research questions. Thus, the discussion guide merely acts as an outline for how the conversation will go. This type of interview technique is flexible, allowing both the interviewer and the interviewee to explore additional points and change direction.

In-depth interviews produce valid and trustworthy results and are usually conducted face to face that is, there's an opportunity to create rapport and draw on the interviewee's body language. In-depth interviews typically range from 15 to 60 minutes. Telephones and other social media platforms can also be used to conduct this type of interview but only by a skilled researcher with little loss of data and at a lower cost. Thus, through in-depth interviews more information can be acquired, and the skeleton outline ensures the interviewer does not divert from the real topic at hand and also ensures that all key points are covered.

In-depth interviews offer many benefits to a study and as the name implies this type of interview leads to in-depth insights. Their flexibility allows for an interviewer to probe for more information from an interviewee regarding a research topic even if they may be sensitive. Longhurst (2003) note that in in-depth interviews, there is a greater opportunity on the part of the interviewer to ask follow-up questions and probe for additional information. The interviewer is also able to circle

back to key questions later in the interview to generate a rich understanding of attitudes, perceptions, motivations, thus the objective of the study will not be lost. Also, as these interviews are conducted face-to-face, the interviewer is privileged to monitor changes in tone, word choice, and body language to gain a deeper understanding and then know how to further approach the research questions.

In-depth interviews have been identified to need fewer participants to glean useful and relevant insights hence they can yield the most out of few interviewees. Unlike in the focus group interview there is none of the potential distractions or peer-pressure dynamics that can sometimes emerge, and this allows participants to share their opinions without bias from other participants. This is a one-on-one session group-think therefore participants' thinking is not influenced by responses of other participants, this improves the quality of data collected.

In the event that in-depth interviews are conducted through a telephone they have been noted to be cost-effective, flexible and faster to conduct. Travelling costs and time will have been preserved. In-depth interviews which require in-depth insights have been found to have high completion rates. Cases where respondents drop off before completions are highly unlikely, especially with one-on-one interviews (Saunders et al., 2016). There is room to explain, clarify questions and probe vague responses which influences participants to complete the interview. In-depth interviews are more suitable than any other type of interview when trying to interview respondents who are hard to reach, such as professionals, doctors, IT managers just to mention a few. However, in-depth interviews have their share of challenges, since they require a deep understanding of the subject matter, they are usually carried out by trained interviewers. Also, they have been found to be time consuming for both the researcher and the interviewee.

3.8. Study Area

This study was conducted at the Port of Durban commonly known as the Durban harbour, which is situated on the east coast of South Africa. Durban is a city in South Africa falling under the province of Kwa-Zulu Natal. It is the largest and busiest port in the sub-Saharan Africa and a popular tourist attraction.

3.9. Target Population

Carrie and Kevin (2014: 33) highlight that "a target population are group members likely to take part in a study". The target population is the total group of individuals from which the sample might be drawn. Target population represents the entire population of the group that the researcher intends to examine, hence in every researcher must define this group. In this study, the target population includes all those people who are members of the port executive team. The targeted population of this study was a total of 20 people involved in the Port Executive. These were relevant to the study because according to literature these individuals make up the Upper echelons and are responsible for formulation and implementation of strategy at the Port of Durban. The specific titles and gender of participants is not included to enhance anonymity. Table 3.1 below shows the role and experience of Port Executive who participated in this study.

Table 3.1: Individuals participated who make up the upper echelon in the port

Role	Years of experience as Sustainable Leader
Port Management	>15 years
Port Engineering	>10 years
Harbor Mastering	>15 years
Port Engineering	>9 years
Port Engineering	>8 years
Operations Management	>10 years
Port Engineering	>5 years
Real Estate Management	>10 years
Operations Management	>5 years

Source: Authors Composition

3.10. Sampling

Datta (2018) simply regard sampling as "selecting a portion of the population, in the research area, which will be a representation of the entire population". Creswell and Miller (2000: 22) notes that "sampling is also the process of selecting individuals or objects that represent the entire population in a study". The strategy is the researcher's plan to be sure that the sample used in the research

study represents the population from which the sample is drawn. Probability sampling and non-probability sampling are the two sampling methods used in sampling participants in any study.

According to Saunders et al. (2016), "in non-probability sampling, the elements that make up the sample are selected by non-random methods and there are three main methods: convenience, quota, and purposive". Other methods of sampling include accidental, snowball, simple random sampling and cluster sampling (Datta, 2018). The participants in this study were sampled using purposive sampling.

Using purposive sampling, the selection criteria for research participants included:(1) being a member of the Port Executives committee and involved in strategic issues shaping the strategic direction of shipping and port activities; (2) minimum of three years' experience as a strategic leader to have hands-on experience of leading self and others at the port; and (3) willingness and openness to reflect own leadership practices and a variety of critical incidents in relation to green management issues, challenges of becoming a sustainable leaders and the practice of sustainable leadership.

A total sample of nine (n=9) out of 20 members of the Port Executive in Durban were purposively selected to participate in the study. All Port Executives participated were relevant to the study because according to literature these individuals make up the Upper echelons and are responsible for formulation and implementation of strategy at the Port of Durban.

The minimum years of experience required for the participants was five (5). The age range was from 35 to 55 years. Of the 9 participants, 6 were males (6 blacks), while 3 were female (3 blacks) in this study.

3.11. Data Collection and Instrument

Data collection is defined as the "process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer queries, stated research questions, test hypotheses, and evaluate outcomes" (Datta, 2018). The tools used by researchers to actually collect data in qualitative research include interviews, questionnaires, documentary analysis, and observation. This study made use of semi-structured and in-depth interviews.

3.12. Data collection

The researcher carried out semi-structured interviews with each selected top executive at the Port of Durban. In the interviews, the researcher used an interview guide which had questions on the perceptions regarding sustainable leadership and the strategies of sustainable leadership at the Port of Durban (see Appendix One). The content and structure of the interview guide was guide by the research questions. Below is a table which matches the research questions and focus of content of questions in the interview guide.

Table 3.2: Matching Research question and Interview guide structure and content

Research question	Core content focused in interview guide to answer the question	Number of standing interview questions on the research question
To what extent does the Port Executive ***display or not display the sustainable leadership practices*** at the Port of Durban?	Sustainable leadership practices	3
How are the Port Executives at the Port of Durban ***enforcing green management practices***?	Green management practices	5
What ***challenges*** are the Port Executives at the Port of Durban facing to ***become sustainable leaders?***	Challenges faced by PE to become sustainable leaders	2
What are the ***key competences of sustainable leadership*** at a hybrid port?	Key competences of sustainable leadership	1

Source: Authors Composition

The research was steered by the work of McNamara (2009), who provides vital points when preparing for an interview to keep the interview focused and intentional. These points are explained on below:

- "Choose a comfortable setting, with minimal distractions". In this study, five interviews primarily took place in various private meeting rooms at the Port of Durban's Head Office and all Covid-19 protocols including facemasks and social distancing were observed. The remaining four interviews were carried out with individuals working from home via skype as suggested by the interviewees for their convenience. All these nine interviews were audio recorded for the purposes of accuracy.
- "The purpose of the interview must be conveyed to participants at the start of each interview". In this study, the researcher commenced each interview by welcoming participants and thanking them for their attendance. Afterwards, the researcher explained the purpose of the interview to the participants and handed out consent forms to each participant.
- "The confidentiality of the data collected must be addressed." The researcher made sure that participants understand that data collected from these interviews would be used in the final report of the study. The researcher explained to participants that their participation, names and personal details were confidential and would not be disclosed in the study report. The researcher also explained to the participants that only the researcher and the research supervisor would have access to the data collected from them.
- "The format of the interview must be clarified." The researcher began each interview session by explaining the subject under study i.e., Sustainable leadership and how their participation in this study may be beneficial to their organisation and other firms that are looking to build sustainable organisations.
- "The anticipated duration of the interview was explained to participants at the start of each interview." The participants had been initially informed that the interviews would take approximately 50 minutes. However, the average of all the interviews that were conducted took 35-45 minutes to complete.

- The researcher shared their contact details with all the participants and encouraged them to feel free to contact the researcher or the researcher's supervisor if they have questions or concerns about the study.
- The researcher explained the interview process before the commencement of all the sessions and asked participants to ask questions if there needed more clarification.
- Before the start of the interview, the researcher explained that audio-recordings of all the interview sessions will be made for purposes of data accuracy. The participants gave the researcher permission to record these interviews by ticking on a box on the consent form, they also signed the entire consent form agreeing to participate in this study.

A total of nine (9) interviews were conducted. The initial number of participants intended for the research was 20 participants however, data collection was concluded when data saturation had been reached. Data saturation occurs when the data collected from the participants starts becoming repetitive after several interviews have been carried out. Employees in the top executive who participated in this study were between 35 and 55 years of age. Each participant satisfied the selection criteria.

3.13. Data collection instrument and procedure

The researcher made use of the checklists provided by Sanders el al., (2016) to prepare for semi-structured interviews. These checklists provided guidelines for the researcher to conduct successful and professional interviews. The researcher ensured that venues for the interviews were booked beforehand and would only allow access to participants to preserve their privacy. The interviews were scheduled both in person and via videoconferencing for some participants, these interviews were scheduled at the convenience of the participants. The researcher inspected their voice recording equipment before the start of the interview to make sure they were working properly. 5 participants were interviewed via videoconferencing because participants were working from home. The other 4 took place in the interviewee's offices at the Port of Durban following the social distancing Covid-19 protocols. All the interviews were done with both researcher and interviews wearing masks. It was convenient and comfortable for some of the participants to conduct the interviews at their offices.

3.14. Pre-testing of the interview guide

The second key issue in data collection instrument is the pre-test or pilot test. The researcher prepared a draft of the interview guide and carried out several pre-tests of this guide with top executives at the Port of Durban. The first pre-test of the interview guide allowed the researcher to identify errors and problems in some interview questions. The researcher was able to correct these by re-writing and simplifying the questions to make sure that they are easily understood. The researcher divided the questions into several categories such that each question had an introductory statement that the participants may easily understand.

Afterwards, a second pre-test of the interview guide was conducted. This involved a single member of the Port Executive who satisfied the sampling criteria. The interviewer went through all the questions with them. The researcher identified that some questions may confuse participants and made the necessary changes after the session. The third and final pre-test was also held with another Port Executive who satisfied the researcher's sampling criteria. This interview took 1.25 hours to complete, and this gave the researcher an idea of the timeframe to expect for each interview. After the final pre-test of the interview guide, the researcher made all the necessary adjustments to the interview guide and proceeded with the actual interviews.

3.15. Method of data analysis

The study made use of thematic analysis to identify a sustainable leadership practice by PE. The focus was on a pattern of regular or repeated actions and behaviours by PE which were related to any dimension or aspect of sustainability in a port environment. Thematic analysis is one of the most common forms of analysis within qualitative research. It emphasizes identifying, analysing, and interpreting patterns of meaning (or "themes") within qualitative data (Creswell, 2009). Braun & Clarke's (2006) latent thematic analysis was used to help sort and organise data into similar themes and present and analyse data following the 15 points checklist steps, which explains how qualitative data can be processed for effective analysis. Table 3.1 below provides a detailed presentation of the 15 points checklists:

Table 3.3: Fifteen-point checklist of criteria for proper thematic analysis

Process	No.	Criteria
Transcription	1	"The data have been transcribed to an appropriate level of detail, and the transcripts have been checked against the tapes for accuracy."
Coding	2	"Each data item has been given equal attention in the coding process."
	3	"Themes have not been generated from a few vivid examples (an anecdotal approach), but instead, the coding process has been thorough, inclusive and comprehensive."
	4	"All relevant extracts for all each theme have been collated."
	5	"Themes have been checked against each other and back to the original data set."
	6	"Themes are internally coherent, consistent, and distinctive."
Analysis	7	"Data have been analysed – interpreted, made sense of - rather than just paraphrased or described."
	8	"Analysis and data match each other – the extracts illustrate the analytic claims."
	9	"Analysis tells a convincing and well-organised story about the data and topic."
	10	"A right balance between analytic narrative and illustrative extracts is provided."
Overall	11	"Enough time has been allocated to complete all phases of the analysis adequately, without rushing a phase or giving it a once-over-lightly."
Written report	12	"The assumptions about, and specific approach to, thematic analysis is explicated."
	13	"There is a good fit between what the researcher claims to do, and what the researcher shows to be done – i.e. described method and reported analysis are consistent."
	14	"The language and concepts used in the report are consistent with the epistemological position of the analysis."
	15	"The researcher is positioned as active in the research process; themes do not just emerge."

Source: Adapted from Braun and Clarke (2006: 96)

Using these identified steps, the raw data was articulately transcribed. The researcher repeatedly listened to the audio recordings and re-read the interview transcripts to ensure accuracy of the

data. By re-reading the transcripts, the researcher identified words and phrases from participants' responses frequently and familiarized with the data to identify and generate themes.

The data was categorised and coded into main themes and sub-themes regarding the sustainable leadership practices displayed or not displayed by Port Executives at the Port of Durban, how they reinforce these practices and the challenges they face. The researcher then used these generated themes as headings in presenting findings. In the final step, interpretations and findings were then validated with information obtained from the literature review and theoretical framework.

3.16. Research quality

Every research must ensure a quality process that enables the study to be reliable, trustworthy and valid. To ensure such a process the study followed the eight criterias by Tracy (2010). Table 3.2 below shows the criteria which was followed in this study:

Table 3.4: Eight "big-tent" criteria for excellent qualitative research

Criteria for quality (end goal)	Various means, practices, and methods through which to achieve
Worthy topic	"The topic of research is: • Relevant • Timely • Significant • Interesting"
Rich rigour	"The study uses sufficient, abundant, appropriate and complex • Theoretical constructs • Data and time in the field • Sample(s) • Context(s) • Data collection and analysis processes"
Sincerity	"The study is characterised by • Self-reflexivity about subjective values, biases, and inclinations of the researcher

	• Transparency about the methods and challenges"
Credibility	"The research is marked by • Thick description, concrete details, explication of tacit (non-textual) knowledge and showing rather than telling • Triangulation or crystallization • Multivocality • Member reflections"
Resonance	"The research influences affect or move particular readers or a variety of audiences through • Aesthetic, evocative representation • Naturalistic generalisations • Transferable findings"
Significant contribution	"The research provides a significant contribution • Conceptually / theoretically • Practically • Morally • Methodologically • Heuristically"
Ethical	"The research considers: • Procedural ethics (such as human subjects) • Situational and culturally specific ethics • Relational ethics • Exiting ethics (leaving the scene and sharing research)"
Meaningful coherence	"The study • Achieves what it purports to be about • Uses methods and procedures that fit its stated goals • Meaningfully interconnects literature, research questions/foci, findings and interpretations with each other."

Source: Adapted from Tracy (2010: 840)

In applying the above-mentioned criteria to the present study:

- Worthy topic – the topic of this research study was significant as it raises awareness about the importance of sustainability and sustainable leadership practices within an organisation, which is a topic that is relevant to anyone considering implementing sustainability strategies.
- Rich rigour – the researcher exercised due diligence in developing the contextual framework, spent adequate time in the field, used a suitable sample size, and ensured that data was collected and analysed proficiently.
- Sincerity – the researcher was honest and transparent about the research process, the goals and biases affecting the present study and how these impacted the methods of the study.
- Credibility – the researcher ensured the trustworthiness and plausibility of the findings by using the member-check method. Research participants were offered the opportunity to check and comment on the transcribed data.
- Resonance – the research report indicates the study's potential value in informing leaders trying to become sustainable leaders in their own organisations.
- Significant contribution – the study aimed to gain deep insight and understanding into the Port Executives' sustainable leadership practices at the Port of Durban. The knowledge gained is useful as it informs on significant environmental, economic, and societal problems.
- Ethical considerations – these are dealt with in paragraph below.
- Meaningful coherence – the research design carefully linked the design to the data collection, and analysis with the conceptual framework.

3.17. Ethical considerations

The study adhered to the UKZN ethical procedure. In research, ethics processes follow the "do no harm principle" (Kuper, Lingard and Levinson, 2008). This means the research highly prioritised the protection of the participants. The following procedures were followed to ensure that ethical standards are observed:

Gatekeeper's letter

The gatekeeper's letter was sought from the Port of Durban and was granted as a protective measure for participants and the organisation.

Voluntary participation

In every research process, volunteers retain their rights to voluntary participation. The participants were fully debriefed on the details of study. In this research study, top executives as research participants at the Port of Durban were informed that participation was entirely voluntary and that they could withdraw from the study without any consequences. The participant information sheet (see Appendix Two for the participant information sheet) was given before the interview.

Informed consent

As participants in this study, top executives at the Port of Durban were assured of their right to consent or withdraw from the study at any moment without any consequences. Therefore, an information letter and a consent form were given before the interview. The researcher also made sure that participants signed informed consent forms before the interviews commenced to fully understand what the study is all about (see Appendix Three for informed consent).

Confidentiality and anonymity

Confidentiality and anonymity were prioritised in this study. Confidentiality and anonymity were paramount in this study. Participants at the Port of Durban were informed that only the researcher and the research supervisor would have access to the recordings and transcripts. Anonymity was ensured as no identifiers were recorded with responses. The researcher used code-names instead of real names in reporting the findings of the study. Participants were informed that their names, departments, or job titles would be mentioned in the research report.

Ethical clearance

The researcher obtained ethical clearance from the Human Research Ethics Committee of the University of KwaZulu-Natal before the commencement of the study. Therefore, the researcher upheld all necessary ethical issues by adhering to the UKZN ethical standards and obtaining an ethical clearance letter (See Appendix Four).

3.18. Chapter Summary

This chapter looked at the research methods adopted for this study. The study took a qualitative approach to research. Exploratory design was the research design implemented. The data for the research was gathered through in-depth interviews and the sample was conveniently and

purposively selected focusing on the participant's knowledge of sustainable leadership and how the PE really functions. Thematic analysis was used to analyse data and UKZN ethical procedures adhered to. The following chapter presents the findings from the interviews carried out to unpack the sustainable leadership practices of Port Executive at the Port of Durban.

CHAPTER FOUR
FINDINGS

4.1. Introduction

This chapter presents the findings of the exploratory study on the sustainable practices of port executive at the port of Durban in South Africa. The presentation of findings of this study is structured according to the four-research objective. As such, the chapter firstly presents the key themes on sustainable leadership practices evident in the patterns of actions and interaction of Port Executives at the Port of Durban. Secondly, the chapter focuses on themes revealing practices of enforcing green management practices before focusing on themes about the variety of challenges are faced by the Port Executives at the Port of Durban in becoming sustainable leaders. Lastly, the chapter presents theme of key competences of sustainable leadership at a hybrid port before the chapter summary.

4.2. Presentation of Findings

The findings of this study reveal various themes and sub-themes which reveal Sustainable leadership practices displayed but also those that were not displayed by Port Executives. It also presents the variety of challenges faced in implementing these practices, and the green management practices by the Port Executives have implemented in pursuit of sustainability. The results that are presented also include key competencies of Port Executives at a hybrid port in Durban.

4.3. Themes on sustainable leadership practices displayed by port executives

The study reveals a variety of four themes relating to sustainable leadership practices by port executives which include (1) prioritisation of environmental sustainability, (2) commitment to strategic partnerships, (3) strategic thinking about the business and people and (4) community building and corporate social responsibility as shown in table 4.1 below.

Table 4.1: Themes on sustainable leadership practices displayed by Port Executives

Sustainable leadership practices of displayed by port executives	Frequency
1. Prioritisation of environmental sustainability	5

2. Commitment to strategic partnerships	5
3. Strategic thinking about the business and people	4
4. Community building and corporate social responsibility	5

Source: Authors Composition

4.3.1. Prioritisation of environmental sustainability

The findings revealed that Port Executives have a clear priority for the environmental sustainability of the Port of Durban. The participants' reflections indicated that they have established policies, rules, and regulations that govern port operations and provide guidelines to port users/tenants through rules that they are expected to comply with to limit pollution. One of the Port Executives indicated the following:

> *One of our main priorities is to ensure that environmental matters are being taken seriously. We have clear policies and procedures that we always give to our port users to ensure that environmentally conscious decisions and practices are adhered to (Participant 4).*

The interviewees revealed that Port Executives at the Port of Durban support environmental responsibility through ensuring that operators within the port and their activities are eco-friendly. Participants explain that these policies and procedures are established in alignment with national and international legislation (ISO) that are meant to ensure that green management practices can flourish within the organisation. One of the interviewees elaborated on the practice of environmental responsibility by specifically highlighting how port executives created regulatory standards and interactive forums at the organisational level to reduce environmental contamination by terminal operators as exemplified below:

> *As the Port Executives, we have put environmental management guidelines to our port users i.e. Commercial tenants, Section 56 operators and licenced terminal operators occupying space in various port precincts (Islandview, Bayhead, Maydon Wharf and Point precinct). The port users include companies like Bid Freight Port Operations, Vopak, Engen, Grindrod Terminal and others. They are required to reduce environmental contamination, including air contamination, grid contamination, and soil and water*

contamination. The Port Executive committee formed precincts forums, we have session every month with our port users where we discuss port precincts developments, environmental issues and compliance to legislations such as National Environmental Management Act, International Organisation for Standardisation (ISO) and others (Participant 2).

Results reveal that environmental responsibility practices hinged on port executives policing others who were port users/terminal operators or users to comply with a variety of guidelines and regulations. Participant 7 expanded the notion of environmental responsibility by Port Executives by adding the frequency and system of compliance audit with the port's environmental regulations by operators as illustrated in the quote below:

The Port leadership ensures that port users adhere to the terms and conditions of our lease agreements. So, on an annual basis, the port environmental specialists are mandated to conduct audits performance of port users to conditions of their lease agreements and legislation. When conducting audits, they check the availability of Risk Assessment, Safety Health & Environment (SHE) policies & Procedures, Appointments of First Aider, Fire fighters, Environmental Management plan & methodology etc. Audits are meant to ensure compliance with port environmental sustainability and legislation (Participant 7).

On the same practice of environment responsibility, participant 1 focused on the link between guideline, procedure, and the care for the environment particularly in terms of waste management which was revealed in this way:

The leadership of the port together with our environmental specialist have developed environmental guidelines and procedures in alignment with National Environmental Management Act, outlining the ways of managing waste in the port. We are looking after our environment by ensuring that waste such as oil waste, asbestos waste, ballast waste, electronic waste and any other forms of waste is managed properly and disposed to the correct site.

Another participant commented on port executives as facilitators of health and safety, and efforts to facilitate waste management and engage users as actors and beneficiaries in the successful pursuit of the slogan of a safe port environment.

> *As the parastatal governed by certain policies and regulations, the organisation is audited based on Health & Safety regulations to ensure protection of the safety, health and welfare of our employees. The Port has the mandate to ensure and enforce safe environment for people. The Port is water and land-based; therefore, as the port leadership, we ensure that port users comply to the safety, health and environmental (SHE) policies. This happens through a fully committed team of environment and risk specialists that assist in different precinct in checking and auditing the user's compliance with the SHE standard. The Port slogan is to be a smart, green, and friendly port hence the port wants a safe environment for port users (Participant 5).*

These findings from the Port Executives revealed how their leadership priorities in the Port of Durban are committed to ensure the sustainability of environmental solutions and engagements.

4.3.2. Commitment to Strategic Partnerships

Another aspect that the Port Executives displayed as a sign of sustainable leadership is their commitment to strategic partnerships to balance and ensure sustainable development. The findings of this study indicate that Port Executives display how they have a wide range of internal and external stakeholders that they partner with to achieve different goals that are crucial to the development of the port. The Port Executives revealed how building and maintaining strategic partnerships plays a vital role in sustaining the growth and expansion of the port, creating employment and also assuring quality and competitive port services. Participants narrate how building strong relationships with stakeholders is crucial to ensure swift maintenance services. For instance, Port Executives indicated how developing efficient cooperation with internal and external stakeholders involved in waste management and renewable energy initiatives plays a critical role in the port's green management and environmental sustainability. One participant had the following to say,

We are working constructively with our internal stakeholders: our electrical power supplies depot, building & marine depot, and project team members to put various energy initiatives around the port. We have put in place Building Management Systems, Air-conditioning timer systems, geyser blankets, heat pumps, LED Street and high mast lighting. All these contribute positively towards reducing energy consumption, monthly electricity consumption and carbon emissions. We are now looking into installing a bigger renewable electricity generating system in our port building (Participant 1).

Another participant indicated how developing partnerships between departments and other companies within the Port of Durban has played a critical role in advancing green management initiatives. The participant had the following to say:

Facilitating close partnerships and cooperation between departments and port tenants has been very crucial in coordinating important initiatives and solutions within the port. For example, addressing environmental issues is not just the responsibility of the Port management, but it is something that we must get everyone involved in (Participant 3).

Participant 5 further provided detailed information on how internal strategic partnerships especially when it comes to planning has aided the development of stronger external partnerships towards the efficient management of the Port of Durban. When asked to explain how Port Executives display SL practices, Participant 5 said the following:

Sustainability is displayed in collaboration with various external stakeholders. As the landlord our function is to create capacity (storage capacity, capacity along the berths, gate capacity) for all our cargo tides which are dry bulk, liquid bulk, containers and automotive. Once we have a plan, we than consult all spheres of government / stakeholders which are EThekwini Municipality, Port Regulator, Sanral, National and Provincial Government etc. We engage extensively with these stakeholders because matters that involves the development of the harbour somehow have an impact to them, for example, cargos leaving the port are using the premises of the city to transport goods and also impact Sanral in terms of using national roads etc. so any changes or developments made in the port, we align with all our stakeholders. We have different forums that we engage in

which are National Port consultative forum which took place quarterly, Port consultative also happen quarterly, South African Association of ship operators & Agents every month as well as precincts forums which take place every month. In these forums we discuss port development plans, status updates for any development effected and we also get to understand their expectations with regards to harbour development.

Partnerships are valued as part of an integral strategy in the Port of Durban by the Port Executives. They are considered essential in managing coordination of services especially in addressing some of the sophistications which might affect Port cities such as traffic. Hence, another participant illustrated on how other members of port executives display effective stakeholder collaboration, as illustrated below:

Sustainable leadership practices are seen or displayed in other members when they dealing with the Durban port Bayhead traffic congestion which has been a major issue for many years in the port. They collaborate effectively with the eThekwini Municipality, Port Terminals, Freight Rail, Department of Public Enterprises, KwaZulu Natal Departments of Transport, Economic Development, Tourism & Environmental Affairs, Durban Metro Police, South African Police Service, organised business through the Durban Chamber of Commerce & Industry, and other stakeholders in finding feasible traffic management measures to alleviate congestion at the port and surrounding road networks. We are already starting to see positive results in the Bayhead area because of such effective engagements and feasible measures they are implementing (Participant 8).

These findings reflect how the commitment of the Port Executives to strategic partnerships has been crucial to developing and sustaining important initiatives that address different challenges that in green management, transport, infrastructural growth, and storage facilities. There is a clear demonstration of sustainable leadership practices as the participants commended how a balance must be maintained between the environment and the bottom line of businesses operating within the port. Thus, demonstrating commitment to consultation with relevant stakeholders to ensure that these initiatives do not place undue or unfair burden on operators highlighted the sustainable leadership qualities. Hence, the conduct of the Port Executives reflects how their focus is intended

towards growth of the port business by ensuring environmental solutions through partnerships that facilitate waste management and renewable energy resources to reduce carbon emissions. The participants demonstrated awareness that sustainable leadership practices dictate responsible and flexible implementation of policies, if the port is to be profitable and sustainable. Engagement in these activities by Port Executives confirm the existence of Sustainable Leadership practices at the Port of Durban.

4.3.3. Strategic thinking about the business and people

The findings of this study reveal that Port Executives display sustainable leadership through their strategic approach on the business opportunities, continuity, and growth of people. The participants illustrated a significant role the Port Executives played in developing opportunities that enable business continuity in the port. This was highlighted by one of the participants as follows:

> *The port leadership has created a structure to ensure that port business does not end now but rather continue to the next generation. This is realised through a creation of mini businesses around the port from the concept of mission directed work teams. Each area see itself as a business on its own. The drive is to make sure that those who are at work are assisted to be engaged with work meaning there are part of the work and indeed add value to the business. The concept structure has four levels which encompasses of employees from top leadership to the level of general workers. Through this structure, employees at all levels see themselves adding value and understand the vision of the organisation. Also, we have charts introduced in various areas, this chart outlines daily team member's responsibility and we update them daily, so, its forces every member to deliver and account for their work on time (Participant 9).*

On the same practice of strategic thinking, participants reflected on Port Executives as being the facilitators for finding and developing opportunities for employees within the system for the purpose of achieving the goals of the port, the participant revealed in this manner:

> *The Port Executives are responsible for cleaning the system by getting people to work or out of the system for the next generation to come into the system. We use quarterly*

performance reviews criteria when undertaking this. The outcome of reviews enables us to check the performance of the workers and ensure that those doing well are either given additional work that will challenge them or get rewarded or promoted to higher levels etc. so that they get motivated. Also, we get understand the challenges faced by low performing workers and assist where it is possible, however, if it is the issue of employee attitude, we get those out of the system to enable others to come in and work (Participant 6).

Another participant revealed the following strategic approach in terms of developing and empowering people when asked about the sustainable leadership practices he displays as a Port Executive member.

There are three significant styles I adopted as a Port Executive member, it is; continuity, empowering and developing people with knowledge so that they can learn, take a lead at work and transfer skills to others. Employees are important to me hence they need to be developed and empowered. I encourage them to learn, get work experience and register with institutions for them to advance their learning so that they will apply knowledge learned back to the organisation for its to remain competitive. As a member of Port Executive, I have an interest in making sure that at the workplace there's business continuity and that people are empowered with relevant knowledge & skills (Participant 2).

4.3.4. Community building and corporate Social Responsibility

Port Executives revealed that they are cooperating with the society in terms of port sustainability. They elaborated how the Port Executives are playing a cognisant role in the balancing the economic growth, environment and welfare of society as highlighted below by one of the participants below:

The Port Executives are displaying positive sustainability practices considering the initiative introduced of the annual Port festivals for the locals and international visitors to come into the port space to celebrate South Africa's busiest port. As the port leadership, we are at the forefront and taking a lead in facilitating success of the event which focus on

the community, tourism industry, history and heritage of the Durban port, diverse cultures, career opportunities and fun activities for visitors (Participant 6).

Another participant elaborated social responsibilities displayed by the members of the Port Executives and an important role they play in ensuring that the society is not left. In terms of building a community and corporate citizenship, participant 5 had the following to say:

Part of sustainable leadership practices displayed by other members is that they are thoughtful and consider the port surrounding community, for instance, the port leadership is identifying an area around the port which will be used as a garden for planting vegetables. So, as part of social initiatives, this area will be accessible and maintained by nearby communities. Not only that, we also have a "take a girl child to work campaign" here in the Port as part of corporate social investment.

Another participant concurred with the sentiments of building a sense of being part of the community by outlining that:

We engage in different community programs and initiatives to ensure that we give back and support our communities. Ensuring a healthy and happy society means we can also have a health business environment (Participant 8).

In collaboration with the eThekwini Municipality, the Port Executive play a significant role in corporate social responsibility and corporate citizenship in maintaining Durban beaches as elaborated by one of the participants who outlined that:

Part of corporate social responsibility is that we are responsible for collecting the sand that has been trapped into the harbour and we pump it back into the Durban beaches using our dredgers to nourish our beaches for the community to enjoy themselves being in our Durban beaches (Participant 1).

Another participant also revealed how that Port Executive ensures that the Port of Durban facilitates different initiatives which support local schools as said below:

We also partner with different government departments such as the ministry of education to support local schools with building classrooms and support different initiatives. It is part of our responsibility to ensure that our society is supported since it is important to the future of our economy (Participant 9).

The Port Executives displayed how they are facilitating sustainable leadership practices through corporate social responsibility programs and initiatives.

4.4. Themes on sustainable leadership practices not displayed by port executives

While the Port Executives displayed different practices that demonstrated their application of sustainable leadership in the Port of Durban, it is notable that there were gaps in their practice of sustainable leadership. This study found that gaps in the sustainable leadership practice of Port Executives include silo behaviour, lack of human development and lack of succession planning from the Port Executives to support sustainability, as shown in table 4.2 below.

Table 4.2: Themes on sustainable leadership practices not displayed by Port Executives

Sustainable leadership practices not displayed by port executives	Frequency
1. Silo behavior undermines sustainability	4
2. Lack of human development on sustainability	3
3. Lack of succession planning	3

4.4.1. Silo behaviour undermines sustainability

This study shows that Port Executives do not display sustainable leadership that affects efficient knowledge sharing to ensure sustainable operations. Throughout the interview process, respondents lamented about the practice of working in silos. When employees are working in silos, teams or companies working towards the same objective, often in close vicinity, do not share information. These individuals develop silo mentality, which is the reluctance to share knowledge or information across different departments or between employees. Participant 7 reflected on poor interdependencies, and lack of trust which undermined systemic performance not only among the upper echelon, but also the lower levels of the organisation:

There is no interlink between members of the Port Executives which also cascade down to their subordinates. People are working in silos and do not look at how the entire system works. They are not comfortable in their own space which leads to fear of sharing work related information with others because of looking at others as threats and there is no trust between each other. Some end up not grooming the subordinates but rather opt to compete with their subordinates which than compromises employee's productivity.

All participants interviewed showed a deep sense of employee dissatisfaction with the workplace's unsustainable information and communication systems. Respondents explain how silo mentality has hindered the drive-by Port Executives to effect change through green initiatives. Participant 4 gave the following insight on self-interested behaviours fuelled by various forms of fear within the organisational context.

Some members of the Port Executive are not displaying sustainable leadership practices because of their working in isolation approach. They have a mind-set of "I need to cover my back and looks after my space". They are unable to work freely and share information amongst each other because they think people will take their positions or occupy better positions than them. This mentality creates stumbling blocks in the entire system.

Another participant indicated the challenges of poor inter-departmental communication which create stumbling blocks towards cross collaboration and sustainability.

Some Port Executives members are oblivious in the way they undertake the work, there is lack of communication amongst each other to understand each other's departmental and individuals' responsibilities. All these is because they are working in silos which doesn't assist in moving the organisation forward because this method is not creating sustainability rather is creating stumbling blocks (Participant 8).

4.4.2. Lack of human development on sustainability

Participants in this study described how Port Executive is not investing enough resources to develop employee skills and knowledge around sustainability. Reflections from participants show how ineffective human development on sustainability has led to poor implementation of

sustainability innovations around the port. Participants describe how often employees are confused about management's expectations of them and generally lack skills to cope with constant technological changes. One of the interviewees focused on the lack of sustainability knowledge by some members of the port executive which negatively affects how they lead others and activities as reported below:

> *There is lack of sustainability knowledge from some members of the Port Executives. I observe that in their manner they conducting business which sometimes do not have a sense of taking cognisance to the environment, like, in projects being implemented, minimal is done in introducing environmental friendly technologies. As a results, its than becomes tricky for them to advise decisively their subordinates around port sustainability. (Participant 8).*

Findings in this study show that Port Executives do not prioritise sustainability trainings and often turn to external recruits for specialised skills. Therefore, the much-needed training and development of specialists and programmes are not provided to support employees who require re-training or re-skilling to champion sustainability. Participant 9 described the lack of developing internal capacity on sustainability in this way:

> *Sustainability trainings are scarce in our organisation. Port Executives and employees need to be trained and reskilled. Adequately skilled human resources are a necessity in the organisation, and the bursary is a greater component of allowing people to be schooled, however, I have no confidence or reliability in the organisation's bursary because of a challenging approval process.*

4.4.3. Lack of Succession Planning

Succession planning is a crucial theme that participants emphasized specifically the nature of succession planning processes within the organization and how it negatively impacts their ability to execute plans and successfully implement strategies to completion. Participants indicated that in most cases a change in management often comes with changing approaches. They identified this as a detrimental challenge towards the sustainability of approaches that are effective in the port's day-to-day running. Whilst change in leadership can be essential towards growth and

development, the participants indicated that there is need for sustainable planning which cannot be affected by leadership successions. For example, Participant 4 said,

> *Whenever there is a change in the Group and Division Top leadership, the new leaders often come with their own approach and plans often to the detriment of good policies and approaches that are currently producing efficient results. This means we are often faced with changing procedures which ends up confusing and compromising the productivity at the port. If we are to develop sustainable plans that can guide incoming leaders, it will help to guide relevant changes to be made and plans that need to be maintained to ensure that the vision of port is achieved.*

Another participant confirmed the disruption of effective practices by leadership changes in the following example:

> *You see, we often have short and long-term cooperate plans that are meant to guide executives towards the port development, however, changes in leadership at group and division levels results in adaptation of new plans that are often different from the existing cooperate plans. This happens in a space of five years when changes occur and the challenging part is that the influence of the port executives does not overlap to the decisions made at both group and division level, however, those decisions affect the sustainable interests of port executives (Participant 3).*

Another participant describe how constant changes in group and division leadership also often cause confusion and instability around the organization. They explain how green management practices are difficult to implement because when new leadership comes in, their vision often differs, and employees are required to abandon their current paths and take on new engagements. Responses from Participant 5 illustrated this:

> *As a member at the port leadership level, it is difficult to display sustainable leadership practices such as coming up with innovative initiatives that will contribute to our port towards being a green port. This is due to bureaucratic environment that is volatile and depended on government. Changes of organisation's group Chief Executive, divisional*

Chief Executive and General Managers that normal take place in every 5-year period bring drastically changes to the port developments plan. We were planning and ready to install a renewable energy system here in the port but due to new port development plans that came with the new leadership we won't be proceeding with that.

4.5. Themes on reinforcing green practices by port executives

The study identified two themes which show that Port Executives were reinforcing green management practices at the Port of Durban by driving and reinforcing waste management and promotion of green innovations. The themes reveal that enforcement was predominantly based on regulation imposed on the port, guidelines developed by the port itself for its own use and its stakeholder and compliance. There was very limited effort to reinforce green management practice informed by green innovation. Table 4.3 below depict the two themes which are subsequently presented in details.

Table 4.3: Themes on reinforcing green management practices by Port Executives

Green Management practices	Frequency
1. Driving and reinforcing waste management	5
2. Green Innovations	7

4.5.1. Driving and reinforcing waste management

Findings of this study indicate that Port Executives are highly committed to the maintenance of a clean environment and put much emphasis on the important role of waste management initiatives and activities in the Port of Durban.

Participant 2 explains how Port Executives were committed to waste management practices and enforced green management initiatives such as air quality controls to ensure compliance with legislation governing waste disposal to prevent pollution. This participant reflected on how Port executives do not simply follow the *National Environmental Management Act and* regulations, but also impose their own environmental guidelines for port users as illustrated below:

As the port leadership, we impose National Environmental Management Act and regulations and our own environmental guideline specification to port users. Part of the National Environmental Management Act and regulations is the Air quality standard of which port users are required to comply with. So, to ensure compliance to this standard, part of the green management initiative introduced is that we have secured air monitoring systems in some of the port precincts to assess and monitor air pollutant levels produced from port activities. Therefore, the port users in these precinct are obliged to meet to the air quality requirements.

In a different vein, participant 3 confirmed green management initiatives that reinforces shipping companies' compliance to the port requirements as follows:

We as the Port Executive forms part of the National & International community and we are subscribing to the regulations such as International Marine Organisation (IMO), Environmental regulations, International Organisation for Standardisation (ISO) etc. that govern the entire world. Port Executives uses these regulations to enforce port users to execute and ensure compliance to the environment and we keep monthly records to track compliance. As part of the environmental control and waste disposal, the Port Executives requires vessels coming into the port to have clean fuel to avoid water contaminations and also to have vessel scrubbers installed so that vessel fumes do not go into the air for the purposes of reducing carbon emissions. On a yearly basis, the port environment office checks water quality in the harbour to verify vessels compliance to our environmental protection requirements.

Participants also credit cooperation of employees as the major drive in the success of waste disposal and management initiative. Participant 6 said the following:

The port leadership through environmental office established separate classification of waste disposal. We have introduced separate waste disposal bins around the port where we are than able to recycle useable items. We have a major issue of waste in our harbour during heavy rainfall, as the leaders we should start running recycling campaigns with communities on upstream areas to teach the communities about waste management and

recycling. We should tell people that every paper and plastic is money in a sense that it can be melted and used to make helmets etc. and so the community members will than make sure that they recycle waste and start a small business to make helmets and other items.

4.5.2. Green innovation

Participants confirmed the existence of plans and strategies that aim to spread green innovations throughout the organisation's processes, including a plan for energy independence. Port Executives have implemented strategies to move away from harmful energy sources to clean energy. While most of the activities to reinforce green management were operational, some participants identified strategic activities such as the use of renewable energy sources which produce less carbon emissions as one of the chief alternatives the Port Executive have in place.

We have introduced energy initiatives, so far, we have implemented and are still implementing various energy saving initiatives through the port engineering office. These initiatives include the installation of Building Management Systems, Air-conditioning timer systems, geyser blankets, heat pumps, LED Street and high mast lighting in order to reduce energy consumption, monthly electricity consumption and carbon emissions and we are now looking into bigger scale of installing renewable electricity generating systems such as PV solar panels in port buildings so that we will reduce the consumption of energy, cost of electricity as well as carbon emissions. (Participant 1).

Another participant reflected specifically on the operational issue of debris after flooding or heavy rains and efforts to restrict waste from getting into the harbour.

Part of pollution control measures to deal with large volume of waste such as debris that is realised after flooding or heavy rains which cause threat on the navigation of harbour craft due to them being unable to berth, so, as the Port leadership we have initiated a project that will restrict waste coming from the city and neighbouring communities into the Durban harbour. The project will focus on the installation of booms in the port storm-water reticulation system for the intention of restricting ingress waste in storm-water reticulation inlets and outlets from getting into the harbour (Participant 6).

The study found that the port leadership has considered the use of cleaner fuel in a strategic effort to help curb global warning as elaborated in the quote below:

> *The port leadership is thriving towards making the harbour an environmental friendly port and as the leadership we are trying our level best to put initiatives in place. As off now, we have gotten away with the 500PPM diesel in our tugboats and we are now using 50PPM diesel which has low sulphur and is a much cleaner fuel and also improve the engine performance of our tugs while reducing the emissions at the same time (Participant 3).*

However, the responses from participants reflect that although Port Executives are conscious about limiting toxic emissions into the environment, their approach to address the issue are ineffective, poorly strategized, and weak. Reflections from Participant 4:

> *Minimal effort is made by the Port Executives in putting multiple environmentally friendly initiatives to enable the port towards being a green port. By now we should have identified areas where we can plant trees and, our port buildings with suitable structures should have already been considered for the installation of self-generating electricity systems like solar panels but we are nowhere. Moreover, in terms of the new developments or projects, there are no major considerations of green initiatives incorporated.*

The study found that although there is an attempt to introduce green innovation initiatives in the port, there is still heavy dependence on minimum environmental practices by port users due to the manner in which lease agreements are structured. Participants attribute this to a lack of green initiative inclusion in port lease agreement contracts. Participant 7 explains this:

> *As much as we can negotiate with our port users to be environmentally friendly, the limiting factor is the manner in which our lease agreements are structured, some are month to month lease, some are year to year, some are 5 years etc. The lease terms are aligned to the port development plan and our lease are not saying much concerning green management initiatives that port users should consider. So, it is than difficult for some port users to put investments in implementing green innovation technologies in their respective areas of operations not knowing whether or not their lease agreements will be renewed*

after their return on investment is realised and so those port users opt to sticks to the minimum environmental requirements. This than compromises the effort we are trying to make in making our port a green port because lot of land space is occupied by our port users.

Findings of this study indicate that Port Executives at the Port of Durban support green management practices through dredging processes. Dredging involves removing material and slit from the bottom of the harbour. As silt and sand travel downstream, sedimentation slowly fill harbours and channels. This material must be removed periodically by dredging. Participants described the implementation of guidelines and standard operation procedures that include retaining effective dredging operational procedures and vessel maintenance at the Dry Dock. They also describe how Port Executives employ sophisticated methods of pumping sand back into the Durban beaches and cleaning seawater in a bid to maintain a safe ecosystem for sea life. According to reflections from Participant 5:

The PE ensures that dredging is undertaken adequately. As dredging is part of the port infrastructure system so as the leadership of the port, we ensure that dredging process of the sand trap is undertaken to keep the depth of the port to its required level for bigger ships to come in safety. Also, should the sand accumulate, we are responsible for keeping the entrance channels open and to it correct depth of 19 metres and to the correct width of 220 metres for proper navigation of ships. We than pump the sand back into Durban beaches.

Green management practices involve engagement in industrial exercises that limit damage to the environment. Findings from this study show that Port Executives are cognizant of the consequences of extensive use of carbon fuels and how carbon emissions accelerate global warming. Port Executives gradually turn away from these fuels to other alternatives that sustain green environments. One participant said the following:

We are making significant efforts to ensure that we get rid of carbon fuels and make use of green energy. We have been working with the municipality and other stakeholders to improve of green energy efficiency (Participant 9).

4.6. Challenges being experienced by port executives

The third objective of this study reveals themes depicting challenges faced by Port Executives in becoming sustainable leaders and organisational challenges affecting the impact of port executives in being sustainable leaders. Thus, the findings pertaining to these two broad issues are presented in two sections below.

4.6.1. Challenges faced by port executives in becoming sustainable leaders

There are three themes that were identified which show the challenges faced by port executives in becoming sustainable leaders. The challenges include slow adaptation to changes by some Port Executives, lack of creativity and skill and difficulty setting up consistent policy frameworks as highlighted in table 4.4 below.

Table 4.4: Themes on challenges faced by Port Executives in becoming sustainable leaders

Challenges faced by port executives to become sustainable leaders	Frequency
1. Slow adaptation to changes	5
2. Lack of creativity and skill	2
3. Difficulty in setting up consistent policy frameworks	2

4.6.1.1. Slow adaptation to changes

The study found that one of the critical challenges affecting Port Executives is slow adaptation to changes that are constantly happening in the Port industry. One of the participants focused on the problem of not being able to quickly adapt to change which is very fast in the port environment as illustrated in the quote below:

> *You see, the environment in the Port is fast changing and there are new things that get implemented every now and then, and sometimes it is difficult to adapt quickly to this ever-changing environment (Participant 3).*

Another participant shared this similar view of failure to cope with change which was expressed as follows:

Things are happening very fast these days; the environment is changing, and you have to adapt to new things. With some of the constant changes, you are slow to adapt to the different changes taking place (Participant 1).

One of the participants expressed how lack of exposure to greener ports was key in shaping the way Port Executives and employees were responding to change:

Lack of experience and exposure on greener ports space is one the biggest challenge that affect one reaction and response to changes in this environment. So with changes coming in, sometimes it becomes very slow and challenging to adapt (Participant 8).

Participants also highlighted how changes in the needs and expectations of the customers were also another source of challenges in ensuring sustainable operations as revealed by Participant 5:

Customers are ever-changing needs and expectation which is difficult for the Port leadership to fulfil and meet their needs and expectations.

4.6.1.2. Lack of creativity and skill

The study also established that Port Executives are often affected by a lack of creativity and skill to tackle some of the constant changes and demands they have to deal with. One of the participants highlighted how lack of creativity was partly a result of excessive pressure and lack of training as shown below:

Creativity in leadership is crucial but there is too much pressure in some instances, and there is lack of training on skills that can help us to adapt quickly in addressing some of the issues (Participant 9).

Another participant echoed how lack of skills training was affecting capacity as follows:

Some of the challenges we face in adapting to these different new changes is because of the lack of skills trainings that might capacitate our thinking and approach in addressing Port issues (Participant 6).

4.6.1.3. Difficulty in setting up consistent policy frameworks

Consistency policy frameworks are vital for a port to establish long term goals about planning and development of the port. However, Port Executives experience difficulty in setting up consistent policy framework. Participants agreed that continuous changes of top leadership were making it difficult to have consistent and long-term framework for sustainability as shown in the quote below:

> *Due to the type of environment, we operate in that has government influence at the group level, it is more than difficult to come up with solid frameworks that are sustainable for the port because changes of top leadership comes with changes of the port policy frameworks (Participant 9).*

Another participant shared this same view by saying:

> *We do have policy framework in our port but with continuous changes of top organisation leadership, our port policy framework is not concrete and we struggle to set up a concrete one because the new leadership that comes in, comes with new changes of port framework (Participant 2).*

4.6.2. Organisational challenges affecting Port Executives performance as sustainable leaders

Results reveal two themes depicting the organisational challenges affecting Port Executives performance as sustainable leader, namely: Lack of sustainability expertise and communication challenges, as shown in table 4.5. below

Table 4.5: Themes on organisational challenges affecting the impact of Port Executives performance as sustainable leaders

Organisational challenges affecting the impact of Port Executives performance as sustainable leaders	**Frequency**
1. Lack of sustainability expertise	4
2. Communication challenges	3
3. Slow decision-making processes	3

4.6.2.1. Lack of sustainability expertise

One of the major organisational challenges the Port Executives faces is a lack of personnel with the right skills and knowledge on sustainability. This lack of skills can be found from the participants' responses where they indicate how processes in decision-making and execution of tasks are often delayed due to team players not knowing how to contribute to projects. Participant 8 said the following:

> *The organisation have limited employees with sustainability knowledge, as a result, we hire professional specialists on contracts to provide services in the port.*

Another participant also supports this:

> *There is lack of sustainability expertise in the port. The existing organisational programmes are not doing much to reinforce skills and knowledge of personnel around sustainability within the workforce (Participant 6).*

4.6.2.2. Communication challenges

This study shows that Port Executives struggle to achieve sustainable leadership because communication systems within the organisation are inefficient. Participants lamented the practice of lack of teamwork, silo mentality and reluctance to share knowledge or information across different departments or between employees. Participant 5 said the following:

> *Look, some leaders here are not comfortable in working with others as a team, they are not sharing information because they see others as threats. There is unnecessary competition that is taking place. So, it is our responsibility as the leaders of this port to come up with a model or a tool that can assist in breaking this challenge we are facing.*

Another participant attribute the challenge of not sharing information to internal employee competition and resistance to change. Participant 9 gave his insight on this by saying the following:

> *Some leaders are hiding information amongst one another because they want to shine better than others whereas they failing to understand that for an organisation to be*

sustainable, team work is vital. This behaviour have a negative impact to our subordinates because sometimes they become confused on what is expected from them in terms of delivery because they find us not talking the same language.

4.6.2.3. Slow decision-making process

Results of the study depict slow decision making processes often depicted through lengthy bureaucratic processes within the organisation as one of the factors that hinder the Port Executives from being sustainable leaders. Participant 4 had the following to say:

There are many committees within the organisation that the leadership has to undergo through either for approval of capital funding, or rather say for business case approval and also for requesting permission to go out to the market or permission to award projects. We have gate review committee, port acquisition council, investment forum, division committee. All these committees checking one and the same thing. Their processes are too lengthy, many people reviewing one document, you find that each person require two weeks to review a document. These lengthy processes create frustration to the leadership who want to see business continuity and sustainability projects being executed timeously.

In a similar vein, another participant echoed by highlighting below:

I think the Delegation of Authority is not sitting with the correct disciplines and sometime the people with high Delegation of Authority at the head office does not understand the groundwork at the port level. The port of this size should have huge amount of Delegation of Authority allocated to its leadership so that the turnaround time for approval processes will be shortened because we get to undergo through lengthy processes for us to get approvals from head office and so if the port has adequate Delegation of Authority, approvals will be obtained timeously and productivity will be realised quicker than expected. Port sustainable projects are prolonged because of the processes within the organisation (Participant 2).

The silence on issues of green management practices in the old and long term lease agreements with terminal operator is an obstacle to the pursuit of sustainable practices in the port. Participant

1 explained this challenge in terms of the space, limitations to reinforce new policies, and green management practices.

> *Large space of the Port is occupied by the Terminal Operators / Tenants. Challenge is that most of the old long term lease agreements are silent around effectively implementation of green management practices, as a results, Port Executive is limited in effectively implementing green management practices in certain areas of the Port (Participant 1).*

4.7. Key competencies of sustainable leadership at a hybrid port

The study revealed three themes which reveal the key competences of port executives at a hybrid port in Durban. The key competences of the Port Executives at the hybrid port of Durban include the ability to encourage and support operational and strategic sustainability, set clear direction, alignment and commitment to sustainability and strategic flexibility and creating conditions for nurturing sustainability. These are shown in table 4.6 and presented below.

Table 4.6: Themes on key competencies of sustainable leadership at a hybrid port

Key competencies of sustainable leadership at a hybrid port	Frequency
1. Encouraging and supporting operational and strategic sustainability	3
2. Setting clear direction, alignment and commitment to sustainability	2
3. Strategic flexibility and creating conditions for sustainability	2

4.7.1. Encouraging and supporting operational and strategic sustainability

The findings of this study reveal that port executives demonstrate key competencies of encouraging and supporting the implementation of sustainable initiatives in the port of Durban. The participants indicated that they play a crucial role towards encouraging and supporting sustainability at the port, especially towards implementing green management and environmental solutions. As the top echelon leaders in the decision-making process of the Durban port, the port executives are expected to demonstrate and practice sustainable leadership. Hence, Participant 1 revealed how Port Executives' identify and encourage sustainable initiatives particularly towards

solving green management, introduction of renewable energy and addressing environmental challenges, as reported below.

> *As I mentioned earlier, we have green management initiatives that we are still implementing in the port, so I have taken action to support green management initiatives at the port. One of the major initiatives I have been pushing is the introduction of renewable electricity generating system. This will cater towards establishing energy sustainability problem-solving solutions as the country is facing an electricity crisis. As the responsible person behind the team working on detailed design developments of this project, I had to rally all the relevant support, encourage the team and ensure that the project comes to life because it is an environmentally viable project.*

Participants also focused on how they have been encouraging and supporting sustainability in the port through facilitating technological and environmental solutions for air quality monitoring within the port. This type of operational level sustainability was reported as:

> *As leaders in the port, we work with our port operators and support them in providing relevant technological and environmental solutions in various port precincts, e.g. the implementation of air quality monitoring control system in our port precincts to ensure that the system detects and assess air quality produced from operational activities undertaken by port users. So, as the leadership, I can say, the port leaders are the change agents in terms of bringing feasible environmental solutions that will ensure that our port users comply with the environmental requirements as per the environmental regulations standards as well as port requirements (Participant 3).*

Participants revealed that Port Executives need the competence to search, analyse and evaluate strategic and relevant sustainable options for the port. In particular, one of the participants elaborated on how port leaders provided measures and recommended feasible options for electricity self-generation system at the port as illustrated below:

> *The port leaders play an important role in providing sustainable environmental measures, including looking for relevant technologies. For example, we have been pushing for a*

photo-voltaic solar system to ensure the electricity self-generating system, which would go a long way in ensuring sustainable energy sources at the port (Participant 7).

4.7.2. Setting clear direction, alignment and commitment to sustainability

This study shows that another the key competence of sustainable leadership that Port Executives is the ability to create clear direction, alignment and commitment to sustainability in the port of Durban. For instance, the participants revealed how they are committed to green management solutions in the port. As a result of clear direction on sustainability, participants indicated how the port has successfully managed the implementation of different initiatives where they have committed and partnered with the municipality, schools, and other stakeholders to promote sustainability and corporate citizenship. Port Executives promote connection of the port to its surrounding community, the city and stakeholders who use the beaches. Participant 4 reflected how PEs aligned their corporate social responsibility to the needs of the neighboring community and stakeholders to promote co-existence as exemplified below:

Look, the leadership of the Durban port is very committed in creating sustainable environment, not only internally but even outside our port boundaries. We have created a clear commitment and agreement with the City in terms of supply of sand through the Durban Sand Bypass system, which aims to act as temporary sand storage, reclaiming and discharging operation for the supply of sand to Durban's beaches via the new dredger reclaim facility, sand hopper and pump station. So, as the beaches are continually eroded due to the sea currents running northwards up the coastline, the system assists in replenishing sand on Durban's beaches by pumping sand in a slurry format from its containment sand hopper through a 400 diameter pipeline to eThekwini's beach.

Participants recollected about cross-sector collaboration for sustainability which include other departments to create impact in the society. In this regard, participant 2 illuminate how commitment to collaborate or partner with others is key for the current and future requirements of the port and its surrounding community.

We are committed in terms of social sustainability, the port leadership have partnerships with the education sector, and as we speak, we have a list of townships schools around the

Durban area which as the leadership we are assisting them with provision of resources that enable them with better and conducive learning. On a yearly basis, we provide tertiary bursaries to the pupils that have done exceptionally well on their matriculation examinations.

4.7.3. Strategic flexibility and creating conditions for nurturing sustainability

Participants complained how sustainability plans were often abandoned at the port as a result of internal changes at the leadership level in a volatile environment. While this shows employee frustration, it also reveals how the ability to re-align or adapt plans in response to internal or external change is a key competence especially that sustainability often affects a bigger scope of the port in a volatile, uncertain, complex and ambiguous environment. Inadvertently, participant 3 reflected on how strategic flexibility and ability to re-aligned sustainability initiatives at different levels was a result of internal changes in the port:

We have the responsibility to develop programs that we can propose to different port departments to initiate. We make the necessary plans, but sometimes our plans are not implemented. For example, we developed a clean energy initiative for generating port electricity. Unfortunately, after we had set everything in place for this program, the plans we made did not align with the new leadership plans for the port of Durban. However, our commitment towards developing relevant solutions does not stop because of challenges, and we keep on creating new initiatives because that's our job (Participant 3)

Participants expressed that Port Executives demonstrated the ability to recognize, take responsibility and accountability on the criteria for sustainability solutions in the port. To nurture the conditions for sustainability to develop, the Port Executives were setting out environmental sustainability criteria on key performance indicators. Participant 6 elaborated on some of the conditions which Port Executives were creating to nurture sustainability-oriented practices in the port.

What is more important to note is that as the Port Executives of the Durban harbour, we take responsibility and accountability for setting and suggesting port environmental solutions. We ensure that by setting out environmental sustainability criteria on key

performance indicators. The criteria include the innovations implemented in various areas. So, quarterly, the leadership is measured on their performance against set environmental criteria. In doing that, all leaders then take accountability in ensuring that the port remains sustainable

4.8. Chapter Summary

The findings presented in this chapter reveals a variety of four sustainable leadership practices by port executives at the port of Durban. These sustainable leadership practices which were demonstrated Port Executives include prioritisation of environmental sustainability, commitment to strategic partnerships, strategic thinking about the business and people and community building and corporate social responsibility. Furthermore, this study also found that the key gaps in the sustainable leadership practice of Port Executives include silo behaviour, lack of practices to develop human resource, and proper succession planning.

This study has reported that Port Executive enforce green management practices at the Port of Durban in two ways, by driving and reinforcing waste management and promoting green innovations. However, Port Executives face Organisational challenges which affect their performance as sustainable leader. The challenges are lack of sustainability expertise and poor communication which undermine internal collaboration for sustainability. The study has identified three key competences of port executives at a hybrid port in Durban. The ability to encourage and support sustainability among internal and external stakeholders is very key for sustainable leadership practices in a port. Another key competence is the setting of clear direction, alignment and commitment to sustainability as plans change with leadership changes as well as changes in the external environment of the port. Lastly, this study has found that strategic flexibility and creating conditions for nurturing sustainability is key for sustainable leadership of a port. In this way, the exploratory study has provided results which clearly identify practices and gaps in the sustainable leadership of Port Executive. It has also evaluated how Port Executive enforced green management practices, and figured out the variety of challenges faced to become sustainable leaders. Also presented are the key competences for port sustainable leaders of a hybrid port. The next chapter discusses the findings of this study.

CHAPTER FIVE
DISCUSSION

5.1. Introduction

This chapter aims to discuss the key findings of this study in relation to existing literature and relevant previous studies. It is noteworthy that the results in this study provide insights on the variety of four practices and key gaps in the sustainable leadership practice of Port Executives. The results also illuminate how Port Executive enforce green management practices, organizational challenges which affect their performance as sustainable leader and key competences of port executives at a hybrid port in Durban.

5.2. Findings

It is noteworthy that practices of sustainable leadership by Port Executives include *prioritisation of environmental sustainability*, *commitment to strategic partnerships*, *strategic thinking of the business and also about people*, and *community building and corporate social responsibility*.

Port Executives enforce green management practices at the Port of Durban in two ways, by driving and reinforcing waste management and promoting green innovations. However, they face a variety of problems to perform as sustainable leaders in their port environment. It is equally important to underscore that the key gaps in the sustainable leadership practice of Port Executives include silo behaviour, lack of knowledge and understanding of sustainability among the leaders themselves and reliance on external experts. At the organisational level, Port Executives face a variety of difficulties including lack of sustainability expertise among the employees and poor communication which undermine internal collaboration for sustainability. To ensure sustainable leadership of a port, it is imperative that port executives have a variety of key competences which include the ability to encourage and support sustainability among internal and external stakeholders, set clear direction, alignment and commitment to sustainability mindful that plans change in a volatile internal and external environment, and strategic flexibility to create and adapt conditions for nurturing sustainability. These results are discussed in detail below.

5.2.1. Sustainable leadership practices, green innovation and key competences

Firstly, this study is explicit that port executives practice environmental responsibility through a variety of activities within the port. This practice involves six distinct activities, namely the

prioritisation of environmental responsibility; establishing of environmentally related policies, rules and regulations to govern port operations and providing guidelines to port users/tenants; policing others who are port users/terminal operators; ensuring port environmental specialists conduct audit on the performance of port users, and caring for the environment. In this study, Port Executives believed they were looking after the environment by ensuring that waste such as oil waste, asbestos waste, ballast waste, electronic waste and any other forms of waste were managed properly and disposed to the correct site. This reveals that environmental responsibility is complex and relates to different types of wastes from a variety of activities and sources. This resonates with the notion that sustainability is a multi-dimensional issue which affects various aspects of the internal operations and business stakeholders. Ashrafi et al., (2019) assert that corporate sustainability as a dimension of sustainability focuses on the ability of organisations to offer solutions to improve the quality of the work environment for employees. Notably, port executives created interactive and consultative forums at the organisational level as one way to reduce environmental contamination by terminal operators. Strandberg (2020) acknowledge environmental-based sustainability which link organisations to ethical behaviour and environmental conservation. Port Executives at the Port of Durban support environmental responsibility through ensuring that operators within the port and their activities are eco-friendly. Lee et al., (2017) agree that air and water pollution are the major negative ecological impacts of shipping. Shipping and port expansion is a major source of a variety of negative chemicals. There are many pollutants related to port operations and these include oil pollution from oil spills, air pollution, and transfer of dangerous marine bacterium from one area to another. This pollution has negative impacts on the environment, including climate change, extinction of endangered species, and habitat loss. Water pollution may also become a problem as contaminants from ballast water, cargo residue, oil waste, garbage disposal and petroleum spills are discharged (Hossain et al., 2019). Maritime activities such as bunkering may produce oil spills with dangerous effects on seashores, food chains, sediment and fishermen while anchoring and this may cause permanent destruction to the environment. According to Lee et la., (2017), oil spills in an oil terminal are unavoidable and port authorities must know this fact. Therefore, anti-pollution practices such as dredging must be put in place, and they must focus on preventing spilled oil to get to the seashores. Mindful of the different types and sources of waste, activities and practices to ensure

sustainability, it is not enough for a leader of a port to simply have sustainability literacy. Holistic thinking or systems thinking is critical for a sustainable leader of a port to understands the system of various interrelationships in which the port is embedded and ecosystems (Strandberg, 2020). Sustainable leader as a systems thinker needs to understand the systemic features of intricate sustainability problems and capability to analyse complex systems across different domains or fields (society, economy, environment, etc.) both locally and globally (Knight and Paterson, 2018).

Port Executives display sustainable leadership through several waste management practices aimed at safely disposing waste material to limit pollution. They also have high levels of commitment towards water management in and around the Port of Durban to ensure a safe environment for marine life. While it is laudable that environmental responsibility is increasingly becoming one of the priority issues within the port, there are also two interesting issues as Port Executives seem to rely on external mechanism of rules, regulation and compliance to environmental guidelines rather than social influence. First, rule based and external mechanisms are helpful to ensure sustainability but are not always based on clear and internalized understanding which is key for port users as stakeholders to trigger their own initiatives and go beyond the minimum environmental requirements and expectations. Second, it is unclear how they actually design and different types type of performance indicators to evaluate and monitor the results of practices of environmental responsibility. Woo and Kang (2020) explain that sustainable leadership ensures the availability of measures to combat industrial nuisances, monitoring all kinds of wastes, safeguarding water and land areas as well as pollution, training port and business staff, modifying operations to eliminate the amount of waste produced, recycling or reuse materials or waste for environmental conservation. Nonetheless, it is noteworthy that the Port Executive committee formed precincts forum and organised session every month with port users to discuss port precincts developments, environmental issues and compliance to legislations such as National Environmental Management Act, International Organisation for standardisation and others. In this way, the practice of environment responsibility by sustainable leaders in a port embrace some consultative interactive approaches for both internal and external stakeholders. Kantabutra (2019) defined sustainability as the concept of preserving the life of an organisation as sustainability keeps the business going. In pursuing organisational sustainability, it is critical that achieving success today should not

compromise the needs of the future (Balasubramanian (2021). Organisations are establishing sustainability policies aimed at emerging an underlying culture of sustainability and creating a balance between their policies and environmental, social as well as financial performance (Hansen, 2017). In this study, Port Executives did not clearly consider how they were building and shaping the culture of sustainability through clearly articulating the firm's vision and mission that aligns with an organization's environmental objectives. A study by Khotsa and van Rooyen (2020) which focused on sustainability leadership in the South African Post Office concluded that efficient waste management practice requires significant sustainability leadership, overall strategic direction and day-to-day support. Khotsa and van Rooyen (2020) recommend that increasing employee awareness of the importance of waste disposal, providing merit awards to units or sections that comply with waste disposal policies, and allocating waste dumping spaces at branch level were key activities to enhance sustainability at South African Post Office. Practices of environmental responsibility by Port Executives which do not ensure deep and internalized understanding are likely to fail as port users and stakeholders may feel pressurized and not internally influenced to embed sustainability in their respective roles and day-to-day activities. Leaders and employees with sustainability literacy are key as they are able to identify and educate stakeholders who pursue greenwashing. While environmental responsibility is prioritised by Port Executives, it raises questions on how this may be actually achieved. More importantly, this study is explicit that there is lack of knowledge and expertise on sustainability not just among the Port Executives but also employees which makes them vulnerable to greenwashing. It is important that leaders are familiar with the concept of greenwashing which is normally used as a pejorative, referring to the practice of construing an activity as more environmentally friendly than it really is. In a port, green washing may relate to processes by port stakeholders claiming to reduce their environmental impacts and environmental protection measures which are put in place simply as add-ons to existing production processes while the original destructive processes are not altered in themselves. Furthermore, an organization may claim to act ecologically sustainable based on symbolic action which does not affect an actual material problem. Symbolic greenwash shift attention from more destructive environmental dynamics to a far less significant issue. An evaluation of how the practices used by Port Executive to reinforce green management show that enforcement was predominantly based on regulation imposed on the port, guidelines developed

by the port itself for its own use and its stakeholder and compliance. It is equally notable that most of the practices were operational in nature while only few were strategic. Clearly, the pursuit of cleaner and renewable energy exemplifies few of the strategic efforts to enforce green management practices at the port. Overall, this study conclude that the practices used to enforce green management at the port were predominantly operational, but also weak, lacked relevant skills and was poorly strategized to create and develop a lasting sustainability culture at the port.

Secondly, port executives were committed to strategic partnerships to balance and ensure sustainable development. Lee et al., (2017) recognize that partnerships with relevant stakeholders are key in fostering the development of better ecological practices and reducing pollution. Results in this study are clear that Port Executives build and maintain partnerships with internal stakeholders such as electrical power supplies depot, building and marine depot, and project team members to put various energy initiatives around the port. Sustainable leaders influence the engagement of employees. Ashraf et al., (2020) argues that employee empowerment and participation through engagement is a vital element in achieving successful sustainable leadership through green management. Anwar et al., (2020) concurs that engaging the employees in different capacities such as in the decision-making process is essential in the sense that the employees will feel as being an active and useful part of the organisation and are more likely to improve their performance in achieving environmental sustainability. According to Masri and Jaaron (2017), empowerment means giving employees some form of concessions and authority to make decisions on their accord. This study's findings show a lack of employee empowerment and poor employee communication at the Port of Durban which undermine collaborative work for sustainability. Participants describe how often management's expectations of them are not clear and how they have developed frustration because of the Port Executives' inability to include low-level staff in decision making at the Port of Durban. Top management does not engage low level employees in key decisions involving strategic green management. Sustainable leaders should influence the engagement of employees to improve sustainability and avoid the inadvertent sustenance of silo mentality (Chaudhary, 2019). When employees are disengaged, they begin to withdraw, hide their identities, ideas, and feelings resulting in an adverse effect on sustainability and systemic work performance (Masri and Jaaron, 2017).

Strategic partnership is key to sustain the growth and expansion of the port but also create quality and competitive port services. Samimi et al., (2019) concur that one of the functions of strategic leaders in an organisation is making strategic decisions. In this study, Port Executives were making strategic decisions regarding the building and managing of partnerships with external stakeholders, performing ambassadorial and external leadership role (Samimi et al., 2019). This study has revealed that building of strong relationships with stakeholders was crucial to ensure swift maintenance services and waste management. Another key finding reveal that developing partnerships between departments and other companies within the Port of Durban is critical in advancing green management practices such as renewable energy initiatives. Drawing from the results of this study, it is salient to underline that sustainable leaders should pay serious attention to forming meaningful relationships with external entities as an organisation and its operations does not exist in isolation. More importantly, this is critical in a port environment where a significant portion of a business' environment is influenced by external forces hence the need to form strong partnerships (e.g. with shipping firms and associations, transporters, oil refineries) and other relevant stakeholders who are tenants within the port environment (Knight and Paterson, 2018). As part of sustainable leadership practices, Port Executives value ppartnerships as part of an integral strategy in managing and coordinating of services especially in addressing some of the challenges such as traffic congestion which has been a major issue for many years in the port. They also collaborated effectively with the eThekwini Municipality, Port Terminals, Freight Rail, Department of Public Enterprises, KwaZulu Natal Departments of Economic Development, Tourism & Environmental Affairs, South African Police Service, Durban Metro, Department of Transport, organised business through the Durban Chamber of Commerce & Industry, and other stakeholders in finding feasible traffic management measures to alleviate congestion at the port and surrounding road networks. Commitment of the Port Executives to strategic partnerships has been crucial to address different challenges regarding green management, transport, infrastructural growth and storage facilities. Lee et al., (2017) states that partnerships among the collaborators, and supply chain members is key in fostering the development of better ecological practices and reduce pollution. Addressing environmental issues is not just the responsibility of the Port management, but rather something that requires collaborative work within and outside the port environment. Environmental management practices encompass a combination of organizational

activities focusing at reducing resource consumption and improving waste disposal (Aronson et al., 2017).

Iqbal et al., (2020) claims that sustainable leaders are good at negotiating and forging binding, and lifelong symbiotic relationships with various stakeholders. According to Ashrafi et al (2019) ports have a chance to achieve sustainable value chain by forming partnerships or collaborating with other sectors or industries to ensure long-term profitability of their organisation, and improvements in the working conditions for workers (Roh et al., 2016).

Thirdly, this study is explicit that strategic thinking by Port Executives is key especially in ensuring environmental solutions through partnerships that facilitate waste management and renewable energy resources to reduce carbon emissions. Competent people in strategic thinking can design and execute transformational actions, systemic interventions, and transition strategies toward sustainability, account for unplanned consequences and cascading effects. Leaders should link learned ecological principles to green initiatives that enable shifts toward a sustainable future (Strandberg, 2020). The findings of this study reveal that Port Executives display sustainable leadership through their strategic approach on the business opportunities, continuity and growth of people. Nonetheless, Port Executives failed to be strategic specifically in developing and empowering of employees with sustainability skills. Furthermore, they were also less strategic in reinforcing green management practices as they relied heavily on rules and regulations which are less effective in building sustainability culture adopted by all employees and stakeholders. It is critical that sustainable leader is clear on sustainability indicators of how sustainability is being embedded within the culture of a port.

Fourthly, it is noteworthy that Port Executives revealed that they were leading a variety of activities of corporate responsibility such as supporting local schools, and use of dredgers to nourish the beaches for the community to enjoy themselves and "take a girl child to work campaign." Port Executives perceive dredging as a key green activity of contributing to society that they must carry out consistently and also improve and maintain marine life. Dredging involves removing material and slit from the bottom of the harbour and pump the sand back into the Durban beaches to maintain a safe ecosystem for sea life. Corporate social responsibility alludes to

commitments of a corporate organisation to giving back to the environment, industry, communities, or toward the growth of the country by mean of a number of structured projects. Companies which maintain ethical corporate social responsibility practices have the opportunity to become more connected to the stakeholders and community around them. Another key and interesting finding is that port executives reinforced green practices within the port especially in terms of waste management, separate classification of waste disposal, and green innovation. The findings of this study underscore that port executives are highly committed to enforce green management initiatives such as air quality controls to ensure compliance with legislation governing waste disposal to prevent pollution. They also reinforce shipping companies' compliance to the port requirements. Sustainability implies growth that does not sabotage the chance of future generations to develop themselves which embrace environmental conservation, economic development and social justice (Tam and Taruna., 2016). This is echoed by Strandberg (2020), who argues that sustainability is the capacity of an organisation to operate during difficulties and still maintain its ethical culture. In ensuring environmental responsibility, Port Executives engage in the practices which align policies, procedures at national and international legislation (ISO) level to ensure that green management practices can flourish within the port. Practices to reinforce green innovation were also manifest in plans and strategies to move away from harmful energy sources to clean energy and renewable energy sources which produce less carbon emissions. In this regard, Port Executives are cognizant of the consequences of extensive use of carbon fuels and how carbon emissions accelerate global warming. Consequently, port executives are gradually turning away from these fuels to other alternatives that sustain green environments. Renewable energy is energy produced from a source which do not encompass using up depletable resources e.g., wind, geothermal, solar, hydroelectric, wave (Chang and Danao, 2019) Lee et al., (2017) explain that the variety of sustainable practices that can be introduced to enhance green management include waste disposal, renewable energy, green materials and equipment, and ecologically harmless shipbuilding designs, support environmental sustainability.

It is notable that the practices of strategic leaders at the port are undermined by lack of wide-spread sustainability knowledge, literacy and skills in the organisation. This study found that slow adaptation to change arise partly from lack of experience and exposure on greener ports which is one of the biggest challenges that affect port executives to perform as sustainable leaders.

Additionally, the ever-changing needs and expectations of customers also pose difficult for the Port leadership to fulfil and meet their needs of various port users and stakeholders. Lack of creativity and sustainability expertise to tackle some of the constant changes and demands are also part of the capability-related challenges faced by port executives. Training and development of human and social capital is one of the key roles of those at the upper echelon of an organisation. According to Tang, Liao, Wan, Herrera-Viedma, and Rosen (2018), green training and development is the concept of preparing multi-talented workers and is concerned with the improvement of competencies, knowledge, and skills necessary to achieve sustainability. It is clear that sustainable practices in the port require deliberate efforts by strategic leaders to engage in green training and development if they are to build a sustainability culture within the port. The lack of relevant skills within personnel, instability of leadership, failure to develop internal capacity for sustainability and delays in decision making processes due to lack of sustainability expertise are not a reflection of a sustainability culture at the port. Masri and Jaaron (2017) define green training and development as the organisational development of attitudes, behaviours, and knowledge and skills among the employees to help limit pollution of the environment.

Chaudhary (2019) argue that without making people green it is impossible to make an organisation green. Green human resource development plays a big role in making organisations more sustainable. With this in mind, sustainability is defined as all the activities aimed at improving a company's ecological and social performance while retaining the financial bottom line (Tang et al.,2017). Green Human Resource Management can be explained as using Human Resource Management (HRM) practices to increase employee commitment to environmental sustainability issues and reinforce environmentally sustainable practices (Masri & Jaaron, 2017: 474).

Port executives experience difficulty in setting up consistent and long-term framework for sustainability in a volatile environment also characterised by frequent changes of top leadership. Agsonsua, Kositpimanwech, and Yuenyong (2018) explain that effecting change through sustainable leadership practices for the long-term future in business, development, or work environment depends on sustainable leadership which uphold a long term and integrated view of the organization, people and the environment.

Fifthly, it is pivotal to highlight that this study identified three key competencies of sustainable leadership in a hybrid port. The ability to encourage and support operational and strategic sustainability among internal and external stakeholders, setting of clear direction, alignment and commitment to sustainability in a volatile environment and strategic flexibility and creating conditions for nurturing sustainability are key for sustainable leadership of a port. A study of sustainable performance and sustainable leadership of hospitality firms in South Africa concur that a sustainable leader also improve social and environmental performance not only firm financial performance (Fatoki, 2021). According to Hansen (2017), the essence of sustainability in an organizational context is the principle of enhancing the economic, environmental and societal systems within which a business operates.

5.2.2. Proposed competences framework for sustainable leadership of a port

Informed by the above discussion of the key results of this exploratory study, it is clear that sustainable leadership of a port requires a variety of competences which include the identified three key competences: encouraging and supporting operational and strategic sustainability; setting clear direction, alignment and commitment to sustainability and strategic flexibility and creating conditions for sustainability.

In proposing the framework of competences for sustainable leadership of a port based on results of this study, it is critical to bear two key issues in mind. First, competency models are popular because they are developed based on those who have superior performance, based on facts rather than subjectivity (Knight and Paterson, 2018). In this respect, competency are the basic characteristics of the person that causes or leads to superior or effective performance. However, this study did not focus exclusively on those who have superior performance as port executives. Furthermore, the study did not explicitly highlight competences necessary for threshold performance. As such, the proposed framework does not separate between distinguishing competences (for superior performance) and threshold competences (minimum acceptable performance). More importantly it provides a general picture of what competences of sustainable leadership in a port are generally shown as important in the various themes from this study.

Second, it is key to initially remember that at its foundation, sustainable leadership is a hybrid set of knowledge and skills grounded by and a reflection of leading self, others, and across sectors, as well as integration of business and the environment to ensure lasting co-existence.

Lastly, Sustainable leadership competences give a realistic and holistic picture of knowledge ('knowing that'), skills ('knowing how'), and attitudes (knowing how to behave) to perform a job successfully as a sustainable leader (Knight and Paterson, 2018). For trainers and educators, competencies usually refer to specified knowledge, attitude and skills that are of focal significance to undertaking successfully a given activity, task or career. The table below 5.1 depicts competencies, their definitions and indicators for sustainable leadership of a port which are drawn from the results and discussion of this study.

Table 5.1 Framework of competencies for Sustainable leadership of a port

Competencies	**Definition**	**Behaviour indicator**
1. Sustainability literacy		
Understanding of people, planet and profit dimensions of sustainability in the environment and the organisation	Demonstrate clarity of the people, planet and profit elements of sustainability and their complex interactions and interrelationships	• Conscious of the interrelations when making strategic decisions in an organisation • Demonstrate environmental responsibility

2. Systems thinking		
Holistically reviewing an organisation, and being able to examine and join the linking parts to create effective processes and avoid practices with unintended and possibly negative results. Knows the business system thinking and its integration with sustainability	Applies whole system thinking to processes and activities by paying consideration to all internal and external environmental factors	• Diagnose and explain things in a system world view • Seeing interrelationship and patterns rather than linear cause-affect chains in the port environment
3. Impact and influence		
Encouraging and supporting operational and strategic sustainability	Support overall organisation strategy and identifies opportunities for the use of natural resources	• Develop operational and strategic sustainability strategies • Market sustainability strategies to all port stakeholders
Building partnership	Demonstrate capacity to create value with all	• Align systems and cultures to create

	stakeholders and exhibit a comprehensive understanding of individuals across cultures and build productive, long term relationships with key stakeholders.	stable relationships described by joint responsibilities, commitments and benefits. • Engage and empower stakeholders across all boundaries.
4. Strategic thinking		
Setting clear direction, alignment and commitment to sustainability	Express holistic clarity about the direction and commitment of the organisation to sustainability	• Create a shared vision and commitment of the organisation to sustainability • Lead efforts to accomplish organisation vision and strategy
Strategic flexibility and creating conditions for sustainability	Ability to respond and adapt to significant changes in the environmental.	• Enhance Organisational sustainability in the emerging market

5. Developing green human capital		
Developing and nurturing sustainability expertise	Develop and support employees to gain relevant sustainability skills and knowledge.	• Promote sustainability literacy and skills through training and development programs. • Enhance skills and capacity building programmes for sustainability • Embed sustainable leadership framework.
Create, develop and implement innovative sustainable solutions	Not accepting the status quo but rather coming up with various sustainable innovative solutions	• Support and promote innovative plans and strategies in the port • Delivers solutions in line with sustainability initiatives and solutions

6. Cross functional communication for sustainability		
Maintain communication across traditional functions and port stakeholders	Identify all relevant stakeholders and develop effective ways to improve cross functional communication	• Maintain and promote sustainability across traditional functions and boundaries in the port
Developing and communicating benefits of sustainability	Clarify and communicate strategic benefits of sustainability to the port and its environment.	• Communicate sustainability benefits to port employees and tenants through a variety of communication channels
7. Building sustainability culture		
Create, develop and maintain shared beliefs and assumptions concerning the significance of balancing social equity, economic efficiency and environmental accountability	Build shared understanding of key sustainability priorities and behaviors. Promote and reward sustainability behavior	• Promote values and beliefs aligned with sustainability among port employees. • Target efforts and resources to address

among organisational members of the port.		the key barriers which prevent employees and port stakeholders from embracing sustainability

Source: own

The above framework provides a descriptive tool which clarifies the competences which are necessary to work in the role of sustainable leader of a port. It is very important that future effort is made to clearly categorize these competencies in terms of those that must be acquired by job holders to achieve superior performance on one hand, and those that would only result in threshold or minimum performance on the other as a sustainable leader of a port.

5.3. Chapter Summary

The chapter concludes that port executives practice environmental responsibility through rule-based mechanism, consultative forums, audit by environmental specialist and caring for the environment by pursuing green innovations.

While it is apparent that rule based and external mechanisms of enforcing sustainability are helpful to ensure sustainability, it is notable that they do not help port stakeholders and employees to get an internalized understanding of sustainability. This may not easily build and shape the culture of sustainability in a port. The prioritisation of environmental responsibility by Port Executives is laudable but invoke questions on how this may be actually achieved especially in a port where there is lack of sustainability literacy among the members of the upper echelon and lack of expertise on sustainability among employees which makes them vulnerable to greenwashing. This study also conclude that the way Port Executives reinforced green management was predominantly based on regulation imposed on the port, guidelines developed by the port itself for its own use and its stakeholders and compliance. In a nutshell, most of the practices were operational in nature while only few were strategic. Overall, this study conclude that the practices

used to enforce green management at the port were predominantly operational, but also weak, lacked relevant skills and was poorly strategized to create and develop a lasting sustainability culture at the port.

Practices of sustainable leadership by Port Executives reflect the use of strategic partnerships as an integral part of addressing environmental issues. This confirms that practices of sustainable leadership embrace a variety of strategic actors and skills which necessitate collaborative work within and outside the port. However, Port Executives were less strategic in developing green human capital that their practices of strategic leadership were undermined by lack of wide-spread sustainability knowledge among employees and sustainability literacy among members of the upper echelon. While systems thinking is central for sustainable leaders of a port, it may be less effective in terms of sustainability without well-trained staff. It is critical that systems thinking for sustainability is premised on sound understanding of the various interrelationships and patterns in the context where the port is embedded and operates by those in the upper echelon and employees at various levels of the port as a whole.

CHAPTER SIX
CONCLUSIONS & RECOMMENDATIONS

6.1. Introduction

Following the presentation and discussion of the findings of this exploratory study, this chapter aims to tie the objectives of the study to the main findings and to conclude the study. This exploratory and qualitative study adopted the Sustainable Leadership Theory (SLT) to specifically explore the practices of strategic leadership being used by the Port Executives at the Port of Durban. The chapter also seeks to provide recommendations and areas for future research. In this respect, the chapter begins by briefly reiterating the overview and summary of the main findings. Thereafter, the chapter presents conclusions, recommendations, and areas for further research.

6.2. Realisation of objectives

The overall objective of this study was to explore the sustainable leadership practices of Port Executives at the Port of Durban in South Africa. This exploratory study used qualitative in-depth interviews involving nine experienced members of the Port Executive. These interviewees were key to delve into the day-to-day sustainable leadership practices by port executives in the port environment. Purposive sampling technique was used in this study to primarily select only those that were in upper echelon of the port and also involved in shaping the strategic direction of shipping and port activities which affect sustainability and operations in the long term. Data were gathered using semi structured interviews and analysed using a thematic approach to get dominant themes depicting sustainable leadership practices, practices of reinforcing green management, challenges of becoming sustainable leaders and key competences of sustainable leadership of a hybrid port.

Results of this study reveal a variety of four sustainable leadership practices by port executives at the port of Durban. These include prioritisation of environmental sustainability, commitment to strategic partnerships, strategic thinking of the business and people, and community building and corporate social responsibility. Furthermore, this study also found that the key gaps in the sustainable leadership practice of Port Executives include silo behaviour, lack of practices to develop human resource. This study has reported that Port Executive enforce green management practices at the Port of Durban in two ways, by driving and reinforcing waste management and

promoting green innovations. However, Port Executives face organisational challenges which affect their performance as sustainable leader. These challenges are lack of sustainability expertise and poor communication which undermine internal collaboration for sustainability. The ability to encourage and support sustainability among internal and external stakeholders, setting clear direction, alignment and commitment to sustainability in a volatile and strategic flexibility and creating conditions for nurturing sustainability are the key competencies for sustainable leadership of a port.

This section summarises the findings of this study to explicitly indicate how each research objective was realised in the study. These will be considered in formulating recommendations in the section that follows:

Objective 1: To identify sustainable leadership practices that are displayed or not displayed by Port Executives

The study reveals a variety of four themes relating to sustainable leadership practices by port executives which include (1) prioritisation of environmental sustainability, (2) commitment to strategic partnerships, (3) strategic thinking about the business and people and (4) community building and corporate social responsibility. Port Executives displayed sustainable leadership through several waste management practices of safely disposing waste material to limit pollution and also green innovation. The study is clear that Port Executives commonly relied on external mechanisms of rules, regulation and compliance to environmental guidelines rather than social influence. In this way, Port Executives did not clearly consider how they were building and shaping the culture of sustainability through efforts to build awareness, connection of the firm's vision and mission with sustainability and also alignment with an organization's environmental objectives. Sustainability culture may be easily promoted through employee awareness of the importance of waste disposal, providing merit awards to those that comply with waste disposal policies, and allocating waste dumping spaces. The challenge of green washing by port tenants require leaders and employees with sustainability literacy to identify and educate stakeholders. Commitment of the Port Executives to strategic partnerships was crucial to address different challenges regarding green management, transport, infrastructural growth and storage facilities.

However, practices of strategic leaders at the port were undermined by lack of wide-spread sustainability knowledge, literacy and skills in the organisation. Instability of leadership, failure to develop internal capacity for sustainability and delays in decision making processes due to lack of sustainability expertise were key obstacles to ensure a sustainability culture at the port.

Objective 2: To evaluate how Port Executives are enforcing green management practices at the Port of Durban

This research objective was realised by the study as the responses of the Port Executives at the Port of Durban described the policies and procedures that they put in place to ensure stakeholder compliance. Port Executive established internal rules and regulations, conducted annual inspections and had waste management policies that were used to monitor and limit carbon emissions and other pollutants into the environment. In the light of this, it is clear that port executives reinforced green practices within the port especially in terms of waste management, separate classification of waste disposal, and green innovation. Furthermore, port executives were highly committed to enforce green management initiatives such as air quality controls to ensure compliance with legislation governing waste disposal to prevent pollution. Overall, this study conclude that the practices used to enforce green management at the port were predominantly operational, but also weak, lacked relevant skills and was poorly strategized to create and develop a lasting sustainability culture at the port.

Objective 3: To identify the challenges faced by Port Executives to become sustainable leaders

This objective was also realised from the responses of the participants. In their responses, participants explained how the failure of the Port of Durban to retain valuable skills had led to high turnover in personnel who occupy top management. They explained how constant changes in leadership and failure to replace through succession planning caused instability and ultimately limited the organisation in executing its strategy. Port Executives also described how challenges such as bureaucracy, lack of employee engagement, poor training and development and limited funding for green initiatives had been major constraints when attempting to achieve sustainable leadership.

Participants also reflected on how ineffective communication systems in and around the organisation were restrictive, information did not flow efficiently throughout the organisation and how this resulted in poor performance, low morale, and dissatisfaction amongst employees.

The study has illuminated three key competencies of sustainable leadership in a hybrid port which are: the ability to encourage and support sustainability among internal and external stakeholders, setting of clear direction, alignment and commitment to sustainability in a volatile environment and strategic flexibility and creating conditions for nurturing sustainability. In addition to these three key competencies specified by Port Executives, a number of other competencies have been delineated from the variety of sustainable leadership practices to propose a framework of competencies for a sustainable leader of a port.

6.3. Recommendations

With the outcomes of this study, the following recommendations are made:

6.3.1. Succession planning

Port executives must recognise the need of succession planning and, more importantly, ensure that it is implemented. This is best accomplished by ensuring that succession planning is in line with other Human Resource Management policies and procedures, as well as being integrated into their overall business strategy. A succession plan should be included in a talent management strategy, which should be implemented across the board, including recruitment, reward policies, and staff development. It's critical to build a strong talent pipeline that can support succession planning.

Port Executives should adopt a variety of strategies to aid in the retention and recruitment of skilled workers. Employee development policies, reward methods, and tools like coaching and mentoring could all be part of these strategies. These should be a strategic element of practice that is implemented across the organisation.

6.3.2. Green Training and development

Certain practices have been structured for both the working environment and training session. An execution of these practices will ensure an effective transfer of learning and subsequent reinforcement. Some of the practices are illustrated below:

Step 1. Identifying Training Needs: Training needs is the difference between actual performance and standard performance. The gap emphasizes the need of employee training. The goal of training is to close the gap between actual performance and standard performance.

Step 2. Establish Specific Objectives: Following the identification of training needs, determining the training objectives is critical. As a result, the major goal of training should be to close the gap between actual performance and standard performance. This can be accomplished by establishing training objectives.

Step 3. Select Appropriate Methods: Training methods are preferred means for achieving training objectives. A suitable training method should be identified and selected to accomplish the specified objectives after the determination of specification objectives and training needs.

Step 4. Implement Programs: Following the selection of an appropriate training method, the actual implementation takes place. The programs and plans are carried out at this stage in order to achieve the desired output. Workers are trained to improve in order to perform better in the organisational activities.

Step 5. Evaluate Program: This entails reviewing many components of training to determine whether the program was effective. Studying the effects of training on employee performance can be used to evaluate.

Step 6. Feedback: Lastly, to determine the effectiveness of the training program, a feedback mechanism is developed. Participants are asked for information on the classroom or workplace for on-the-job trainees, etc. The information is then analysed and assessed in order to discover weak areas in the training programs that can be improved in the future.

6.3.3. Effective communication strategies

A challenge for Port Executives at the Port of Durban is their inability to set up effective communication channels to reinforce and promote sustainability. The following strategies may be incorporated to improve the efficiency in information transfer:

1. Create an open communication environment: An organization should strive to create a communication atmosphere in which all employees are free to discuss their ideas, feedback, and critiques on any given topic. Organizational leaders that strive for open communication are better able to build trust among their staff and, as a result, are more likely to achieve better results.

2. Employ the inclusive communication strategy: An inclusive communication strategy is one in which all individuals are included in the company's decision-making processes. This motivates employees to come up with more innovative and effective ideas for the organization.

3. Communication must be multi-directional: One-way communication is never acceptable. It should be a two-way process that can be horizontally or vertically in nature. It must include not only top workers, but also staff at lower levels who have the authority to pass information on to their superiors.

4. Communication must be result-oriented: The goal of business communication is to achieve a specific outcome. Organizations must comprehend and ensure that staff are provided with measures they need to increase their company's productivity.

5. Employ multiple channels to transfer messages: Make certain that all members of the organisation get relevant communication on time through various channels. Effective commutation channels to convey messages incorporate meetings, memos, posting, interacting via faxes, emails and telephone and face to face conversations.

6. Communicate objectives and goals clearly: Regardless of the position an employee holds, it is critical that he has a thorough awareness of the company's goals and policies. All critical organizational functions must be communicated to employees. Only then will a company be able to build an effective internal communication system.

6.3.4. Developing a Sustainability Culture

Port Executives need to foster a green organisational culture at the Port of Durban to fully realise sustainable outcomes. Some of the ways to achieve green culture are as follows:

Green training and development

Green training should be prioritised. It is a critical intervention in the GHRM to prevent and reduce waste. Green training and development raises employee awareness of the importance of environmental management, teaches them understand ways on how to act green, and improves their ability to cope with environmental issues.

Sustainable leadership competences and Green competencies

The study has proposed a competence framework for sustainable leaders which may offer guidance to build sustainability conscious human capital at the upper echelon. As for the other level which also lack sustainability skills, it is critical to develop sustainability literacy and green competencies. These are important because it will be impossible to become a green employee if employees do not have appropriate knowledge and skills (competencies) concerning greening. Individual green behaviour is favourably connected with green competence. Training and education is a technique that allows employees to learn and adopt new skills and, as a result, can assist in gaining possible green competences. Employees will learn new skills related to greening as a result of the training, which will expand their participation in environmental initiatives.

Green recruitment & selection

Organizations will select candidates with necessary green attitudes and competencies who will help the organization become "greener" by applying green recruitment and selection processes. Most developed countries recognize the relevance of green recruiting and selection for GHRM. They discovered that the most influential GHRM practice on environmental performance was green recruiting and selection.

Green attitudes

Employees must have the appropriate attitude (feelings, beliefs, and intention) when it comes to greening. The acceptable attitude toward greening can be split into three categories: cognitive, effective, and behavioural. Employees who believe in greening, understand the necessity of greening, and live a greening lifestyle have a positive cognitive attitude. Employees with a good affective attitude toward greening and who like participating in greening. Employees who have

the right behavioural attitude are those who want to make a genuine contribution to greening. As a result, Port Executives must change employee attitudes in order to achieve ideal performance.

Green behaviour

Employee behaviour must change because green behaviour is necessary for the organization to be environmentally sustainable. Hence, the Durban harbour ought to develop green behaviour practices. For example, utilising the following initiatives:

- Organisational citizenship behaviour which is the extent to which workers engage in deliberate green activities that assist the organisation accomplish greening e.g., recycling.
- Green interpersonal citizenship behaviour which is reflected through engagement of workers in aiding co-workers to tackle their work in a green way.
- Green official behaviour which involves employees voluntarily participating in green tasks and duties assigned and imposed by top management e.g. mandatory separation of waste

In conclusion, Port Executives need to revise their sustainable leadership practices and understand that sustainability is a holistic approach with various functions that must be satisfied and paid equal attention for green initiatives to be successful.

6.4. Area for future research

There are three key areas for further research, which are as follows:

As this exploratory study focused on the sustainability practices of those in the upper echelon of a port in Durban, it is important that future research investigates and compare findings of sustainable leadership practices from a variety of members of the upper echelon in various ports in different geographical contexts in South Africa. This is critical to enrich or dismiss some of the findings from this study which is situated in one context of port sustainable leadership. Future studies should not only enhance diversity of research contexts but also increase the sample size. This is very important to develop patterns of sustainable leadership practices across different contexts. Increasing the diversity of research contexts within or beyond the port environment may be useful to generate findings with more explanatory power in a variety of contexts, hence more generalizable. One of the limitation of the findings in the current study is lack of generalization as these results are from one port and a very small sample size. Consequently, these results are only

transferable to a similar context. The current study deliberately focused on views of strategic leaders regarding their own practice of sustainable leadership in a port environment. It is possible that some of the participants overrated their views or presented some self-bias often associated with self-report. As such, future research is needed to focus on how followers rather than members of the upper echelon perceive their own practices of sustainable leadership in an organisation. This may enrich our understanding of practices of sustainable leadership from the view point of others. This type of research may be insightful as leadership is fundamentally about social influence. Additionally, other researchers may want to compare the views of leaders themselves with how others perceive or experience their practice of sustainable leadership to get a more integrative view. Lastly, as this study was exploratory in nature, there is an opportunity for future explanatory research to test the proposed framework of competences of sustainable leadership. This requires more clarity of the dimensions of each competence to measure each of them in a quantitative study.

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Appendix 1: Ethical Clearance

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

20 November 2020

Miss Nontobeko Londiwe Zungu (219084799)
Grad School Of Bus &Leadership
Westville Campus

Dear Miss Zungu,

Protocol reference number: HSSREC/00002110/2020
Project title: An investigation of sustainable leadership practices of Port Executive in the Port of Durban
Degree: Masters

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 29 October 2020 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted **FULL APPROVAL** on the following condition:

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

This approval is valid until 20 November 2021.
To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours sincerely,

[redacted]

Professor Dipane Hlalele (Chair)

/dd

Appendix 2: Gatekeeper's Letter

RECOMMENDATION:

19. It is recommended that the Acting TNPA Chief Executive grants approval for Nontobeko Londiwe Zungu to conduct the research as part of her studies, Master of Commerce in Leadership Studies in the sustainable leadership practices for Port Executive Committee at Transnet National Ports Authority, Port of Durban.

[redacted]

Mr. Moshe Motloni
Acting Port Manager
Port of Durban
Date: 23/06/2020

Requested by:

[redacted]

Mr. Magenthran Ruthenavelu
Acting GM: Infrastructure
Transnet National Ports Authority
Date: 23-06-2020

Recommended/Not Recommended:

[redacted]

Ms. Nandi Tyamzashe
Acting GM: Human Resources
Transnet National Ports Authority
Date: 30/06/2020

[redacted]

Mr. Khomotso Phihlela
Acting Chief Executive
Transnet National Ports Authority
Date: 23/07/2020

Appendix 3: Introductory letter

Information Sheet for Participant in Research

Date: 11-11-2020

Dear participant it is my pleasure to have your attention and time for you to give me the required information that will assist in my research.

My name is Nontobeko Londiwe Zungu from Durban. I am a student at the University of KwaZulu-Natal doing my Master of Commerce in Leadership Studies with a student number 219084799. I am enrolled under the Graduate School of Business. My research topic is titled "**An investigation of sustainable leadership practices of port executive in the Port of Durban".**

You are being invited to consider participating in a study that involves research into the Port sector focusing more on sustainable leadership practices. This study aims to explore sustainable leadership practices utilised by the Port Executive in advancing, facilitating growth and development in the Port of Durban and understand measures in place to enforce green management practices. The study is expected to enrol on a series of interviews with port executive in the Port of Durban such as yourself. It will also involve the following procedures: A one page questionnaire that you will be required to answer with your best ability. The duration of your participation if you choose to enrol and remain in the study is expected to be one month.

Participation in this research is voluntary and you may withdraw participation at any point. Refusal or withdrawal will not incur penalty.

Your confidentiality will be maintained at all times as your personal details will not be stored, answers given will be untraceable and no name or contact details are required to participate.

The study has been approved by Transnet Chief Executive in the duration of the pandemic.

In the event of any problems or concerns/questions you may contact the researcher on 0635055029 or 219084799@ukzn.ac.za or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus
Govan Mbeki Building
Private Bag X 54001
Durban
4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557- Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Appendix 4: Informed consent

CONSENT FORM.

I ..... have been informed about the study which is titled: **"An investigation of sustainable leadership practices of port executive in the Port of Durban"** by researcher Nontobeko Londiwe Zungu Student number 219084799.

I understand the purpose and procedures of the study.

I have been given an opportunity to answer questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher at 0635055029 and email address 219084799@ukzn.ac.za

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus
Govan Mbeki Building
Private Bag X 54001
Durban
4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557 - Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Additional consent, where applicable

I hereby provide consent to:

Audio-record my interview YES / NO

_____ _____

Signature of Participant **Date**

_____ _____

Signature of Witness **Date**

(Where applicable)

_____ _____

Signature of Translator **Date**

(Where applicable)

Appendix 5: Interview Schedule

Interview Schedule/Guide

AN INVESTIGATION OF SUSTAINABLE LEADERSHIP PRACTICES OF PORT EXECUTIVE IN THE PORT OF DURBAN

Objectives No.1 (To identify sustainable leadership practices that are displayed or not displayed by Port Executive)

- Does the Port Executive (PE) display sustainable leadership practices?
- To what extent is the PE displaying or not displaying sustainable leadership practices?
- What are the challenges that hinder the PE for not displaying sustainable leadership practices?
- What are the sustainable leadership measures displayed by the PE in sustaining growth and development in the Port of Durban?

Objectives No.2 (To evaluate how Port Executive are enforcing green management practices at the Port of Durban)

- Is the PE enforcing green management practices at the Port of Durban?
- How is the PE enforcing green management practices?
- Are there any obstacles faced by the PE in effectively enforcing green management practices?
- How is sustainable leadership assist in identifying green management measures at the Port?
- What are the possible gaps resulting in ineffectiveness of enforcing green management practices?
- Are there policies in place in support of green management practices at the Port of Durban?

Objectives No.3 (To identify the challenges faced by Port Executive to become sustainable leaders)

- Is the PE facing challenges to become sustainable leaders?
- What are the challenges faced by the PE to become sustainable leaders?
- Are there any obstacles faced by the PE in enhancing business growth?
- Is there a training programme in place to assist PE to enhance sustainable leadership practices?

Objectives No.4 (To propose a sustainable leadership competency framework for port leaders of a hybrid port)

- What are the key competences of sustainable leadership at a hybrid port?

Appendix 6: Turnitin Report

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