UNIVERSITY *of the*
WESTERN CAPE

An analysis of crayfish street trading challenges in Paternoster

A thesis submitted in partial fulfilment of the requirements for the degree Master of Arts (Geography) in the Department of Geography, Tourism and Environmental Studies, University of the Western Cape

October 2023

Ashlin Theo Ontong

Student no. 3332899

Supervisor: Dr M. Dyssel

Plagiarism Declaration

I declare that 'An analysis of crayfish street trading challenges in Paternoster' is my own work, that it has not been submitted before for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged as complete references.

Full Name: Ashlin Theo

Surname: Ontong

Date: October 2023

Signature:

Abstract

Located on South Africa's West Coast is the small-fishing and tourist village of Paternoster which is defined and characterised by unspoilt white-washed beaches and cottages that are spread out along the coast. This town has a rich culture and marine biodiversity that attracts visitors from all walks of life. Paternoster is popular for its famous crayfish which has created a bustling commercial and restaurant sector which sustains both the local and some aspects of the national restaurant and seafood economy. This picturesque town is plagued by deep class and lucid racial divides cast between the wealthy (primarily white) communities and the poor (black, i.e. mainly coloured) communities. The coloured residents predominantly partake in small-scale fishing to sustain their livelihoods. These local fishermen are often tempted to engage in informal (legal or illegal) activities, due to restrictive laws and policies that have limited the overall volume and hampered the smooth selling of their catch. These laws generally benefit large-scale commercial fisheries as they have the infrastructure and boats to exploit these policies for their 'selfish' benefit. Policies such as the Marine Living Resources Act (MLRA) that have embedded sustainable harvesting and pro-poor principles, seem to be slow, with the impeded implementation that has further marginalised poor communities.

This study explores the polemics and impact associated with the informal crayfish street trade in Paternoster. Concerns about access to small-scale fishers and potential safety issues present street trading and traders as an alternative research lens to look at the bigger informal crayfish trade. A qualitative approach, rooted in an ethnographical investigation paradigm, based on participant observation and face-to-face conversations with street traders, as well as interviews with other interested parties, were conducted to record and analyse the why, where, when and how of the informal crayfish street trading in Paternoster.

Keywords: crayfish trade, informal street trade, biodiversity, small-scale fishing, commercial fishing, Marine Living Resources Act (MLRA), marine resources dependency.

Dedication

This thesis is dedicated to my partner, and son - thank you for your love and support.

Acknowledgements

First and foremost, I would like to thank the creator for giving me the strength and courage to complete this Master's dissertation. I would also like to thank my Supervisor Dr Michael Dyssel for his guidance and constant words of encouragement.

I extend my gratitude to the participants of this study for kindly sharing their lived experiences, which enabled me to gain valuable insights into the operations of crayfish street trading in Paternoster. While their names cannot be disclosed, their contribution was crucial in shedding light on the trade of crayfish.

Finally, I would like to acknowledge Dr John Mambambo for the language and technical editing of this dissertation.

Table of Contents

List of Figures

List of Maps

List of Tables

List of Abbreviations

CAF: Consultative Advisory Forum

DFFE: Department of Forestry, Fisheries and the Environment

DEAT: Department of Environmental Affairs and Tourism

DAFF: Department of Agriculture, Forestry and Fisheries

DTI: Department of Trade and Industry

IWT: Illegal Wildlife Trade

MLRA: Marine Living Resources Act

RDP: Reconstruction Development Programme

SASSI: South African Sustainable Seafood Initiative

TAC: Total Allowable Catch

WCRL: West Coast Rock Lobster

GDP: Gross Domestic Product

ITQS: Individual Transferable Quota's

SFTG: Subsistence Fisheries Task Group

FIPs: Fishery Improvement Projects

WWF: World Wildlife Fund

NGOs: Non-Government Organisations

SAPs: Structural Adjustment Programmes

OMP: Operational Management Procedure

FIDC: Fishing Industry Development Corporation

IMS: Information Management System

SETA: Sector Education and Training Authority

MCM: Marine and Coastal Management

SLA: Sustainable Livelihoods Approach

FRAP: Fishing Rights Allocation Process

Chapter 1: Introduction

1.1 Rationale

Globally, small-scale fisheries play a significant role in food security, poverty reduction and income generation (Béné et al., 2007; Heck et al., 2007; Béné et al., 2010; FAO, 2003). In Africa, the fishing sector has assisted many struggling communities by providing an income for more than 10 million fishers who are involved in the production, processing, and trade of various marine resources, including crayfish. This sector contributes to the livelihoods and food security of over 200 million people on the African continent (Isaacs and Hara, 2015). Although the contribution of small-scale fishing towards the South African Gross Domestic Product can be considered minute in comparison to commercial fishing, this practice plays a critical role in providing employment and sustenance to coastal communities. Small-scale fisheries play a central role in providing income, jobs, and food security to marine-dependent coastal communities (FAO, 2014).

Paternoster as a town is characterised by a history of division, separation, and inequality. During Apartheid, laws, and policies such as the Group Areas Act of 1950 separated people along racial and economic lines. Fishing policies during Apartheid largely benefitted white-owned commercial fisheries which meant that small-scale local fishers were restricted in their attempts to sustain their marine-resource-dependent livelihoods. Isaacs & Hara (2015:6) argue that "in South Africa, however, fisheries have historically been dominated by the commercial marine sector." Generally, the granting of permits was a privilege for white fishermen, which meant that local coloured and black fishermen were forced to catch fish 'illegally'. At the height of Apartheid, most black coastal communities lost their fishing rights because small-scale, and subsistence fishing was not officially recognised as a sector of the industry (Isaacs and Hara, 2015). The consequence of the subsequent restructuring of the industry was an over-concentration of rights in the hands of a few rights-holders. The local elites within communities, who had the necessary social and political capital, organised to maximise their access to quotas (Isaacs and Hara, 2015).

This study investigates crayfish street trading in Paternoster as a small-scale fishers' survival strategy to sustain their livelihoods. The fishers often lack basic education which hampers their access to formal employment. In stark contrast to the (predominantly white) owners of the hotels and restaurants, these residents are subjected to abject poverty, and dreadful experiences of poor service delivery as they are confronted with high levels of unemployment (Hűbschle and De Greef, 2016). Within this community, fishing is deeply entrenched and weaved into the livelihoods of these people. Their historical connection to the ocean, coupled with the economic importance of fish resulted in some residents entirely depending on the ocean. However, their livelihoods seem to have been increasingly threatened by laws and quota systems policies, and licencing introduced by the government. These legal systems and licenses have justifiably been introduced to guarantee the protection of marine species.

The Marine Living Resources Act 18 of 1998 (MLRA) was promulgated to grant access to marine resources to previously disadvantaged communities. However, fishing in the new democratic South Africa has taken a neo-liberal outlook, which has influenced governance and the overall function of fishing in South Africa. This industry is now more export-driven, with a lesser focus on sustainability and social justice. Anciano & Piper (2018:126) posit that "Instead of targeting historical fishers, the initial permit reallocation that was implemented to achieve the MLRA goals was opened to all. This resulted in many permits being allocated to new entrants rather than the intended beneficiaries." Even though, in some instances, permits were allocated to historical fishers, only a small amount of permits were allocated, which implied that a large portion of previously disadvantaged fishermen was still not granted access to fishing permits.

The post-apartheid government incessantly introduced policies that failed to rectify past injustices. De Greef (2016:1) opines that "New legislation, intended to reform the fishing sector after apartheid, has been poorly implemented, making small-scale fishing more complicated." Despite the government's attempt to introduce new inclusive policies, the introduction of these laws is generally slow and continues to marginalise poor communities. The burgeoning of the informal market is therefore spurred by these past injustices, coupled with the present government's inability to introduce policies that truly benefit small-scale fishermen. Hauck and Sowman (2001: 176) posit that "the effectiveness of these policies, however, is under question due to the enormous gap that still exists between policy objectives and implementation." To

break the cycle of poverty, local fishermen are forced to participate in the 'illegal' trade of crayfish, as this sector is far more lucrative than the formal market, which is marred by bureaucratic red tape which stifles the spontaneous growth of local fishermen. The 'illegal' trade of crayfish in Paternoster is further spurred by a variety of socio-economic ills that continuously agitate Paternoster's local community. De Greef (2016:1) is of the view that "Kliprug and Hopland are genuinely tough places to live, beset by unemployment, chronic alcohol abuse, and, in recent years, a sharp rise in crystal methamphetamine addiction." (Kliprug and Hopland are poverty-stricken township communities of Paternoster).

The 'illegal' trade in crayfish is run by fish vendors who target tourists upon their arrival in Paternoster. According to De Greef (2016:1) "A jarring scene greets visitors arriving for the first time. At the entrance to the settlement, a dusty intersection with signs to dozens of guest houses and restaurants, groups of men hawk live, crayfish, pinching their fingers to mimic invertebrate mouthparts". These fish vendors would target clients at major intersections and at various street corners in the town. Within Paternoster, there were two types of street vendors: the first type sold crayfish exclusively for boat captains, while the second type captured and then sold their catch throughout Paternoster to locals and visitors.

Post-apartheid fishery reforms in South Africa through the introduction of the Marine Living Resources Act No 18 of 1998 attempted to allocate quotas to commercial and subsistence fishermen. This act was, however very slow in including the rights of small-scale and artisanal fishers. Despite the formal recognition accorded to the subsistence fisheries sector in terms of the MLRA, informal fishers as a group have continued to be marginalised and excluded from the fishing rights allocation process established in terms of the MLRA (Young, 2013). Due to the slow allocation of their fishing rights, local fishermen started to fish outside the allocated fishing season in order to obtain a steady income.

The manifestations of these polemics and the inertia that is being caused are often reflected in the informal marine resources trade – legal or illegal and sustainable or unsustainable. This study positions itself within this schism by applying on the one hand, an ethnographic approach, i.e., the capturing and analysis of people's (i.e., street traders) customs, behaviour, activities, etc. in

engaging ways and on the one hand, recording and analysing the opinions of other stakeholders (i.e., law enforcement agencies, conservation authorities, lobbying groups, etc.).

1.2 Aim and Objectives

The aim of this study is to provide an analysis of crayfish street trading in the context of South Africa as a mirror through which the (spatially) broader nexus and schisms associated with sustainable marine harvesting, market-driven interests, marine-dependent livelihoods, and the application of environmental regulations can be viewed. This study will therefore investigate the problems, patterns and processes associated with informal crayfish street trading in Paternoster.

Objectives

1.2.1 To utilise interviews and participant observation in order to record the perspectives of crayfish street traders in Paternoster.

1.2.2 To record the potential influences of spatial factors, including location, timing, and ocean access, as well as the presence of willing sellers and buyers in the informal crayfish market in Paternoster.

1.2.3 To capture the perceptions of residents and other stakeholders, such as fisher and civil society organisations and their understanding of the legal/illegal trade in crayfish in Paternoster and the surrounding area.

1.2.4 To analyse the relationships between socio-economic conditions, the growth of the informal market as well as its supply and value chain, and to assess the prospects for more sustainable solutions to the informal crayfish market (legal or illegal) in the study area.

1.3 Study Area

1.3.1 Introduction

Situated on the Cape's West Coast of South Africa is a picturesque, small fishing village of Paternoster. This village is located approximately 150km from Cape Town and is located between the towns of Saldanha Bay and St Helena Bay.

Maps 1: Location of Paternoster (Google Earth 2021).

Paternoster is among the oldest small-scale fishing communities in South Africa (Hűbschle and De Greef, 2016). It has a population of ±2000 residents, and a variety of restaurants, art studios, guest houses, hotels and several bed and breakfast establishments that are scattered across this small town. The original-coloured population is mostly excluded from the tourist economy and still heavily relies on fishing (Hűbschle and De Greef, 2016). In stark contrast to the (predominately white) owners of the hotels and restaurants these residents live in abject poverty, experiencing dispiriting poor service delivery and facing high levels of unemployment. After

conducting multiple pilot visits to the West Coast, the town of Paternoster was earmarked for this study. The pilot visit revealed that the selling of crayfish, abalone and mussels were a daily occurrence carried out by local community members. Multiple warning signs concerning the illicit trade of crayfish across the town sparked curiosity, as this practice answered the research question and addressed the aims and objectives of this study.

1.3.2 Exploring the heritage of Paternoster

The true ancestors of Paternoster were the 'Strandlopers' (beach walkers) who travelled along the west coastline in search of food and other edible delicacies that were found in the ocean. These 'Strandlopers' were also known as the Khoikhoi who were hunter gatherers who originated from the Cape Colony. The coastal regions of the south-western Cape were densely occupied by pastoralists, or herders, known as the Khoikhoi. The West Coast region was the land of the CochoQua, which included Saldanha Bay to Vredenburg (Brand, 2000). There were many theories pertaining to the creation of the name 'Paternoster', however the popular belief is that it referred to the prays of Catholic Portuguese seamen who had shipwrecked along the coast. According to Harvey (2021:1) "Paternoster which means 'Our Father' in Latin is said to have been named by shipwrecked sailors who gave thanks for making it safely to shore".

The Paternoster Hotel was built in 1863 by the local inhabitants. This building was initially used as a gathering place which housed a variety of shops. The dining room was utilised by the church and other sections of this building were used for storing the farmers' yields. In 1940, the Tollman family purchased the building and turned it into a hotel, which was later sold to the Sanks family. After a continued exchange between owners as it was being bought and sold, today this property is owned by Johan and his wife Wilna. Huibrecht (2022:1) submits that "Johan and his wife Wilna, with their unique style of hospitality transformed the Paternoster Hotel into a well-known business."

Paternoster was originally known as St. Martin's Bay which had a thriving wildlife population consisting of hippos and leopards which freely moved along the coastline and marshes that stretched for so many kilometres. Paternoster has a Mediterranean climate meaning that it experiences wet rainy winters and dry hot summers. Huibrecht (2022:1) argues that "The climate is mostly known for its infrequent rainfall, dry countryside, and high offshore winds." Despite

the infrequent rainfall, the climate supports the growth of a variety of fauna and flora which includes the famous wildflowers along the West Coast. In winter, the ocean surface temperature is much warmer, due to the change in wind direction which blows from the southeast to a north-westerly direction.

There are various marine farms such as kabeljou and oyster farming which makes this a thriving industry in Paternoster. The lobster industry was launched in Paternoster in 1902. Huibrecht (2022:1) states that "By 1902 a full-blown lobster industry was in operation, canning and exporting lobster to France in particular." The canning and exporting of lobster were initiated owing to an increase in demand from France. In 1930, the Redro factory was established in Paternoster. This industry focused on creating a fish paste which competed with Peck's Anchovette of Britain. Today, this factory is owned by the Pioneer Food Group.

Paternoster is a popular tourist destination which is well-known for crayfish as an important item on the menus of restaurants. This area consists of beautiful, white-washed beaches and cottages that are spread out along the coastline. This area is also characterised and defined by white boulders and jagged-edged cliffs which complement its pristine condition. Paternoster plays a fundamental role in commercial fishing which contributes to and supports South Africa's export activities. The fishing industry in this area partakes in deep sea fishing which includes the extraction of snoek and crayfish. Hűbschle and De Greef (2016:10) argue that "The Paternoster fishing community has a historical connection to West Coast rock lobster (crayfish) harvesting, and in the wake of on-going social and economic marginalisation has become notorious for crayfish poaching."

1.3.3 Context of the study

During the past few years the illegal catching and trading of marine resources such as crayfish, abalone and mussels has been a contentious topic that the post-apartheid government has not fully addressed. Due to their inability to tackle this issue the illegal trade of marine species has flourished at an alarming rate in South Africa. Fishing towns such as Hout Bay, Paternoster and Hawston are a few of these towns that are targeted by criminal syndicates. These towns are

targeted due to pre-existing socio-economic issues that were not addressed by the post-apartheid government. Illicit fishing particularly of high-value resources like kreef and abalone, has taken off on a massive scale, with many communities highly reliant on income from illicit fisheries (Hűbschle, 2016).

This study focuses on the informal street trade in west coast rock lobster which is an important and highly priced marine species. The South African Sustainable Seafood Initiative (SASSI) has assigned a 'red dot' designation to this species, classifying them within the 'do not purchase' category. According to SASSI (2023:1) "The most recent stock assessment indicates the stock is heavily depleted at only 2% of its pre-exploitation levels". The loss of this species has the potential to impact the entire marine ecosystem. Paternoster's historical context, coupled with the present reality of the plight of small-scale fishers, has led to further exploitation of this species. Among some of the challenges faced by these small-fishers are laws and policies such as the marine living resources act, and the policy for the small-scale fisheries which has been slow to bring about equal access to fishing rights. The increased levels of poaching, disregard of scientific recommendations in the recent total allowable catch allocations and finally the lack of clear directions regarding the implementation of the small-scale fishing policy has impacted the level of poaching of the west coast rock lobster (SASSI, 2023). The challenges faced by the small-scale fishers have contributed towards the need to exploit the ocean in order to overcome the various socio-economic issues within the town of Paternoster.

1.4 Sustainable livelihoods approach as a theoretical framework

This study is underpinned by a (sustainable) livelihoods approach (SLA) in which ways of analysing and changing the lives of the disenfranchised and the poverty-stricken are explored. The concept of 'sustainable livelihoods' encompasses a broader range of concerns, which aim to illustrate the relationship between poverty and the environment. Sustainable livelihoods are a composite of many ideas and interests, the coming together of a number of different strands in the development debate (Scoones, 1998). To enable individuals to pursue diverse livelihood strategies, there must be an emphasis on both tangible and intangible assets within the possession of people. Although critique can be levelled against the sustainable livelihoods approach,

concern for the wellbeing of people and the agency that they possess is still fundamental to SLA. (Morse and MacNamara, 2013, De Haan, 2012). A disregard and/or inadequate focus on the direct and indirect impacts of power relations on the furthering of sustainable livelihood practices for the poor is one such point of critique – something that this study analyses in the nexus of sustainable marine resource-use and legislation. Justification for the study is further underpinned by the continuous reoccurrence of 'illegal' poaching in the print and online media. Online sources have been published mainly on the media News24 platform and the daily newspaper, the Cape Argus. This research builds on the findings of De Greef (2016) who illustrates how the post-apartheid era has caused both a class and economic divide within Paternoster. The work of Isaacs and Hara (2015) has also been used as it focuses on the various transformations which the South African fishing industry has undergone, with a specific focus on small-scale and subsistence fishers. The concept of sustainable livelihood is to go beyond the ordinary explanations and approaches to poverty eradication. This focus is too narrow and according to Karki (2021:266) "they focused only on certain aspects or manifestations of poverty, such as low-income, or did not consider often vital aspects of poverty such as vulnerability and social exclusion". This approach highlights the growing gap between the rich north and poor south at a global scale. This trend was further prompted by globalisation which has deepened economic inequalities and vulnerability in the South. The idea of 'sustainable livelihood' was initially introduced in 1992 by the Brundtland Commission on Environment and Development as a way to connect socio-economic and ecological considerations in the design of a unified policy-structure. In 1992 the UN expanded the idea and attempted to incorporate it into their holistic plan for poverty eradication. This approach focuses on people-centred development which enables the researcher to obtain a broader understanding of their livelihood strategies. It puts people at the centre of development and enables poor people themselves to participate in identifying and addressing their livelihood priorities (Karki, 2021). This understanding helps to identify not only the challenges such as vulnerability, poverty, social exclusion, insecurity and homelessness that hinder the process of respondents, but also the various opportunities to overcome such challenges. The sustainable livelihoods approach is based on the ideas of capability, equity, and sustainability. According to Chambers and Conway (1991:1), "A livelihood is environmentally sustainable when it maintains or enhances the local and global assets on which livelihoods depend and has net beneficial effects on other livelihoods." In order

for a livelihood to be socially sustainable, it must be able to both cope and recover from the various shocks and stresses in order to cater for future generations. In its most simplistic form, a livelihood can be defined as a way of obtaining a living. Sustainable livelihood is driven by the idea that security was a pre-condition for a stable population. Sustainable livelihoods also provide the resources and conditions for the enhancement and exercise of capabilities (Chambers and Conway, 1991). This study relies heavily on the sustainable livelihoods approach as it draws on the wealth of knowledge, skills and adaptive strategies of the poor (Karki, 2021). Since the research is community based, the individuals who were interviewed played a pivotal role in contributing to the study. The sustainable livelihood framework also identifies how access to the ocean and other assets has been influenced by laws, policies and the relationship between government and residents.

1.5 Chapter Outline

This study consists of five Chapters. Chapter One briefly introduces and discusses the rationale, aims and objectives, and the historical as well as overall context of the study. It deployed a Sustainable Livelihoods Approach (SLA) which was instrumental in understanding the various challenges which street traders face and the strategies that were introduced to overcome adversity.

In the Second Chapter, the literature review focuses on the legislative framework and the way both the former apartheid, and current democratic government have failed to allocate sufficiently sustainable fishing rights to small-scale fishers. This Chapter specifically focuses on Paternoster and the underlying reasons why street traders and small-scale fishers 'poached' crayfish. Through this Chapter, attention is given to the way the Total Allowable Catch (TAC), coupled with the government's inability to address the needs of small-scale fishers, led to deep mistrust between these two parties. Chapter Two further focuses on the informal sector and the way in which it has become a livelihood strategy for many impoverished communities. Finally, this Chapter discusses the impact of Covid 19 and the strategies that were introduced to address the 'illicit' catching of crayfish.

The Third Chapter unveils the various research methodologies which were deployed in this study to collect relevant data. These methods specifically focused on a case study approach which allowed the researcher to conduct a detailed investigation into the various challenges which street traders and small-scale fishers faced daily. An ethnographic approach was followed which encompassed participant observation whereby the researcher physically visited the study area and interviewed respondents. The snowball and convenience sampling methods were utilised due to the nature and extent of the study. The Chapter finally focuses on data, and content analysis which demonstrates how data was processed.

The penultimate, Fourth Chapter focuses on the research results and analysis. In this Chapter, much focus is on the analysis of the results of the interview process. To illustrate the results of the closed-ended questions, graphs such as bar-graphs were designed. Photographic evidence and reports on in-situ observations were also incorporated into this Chapter, to verify the main arguments of the researcher and to substantiate the viewpoints of respondents.

The Fifth and ultimate Chapter focuses on the various recommendations which were identified to overcome the challenges caused and experienced by street traders and small-scale fishers. The said strategies were targeting government laws and policies. Recommendations pertaining to co-management and monitoring of the crayfish population are also discussed in this Chapter. This Chapter ultimately concludes the study.

Chapter 2: Literature Review

2.1 Introduction

The literature reviewed in this Chapter provides a basis for the conceptualisation and methodology that underpins this study. Legislative gaps are those that either did not fully recognise the rights of small-scale fishers and street traders or those that took many years to be successfully implemented by the government. The review of literature addresses various topics related to small-scale fishing and street trading such as understanding the fishing industry, unemployment and the informal trading of crayfish in Paternoster.

In this literature review, recent events such as the Covid 19, are highlighted to illustrate how this global pandemic destroyed the livelihoods of small-scale fishers and street traders, by reducing tourism in Paternoster. Finally, this Literature Review focuses on the transformation within the fishing industry and the various constraints which the Marine Living Resources Act of 1998 and the Policy for Small-scale Fisheries have faced while attempting to readdress past injustices.

2.2 Historical overview of Cape Town's economy and fishing communities

In 1652, Cape Town was utilised by the Dutch as a strategic point for resupplying their ships. According to Anderson and O' Farrell (2012:4) "After attempts by various groups at actual settlement and control, primarily foiled by the indigenous people, it was the Dutch East India Company, a powerful economic enterprise, who established a refreshment station at the Cape in 1652, under the command of van Riebeeck". The continual appropriation and control of natural resources by the Dutch resulted in a gradual weakening of the local Khoi-San populations. The Khoi-San held a profound spiritual bond with the land, and the persistent encroachment and displacement deeply signified a profound loss for them. This era was marked by rampant disease and increasing European encroachment. While European settlement remained small, the settlement was aimed at extracting maximum benefit from the environment and the associated

environmental impact was significant (Deacon, 1992). During this period, the Cape Colony was inhabited by Dutch settlers, Khoi-San communities, enslaved individuals from West Africa, as well as Muslims from Indonesia and the Philippines. Since that time, the main economic activities in Cape Town have been traditional fishing and farming (Isaacs, 2013). Due to the governance of the Dutch East India Company, the fishing rights in the Cape Colony were under their control and once the British took over in 1795, they lifted the ban on fishing rights and opened up a more commercial fishing industry.

Once snoek and other marine species were caught by small-scale fishers, it followed a variety of distribution avenues through Cape Town to contribute towards the food security of households. The catching of fish, crayfish, mussels, and abalone was deeply entrenched in the culture of many communities. Small-scale fishers were subjected to institutionalised racism in South Africa during Apartheid, whereby segregation policies were introduced to remove and displace coloured and black communities far from their traditional fishery grounds. During this time, small-scale fishers were not granted fishing rights, and their livelihood was criminalised under the institution of Apartheid. Isaacs (2013:3) opines that "the country's fishing was controlled by an established industrialised white-owned sector that systematically deployed its centralised management structure and influence over government scientists to control fishing access thereby securing their established companies quotas and licenses." This approach by the Apartheid government meant that artisanal and subsistence fishers were only allowed to fish on recreational permits or informally.

2.3 The role of apartheid and the growth of the 'illegal trade'

The creation of both local and international markets can be traced all the way back to when the Apartheid government started losing political traction and control in South Africa. Since the Apartheid government was preoccupied with limiting the movement of people and combating various political organisations such as the ANC, this led to a relaxed approach towards illicit poaching as law enforcement resources became seriously strained. The instability that followed the transition in the early post-apartheid became an ideal time for the burgeoning of organised crime and has been likened to the growth of organised crime in many other transitioning countries (Shaw, 1998). During the early stage of the post-Apartheid era, the State was unable to

fulfil its state function, as the focus shifted towards reconciliation, and rebuilding many institutions. During the 1990s, many sanctions against South Africa were dropped as Apartheid ended, which facilitated economic growth in the country. Despite the positive economic growth, the end of these sanctions also meant the loosening of border controls. During this period, there was also the growth of foreign organised crime groups which began infiltrating and growing in South Africa, arguably exploiting the weaknesses of the South African state (Lambrechts and Goga, 2016). In the 1970s, Asian crime syndicates were already well-established in South Africa. These syndicates were actively involved in the trade of shark fin and abalone. Within the Western Cape, local gangs swiftly realised the potential quick bucks that they could obtain from illegally catching and trading in marine resources such as crayfish, mussels, and abalone. To successfully participate in this trade, these gangs would utilise the profits made from drugs to fund their new business venture. During this transition period, law enforcement agencies were also restructured, which impacted their ability to combat organised crime. The disbanding and restructuring of specialised policing units such as the Scorpions was a clear indication of this instability. Operations such as Neptune and Operation Trident were abruptly ended due to a lack of funding, despite large-scale successes. This once again exposed the government's failure to address these crime syndicates. Steinberg (2005) also cites several other reasons for the uncontrolled expansion in poaching, including the growth of Asian economies as well as the rapid weakening of the Rand. This has increased the profits for organised crime groups. The process of bartering illegal goods across international borders has also played a pivotal role in this illicit enterprise. Lambrechts and Goga (2016:239) posit that "Further increasing the appeal was the weakened Rand added to the lucrativeness of the trade which made potential profits far higher for criminals on either side and in particular, those that were bartering goods." A primary example of bartering would be the exchange of methamphetamine for marine resources such as crayfish and abalone.

2.4 The legislative framework concerning small-scale fishing in South Africa

In the late 1980s, the South African government introduced the Individual Transferable Quota's (ITQs). This policy gave exclusive rights to an individual or company to catch a specific amount of fish species within an allocated period of time. The ITQs were transferable which meant that rights were often sold on the open market. Thus, the ITQs system gives *de facto* property access

rights or privileges and is primarily concerned with promoting economic efficiency rather than conservation, community welfare or equity (Sumaila, 2010; Copes & Charles, 2004; McCay, 2004). This system led to the privatisation and marketisation of the fishing sector, which left the government with a small role to play in this industry. Owing to this government approach, only a few individuals had accessible rights to marine resources. This model was based on the successes of first world countries such as New Zealand, Iceland, and Canada. This approach however disregarded the South African context which created scenario where rights were not equally distributed. In 1992, the then Minister of Environmental Affairs, Gert Kotzé established the Schutte inquiry that was tasked to investigate and create a report on the socio-economic conditions of fishing communities, in and around the West Coast. After releasing this report, the Quota Board created the Fisher's Community Trust, which was aimed at preventing households from falling into poverty through providing support in the form of food parcels and cash payments. This board was an independent body which was appointed by cabinet to ensure that fishers had access to the ocean and to introduce measures to alleviate their poverty.

The community trust/community quota system was based on selling the catch back to the established operators for a relatively low price and using the income as relief support for poor fishers within their fishing communities (Isaacs, 2003). These operators were well-established fishing companies who had the necessary boats and equipment to process fish and crayfish. The issue with these community trusts was that semi/skilled, and skilled professionals who were farmers and school teachers were part of this programme, even though they were not involved in the fishing process. Furthermore, community trusts were created without the necessary financial and management structures (Schutte, 1994). Consequently, this yielded the mismanagement of resources which in turn normalised corruption. In 1998, the Marine Living Resources Act No 18 of 1998 replaced the Community Quota System. This Act was aimed at ushering in a new legislative framework that would ensure equal distribution of fishing rights. However, despite these policies; rights were only allocated to commercial and subsistence fishers, which meant that poor and marginalised fishers were still marginalised by being excluded from obtaining fishing rights. Isaacs & Hara (2015:10) argue that "the fisheries reform in South Africa created opportunities for the elite to grab fishing rights at the expense of the bona fide fishers." The primary failure of the MLRA was its inability to recognise the mixed social, political, and

economic nature of fishing communities. The Marine Living Resources Act No 18 of 1998 was introduced to rectify past injustices, whereby only a few individuals, namely 'white owned' well-established fishing companies were given further access rights to the ocean. This Act, however, failed in many respects as it failed to produce the necessary infrastructure, funding, and to gunner ample political support for poor fishing communities who were marginalised and excluded from fishing policies during Apartheid.

2.4.1 Mismanagement of the fishing industry

In order to bring about some form of relief to small-scale fishers the government in 1999 introduced the Subsistence Fisheries Task Group (SFTG). This task team argued that the current policy omitted an important group of fisher. According to Sowman (2011:302) "An important finding of the SFTG was the recognition that there existed a group of fishers that did not fit the subsistence definition and could be classified as 'small-scale commercial fishers' operating at the lower end of the conventional commercial fishing spectrum". While this debate which was centred on the introduction of an inclusive policy for small-scale fishers continued an interim relief measure was created to give rights to small-scale fishers. These rights were, however only given for periods up to a year, which often led to much debate and conflict. In 2005 small-scale fishers mobilised and launched an action suit against the Minister of the Department of Environmental Affairs and Tourism (DEAT). The aim of this process was to reform the entire process of the ITQ based allocation of fishing rights. These small-scale fishers wanted a collective rights allocation, in order to gain access to the ocean. However, despite this attempt to be heard and recognised the Equality Court in 2007 placed the entire process on hold and granted these fishers interim rights. In the same year the Fisheries Department created a national task team in order to develop a small-scale fisheries policy for South Africa. The process was participatory, and the voices and inputs of fishers came through in creating and developing the new Policy for Small-scale Fisheries in South Africa, gazetted on 20 June 2012 and approved by the cabinet (Isaacs and Hara, 2015). In 2013 the Marine Living Resources Amendment Bill was released and recognised small-scale fishers as a group that deserved the allocation of fishing rights. In 2014 the Marine Living Resources Amendment Act was passed into law with the aim of rectifying past injustices that were carried out against small-scale fishers. This policy coupled

with the Policy for Small-Scale Fisheries (2012) played a pivotal role in formalising the rights of small-scale fishers. The primary challenges that the Marine Living Resources Amendment Act faced was a lack of communication between the Department of Agriculture, Forestry and Fisheries and the Department of Trade and Industry. Without considering the new policy to guide allocations and development in the sector, the DTI pre-empted implementing and facilitating the formation of cooperatives, creating confusion in fishing communities and showing a lack of communication between line ministries (DAFF and DTI) (Isaacs and Hara, 2015).

2.4.2 The development of a lucrative trade

Despite the 1994 democratic elections, small-scale fishermen were still not reaping any rewards from the ocean. De Greef (2016:1) argues that "New legislation, intended to reform the fishing sector after apartheid, has been poorly implemented, making small-scale fishing more complicated. Rural fishing towns have suffered consequently." The control and management of marine resources remained in the hands of large-scale industries. Even though small-scale fishers had been acknowledged in various policies, such as the Marine Living Resources Act, the implementation of these policies has been very slow. Overall, the size of the catch has been reduced by officials, especially when it comes to the catching of high-value species. The bag limit is four per person, per day, and the size restriction is 80mm carapace length (Manaleng, 2021). The carapace of a crayfish referred to the overall length of the crayfish shell. In 2007, fishermen were able to catch 8 bags per person, however, authorities have now introduced stricter measures to curb the over-exploitation of this marine resource. These stricter laws and policies have motivated small-scale fishers to return to the ocean to 'illegally' catch fish to ensure their economic survival.

In the 2019/2020 fishing season, Minister Barbara Creecy attempted to give small-scale fishers improved opportunities to participate in the capturing and selling of marine resources. This desire to incorporate small-scale fishermen was completed through the hosting of various workshops. Despite the Minister's attempt to grant small-scale fishers rights to fish during the 2019/2020 fishing season, this relief programme was confronted with various challenges. Modise (2019:1) opines that "one of the many challenges raised, by fishers was that the Western Cape

small-scale fishers list did not include all small-scale fishers in the province, and in that, the process was not fair." Not all fishermen were incorporated into this relief programme which meant that many fishermen missed out on the opportunity to legally fish during this season. This programme has created unnecessary bureaucracy and red tape for fishermen who struggled daily to make a living.

During the 2021/2022 fishing season, informal fishers once again showed their frustration towards Minister Creecy by demanding that the Minister reviews the Total Allowable Catch (TAC), for this season. In response to these demands, Ms Creecy requested the Consultative Advisory Forum (CAF) to review the Total Allowable Catch. This review of the TAC, brought into question the decision, which was taken by the Department on the 15 October 2021, whereby a reduction of 28.3% was decided upon by the government. Oirere (2021:1) submits that "The department said it recognised that a reduction in quota would have an adverse impact on small-scale fishers, but that the measure is necessary to avert further decline of the WCRL population- which has dropped a further 1.5% off sustainable population levels." The department within this context claimed that the environmental preservation of the West Coast rock lobster was their primary reason for reducing the TAC; however, a policy which infringes upon the basic human right of small-scale fishers cannot be implemented, especially when enforcement of this policy creates poverty and unemployment, forcing small-scale fishers to participate in 'illicit' fishing. The Department has clearly utilised a methodology which favours environmental preservation over human survival. This policy must clearly be rethought, and a new TAC model must be created that favours both the environment and the local community.

2.4.3 Constraints to transformation within the fishing industry

To broaden access to fishing rights, the government introduced two approaches. One focused on individuals and companies through state interventions, while the second approach focused on external transformation, which was obtained through the market and specifically focused on the Black Economic Empowerment (BEE) policy. Marine and Coastal Management (MCM) was a branch of the Department of Environmental Affairs and Tourism (DEAT) who were tasked with ensuring external transformation. The Constitution coupled with the Bill of Rights, and the new fisheries policy created an avenue for new fishers to break into the fishing industry. The MCM profusely struggled with managing this process, and ultimately failed deliver on their mandate.

Isaacs et al, (2005:2) posit that "a complicating factor was that the sector was already oversubscribed - making space for new entrants would require cutting existing allocations." Due to the intervention of the market, the State was unable to provide community empowerment programmes, which further impacted their access to fishery rights. Many small-scale fishers were unwilling to buy fishing rights, as they believed that during Apartheid their rights to the ocean were robbed from them, making this new programme unfair to them. There were expectations that government would make this travesty right by simply taking these rights back from established companies and redistributing them to Historically Disadvantaged Individuals (HDI) after the advent of democracy (Isaacs et al, 2005). Well established companies were able to further cement and secure their rights to the ocean as they were unwilling to sell their rights. To protect their rights to the ocean, commercial fishing industries were very slow to redistribute fishing rights and often exploited the legal system to further aggravate this allocation process. As one would expect, many courts ruled in favour of the established industry, hindering the government from taking large portions of their quota allocations to accommodate new entrants into the industry (Witbooi, 2006). Many commercial industries were strategically aligned with Trade Unions, who advocated that a reduction in quotas would ultimately lead to a reduction in jobs. In return for their support, these industries promised pension funds and improved medical benefits.

2.4.4 Internal transformation

Many well-established commercial industries such as I&J undertook a process of transformation through selling shares to BEE companies to become BEE compliant. With the assistance of these "BEE compliant" companies, these industries were further able to extend their fishing rights and obtain higher quotas. Isaacs et al. (2005:3) argue that "The established industry quickly responded to internal transformation requirements. For example, Oceana Fishing Group sold half of its equity to a black empowerment consortium while Premier Fishing shares ownership with Sekunjalo and Pamodzi/Foodcorp owns Marine Products. Allowing more black ownership strategically put such companies in positions of strength for maintaining or even increasing their quota holdings since most of these empowerment groups had good political connections." Commercial industries also altered their top-structure, through introducing more underprivileged

people, and people of colour; however, these board members were just ceremonial and often unable to make key decisions. Many small-scale fishers who recently joined the sector had no access to infrastructure and marketing muscles and networks. Neither did they have access to competitive industrial fishing paraphernalia such as ships and processing plants.

During the post-apartheid era, the Sea Harvest Group attempted to rectify past injustices, by becoming one of the largest black owned companies in South African fishing sector (Sea Harvest, 2023). Sea Harvest currently has an 89.48% black ownership, which gave them a higher B-BEE score. Their journey to transformation began in 1998 when Brimstone Investment Corporation which was a black-owned company invested into Sea Harvest, which led to the buying out of the Tiger Brands Group in 2009. Brimstone gradually increased its shareholding to establish the 83% black-owned company that Sea Harvest is today (Sea Harvest, 2023). To boost the internal transformation within Sea Harvest, employees were allowed to own shares of the company through employee share trusts. A similar practice was adopted and implemented by I&J whereby the company, which was delisted in January last year, introduced its first employee share incentive scheme in 1996. The scheme was designed to empower all the company's employees, by linking their welfare more directly to that of I&J and giving them a stake in the company's growth (Business Report, 2000). Despite the various internal transformations within these huge industries, the daily reality of fishing communities such as Paternoster remained the same. These fishing communities were plagued by huge trawlers which directly competed with small-scale fishers, further straining the marine environment.

2.4.5 Strategies to end the 'illegal trade' of fishing

To prevent the 'illicit' trade of crayfish in Paternoster, a pilot project known as the Abalobi mobile app has attempted to formalise this industry by connecting and ensuring the convenient pairing up of small-scale fishermen with local restaurants. The fishers used the Abalobi platform to market and sell their entire government-sanctioned basket of species to these restaurants, without the drain of the middlemen or the pressure to have their catch traded on the global market (Bonthuys, 2020). This online strategy was a revolutionary idea where local fishermen could legally obtain a direct line of trade with the restaurants. This programme not only allowed

authorities to easily monitor and trace the catching and selling of crayfish but also showcased the expansive capabilities of this mobile app. Beyond being a mere platform for catches to be sold, the app offers a diverse array of data-enabling options. This multifaceted approach is pivotal in the quest to eradicate the 'illegal' trading of crayfish, ensuring the preservation of the environment. Through the integration of advanced technologies, this online platform emerges as a powerful tool, promising efficient monitoring and regulation. The Abalobi programme ensured the transformation of the seafood industry, whereby fishermen are given a fair price for their catch. Bonthuys (2020:1) posits that "Abalobi marketplace facilitated sales of 4.5 million in fish to restaurants. More than 350 fisher families reaped the benefits, earning up to four times more than they did before the initiative, enabling them to pay off debt to loan sharks, or invest in their household and children's education." Small-scale fishermen who partook in this mobile programme were able to secure an income.

2.4.6 Mobile applications around the world

Within Alaska**,** there is a similar programme which resembles the Western Cape's Abalobi app. Within Alaska's Cod fishery**,** they are testing an electronic monitoring system, combined with computer vision technology and machine learning to help avoid overfishing the Pacific Halibut, a high value species in the region**,** often found with Cod (Ortiz, 2019). To improve fishery management practices and to ensure the empowerment of local fishermen**,** Bumble Bee **F**oods utilised an SAP cloud platform block chain service. This service allowed customers to track the movement of tuna from its source in the Pacific Ocean to its destination. Consumers can scan QR codes with their smart phones to learn about the provenance of their tuna and the responsible practices developed by this fishery, allowing them to make better consumption decisions (Ortiz, 2019). In Mexico**,** the Yucatan Group fishers were using digital platforms to trace and track their vessels via satellite, to give consumers more information on where marine species were caught. In a similar project in the Gulf of Mexico**,** the Curvina fisheries introduced a mobile application called Webcontrol Pesca which empowers small-scale fishers to make better business decisions. This mobile app links small-scale fishers with local restaurants and ensures a sustainable market which resultantly promotes environmental preservation. Through Webcontrol Pesca, fishery

monitors register fishermen quickly and precisely and track where and when they fish, how much fish are caught and to whom they sell it and at what price (Ortiz, 2019).

2.4.7 The introduction of fishery improvement projects

The Fishery Improvement Projects (FIPs) like the Abalobi programme were designed to guarantee the sustainability and growth of fisheries around the world. This project ensured a partnership with the chain of stakeholders like seafood buyers, retailers, processors, suppliers, producers, and non-governmental organisations (NGO's) with an interest in a specific fishery to encourage improvements in policy and management at government level (Sustainable Fisheries Partnership, 2014). This project also attempted to combat illicit poaching and to lessen the environmental impact on the ocean. Since it has been estimated that 57% of the World's fish stocks has been depleted, this project was a direct response to rebuilding this dwindling fish stock. Through supporting this initiative, retailers would be able to obtain a wider range of seafood, while maintaining responsible practices. In Sri Lanka, the UK, New England Seafood has embraced this project to ensure the improved sustainable management of yellow fin and big-eye tuna. This group partnered with the Sri-Lankan government and other relevant stakeholders to ensure the success of this initiative. The progress includes the introduction of fishing logbooks to refine data collection, training sessions for fishermen to help them avoid capture of or damage to non-target marine wildlife, and an on-board scientific observer program to monitor interactions with sharks, marine birds, and sea mammals (Sustainable Fisheries Partnership, 2014). In the Orkney Isles, the UK-based retailer M & S, has joined WWF and the Orkney Sustainable Fisheries to participate in the fishing improvement project, with the aim of ensuring the sustainable management of the brown crab fishery. Since the brown crab was a sort after delicacy, the retailer had to ensure its environmental preservation as their clients expected a high level of sustainability. The project supported local fishermen, who were tasked with the responsibility of recording the size, numbers, and location of these crabs. Undersized crabs were tagged and released back into the sea to find track their movements. The data collected would be used to develop a harvesting strategy to maintain the marine environment, sustain the fishery, and continue supporting the livelihoods of Orkney fishermen (Sustainable Fisheries Partnership, 2014).

On the 5th of October 2015, a pilot project was introduced along the Kogelberg Coast, which saw the creation of a mobile-based catch monitoring system. Using the Integrated Information Management System (IMS), the project provides opportunities for more fishermen to be linked to the restaurant project using a mobile phone. Presently, this technology can only be used to register the catches of fishermen; however, there are plans in the future to turn this into a trading platform which can directly deal with restaurant owners.

2.5 The state of the fishing industry in Paternoster

The plight of poor subsistence fishers worldwide has been and continues to be an important research theme as developmental and environmental challenges are constantly changing, and in many instances increasing. Marine-resource usage for commercial, artisanal and subsistence purposes has always been marred by controversies. Poor fisher folks and their livelihoods need particular attention from a development point of view. The Sustainable Livelihoods approach therefore largely dominates literature in this regard (Allison and Ellis, 2001; Cohen et al., 2019; FAO, 2021). According to the Food and Agricultural Organisation of the United Nations (FAO), a good 90% of the 35 million people that consider themselves as fishers, can be classified as small-scale fishers. Some more 200 million people globally directly or indirectly depend on small-scale fisheries for their livelihoods (FAO, 2021). From an African perspective, Merem et al. (2019) report that "hundreds of illegal fishing vessels enter African waters and trawl daily for shrimp, sardines, tuna, and mackerel worth $1 billion annually in an overfished environment." This has led to a significant decline in the stocks of these species. This decline has resultantly led to the introduction of new laws and policies aimed at preventing the further exploitation of these marine species. These laws, however, have been poorly implemented and this has further marginalised those who partake in small-scale fishing. Merem et al. (2019:2) argue that "the problem is further compounded by the lack of efficient fisheries management systems and the weak institutions in West Africa that allow firms to exploit marine resources at a low cost." These global hurdles are also largely mirrored along the South African coastline where marine-resource-dependent communities are finding it increasingly difficult to make a living due to stock declines, legal impediments on harvesting and exploitation by external (market) forces. Paternoster is a microcosm of almost all these challenges. Along the West Coast, marine species such as hake, abalone, rock lobster, anchovies and pilchards have been in continuous decline,

which has negatively impacted export rates. This sharp decline has been exacerbated by climate change among other pressing issues that affect the marine environment. Rural fishing towns have suffered consequently – particularly along the West Coast, which is hot, dry, and home to little other industry (De Greef, 2016). The overall climate has already limited the availability of these marine species; therefore, the poor implementation of new laws and policies continues to infringe upon the livelihood of these small-scale fishermen. The 'coloured' residents of these fishing communities are limited and confined to becoming cleaners, construction, and maintenance workers in their choice of employment.

2.5.1 Informal Crayfish trading in Paternoster

The picturesque fishing town of Paternoster is characterised and largely defined by unspoiled beaches and a pristine natural environment. It has a rich and diverse culture that draws in tourists from all over the world. De Greef (2016:1) submits that "the local leisure market boomed, with Cape Town becoming a major tourist hub a long-term process accelerated by South Africa hosting the 2010 FIFA World Cup." Upon arrival in this scenic town of Paternoster, tourists were exposed to the informal and very often, 'illicit' trade of crayfish and other marine resources. These fish vendors generally targeted potential clients at important intersections and at various streets corners in the town. To capture the attention of potential clients, the vendors would scream out 'kreef' which is the Afrikaans word for crayfish. Before purchasing the marine produce, a negotiation occurs between the seller and the buyer. According to De Greef (2016:1), "Large specimens sell for 60 Rand (US $3.50); a comparable dish at the old hotel, one of the village's cheaper seafood outlets, costs double." Those who 'illegally' trade crayfish, generally come from poor socio-economic backgrounds, therefore exploiting this market is an important source of income. Trading crayfish 'illegally' in Paternoster has flourished for the past two decades, due to restrictions on the fishing industry. Due to the high influx of tourists during the peak seasons (December Holidays/ Long weekends) there was a well-established clientele. De Greef (2016:1) "transactions take place in the open, and holidaymakers drive off daily with their share of the catch." The tourism industry to a large extent has contributed towards the growth of the 'illicit' trade in Paternoster as their demand for the marine species has resulted in the creation of a booming industry. To meet the demand, fishermen often caught-under-sized crayfish and sold them cheaply to secure some form of economic revenue. Unemployment coupled with a

lack of social and economic development forced these vendors to exploit the natural environment.

2.5.2 The unequal distribution of opportunities

Before the 1980s, Paternoster existed only as a small fishing village with limited development opportunities. The town attracts many investors who attempt to obtain their (property) share of the picturesque coastline. Unfortunately, this investment only benefits a small segment of the population and completely disregards the small-scale fishing community. Hűbschle and De Greef suggest that (2016:9) "Paternoster's fishing community, whose traditions and small-town aesthetic have been co-opted as selling points for tourists, remains excluded from the benefits of this development." The pristine environment has undergone a process of gentrification as the town is controlled by a few wealthy investors. Fisher (2018:1) posits that "the sad reality is that for many of the town's original residents, time has stood still. It is almost like they are trying to make themselves invisible when surrounded by the influx of tourists and out-of-towners that have bought up much of the property in the town and built more properties, effectively forcing out small fishermen who have traditionally made a living from catching crayfish and other marine resources."

2.5.3 Unemployment and the growth of informal fishers

There is a general perception that poaching is associated with illegal syndicates which are run by top ranked gangsters or the Asian mafia within South Africa. These syndicates are usually regarded as well-structured and operate outside the confines of the law. However, despite the 'possible' presence of these syndicates, informal traders in Paternoster engage in the practice of fishing to sustain themselves and their immediate families. Cruywagen and Payne (2021:1) argue that "In Paternoster along the West Coast unemployed fishermen say, poaching three or four lobsters to put on the table is poverty alleviation." Unemployment coupled with a lack of opportunities in Paternoster has continuously created an environment, whereby local fishers are forced to exploit the ocean as a means of survival. Joblessness among South Africans continues to skyrocket with the unemployment rate has increased from 34.9% to 35.3% in the fourth quarter of 2021 (Ngcobo, 2022). These stats are a stark reality of the unemployment rate in South Africa. The quarterly labour force survey during the 2020-2021 period further unpacks the

various sectors and provinces that are plagued by high unemployment rates. The Western Cape's year-on-year stats were up by 5.5 percentage points. The proportion of those without formal qualifications, such as a Matric Certificate, generally made up about 51.6% of those who are unemployed (Quarterly Labour Force Survey, Quarter 4: 2021). Based on the above statistics, on unemployment, it can therefore be theorised that unemployment and a lack of formal education plays a fundamental role in the high levels of those fishers who participate in the informal sector. This tradition or rather survival technique was passed down from fathers to their sons to ensure that their families were able to sustain themselves in the future. These fishers are the same individuals who risk life and limb to secure 1-2 crayfish tails. The drastic change in the Total Allowable Catch (TAC) for the 2021/2022 fishing season, has further strained the resources of these local fishers as this reduction, meant that the total allocated amount dropped from 78kg, which was the stipulated amount to a staggering 35kg. During the 2020/2022 Covid period, the fishing industry was severely impacted by this harsh regulation, which brought import and export to a virtual standstill. These fishermen in the aftermath of Covid 19 are now incapable of sustaining themselves financially, as the introduction of further policy amendments limits their access to the West Coast rock lobster. To circumvent these harsh limitations and restrictions, fishermen would catch during the off-season and would often undertake the dangerous task of fishing during the winter period to sustain their families. These fishermen, often do not return home, leaving their families destitute and without an income, further cementing the cycle of poverty and unemployment. Cruywagen and Payne (2021:1) are of the view that "Fishermen from Paternoster make it clear that they are willing to risk their lives to go out to sea to get their hands on the lobsters." The allocation of fishing permits and quotes in Paternoster is another contentious topic, as these local fishers are often forced to compete with outside fishers, who do not physically reside within the borders of this fishing town. One example of how far removed the fisheries department is from the community is that it has given fishing quotas to people who don't even live on the West Coast (Cruywagen and Payne, 2021). In many instances, the ocean was their only source of income and constant competition further limited their opportunity to assist their families. Overall, these small-scale fishers have also been impacted by the reduced amount of crayfish in the ocean. These local fishers are also the first communities to bear the brunt of climate change and its effects on the oceans. The environmental phenomenon known as Algal bloom (Red Tide) on the 1st of March 2022 severely impacted the crayfish population and

resulted in the approximate loss of 500 tons of West Coast rock lobster. To ensure the environmental preservation and protection of this marine species, the Department of Forestry, Fisheries, and the Environment activated a contingency plan that pushed all government role players to be on high alert. Department officials together with Police Officers and the local municipality were actively involved in the capture and rescue of these lobsters. African Business (2022:1) highlighted that "All recovered live lobsters will be rehabilitated and will be safely returned to sea once the red tide threat has abated." The 'red tide' was caused by the accumulation of phytoplankton along the shoreline. These phytoplankton reduced oxygen levels and produced dangerous toxins which were detrimental to all sea creatures. The crayfish which were washed ashore were therefore filled with dangerous toxins, which posed a serious health risk to humans who consumed them. Industrial exploitation coupled with inadequate policies has further depleted the available crayfish stocks. According to Engel (2022:1) "Kreef walkouts can be reduced if industrial pressure on the ocean space is reduced, and an integrated policy approach is adopted. Currently, our different policies are framed in isolation of each other." West Coast fishers are severely impacted by governments' unfair treatment towards informal fishers. Big companies and informal fishers along the West Coast are required to take the same percentage cut, which has been detrimental towards the informal fishing sector.

2.5.4 Tourism as a social and economic divide

To a large extent, the new South African government criminalises the catching of crayfish by these communities. The two main 'coloured' fishing communities, Kliprug and Hopland, are situated outside the town of Paternoster and far away from the economic opportunities created by tourism in the town. This new form of separation and segregation is no longer brought about by law, instead the physical location of these sections is created and dictated by an economic divide, whereby the wealthy elite stay in Paternoster while the 'coloured' residents occupy the zones slightly outside the town. Hűbschle and De Greef (2016:9) illustrate that "spatial patterning of Apartheid has reproduced itself, historic asymmetries in wealth and opportunity carrying over to the present-a gulf that persists across South Africa, where the Apartheid status quo remains largely intact." The town of Paternoster is largely characterised by development driven by the growth in tourism. This growth unfortunately does not really benefit the poor communities of Hopland and Kliprug. These communities instead have become a breeding ground for high levels

of unemployment, alcohol, and drug abuse. The creation of these multiple socio-economic issues has been brought about by a variety of underlying factors such as the unequal distribution of tourism opportunities, and limitations on the harvesting of marine resources.

2.6 Small-scale fishing as a livelihood strategy

Isaacs (2013) conducted similar research on the allocation of fishing rights, whereby 300 households formed part of a survey. This study focused on purchasing practices, consumptive practices, and governance of the fishery. The study specifically looked at residents who bought fish from the local sellers. Results of this study revealed that when it came to the allocation of snoek licenses, only 6 fishing permits were allocated to the community of Ocean View, and that only 1 of these rights holders were female. Most of the snoek fishers (92) operate on interim relief permits, which are valid until the implementation of the new small-scale fisheries policy (Isaacs, 2013). The interim rights which were allocated only lasted 6 years and required a yearly re-application. The study also revealed that within Ocean View, there was a thriving informal economy whereby street traders played an integral role in the selling of fish to impoverished communities, who often bought on credit from these street traders. These street traders provided residents with access to money to obtain access to electricity, and water.

A similar study was done in Senegal by Virdin and Basurto (2019) whereby they focused on the role which small-scale fishers had on the informal sector, which led to food security within this community. Virdin & Basurto (2019:1) opine that "in many countries, artisanal or small-scale fishers represent most of the people working in fisheries, and in many developing countries they provide nearly half of the fish caught for human consumption." These two authors noted that within Senegal, small-scale fishing was an important activity which addressed poverty, unemployment and ensured environmental preservation as these fishers were not exploiting the natural environment.

2.7 The establishment of local and international markets

The West Coast Lobster was enjoyed by Cape Town's elite class during religious holidays such as Christmas, Eid and New Year's Day and globally was a sort-after commodity. During the past 60 years, a local market emerged, due to the increased demand of this marine species. Even

though crayfish was in decline and in constant threat of extinction, trade continued and continues to increase because of the economic incentive of selling crayfish. The selling of this species was and is still often done by poor struggling fishermen due to a lack of alternative economic revenue streams. Isaacs and Witbooi (2019:162) argue that "Opportunities to supply the local and export markets were taken up by informal fishers who had few other livelihood options." This marine resource was sold to the catering industry, restaurants and wine farms which meant that the local market would continue to thrive due to its vast clientele. The high demand came from upmarket restaurants as well as from those who served it at weddings, corporate events, and other important occasions (Lambrechts and Goga, 2016). The local and overseas consumers who were quite diverse utilised illicit wildlife in various ways for example, consumers might use these products for cultural medicines, textiles, clothing and as a food delicacy. The trend of illicit trading generally flowed from developing countries to developed countries, who were the biggest consumer/buyer of illegal wildlife. The illicit market starts in continents such as Latin America, Africa, and South East Asia. Locals and indigenous people, often from impoverished communities, have historically trapped and traded (or poached and trafficked) wildlife to supply such markets and supplement their incomes (Leberatto, 2016; Pires et al., 2016; Roe, 2002; TRAFFIC, 2008). A well-established and booming local and international market has led to the establishment of a multi-million-dollar organisation. This enterprise was supported by corrupt individuals such as the security forces and port officials. Lambrechts and Goga (2016:231) argue that "the supply chain is highly organised, with key role players, strategies and destinations, forming part of this global transnational crime." Despite the introduction of laws and policies protecting wildlife, many government officials are very reluctant in its implementation, as many benefit out of this lucrative trade.

The commercialisation of the West Coast rock lobster started around the late 1800s and peaked in the late 1950s. The amount of crayfish caught per annum were at its highest in 1950, whereby 18 000 tonnes were captured. The catching of the West Coast rock lobster was dominated by the hoop nets, however, to increase their yields per annum, fishermen introduced more modern and efficient traps and motorised boats. However, despite these technological advancements, catches declined by almost half to 10 000 tonnes during the 1960s and continued to sharply decline to around 2000 tonnes in recent years (DFFE, 2023). This rapid decline in the catching of the West Coast rock lobster was due to a combination of factors, namely changes in fishing methods, the

introduction of new laws and policies, environmental changes, and the possible exploitation of this marine species.

2.8 The impact of Covid 19

The onset of Covid 19 in South Africa has had a devastating impact on the small-scale fishing industry along the West Coast. Bonthuys (2020:1) suggest that "Adverse consequences include the shutdown of fisheries, the knock-on effects of market disruptions, and further delays in implementing the government's small-scale fishing policy." The closing down of this industry was detrimental to the livelihood of these small-scale fishermen who depend entirely on the ocean as a source of economic revenue. The failure by the government to implement an inclusive policy that incorporates the rights of small-scale fishers has left these people in a state of social and economic despair. External market forces coupled with the historic over-exploitation of crayfish has led to a rise in the 'illicit' fishing industry. To contain the outbreak of Covid 19, China halted the import of the West Coast rock lobster in 2020. During the 2020 fishing season, Small-scale fishers had no domestic or foreign market for their crayfish, resulting in huge financial losses. The coronavirus epidemic killed more than 2, 000 people and infected tens of thousands more as its pernicious tentacles disrupted global aviation, shipping trade, and tourism sectors. China halted live animal trade over fears that the trade could help spread the disease (Roelf, 2020). Formal fishers, which comprised of fishing companies, industries and those who had fishing permits and rights holders, had a direct loss of 257 million Rand during the 2020 fishing season. This huge financial loss was caused by the direct impact of a declining export market.

Crayfish in South Africa is on the red list for the South African Sustainable Seafood Initiative (SASSI), because its population has significantly declined and dropped in the past 3 decades. The rock lobster fishery sector used to catch 4,000 tonnes of crayfish per year but recently, they harvested less than 2,000 tonnes (Manaleng, 2021). These figures are alarming as they exhibit that the crayfish population is facing extinction. With this species facing a decline in population, this may impact the livelihood of small-scale fishermen who entirely depend on the ocean as their source of income. This dwindling population coupled with the impact of Covid-19 limitations has meant that the international demand for crayfish has declined. Due to the Covid-

19 pandemic, local fishermen were forced to cut their selling price as they were desperate to make the sale. Covid-19 had a negative impact on market demand for the majority of the 2019/2020 season with losses being incurred by the West Coast rock lobster fishing sector (Manaleng, 2021). It can therefore be argued that to overcome the impact of Covid-19, the government must implement a strategy that both pushes up revenue and ensures environmental sustainability.

The small-scale and commercial industry has been hit hard by a 22.8% reduction in their Total Allowable Catch (TAC) during the 2020/21 fishing season (Bonthuys, 2020). These industries are impacted severely by 'illegal' poachers who poach marine species. Owing to the financial gain of catching marine species, these poachers are willing to risk jail time and a hefty fine. These poachers are responsible for the exploitation of marine resources and have caused tremendous damage to the natural environment. These poachers have no standards and do not adhere to any rules or regulations pertaining to the capture, processing, and selling of the West Coast rock lobster 2, 000 poachers have stripped South African coastal waters of at least 96 million abalone causing a decline of the Haliotis midae (Abalone) to unprecedented levels (Finsa Reporter, 2020). To control the 'illicit' capture of crayfish and other marine species, technology in the form of a mobile application, must be utilised as they are able to monitor and track the capture and sale of marine species. These mobile apps have been utilised throughout the world and currently, a pilot project called the Abalobi programme has been introduced in the Western Cape.

2.9 Identifying the characteristics of a poacher

Poaching is a distinct form of exploitation which impacts the crayfish industry. Hauck and Sweijd (1999:1025) argue that "poaching refers to any activity which contravenes industry regulations outlined in the marine living resources act of 1998." For example, poaching was practiced in various ways when individuals dive into restricted areas to acquire crayfish or when they catch beyond the allocated amount. The informal sector was generally run by individuals who supply the growing black market. Crayfish and abalone are the popular marine species that are captured and sold to these 'illegal' markets. The involvement of syndicates in supporting the high demand for abalone products in the Far East has exacerbated the problem and has resulted

in devastating effects at local level (Hauck and Sweijd, 1999). Those who are involved in poaching are individuals who are generally unemployed and who utilise this trade to secure an income. Oftentimes, poaching fuels other socioeconomic issues such as drug and alcohol abuse. Poaching also leads to an increase in competition for legal businesses as the market becomes flooded with cheaply purchased crayfish.

The local community members who participate in poaching are often from the area and utilise this trade to obtain a source of revenue. Hauck & Sweijd (1999:1028) are of the view that "some people were involved in poaching because it was a mechanism by which to feed their families and to survive a desperate situation." The possible economic return of poaching has become a viable option for local community members to escape poverty. These impoverished communities have become easy targets for the syndicates as the government continuously fail to provide economic support. Local community residents from areas such as Hawston participate in the illegal trade of abalone as the economic return was four times higher than the average monthly salary in the town. In Hangberg, poaching was conducted by teenagers who avoided school to obtain an income for their households. These children came from poor backgrounds which often consisted of no breadwinners. The teenagers, who participated in this lucrative business, often used the money to fund their alcohol and drug use. In this industry, these young individuals held a variety of positions, including divers, traders, and lookouts. For drivers, one single operation could earn them R10,300 (roughly R52,500 monthly), whilst boat owners could earn R7,000 per operation (R35,000 monthly) and diving boat owners could earn up roughly R97,500 monthly (Lambrechts and Goga, 2016). The individuals who partook in the process of poaching were those who belonged to poor fishing communities and historically were starved of their fishing rights. This form of institutional racism leads to limited opportunities for 'coloured' communities within Paternoster. Delinquency does not randomly occur throughout the city but was concentrated in disadvantaged neighbourhoods in or adjacent to areas of industry or commerce. These impoverished neighbourhoods were in a constant state of transition (Wickes and Sydes, 2018).

Within Paternoster and the surrounding West Coast towns, there are two types of marine resources that are under threat of illegal harvesting. They are known as Abalone (*Haliotis midae*) and the West Coast rock lobster (*Jasus lalandii*). The harvesting and trading of these marine

resources are often run by criminal syndicates who carry out their business in broad daylight and in full view of the public. Bonthuys (2020:1) argue that "The poaching component has gotten out of control; it is a big business among criminal gangs. Crayfish is the new abalone." Despite their attempt to capture illegal poachers, the criminal syndicates generally continue to conduct their 'business' once the police have moved out of the area. Van As (2020:2) further demonstrates that "The perpetrators' activities have been described as the widespread plunder from our coastal waters." Those who partook in the 'illicit' fishing were often those who come from marginalized communities, due to the previous impact of Apartheid laws and policies. Hűbschle and De Greef (2016:9) suggest that "Unlike the postcard holiday town they now border, Kliprug and Hopland which are genuinely tough places to live, beset by unemployment, chronic alcohol abuse, and, in recent years, a sharp rise in crystal methamphetamine addiction." The illegal poaching of marine species was often connected to international crime syndicates, such as drug trade, human trafficking, and the smuggling of weapons. The Financial Action Task Force Report (2020:5) reports that "The illegal wildlife trade (IWT) is a major transnational organised crime, which generates billions of criminal proceeds each year. IWT fuels corruption, threatens biodiversity, and can have a significant negative impact on public health and the economy." The protection and preservation of the ocean falls under the Marine Living Resources Act (MLRA) which is enforced by the Department of Forestry, Fisheries, and the Environment (DFFE) (Government Gazette, 1998). Isaacs and Hara (2015:10) suggest that "the aim was to come up with a new policy and legislation that would redistribute fishing rights to racial groups that had been marginalised under apartheid. The product of this four-year process was the Marine Living Resources Act (MLRA) promulgated in 1998." Despite the introduction of this act the poaching of abalone and the West Coast rock lobster accounted to a loss of R628 million annually. According to Van As (2020:5), "By 2005 between 1,000 and 2,000 tonnes of abalone with an export value of USD 35-70 million per year were harvested illegally in the Eastern Cape." It is therefore clear that illegal poaching was a profitable enterprise that was often created through the market needs of countries in South East Asia such as China. The poaching of marine resources was often motivated and initiated due to corruption within the Department of Forestry, Fisheries, and the Environment. In 2018, eight officials who were based in Gansbaai used their official status to run a poaching syndicate inside the Western Cape. The Hawks arrested nine DAFF officials in Gansbaai alleged to be linked to an abalone poaching syndicate (SABC News, 2018).

Corruption within DFFE has undermined the Marine Living Resources Act, which has further depleted this marine species, further risking their extinction.

2.10 The various uses of crayfish

2.10.1 Medicinal Value

Crayfish is on demand throughout the world and is usually harvested for food or other medicinal purposes. Marie (2022:1) argues that "crayfish are a type of freshwater crustacean that are found all over the world and are a staple food in many human diets." This marine species provides valuable minerals and vitamins and plays an important role in many ecosystems. Crayfish also has compounds that contain anti-inflammatory, antibacterial, and antifungal properties that can be used for medical purposes.

2.10.2 Food

Crayfish is consumed by humans as it contains weight loss ingredients such as low-fat and carbohydrates. Crayfish can be served in various ways and most often, it's incorporated into salads, to ensure a healthy diet. Crayfish is traditionally steamed whole, depending on your individual preferences. This marine species can, however, be cooked and used for a variety of dishes including sandwiches, salads, soups, risottos, and a wide range of other options (Marie, 2022). Within Paternoster, they hosted an Annual Crayfish and Seafood Festival, whereby tourists were invited to participate and purchase from stalls that sold crayfish braais. Street vendors actively partook in the selling of crayfish and operated on a small scale. Sales and transactions for crayfish, mussels and abalone were done in public spaces by these informal street traders.

2.11 What is an informal street trader?

Informal traders are individuals who engage in street trading on a small scale. This practice takes place on pavements and street corners. These individuals sold a variety of goods and rendered multiple services to their clients. The concept 'informal sector' was created through anthropological work that was carried out by Keith Hart in 1973 in Accra Ghana While

conducting research, Hart identified the various activities that the poor carried out, and how they played a pivotal role in providing important services in Accra (Hart, 1973).

Street traders played an important role in obtaining an income, especially in situations whereby residents were struggling to find employment in the formal sector. Skinner (2008:7) posits that "In Africa, the informal sector as a whole is estimated to account for 60 percent of all urban jobs and over 90% of all new urban jobs." The trends within street trading are linked to patterns of rural-urban/ international migration and the poor economic growth of countries. As Landau (2007:61) posits, "international migration is an inexorable response to regional economic inequalities." International migration was spurred by political turmoil such as civil wars. Desperate individuals fled their countries of origin to obtain security and to get an income. These migrants flooded the job markets of neighbouring countries, and usually ended up in the informal sector, as there are no laws and policies really governing start-up costs. Within Africa, the introduction of Structural Adjustment Programmes (SAPs) during the 1980s and 1990s led to the restructuring of the public sector, which opened many economies and ultimately impacted the formal economy. This resulted in a substantial increase in the number of informally employed (Skinner, 2008).

The informal economy was utilised by the urban poor to develop their skills and reduce their level of poverty. The informal and formal economy existed in a theory called dualism. This theory highlighted the way these two sectors depend on each other for survival. Todaro & Smith (2015:350) argue that "the formal economy benefits from the cheaper workforce that the casual economy offers while the informal economy depends on a developed formal economy to improve its conditions and revenues." This link between the two sectors was based on the constant exchange of goods and services. Within Cape Town, informal traders played an integral role in the local economy and urban landscape. The 2014 State of the Central City Report (SCCR) stated that 8,040 people are employed in street trading (informal trade) in Cape Town CBD. This thriving economic sector ensured a range of employment opportunities and contributed positively to the economic growth within Cape Town. The Greater Tygerberg Partnership (2023:1) argues that "although difficult to measure, some estimate the informal economy's value at 28% of South Africa's GDP." The informal sector within Cape Town was the 5th biggest employer and allowed a range of businesses to participate in this growing sector.

Informal traders have limited access to funding and generally lack start-up capital. Informal traders, also usually have no marketing and management skills to successfully run their businesses. The primary challenge for informal traders was the lack of government investment and recognition, which impacted their access to trading infrastructure and limited the introduction of inclusive laws and policies. The informal economy participants under these conditions choose to remain informal due to the government not intervening to make the conditions favourable (Mahlangu et al., 2022). Since the informal sector ensured economic growth and security for impoverished communities, this sector must be recognised by the government, to ensure future growth of this sector. Since their laws and policies regulated and dictated the formal economy, many people will turn to the informal economy as a livelihood strategy. Turok et al. (2017:35) is of the view that "the informal economy can serve vital niche markets and enhance significance to other events with the government support." This support also takes the form of infrastructural and capital investment. Mafunzwaini (2013:5) argues that "the informal economy is still defined by poor infrastructure suggesting that it is been poorly reflected in the improvement of policies". At the local level, municipalities tended to suppress and control the informal economy by having predetermined locations and allocated trading bays. However, local municipalities must be cognisant of the way this sector operates and how it contributes towards service delivery. Economic development policies played a crucial role in supporting the growth of the informal sector. There is a need to explore alternative approaches to economic development that can bring inclusive economic expansion although informal economy is often overlooked in economic policy analysis (Ndabeni, 2014). The inclusion of the informal sector into economic policies would ensure employment opportunities and the economic growth of impoverished communities. In 2017, Statistics South Africa published that 88.70% of Africans were unemployed, which was a clear indication that inclusive policies were crucial to combating unemployment.

2.11.1 Perceptions and attitudes towards street traders

Within South Africa, the informal economy plays an important role in the employment of many individuals who are unable to secure a livelihood in the formal sector. Street traders usually participate in a range of activities and render a vast amount of services throughout the country. This sector provided a much-needed safety net against poverty and unemployment and ensured

the growth of local economies. Street trading circulates money, and goods into the domestic economy in diverse ways, through economic and social exchange among people (Oluwatoyin et al., 2018). Street trading allowed individuals access to a free and open market, whereby they are freed from expensive start-up capital and the burden of renting office or shop space. These individuals were able to evade taxes and obtain 100% profit on the sale of goods and services rendered. This freedom however comes at a price as local law enforcement coupled with local business owners view this trade as a nuisance that had to be controlled and managed.

2.11.2 Local municipality and street traders

Informal street traders were harassed by municipal officials daily, through forced evictions, the issuing of fines and the confiscation of their goods. Street traders in many instances were forced to offer bribes to protect their goods. Ngcobo et al. (2022:1) posit that "the justification is often that street traders are unruly, chaotic, and disruptive, driving municipal authorities to forcefully remove and relocate street traders." Local bylaws and policies usually attempted to curb and control the spread of informal traders. These laws and policies are often made without considering the importance of the informal sector. Zogli et al. (2021:413) argue that "sometimes, government policy and practices can hamper the dynamism and flexibility that allows certain informal economic activities to exist." The continuous harassment by local law enforcement agencies ultimately hindered the ability of informal traders of ascending into the formal sector. Within South Africa, especially during the period of Apartheid, laws, and policies hindered and stifled the growth of this sector. Skinner (1999: 17) report that South African policies tend to restrict informal trading operations rather than facilitating them, especially during the years of Apartheid. Through forced evictions, informal traders lose their entire stock and are forced to start over from scratch, without any form of start-up capital or assistance from local municipality. To further marginalise informal traders, the registration as formal business entities were an expensive process that had a high level of taxation and street traders would have been expected to follow strict regulations.

2.11.3 Formal business and street traders

Within Empangeni, formal business owners viewed informal street trading as a hindrance that hampered and affected their business operations. These businesses lose clients as the sidewalks

and pavements were left with a large amount of litter and other pieces of garbage. Oftentimes, street traders directly traded similar products in front of the entrances of formal business outlets which hindered the growth of the formal businesses and limited the access of clients. The presence of informal traders can cause a severe health hazard as the cleaning of utensils and products such as fish is done directly on the sidewalk and the remains are dumped directly into the sewage drains, which causes a foul smell that attracts rodents. Another serious issue was the infestation of rats due to food scraps being dumped on the pavement at the end of the day (Jenkins, 2014). Within Empangeni, there are some illegal products that are being sold under the disguise of street trading, which poses a serious risk for formal employees and clients. Oluwatoyin et al. (2018:8) argue that "it allows people to put up illegal structures like kiosks and sheds on the road, reducing the aesthetic value of the streets, causing noise pollution, creating traffic jams, attracting litters and waste to public places." Street vendors caused a variety of environmental problems as these temporary structures that were erected did not follow Municipal by-laws and caused the over-crowding of the sidewalks which forced people to walk directly into the streets. Due to the high levels of pollution associated with street traders, local businesses are forced to utilise their own money to clean-up sidewalks, especially in the absence of government intervention. Within Paternoster, the services of private security have been employed by businesses to ward-off hawkers and street traders who cause a nuisance for formal businesses.

2.12 Anatomy of street trading

2.12.1 Regulating street trading

Street trading within South Africa is a popular occupation whereby the practice and location of this enterprise was determined by various external forces such as Urban Spatial Planning. These forces prohibit street trading which limits the success of this sector. Mitullah (2004:5) posits that "all types of enterprises in urban areas, whether micro, small, medium, or large, should have the right not only to the CBD but to all goods and services. The notion of inclusion has different resonances in each region with the exclusion of specific groups being most significant in some regions and exclusions of the poor majority more important in others." The importance of the informal sector including street trading in Urban Planning would address the exclusion of certain individuals in society. Within Cape Town's CBD, the process of inclusion and exclusion can

only be addressed through municipal governments' acceptance of street traders into spaces within the city. The negative perceptions of street traders were usually created by elites and formal business owners who attempted to safeguard their own interests in the city. Despite these negative attitudes towards this sector, the literature has constantly proved that both the informal and formal sectors can co-exist without the one infringing upon the other. What is evident though is that the integration between the two sectors is necessary for the implementation of proactive planning (Bhomik, 2005).

In South Africa, the informal sector plays a significant role in the economic growth of the country and has become a huge source of employment. Donaldson et al. (2013:288) have pointed out that "the informal economy's primary driving factor has been to ensure that those unable to find work at formal businesses are self-employed and allows impoverished locals to purchase goods and services at affordable prices." Within areas where street trading has been incorporated into urban spatial planning, economic growth has been experienced. In Durban, the Warwick Junction Urban Renewal Project led to various infrastructural and developmental upgrades in the city, which both benefitted and promoted the growth of street trading. Informal trading in Cape Town CBD is different from trading in any other city, as there are more structured markets, and street trading is a more lucrative activity (Skinner, 2000).

Street trading within Cape Town went from regulated to unregulated in the 1990s and was then later regulated again. During 1990-2000, Cape Town underwent 6 administration changes, however, presently street trading in Cape Town is governed by the City of Cape Town government and this institution was guided by the 2009 informal trading by-law whereby a permit system was utilised to keep track and organise street trading in Cape Town. The informal economy consists of a variety of goods and services. Goods for sale in street trading bays can range from art and musical instruments to necessities, such as food and hair care products (Donaldson et al, 2013).

Within the CBD alone, there are six major markets and numerous other trading bays are spread out along the city streets (Donaldson et al, 2013). Within Cape Town six officials were employed to manage these trading areas. To assist these officials, market committees were established, as they consisted of traders. Their role was to organise and supervise market activities. These activities include marketing planning which means ensuring product diversity and the promotion

of South African-made products in the market (Donaldson et al, 2013). Despite the inclusion of street traders into these committees, they were not assisted by the local government, which impacted their ability to fulfil their duties. The current system provided no guidelines regarding the selection and code of conduct of these members. The traders that made up the dominant ethnic groups in the market influenced the selection process, while those in the minority were marginalised (Donaldson et al, 2013).

To ensure the economic growth of individuals, especially those who reside in developing countries, the informal economy, through the practice of street trading should be utilised to empower these individuals socially and economically, however, within South Africa the informal sector has been utilised as a survival strategy to escape poverty and despair. This process has hindered people's ability to transition from the informal sector to the formal sector.

Within Cape Town, there is competition for trading bays between local and foreign traders which has often led to tension in markets such as Bellville. Foreign nationals usually band together, where they would purchase goods in bulk and work together to be successful, where locals competed which impacted their profits. The allocations of new trading bays were often done, without consultation with street traders, and these bays were usually situated in undesirable spaces which lacked access to customers. Donaldson et al., (2013:291) "one consequence of this is that sometimes-certain trading bays are created in commercially unattractive areas that lack pedestrian traffic. Traders will not accept these bays and then they just sit there empty." This resulted in street traders in many instances trading 'illegally' to sell their products and secure a livelihood.

2.13 Conclusion

This chapter reviewed various aspects which have had a direct impact on the lives of street traders and small-scale fishers. The literature has documented and criticised government's introduction of the Marine Living Resources Act and the Small-Scale Fisheries Policy. These criticisms were based on government's slow implementation, and its inability to address the injustices of the past. Literature also illustrated an important role of street traders, and the informal economy, as many people utilised this sector to secure a livelihood. Finally, literature suggested possible solutions for both street trading and small-scale fishers. These solutions were

deeply rooted in improved partnership campaigns between the local municipality and these individuals.

Chapter 3: Research Methodology

3.1 Introduction

The qualitative approach was deployed in this study. This approach permitted the researcher to question the 'why', 'what' and 'how' of street trading in Paternoster. Through various research methods, such as a case study approach and participant observation, the researcher was able to obtain a deeper understanding of the lived experiences of the respondents. Palmer & Bolderston (2006: 16) argue that "Qualitative research is an interpretative approach, which attempts to gain insight into the specific meanings and behaviours experienced in a certain social phenomenon through the subjective experiences of the participants." The methods used in this Chapter were therefore used to assist with reaching a conclusion. Finally, this Chapter unpacks the way these methods assisted in the analysis of data.

3.2 A Case-study approach

A case-study approach was deployed whereby the town of Paternoster was the main focus of the study. This approach has a range of sub-categories which were deployed to analyse and unpack informal crayfish trading. These sub-categories relate to the various role players who actively participated in informal crayfish trading. These are the middlemen, and vast clientele, which expands both locally and internationally. A case study approach in Human Geography is useful in teaching and research, especially when a detailed investigation is required. The case study approach is particularly useful when there is a need to obtain an in-depth appreciation of an issue, event or phenomenon of interest, in its natural real-life context (Crowe et al., 2011). To conduct this scientific enquiry, the researcher adopted an instrumental case study approach, whereby the town of Paternoster was the key focus to obtain a much broader appreciation of the challenges that street traders faced in this fishing community. Crowe et al. (2011:4) argue that "the case study approach lends itself well to capturing information on more explanatory 'how', 'what' and 'why' questions." The case study approach was utilised as there were many gaps in the literature pertaining to the various challenges that crayfish street traders faced on a daily basis. To fill these gaps in literature, the researcher used the epistemological approach known as 'interpretivist', whereby knowledge, and information was examined through an understanding of

the individual and their shared meaning of street trading. Finally, the street trade case study can be seen as a proxy that allows for a small glimpse into the informal, and perhaps also the much bigger illicit crayfish business that falls outside the scope of this study.

3.3 Ethnography as a research method

Ethnography underpinned this study and was primarily based on participant observation. The primary aim of this technique was to observe the operations of crayfish sellers to obtain a better understanding of crayfish street trading in Paternoster. Ethnography is a research strategy to understand–how people create and experience their worlds through processes such as place making, inhabiting social spaces, forging local and transnational attachments and networks, and representing spatial imaginaries (Till, 2009). Ethnography is a process where the researcher utilises a methodology called participant observation, where considerable time is spent observing and interacting with a social group. Through this methodology, the researcher was able to observe and understand street traders and their connection with each other as well as the potential buyers. As Ley (1988: 121) puts it, such research "is concerned to make sense of the actions and intentions of people as knowledgeable agents; indeed, more properly it attempts to make sense of their making sense of events and opportunities confronting them in everyday life." Ethnographers through observation can draw key information and knowledge from the daily routine of participants. Herbert (2000:551) argues that "the ethnographer gains unreplicable insight through analysis of everyday activities and symbolic constructions." The ethnographer therefore applies his/her theory to a scene to obtain a better understanding of the context.

3.4 Participant Observation

Participant observation has been used for many years in Anthropological and Sociological Studies, and recently the field of education has used this qualitative study to collect information. This ethnographic method utilises techniques, such as interviewing, observation and the analysis of documents. Observation is a useful method which assists researchers in many ways. They provide researchers with ways to check for non-verbal expression of feelings, determine who interacts with whom, group how participants communicate with each other and check for how much time is spent on various activities (Schmuck, 1997). Participant observation allows the

researcher an opportunity to look up various terms that were used by the respondent during the interview process. The researcher would be able to observe a series of events, especially those events which respondents might have been unwilling to share as they might have been viewed as insensitive. The researcher, through this research method, would also be able to obtain a much bigger picture of the lived experiences of respondents. DeWalt & DeWalt (2002:92) argue that "the goal for the design of research using participant observation as a method is to develop a holistic understanding of the phenomena under study that is as objective and accurate as possible given the limitations of the method." Participant observation can therefore be used to validate the study as the researcher would have an increased understanding of the overall context. To further validate the study, researchers would have to incorporate other qualitative methods such as interviewing, surveys and questionnaires.

Once researchers can formulate a hypothesis, participant observation would become the lenses through which they would be able to test, verify or reject their hypothesis. Participant observation provides the researcher with an opportunity to obtain a background understanding of the culture of the respondents. This research method is a layer of quality assurance for data collection and interpretation, which gives the researcher the opportunity to develop new questions related to the hypothesis, which will further assist in meeting the aim and objectives of the study. The way researchers involve themselves in the study ultimately impacts the overall quality of the information that is obtained. To determine what needed to be observed, the researcher should know exactly what they are studying and be able to determine normal activities from abnormal activities. The researcher therefore can identify various changes. Through observation, a multitude of viewpoints are identified. Wolcott (2001:28) suggests that "fieldworkers ask themselves if they are making good use of the opportunity to learn what it is they want to know." The successful use of observation is when researchers build solid and intertwined relationships with their respondents. To ensure a high level of ethics by the researcher, respondents throughout the study must be informed of their intentions and should constantly introduce themselves as researchers. Participant observation must also ensure the anonymity of all respondents to prevent them from being implicated in any crimes.

Interviews were carried out and questions were asked pertaining to the underlying social, economic and political causes for the spike in informal (legal and illicit) trading. Participant

observation supplemented the interviews. During the research process, the researcher engaged in both formal and informal conversations with participants, i.e. traders/sellers and buyers as well as other relevant interested parties, such as conservation authorities and law enforcement agencies, e.g. the police and the marine harvest inspectorate on a convenience/snowball sampling basis. To develop a thorough understanding of the case, the case study approach usually involves the collection of multiple sources of evidence, using a range of quantitative (e.g., questionnaires, audits, and analysis of routinely collected healthcare data) and more commonly qualitative techniques (e.g., interviews, focus groups and observations) (Crowe et al., 2011). The use of multiple sources is important as it gives the study validity and is an appropriate technique when addressing the research question. An underlying assumption is that data collected in different ways should lead to similar conclusions, and approaching the same issue from different angles can help develop a holistic picture of the phenomenon (Crowe et al., 2011).

3.5 The interview process

A total of 20 interviews were conducted at street corners, in parking lots, major intersections and in restaurants. The interviews were divided into 10 informal interviews which were carried out with street traders and small-scale fishers, while the remaining 10 respondents were law enforcement officers and business owners. Through the use of snowball and convenience sampling, the researcher was able to interview respondents close to the study area. Once the first round of interviews was completed, the first group of respondents were able to refer more respondents, who were either small-scale fishers or those who participated directly in street trading – this was convenient. Street traders were located in various areas such as along the coastline, in parking bays, in front of restaurants, and at the entrance of the town. The researcher initiated informal conversations with these street traders about crayfish and the sale of marine species. Despite some initial reservations, the street traders were quite open in their discussions with the researcher. Given that the majority of the interviewed street traders were actively engaged in trading, the researcher adopted a more informal conversational approach. The selection process for law enforcement officials involved a visit to the Vredenburg police station. Upon arrival at the station, the researcher made an inquiry about poaching, and the front desk sergeant recommended a detective. While interacting with the detective at the Vredenburg police station, the exchange was formal, allowing the researcher to take notes during the conversation.

In contrast, when engaging with the traffic police, a more informal approach was taken since they were actively on duty. The interview with restaurant, shop and hotel owners and managers was easy as the researcher was able to conduct formal interviews with the hotel owners and was actually allowed to take notes while interviews with the restaurant owners had to be more informal as they were running and managing their businesses. As ethnography helped the researcher to obtain a better and more in-depth relationship with the respondent through informal conversation and participant observation, the opinions of street vendors were captured. Due to the nature and extent of this study, gaining the trust of the respondents was pivotal in understanding the (informal) crayfish trade in Paternoster. The qualitative and iterative nature of the methodology allowed the researcher to have group conversations with traders and subsistence fishers. To ensure the success of this study, the researcher ensured that the respondents were well aware of the goals and objectives. This study also utilised site documents which included flyers, brochures, and other advertisements pertaining to the legal/illegal trade of crayfish. Site documents can be used to learn about general issues, which might affect the field site, or they can tell you how the participants of your study present themselves to other people (Eriksson & Kovalainen, 2008).

3.6 Sampling Methods

Sampling is a method where the researcher selects a sample from a much larger population. The sample which is selected must be representative of the population to guarantee valid generalisations on the population based on the findings. Mujere (2016:109) posit that "sampling is the act, or technique of selecting a suitable sample, or a representative part of a population for the purpose of determining parameters or characteristics of the whole population." To draw a particular conclusion about a population, the researcher must utilise analytical tools to identify a population's characteristics.

3.6.1 Snowball Sampling

The snowball sampling method is utilised when a researcher has difficulty in accessing a specific type of respondent, therefore this research method is anchored on the support of other respondents. To create a snowball sample, there are two steps: (a) trying to identify one or more

units in the desired population; and (b) using these units to find further units and so on until the sample size is met (Mujere, 2016). This research method perfectly suited this study as the street traders who were interviewed were conducting activities that were considered 'illicit', and therefore having a list of pre-determined respondents was relatively difficult. Through this method, the researcher was able to speak to one respondent, who based on mutual trust, referred more potential respondents. Naderifar et al. (2017:2) argue that "the snowball method not only takes little time but also provides the researcher with the opportunity to communicate better with the samples, as they are acquaintances of the first sample, and the first sample is linked to the researcher." In accordance with the ethical consideration, the identities of street traders were not revealed and this study ensured the confidentiality and anonymity of all respondents. Snowball sampling takes a long time to obtain respondents, however, like the concept of a snowball, the size of the respondents constantly grows as the researcher is referred to the next respondent or group.

3.6.2 Convenience Sampling

Convenience sampling is a way of data gathering which identifies samples that are conveniently located close to the study site. Etikan (2016:2) is of the view that "convenience samples are sometimes regarded as 'accidental sample's because elements may be selected in the sample simply as they just happen to be situated, spatially or administratively, near to where the researcher is conducting the data collection." This research method was employed in this study as many respondents who were interviewed were conveniently along the coastline, either selling or catching crayfish. The boat crews who docked on the beach were conveniently placed as the researcher was walking along the beach. This research method was relatively cheap as no money was spent commuting throughout the study area, as all respondents were readily available. The 10 respondents for this study used the natural environment to obtain a livelihood. To understand their relationship and connection to the ocean, the researcher utilised the Sustainable livelihoods approach, which focused on the way crayfish was used to overcome poverty and adversity.

3.7 Sustainable Livelihoods Approach

The sustainable livelihood approach takes precedence, offering a lens to analyse the changing lives of people as they are subjected to, and experience abject poverty. This theoretical framework overarches the emphases on more nuanced approaches such as Policies and Institutions, the Basic Needs Approach, and the Rights Approach. This participatory approach was employed, centering on individuals and their inherent abilities and assets. This approach was geared towards understanding how these resources could be harnessed to overcome adversity and enhance their quality of life. The sustainable livelihoods approach is a way of thinking about the objectives, scope, and priorities for development activities (Serrat, 2008). This approach is people-centred and looked at the ever-changing way in which these poor people lived their lives. This approach also looked at policies, laws, and institutions, which helped to create development activities. Through this research method, the researcher was able to draw connections between people, their overall environments, and the way this environment creates various livelihood strategies. The researcher would also be able to identify various livelihood assets such as human, social, natural, physical, and financial capital, and the way in which households have different levels of access to these assets. This approach illustrates a better understanding of poverty through looking at aspects such as households, gender, and governance. The concept, sustainable livelihoods approach was an attempt to go beyond the conventional definitions and approaches to poverty (Sapkota, 2021). This approach comprises 3 attributes which focus on tangible assets, economic activities, and possession of human capabilities. Even though this approach was like the Rural Development Approach it does not necessarily aim to address all aspects of the livelihoods of the poor (Sapkota, 2021).

3.7.1 Policies and Institutions

Livelihood strategies are not only determined by access to assets and capital, instead structures within the public and private sectors were also important as they were responsible for the introduction of laws and policies which delivered certain services to the people. Serrat (2017:24) argues that "processes are important to every aspect of livelihoods. They provide incentives that stimulate people to make better choices. They grant or deny access to assets. They enable people to transform one type of asset into another through markets." One of the primary challenges

which the poor faced was when public and private structures limited or restricted their access to a livelihood.

This approach demonstrates the importance of understanding institutions through a mapping framework and ensuring connections between micro and macro environments. Since many of the street traders who were interviewed were relatively poor, the sustainable livelihoods approach was a way of addressing issues around poverty. Finally, this approach is context-specific and focuses more on the local perspectives of people.

3.7.2 Basic Needs Approach

The origins of the basic needs approach can be traced back to the 1976 International Labour Organisations World Employment Conference. This conference led to a report which primarily focused on the acquisition and provision of food, clothing, shelter, housing, and sanitation (Reinert, 2021). This approach was centred on meeting the needs of all people; therefore, development must be centred on this approach. The sustainable livelihoods approach was therefore chosen as it focused on securing the rights of those who are marginalised in society. Street traders within Paternoster fell directly into this category as they utilised a natural resource to maintain their livelihood. The basic human needs approach illustrated that once an individual was unable to provide for his/her basic needs, they had to be considered as poor. This approach can be applied to the street traders and small-scale fishers within Hopland as it focuses on the present economic experiences and the unequal distribution of benefits. Watson (2014:1) posit that "in general, the BNA is more concerned with poverty experienced in the present than with long-run growth per se and more concerned with inequality in the distribution of growth's benefits than its absolute speed**.**"

3.7.3 The Rights Approach

This approach was centred on providing everyone across the world equal rights, which promoted freedom, justice, and peace. The Human Rights-Based Approach (HRBA) is a conceptual framework that is normatively based on international human rights standards and operationally directed to promoting and protecting human rights (Social Protection and Human Rights, 2015). This approach was utilised as it focused on analysing, inequalities, and the way the unequal

distribution of power limited the human rights of individuals. Through this approach, the researcher was able to look at whether small-scale fishers and street traders had access rights to the ocean in Paternoster.

The inability and failure of the economic and social system to recognise the basic rights of millions of people in third world countries has led to the universal call to secure people's basic rights to social and economic goods and services. Stewart (1989:347) argues that "in the latter part of the 1970s, development economists adopted a 'basic needs' approach to development, largely as a response to the failure of economic growth to alleviate poverty in many developing countries." The basic needs approach was developed to ensure that everyone had enough goods and services such as food, water, good health, shelter, and education to maintain a basic standard of living. This approach is centred on the needs of people, instead of their wants. The idea of needs and rights is viewed separately. Making basic needs human rights add two elements to the basic need approach. It increases the moral weight of and political commitment to their fulfilment, and it gives basic needs fulfilment some international legal status, the extent and nature of which depends on the nature of the supervisory and enforcement mechanisms associated with the rights (Stewart, 1989).

3.8 Social Disorganisation Theory and Poaching

At its core, social disorganisation was a theory that attempted to explain variations in criminal offending and delinquency, because of institutional inability. These institutions (family, school, church, friendships, etc) are historically responsible for the establishment of organised and cooperative relationships among groups within the local community (Porter et al., 2015). Therefore, the organisation that was created ties into the sense of belonging that individuals felt within their community, which either increased or decreased their participation in criminal activities and other delinquent behaviours.

Modern society has advanced far beyond their predecessors' hunter-gatherers, as they now have food security, modern technology, and engineering. This improvement led to the establishment of well-planned urban projects which spurred the creation of modern cities. These cities were populated with different race, and ethnic groups who spoke a range of languages, and who had different values which caused tension within these cities. The communication barrier coupled

with their different ethnical backgrounds meant that this homogenous group had constant conflict which placed a huge strain on social controls such as schools, and religious institutions from preventing delinquent behaviour. Porter et al. (2015:1180) posit that "although the development of cities has been considered a monumental achievement in human ingenuity and engineering, it has long been observed that densely populated urban areas produce unintended and adverse social conditions that can result in alienation, psychological distress, criminality, and deviance." The rapid increase in population can create individuals that completely disregard the physical environment, through participating in criminal activities. This theory illustrates that a low socio-economic status can be linked to lower levels of informal and formal controls which impacts the supervision of the youth. The lower the status of individuals, the higher their chances of engaging in delinquent behaviour.

The introduction of unjust fishing laws and policies in South Africa impacted the access of small-scale fishers to fishing rights. Coloured and Black fishing communities were given the bare minimum regarding governmental support, which often forced these residents to live in derelict communities which were densely populated. These residents had few job opportunities and were subjected to abject poverty. Porter et al. (2015:1182) submit that "high crime rates emerge when there is a confluence of high rates of residential mobility, low rates of homeownership, lack of job security, high rates of poverty, and increasing heterogeneity in the ethno-racial composition of communities." The theory of social disorganisation can be connected to the illegal poaching and trading of crayfish as this crime took place within fishing communities, which faced a range of socio-economic issues. The livelihoods of these residents are under constant attack at both local and institutional levels. Poaching, therefore, exists in fishing communities that are under a constant state of social disorganisation, as residents become by-products of their own environment.

3.9 Data Analysis

3.9.1 Introduction

Qualitative data analysis is the formal interpretation of collected data to create order, elicit meaning and communicate findings (Harding & Whitehead, 2016). The inclusive significance of

data analysis is to recognize, sustain and complete the research. To conclude this study, the researcher presented a comprehensive literature review, which reinforced and cemented the initial research question, along with the aims and objectives of the study.

To further substantiate this study, interviews were conducted with various role players, namely residents/business owners, street traders and law enforcement officers. At the beginning of the twentieth century, narrative data analysis emerged out of qualitative research. It employs field texts such as stories, interviews, letters, conversations, photos, journals, autobiographies, field notes, etc as units to analyse for substantiating grounds for the research question (Ashirwadam, 2014). Once the interview process was conducted, the researcher could analyse the response and draw connections.

3.9.2 Sampling

Through the process of sampling, the researcher was able to obtain the first 10 respondents, who played various roles in the street trading of crayfish in Paternoster. The interview with respondent 12 was obtained as the researcher had stayed at his establishment during the 2021 December Holidays. This respondent therefore referred the researcher to the Gallery owner, and BNB owner. The sampling of law enforcement officers was made possible by the researcher visiting Vredenburg Police Station.

Information obtained during the sampling process was initially captured by the researcher in the field notes and was then at a later stage transferred onto a personal computer for interpretation, analysis, and storage.

3.9.3 Content Analysis

Content analysis is a critical research analysis tool in which the researcher was able to draw connections and identify themes throughout the literature. Content analysis in its simplest form looks at what is being said and written about a particular topic and allows the researcher to identify certain patterns. Shava (2021:554) opines that "qualitative content analysis involves a process designed to condense raw data into categories or themes based on valid inference and interpretations." Through this content analysis, the researcher was able to uncover the truth behind 'illicit' poaching and street traders in Paternoster. Content analysis has three different

approaches namely conventional, directed or summative. The results of the qualitative content analysis support the development of new models and theories. Parveen and Showkat (2017:6) argue that "being one of the most employed analytical tools used in this multi-discipline, content analysis is basically a set of procedures used to transfer discrete information into an organised format allowing analysts to make inferences." The content analysis of this study started off with manifested, observable content, whereby the researcher visited the study area, and directly observed the selling of crayfish within Paternoster. During these initial visit inquiries with locals, it was extremely difficult to develop a relationship with street traders, however, after a lengthy conversation with them they were willing to speak to the researcher. Latent content, which was the hidden messages, emanated after the observation stage of research. Once the researcher finished the observation process, Google searches pertaining to the capture and selling of crayfish in Paternoster were done in order to verify the researchers' initial observations.

After visiting the study area for the second time, signs warning tourists of the capture and trade of crayfish became more apparent which sparked more curiosity. This curiosity led to various informal and formal conversations with both business owners and street traders. Upon further research into the history of the town, it became evident that the local community was plagued by many socio-economic ills such as unemployment and a general lack of opportunities. Field notes were made on the various observations. The researcher was then able to design various categories and themes which were in line with the research question. Chapters and sub-chapters which specifically focused on small-scale fishers and an understanding of the crayfish trade in Paternoster were designed. The review of the literature yielded a variety of conclusions regarding the informal crayfish trade in general and in Paternoster in particular. In order to verify these conclusions, data analysis was executed and the study was organised to obtain an outcome. Qualitative research methods were utilised to analyse the results of the open-ended questions while various graphs and diagrams were used to illustrate the findings of the closed-ended questions.

The researcher read through the responses and was obligated to engage with the primary data collection. Content analysis and thematic analysis, in particular, will be used to make sense of the data and information provided, in order to make connections and detect various similarities,

and contrasting points. Thematic analysis in qualitative research allowed for the identification, analysis and interpretation of patterns in response to questions.

The analysis of the primary data is contextualised through a thematic review of key literature in order to better understand the impacts of the schisms and nexuses referred to previously. It is hoped that the analysis of the Paternoster case study will provide more insight into the crayfish trade, legal or illegal, that transcends local, national and international geographical scales.

3.10 Limitations and challenges faced in the study

Due to the researcher's outsider status, it was very difficult to obtain formal interviews from community members, leaders, and commercial fishery employers. To circumvent these challenges, the researcher befriended one respondent who was actively participating in the informal trade of crayfish. While interviewing community members, a snowball sampling technique was used to access more information from other possible respondents.

3.11 Ethics of the research

While conducting informal and formal interviews, this study adhered to a strict code of ethics and the identities of all respondents were kept anonymous. All the information obtained from respondents was utilised for academic purposes only. Before each interview, the aims, objectives, and the overall purpose of this thesis were explained to each respondent. During each interview session, a certified ethical clearance document from the Department of Geography, Environmental Studies and Tourism at the University of the Western Cape was displayed to verify that the questions being asked were for research purposes only. Since this research focused on informal activities, all interviews were conducted in a safe environment.

3.12 Conclusion

This chapter unveiled and explicated the research methodology which was utilised in this study and the way the data gathering tools (i.e., participant observation, interviews and questionnaires were devised and deployed to support the objectives of the study). The chapter also illustrated the way data was obtained and how it was analysed and processed. This chapter finally reflects

on content analysis, limitations, ethics, and the importance of data analysis as well as the centrality of computers in this study.

Chapter 4: Research Results and Analysis

4.1 Introduction

This Chapter focuses on the overall results of the data collection process. Through this Chapter, the respondents' perceptions of laws, policies, poaching, tourism, crayfish street trading and economic development are highlighted and presented in the form of charts, tables, and photographs. These visual sources are utilised to identify similarities and patterns which either support or refute the preliminary findings and observations of street trading.

4.2 Interviews

The interview process took place in April 2022. The period was strategically selected as it included the Easter Break when the town of Paternoster was flooded with residents, holidaymakers from Cape Town and a variety of international tourists. Interviews were conducted in both formal and informal settings to ensure the comfort of respondents who participated in this research study. This level of comfort permitted the researcher to ask complex and often uncomfortable questions pertaining to the capture and sale of crayfish. Irvin (2022:1) is of the view that interviews "can be used to explore the views, experiences, beliefs and motivations of individual participants." The interview process consisted of three separate interview questions that were specifically designed for residents/business owners, law enforcement/environmental agencies and street traders/subsistence fishers. All three interview questions consisted of closed-ended questions and open-ended questions that permitted all the respondents to give their opinion and perspective on the issues related to poaching, illegal trade, current laws and policies, socio-economic issues, their understanding of the fishing industry in Paternoster as well as street trade. In total, twenty respondents were interviewed and were divided into ten small-scale fisher/street traders and the latter group was comprised of police, traffic officials and marine as well as coastal inspectorate officials.

The following sections basically cover the chronology of the questions and the responses of the participants.

4.2.1 Status and years of occupancy

To obtain a holistic image of the respondents, questions pertaining to their duration of stay within Paternoster and their statuses were addressed. Due to the nature and extent of the questions asked in the interview process, these two questions were important; as the study focused specifically on the residents of Paternoster, and the duration of stay was a marker that illustrated the respondents' level of knowledge, specially linked to the history of the town and the fishing industry.

Are you a resident of Paternoster (Yes/No)	**How long have you been staying in Paternoster**
Respondent 1: Yes	10 Years
Respondent 2: Yes	15 years
Respondent 3: Yes	5 years
Respondent 4: Yes	2 years
Respondent 5: Yes	12 years
Respondent 6: Yes	4 years
Respondent 7: Yes	6 years
Respondent 8: No	3 months
Respondent 9: No	2 months
Respondent 10: Yes	2 years

Table 1: Status of residency and duration of stay

Respondents One, Two and Five were long-term residents in Paternoster who moved from Cape Town to obtain access to an RDP home and employment. All three participants had families in Paternoster. These family members lived in Paternoster since the establishment of this town. All

three Respondents had moved to this town, after family members assured them of possible employment in this fishing industry.

4.2.2 Changes observed by respondents in Paternoster

Residents who stayed in Paternoster for a period longer than ten years were able to identify and trace the overall changes in infrastructure, land-use, ownership, and how the area has shifted from a predominately residential area to a more up-market tourist area. According to Respondent One: “This place has changed into a holiday resort, most coloured people sold their homes to ‘white’ people, and they turned it into a holiday house, which forced coloured people to stay outside the town.” During the interview process none of the Respondents were able to comment on the exact amount of money coloured people received for their homes; however, the consensus was that the amount was substantially small, as their grandparents were unaware of the true value of their properties. Furthermore, Respondent One, Two and Five agreed that once the properties were sold, the money was spent relatively quickly, and in most cases, residents did not invest their earnings into other property enterprises.

Figure 1: Fisherman's Cottage B&B

Fisherman's cottage is a B&B which has four bedrooms, a fully equipped kitchen and was conveniently located along the coastline of Paternoster. This B&B is a prime example of the many B&Bs and hotels which were spread throughout the entire town, all having their own unique features such as swimming pools which were used as a marketing tool to attract both local and international tourists. These cottages were all painted the same, which was done to ensure symmetry and aesthetic appeal.

While interviewing Respondent Two, he alluded to the fact that racially, the area of Paternoster went through tremendous change, due to the economic potential of the town. Respondent Two articulated that "many white people started to buy into the area, as they were the only ones who could afford these homes." Even though Respondent Three only stayed in Paternoster for a period of Five years, he was able to identify that this town now received an influx of tourists throughout the year, even during the off-season of June-July. During the interview process, Respondent Five spoke at length about the infrastructural changes that occurred in and around the town. According to Respondent Five, the road network has been updated, and a primary

school, as well as a clinic, have additionally been added to the town. Many homes have either been renovated, or completely converted into fully functional restaurants, bars, B&Bs, boutiques, general stores, and art galleries that sell small trinkets and souvenirs to tourists. Some of these homes had modern and up-to-date facilities which attract people from all walks of life. Some 'coloured' residents have remained in the town and are adamant about not selling their properties; instead, they opted to convert their living rooms and garages into tuck-shops to service the surrounding community.

Figure 2: St Augustine's Primary School

St Augustine's primary is located at the end of the main road and is conveniently situated away from the entertainment and economic hub of the town. This primary school was owned by the State and services the town of Paternoster. Upon inspection from the outside of the schools premises, the school has adequate facilities such as constructed classrooms with various sections which include an admin block. The school looks well-maintained and forms part of the infrastructural upgrading of the town.

Figure 3: Upgraded roads in Paternoster

The improvement and maintenance of Paternoster's road network play a pivotal role in sustaining the flow of tourism. Entry into this town was only permitted via the tarred road, therefore the constant maintenance of this infrastructure and its adjoining features such as parking bays brings much-needed economic revenue to this town which sustains the local economy. Industries such as restaurants, B&Bs, art galleries and local fish shops all depend entirely on the smooth running of the road network.

The road network also provides much-needed municipal services and local businesses also depend on this infrastructure for supplies. Since the road ensured a steady flow of visitors into the town, street traders would position themselves along the road to capture the attention of possible clients. When comparing the road network of Paternoster and Hopland, there was a huge difference in cleanliness, which 'perhaps' can be traced back to a lack of municipal services or an expanding population within Hopland.

4.2.3 Locating the trade

The capturing of crayfish takes place offshore while the negotiations/transactions/trade of crayfish starts directly on the beaches of Paternoster where the boats were brought by 'bakkies' to be launched into the ocean.

Figure 4: Bakkies used to tow trailers (1)

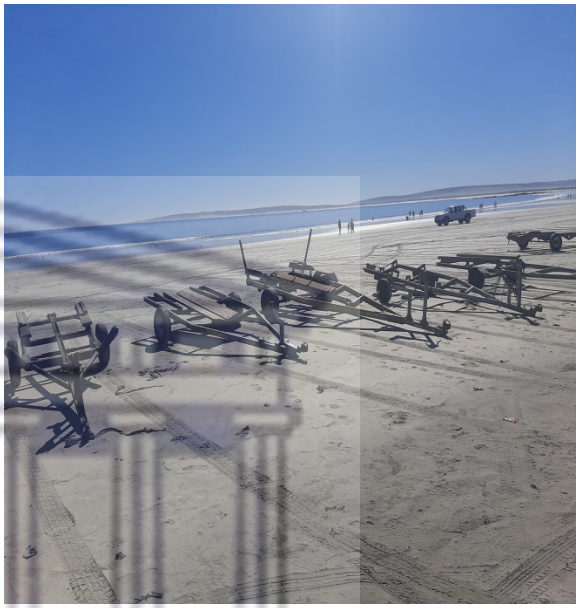


Figure 5: Trailers (2)

Figures 4 and 5 illustrate how "bakkies" are driven to the beach where trailers are hooked off. These trailers are designed to transport boats which have crews of six or more, depending on the size of the boat. These boats are an important link in the capturing of crayfish as small-scale fishers launch their journey on these beaches. During the interview process, some bakkies were off-loading new trailers while others were collecting their boats.

Figure 6: Crayfish crate (1)

Figure 7: Crayfish crate (2)

The above two photographs were taken along the coastline of Paternoster on the first day of the interviews. This particular boat had seven crew members on board and three crates filled with crayfish of multiple sizes. Permission was granted by respondents to take various photographs. These crayfish were sold according to size and ranged between R150-R200. Upon inspecting the contents of the third crate which was strategically placed underneath a fishing net, there were mussels and abalone which I was told would be given directly to street traders to be sold throughout Paternoster.

Even though crayfish was paraded along the beach, the legal status of abalone forced boat captains to be cautious as the harvesting of abalone was prohibited in South Africa due to the increased strain which was placed on this marine species. These 'special' bags were strategically packed whereby abalone was placed at the bottom of the bags while mussels were placed on top which concealed the illicit contents. Once street traders were in the process of selling their crayfish, they would casually inform customers that they had a supply of abalone if customers were interested.

Figure 8: Parking-lot street traders (1)

Figure 9: Parking-lot street trader (2)

Figures 8 and 9 consisted of a group of street traders who sold crayfish and mussels in the parkinglots and along the beach of Paternoster. In figure 8, one street trader was tasked with the responsibility of sorting the 'plastic' bags where crayfish were packed according to size. The second trader in Figure 8, was the 'look-out' who monitored the entrance of the parking lot for Law Enforcement and potential clients. In Figure 9, the street trader displayed the various sizes of crayfish which were caught on the day for customers, and within a matter of minutes, both plastic bags were sold.

These bags had between 5-10 crayfish tails and upon request, 'special' bags of more than 10 tails had been arranged for clients. To distribute abalone, mussels and crayfish through Paternoster, specific locations were chosen. These locations are highlighted as Areas 1-3 on the Google Earth image of Paternoster. All three areas were strategic points where there was a maximum amount of people during the day. Area 1 was along the beach, while Area 2 was at the main entrance of the town. Area 3 was situated close to nearby restaurants.

Figure 10: Street trading hotspots (Google Earth, 2022)

Figure 11: Area 1

Figure 12: Area 2

Figure 13: Area 3

Area 1 was directly located on the beach of Paternoster and customers flocked to the beach upon the arrival of these boats which caused a commotion. This is evident in Figure 11 where the boat Captain prepared the plastic bags for a street trader, in the presence of possible customers. These customers would first inspect the contents of the boats as they arrived and would then negotiate with the boat Captains for the best possible price before making a purchase.

Area 2 was situated at the entrance of the town and the two street traders in figure 12 were young men who were under the age of 30. These two gentlemen casually informed the researcher that selling crayfish was the only source of employment available to them, as opportunities in Paternoster was very limited. While standing at the entrance of the town, their jobs were to display the big sizes of crayfish to persuade customers to buy from them.

Area 3 was the bend or 'turn-off' from the main road which directly led to the beach. As evident in Figure 13, the customer in the red 'bakkie' stopped one of the boat Captains who had already packed up his boat and was headed home. While the exchange of money for crayfish happened between the customer and boat captain, traffic momentarily stood still, and many street traders utilised this opportunity to target the stationary vehicles who were waiting for traffic to clear.

4.2.4 Flow of crayfish transactions

Figure 14 captures the potential flow that can underpin the flow of crayfish transactions.

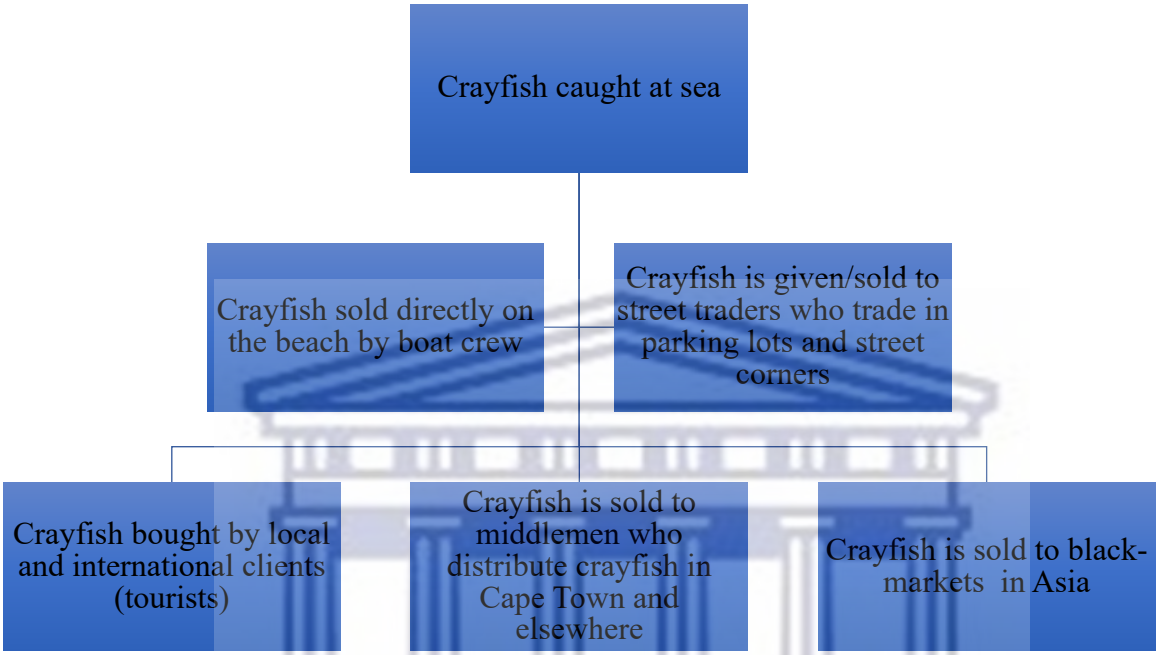


Figure 14: The flow from source to plate

Within Paternoster, the movement and flow of crayfish took various forms from the initial capture. As evident in Figure 14, once crayfish were caught by boat Captains at sea, the sale of these crayfish took place directly on the beach as clients were drawn to the boats due to the commotion that was caused through their arrival. In many instances, clients were able to bargain with the boat Captains for the best possible price that was mutually beneficial to both parties. In many instances, the boat Captains were desperate to sell their catches to these clients as they were able to obtain a profit off the sale of crayfish. The crayfish that were not sold by the boat Captains were then given/sold to street traders. These Captains were not eager to sell to these street traders as they bargain to make a bigger profit than the boat Captains. Once crayfish was acquired by these street traders, they were sold to locals, holiday makers from Cape Town and international tourists. Within the town of Paternoster, there are many 'middlemen' who sold directly to the Cape Town and international market.

4.2.5 Positive Changes in Paternoster

After interviewing all ten Respondents, it became apparent that each of them was very pessimistic about the various changes that were happening in and around the town of Paternoster. The only positive comment came from Respondent Three, who stated that "from a positive view, more tourists meant more money for us. You see we are 'broke', and this is our only means of income. With more people going on holiday to Paternoster, we get to charge more for our tails." Respondent Three, like many of the other respondents, had only been able to see the one economic benefit of having more people in the town. Respondent four, during the interview process, passionately stated that "Do you think that 'our' people can afford to live in those hotels and B&Bs? I think you know the answer to that question. We hustle every day not to sleep in hotels; we hustle for bread and food for our families." After reviewing the various negative responses of my respondents, it painted a detailed picture of a town that is socially and economically split. Even though, the town undergoes various infrastructural changes such as road upgrades, it begs the question: who benefits out of tourism? Informal traders are the same individuals who return home to their 1–2-bedroom RDP home, while restaurant and hotel owners can cash in on tourism.

Figure 15: RDP homes in Hopland

The RDP homes in Hopland are smaller in size in comparison with the B&Bs and hotels in the town of Paternoster. The streets are narrower and overall, the houses are clustered together which provides limited space between houses. Most of the houses have rudimentary borders and fencing comprised of mesh-wire and wood. Even though basic amenities such as electricity and water were observed by the researcher, no economic opportunities were evident such as restaurants or B&Bs. The amount of boats and 'bakkies' which were parked outside on the streets became a clear indication that a large amount of people obtained a livelihood from the ocean.

The pessimistic view that street traders did not entirely benefit from tourism in the same manner as restaurant and B&B owners led to a Google search to determine the way the town of Paternoster and the West Coast was advertised to the public, while searching it quickly became clear that there marketing strategy focused on the unique natural and constructed features. These

features became a popular tourist destination and generally only a few individuals benefitted from tourism. The figure below illustrates the way the West Coast was advertised.

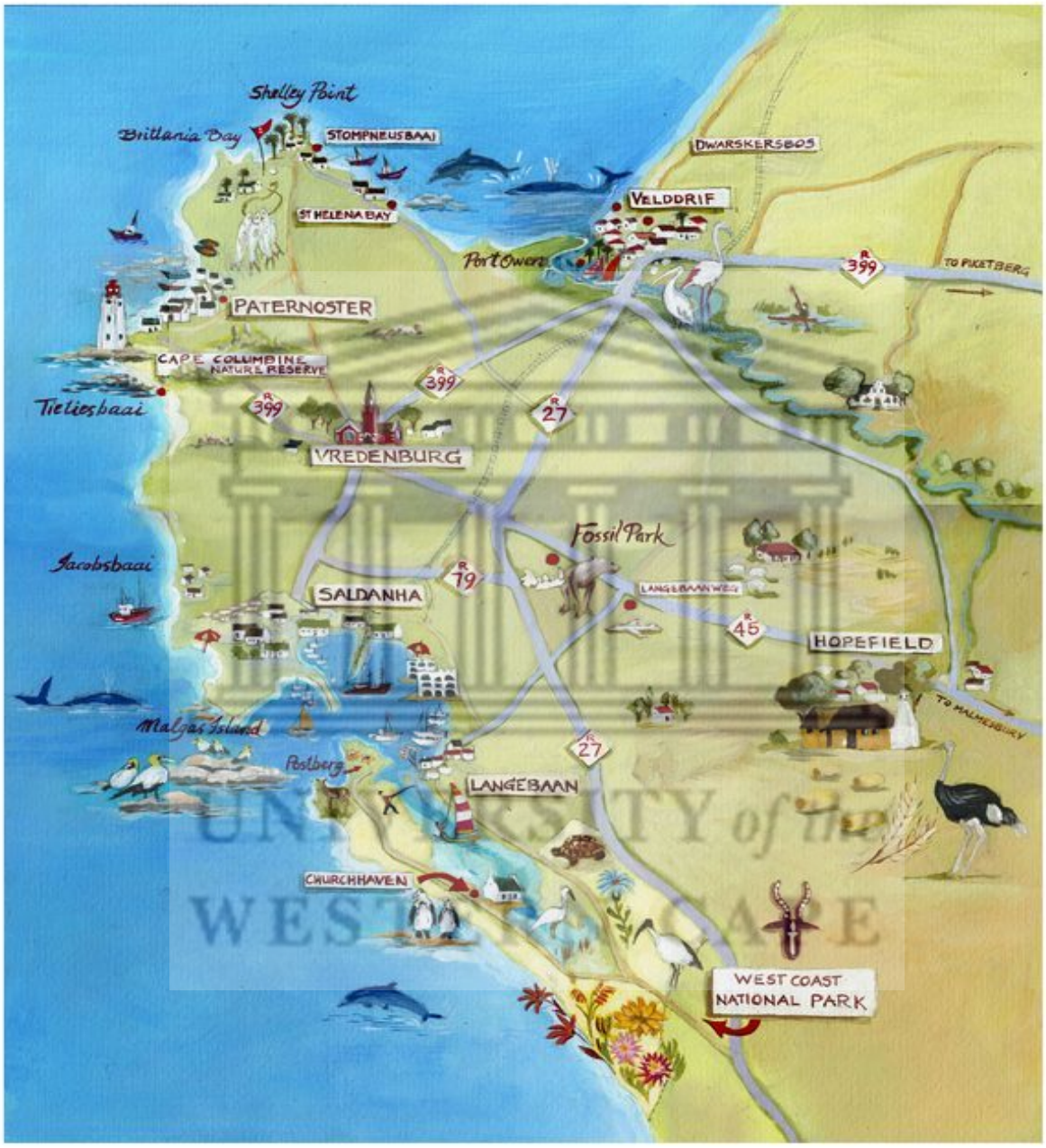


Figure 16: Promoting the West Coast as a tourist destination (2022)

Figure 16 is a visual representation of the way the West Coast was marketed to incoming tourists. This coastline, including the interior had many distinct characteristics that attracted a

certain type of tourist for example: it shows the various types of marine creatures that are found along the coast, ranging from dolphins, penguins, seagulls whales, tortoise, ostrich and a variety of fish and crayfish species. The West Coast National Park is one of the primary destinations that eco-tourists were keen on visiting. The various towns that are scattered throughout this map does not illustrate the smaller local 'coloured and black communities'. For instance, when unpacking Figure 16 that displays Paternoster, only the white-washed B&Bs and restaurants are shown. The area known as Hopland was not depicted on this map as it included many informal structures, which had the ability to stop the flow of tourism.

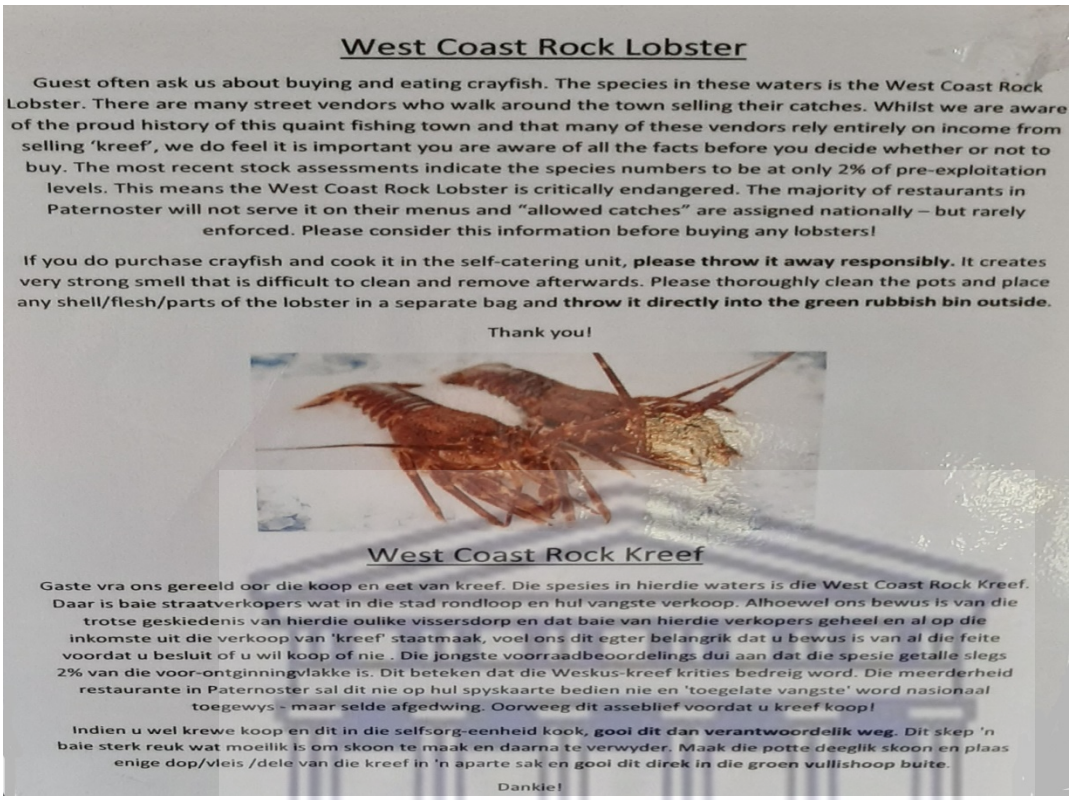
Figure 17: Informal Settlements in Hopland

The above figure demonstrates that Hopland informal settlements lacked basic amenities such as water and electricity. To obtain an income, many of these residents utilised the ocean, as evidenced by the boat packed closely to the settlement. These informal settlements are scattered throughout the community of Hopland and were created due to the burgeoning population and shortage of RDP houses.

The beautiful, picturesque beaches are inviting to the first-time tourist. When comparing Vredenburg to Paternoster, one identifies the differences. Vredenburg looks and feels like a mere extension of Cape Town, with its bustling street corners, multiple shops, restaurants, banks and even a fully functional and equipped mall. Even though Vredenburg is surrounded by vast open lands filled with various agricultural practices, one still experiences the city life. Paternoster on the other hand, has a beautiful coastline, with huge white boulders that are found throughout the town. The small white cottages are strategically placed all around the coastline, giving this area a resemblance to the Santorini Island in Greece. As one enters the town of Paternoster, it feels and looks like any other tourist town. A town mixed with diverse people, various seafood restaurants, BNBs, and boutiques. Street traders tend to stop tourists to sell to them, crayfish, muscles, and abalone. Searching for a street trader in Paternoster was not a difficult task. The amount of street traders on every corner was a testament to the sheer size of this lucrative business.

4.2.6 Negative changes in Paternoster

Respondent One openly criticised the negative changes that Paternoster had undergone, whereby foreign nationals and 'black' people had been given work in the town. Respondent One argued that "Nothing positive came from the changes, black people come from Vredenburg, and they get jobs, 'coloured' people are now forced to steal to survive." The lack of jobs and opportunities in Paternoster was typical as each Respondent actively commented on it, as they were frustrated with the limited job opportunities for local 'coloured' people. Respondent Two was of the view that "there has been no positive changes in Paternoster, our people were forced out and now live outside the area." Respondent 2's sentiments and argument were repeated by all the Respondents who were interviewed. All Respondents believed that the negative changes of Paternoster, outweigh the positive and that any positive change only benefitted a select group within the town. In many of the restaurants and BNBs within Paternoster, there are posters warning patrons against buying crayfish from street traders. Respondent One said that "one of the changes that I saw was that owners and residents started to tell tourists not to buy from us." Posters and stickers such as the ones highlighted in Figures 18, 19 and 20 were typical examples of these types of warnings.



West Coast Rock Lobster

Guest often ask us about buying and eating crayfish. The species in these waters is the West Coast Rock Lobster. There are many street vendors who walk around the town selling their catches. Whilst we are aware of the proud history of this quaint fishing town and that many of these vendors rely entirely on income from selling 'kreef', we do feel it is important you are aware of all the facts before you decide whether or not to buy. The most recent stock assessments indicate the species numbers to be at only 2% of pre-exploitation levels. This means the West Coast Rock Lobster is critically endangered. The majority of restaurants in Paternoster will not serve it on their menus and "allowed catches" are assigned nationally – but rarely enforced. Please consider this information before buying any lobsters!

If you do purchase crayfish and cook it in the self-catering unit, **please throw it away responsibly.** It creates very strong smell that is difficult to clean and remove afterwards. Please thoroughly clean the pots and place any shell/flesh/parts of the lobster in a separate bag and **throw it directly into the green rubbish bin outside.**

Thank you!

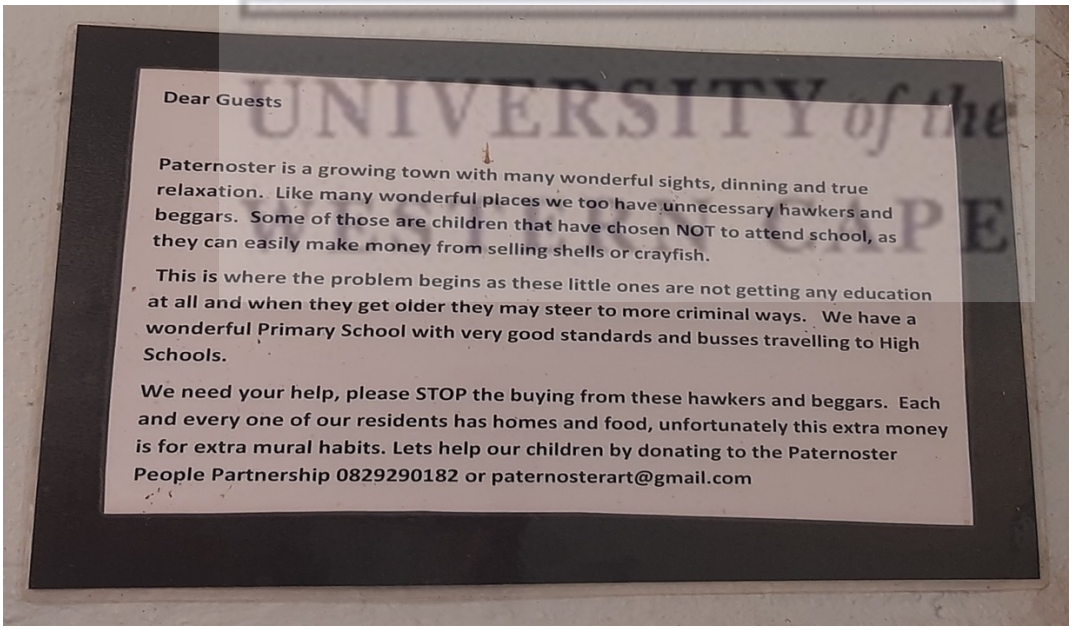
West Coast Rock Kreef

Gaste vra ons gereeld oor die koop en eet van kreef. Die spesies in hierdie waters is die West Coast Rock Kreef. Daar is baie straatverkopers wat in die stad rondloop en hul vangste verkoop. Alhoewel ons bewus is van die trotse geskiedenis van hierdie oulike vissersdorp en dat baie van hierdie verkopers geheel en al op die inkomste uit die verkoop van 'kreef' staatmaak, voel ons dit egter belangrik dat u bewus is van al die feite voordat u besluit of u wil koop of nie . Die jongste voorraadbeoordelings dui aan dat die spesie getalle slegs 2% van die voor-ontginningvlakke is. Dit beteken dat die Weskus-kreef krities bedreig word. Die meerderheid restaurante in Paternoster sal dit nie op hul spyskaarte bedien nie en 'toegelate vangste' word nasionaal toegewys - maar selde afgedwing. Oorweeg dit asseblief voordat u kreef koop!

Indien u wel krewe koop en dit in die selfsorg-eenheid kook, **gooi dit dan verantwoordelik weg**. Dit skep 'n baie sterk reuk wat moeilik is om skoon te maak en daarna te verwyder. Maak die potte deeglik skoon en plaas enige dop/vleis /dele van die kreef in 'n aparte sak en gooi dit direk in die groen vullishoop buite.

Dankie!

Figure 18: Warning to guests by a B&B owner



Dear Guests

Paternoster is a growing town with many wonderful sights, dinning and true relaxation. Like many wonderful places we too have unnecessary hawkers and beggars. Some of those are children that have chosen NOT to attend school, as they can easily make money from selling shells or crayfish.

This is where the problem begins as these little ones are not getting any education at all and when they get older they may steer to more criminal ways. We have a wonderful Primary School with very good standards and busses travelling to High Schools.

We need your help, please STOP the buying from these hawkers and beggars. Each and every one of our residents has homes and food, unfortunately this extra money is for extra mural habits. Lets help our children by donating to the Paternoster People Partnership 0829290182 or paternosterart@gmail.com

Figure 19: Warning to guests by a restaurant owner

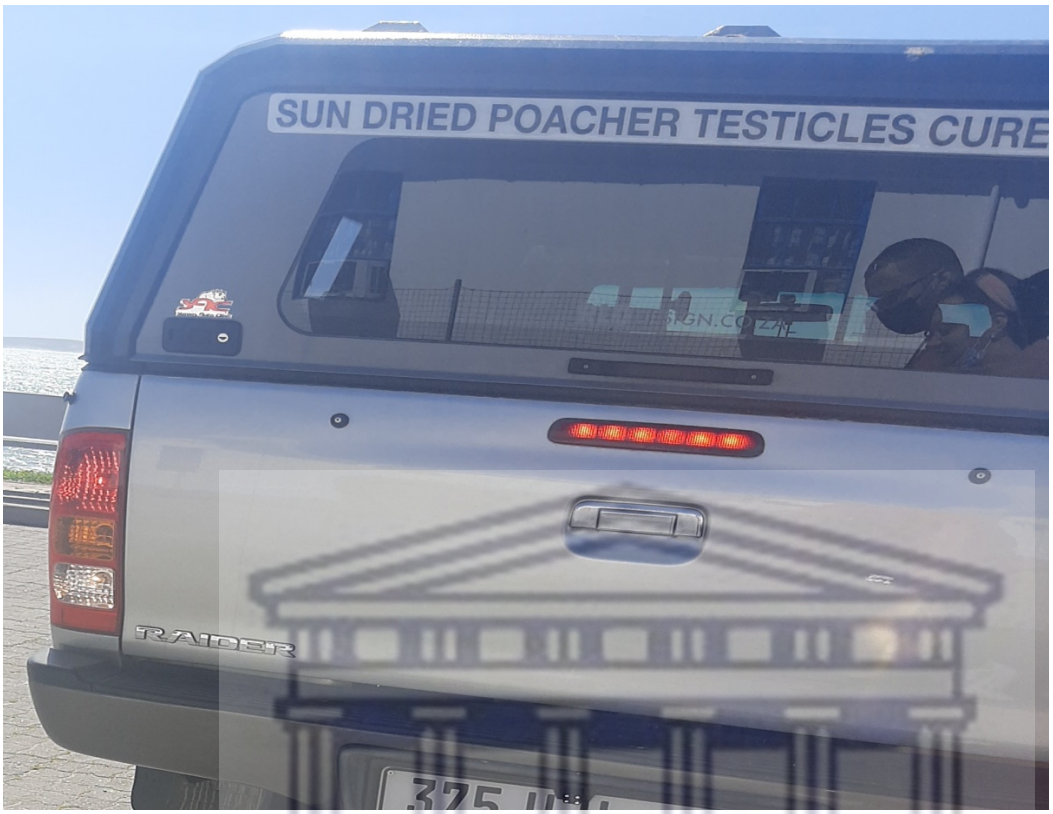


Figure 20: A warning to poachers

The information presented in Figure 19 is highly disrespectful, misleading, and insensitive to the daily social and economic challenges faced by the residents of Hopland. It is important to note that many of the individuals referred to as 'beggars' and 'hawkers' in this signage are actually members of the Hopland community. This sign, which was placed in the male's bathroom in a popular restaurant in Paternoster, misguides its patrons by depicting the children of Hopland as delinquents who have chosen to skip school to sell crayfish. Patrons who are unaware of the actual circumstances of these 'hawkers' and 'beggars' may be more inclined to accept the information presented in the sign at face value. Moreover, the use of the term 'extra-mural habits' implies that these residents are both drug users and alcoholics who sell crayfish to sustain their habits. This entire sign promotes stereotypes and unfairly portrays 'hawkers and beggars' in a negative light.

Figure 20 featured a sticker that can be described as offensive, unconventional, and highly unusual. This sticker was attached to the 'bakkie' of a Paternoster resident and carried a warning to poachers that their 'genitalia' would be removed if they were apprehended. It is evident that

this resident was a devoted environmentalist who had adopted an extreme stance when dealing with poachers.

4.2.7 The enforcement of laws vs livelihood considerations

While interviewing the ten Respondents, they all had some rudimentary understanding of the Marine Living Resources Act. Despite the acknowledgement of this Act, all respondents were not fearful or bothered by the law or the Police officers who enforced these laws. Respondent One argued that "SAPs don't worry about us, even though they enforce the law, we will continue to sell our tails". All Respondents were self-employed and were desperate to feed their immediate families, therefore one starts to understand that the physical presence of the police was not a deterrent to their selling of crayfish and other marine resources. Many of the respondents, such as Respondent Two spoke at length about the quota system and how it impacted their livelihood. The Respondent further argued that "the quota system has really impacted our livelihood, and this is why we continue to fish outside the season." It is clear from the above statement that the quota system was a problematic law which encouraged the catching of crayfish outside the fixed season. Many of the Respondents like Respondents One, Two and Five had absolutely no fear of the Police. While observing the group of traders, multiple police vehicles drove through the parking lot and none of these street traders was searched or even questioned, as these Police Officers were aware that the street traders were merely trying to earn a living.

4.2.8 Depletion of the West Coast Rock Lobster

All the interviewed respondents passionately stated that there was more than enough crayfish along the West Coast. According to Respondent Three, "there are over-enough tails for everyone, recently we had a situation in Elands Bay, whereby thousands of crayfish walked out of the sea. This clearly proves that there are enough tails in the ocean. The government is trying to trick us into believing that there are few crayfish in the ocean." When one starts to unpack the underlying message of Respondent Three's statement, it becomes evident that street traders and informal fishers negatively perceive and view the governments' involvement as an entity which wishes to control the capturing and trading of all marine resources. During the interview process, most of the respondents regarded themselves as totally blameless, as they viewed their impact on

the ocean as miniscule in comparison to large industries. Respondent Five indicated that "after meeting their quota system for the day, these huge ships return to the ocean in order to catch on the same quota, as no- one checks up" This profound statement by Respondent Five was an indication that large ships and companies were breaking the law to obtain access to more marine resources. If this is the case, there is a lack of enforcement by the Police. Since the respondents have experience in the commercial sector, this story does not seem far-fetched, as many industries are struggling to keep up with the global demand for crayfish.

4.2.9 Controlling Paternoster's fishing industry

All the interviewed respondents opined that there were large industries that controlled the fishing industry of Paternoster. These were companies that supplied both local and international markets with marine resources. These respondents believed that they traded on a small scale in comparison to these large industries. A retired Police Sergeant who was interviewed said that "there are many middlemen who buy directly from the small boats. There is a local guy in town that buys up what the street traders and boat Captains can't sell during the day. He stores all these tails at his property and sells them directly to Cape Town." These 'middlemen' are huge buyers that trade per truckload and are viewed as the main individuals which control Paternoster's fishing industry. These sentiments were shared by Respondent Three, who believes that "the industry in Paternoster is controlled by a few big buyers. They have various connections in the market, both locally and internationally." Even though these buyers are not recognised as formal business enterprises, they play a huge role in the distribution of crayfish out of Paternoster.

4.3 Discussion

4.3.1 Respondent One

The First Respondent was a street trader who had lived in Paternoster for 10 years. This respondent was initially from Eersteriver, which is an area in Cape Town. Due to the lack of job opportunities, Respondent One moved to Paternoster in search of possible employment. Respondent One was a young, coloured male, in his early 30s. Upon approaching the

Respondent, he was very reluctant to engage in a conversation, as he feared speaking to an outsider who possibly worked for the government or the Police. After evidential reassurance, he became more approachable and eager to speak to me. Even though Respondent One only lived in Paternoster for ten years, he was very knowledgeable on the history of the town. During the interview process, Respondent One spoke at length about how their predecessors (grandparents) sold their homes and land to the 'white' people for next to nothing. Respondent One further indicates that "Our ancestors, did not understand the value of property, today we live outside of Paternoster in small RDP houses, far away from the real opportunities within Paternoster". Respondent One was clearly dissatisfied with the way 'coloured' residents sold their homes. Throughout the interview, this Respondent reiterated this sentiment, by stating that many years ago, white people tricked and lied to their grandparents about the presence of underground pipes and ground water levels that would eventually burst or flood the entire section of land close to the beach, therefore it was in their best interests to sell their properties before it would be destroyed. Respondent One was entirely dependent on the ocean as a source of income. Respondent One further argued that "we start our day at 6 O'clock in the morning. The more we sell, the more profit we make. I am not educated, and I don't have the papers to apply for any other jobs." While conversing with Respondent One, he states that recently the local government started to fix and upgrade the roads in and around Paternoster. While posing questions pertaining to why he did not apply for these posts, Respondent One casually informs the researcher that he did not possess a SARS tax number, and that companies who got the contract from the government only hired 'African' people who resided outside of Paternoster. The hiring of workers from outside of Paternoster, to a large extent could be viewed as one of the contributing factors for the high unemployment rate amongst 'coloured' individuals in Paternoster. However, clearly the inability to obtain a tax number was primarily the reason for Respondent One not being able to apply for the post as companies made this a prerequisite for all posts that were advertised.

Respondent One believed that tourism in Paternoster was their life line and that without tourism, most of their families would go hungry and have no source of income. Respondent One "my customers come from near and far, I even have customers from China coming to Paternoster for my tails." While interviewing Respondent One, a clearly marked SAPS vehicle had stopped, and to my complete surprise, the street traders knew both officers in the van and they conversed for

at least 5 minutes. While observing this interaction between Respondent One and the Police Officers, Respondent One proceeds to walk directly to me and casually tells me, "You see my brother, the Police knows that we are hustling to put bread on the table, they won't stop us. To smooth things over, two tails should do the trick." Through witnessing this obvious bride of Police Officials in broad daylight in the view of the public, it became evident that crayfish trading was truly a complex practice that had many role players. Before completing the interview Respondent One quickly stands up and runs to a nearby car shouting *'Kreef, Kreef'* (Crayfish). Potential clients drove directly to the sellers, and a quick back and forth exchange began between buyer and seller. After making the sale, Respondent One returns to the researcher to finish off the conversation. "You see that Chinese couple, they think that they got a good deal, we charge according to colour here. The same tail, we would charge R150 - R200 for you, would be R50 more for them. These 'whites' and foreigners have money, and they are desperate to buy from us. In the shop, they would have to pay double and triple for the same tail" (Respondent One).

4.3.2 Respondent Two

Respondent Two was an informal fisher, whose interview happened directly after he had returned from catching crayfish. Upon arriving on the beach, Respondent Two jumped out of the small, motorised boat and immediately shouted *'Kreef, Kreef'(Crayfish)* "Fresh crayfish for sale." After attracting the attention of all nearby bystanders Respondent Two unloads two crates of fresh crayfish and starts to sort them out according to size. The excitement even draws the attention of small children who proceeded to climb aboard the boats and started to mimic the actions of these seasoned fishermen. After a very brief conversation with the children, the general consensuses were that they were hoping to become fishermen themselves to help their families. Respondent Two had no official permit or licence; instead, he informed me that during the season, he would catch on his friend's permit as the Police did not monitor the permits which made it easier for fishermen to borrow these permits from neighbours and friends. While speaking to this Respondent, it became clear that the relaxed response and poor enforcement of Environmental Laws and Policies by the Police contributed towards the growth of informal fishers and street traders. Respondent Two believed that crayfish was in abundance and did not consider himself a poacher in any form or way. Respondent Two argued that "the ocean belongs to us, this is the only work I know, catching crayfish puts food on the table. I am only making a

living for myself and my family." Respondent Two was a 3rd generation fisherman, and all the skills which he had acquired were bequeathed from his grandfather. These skills are what fuelled his desire to obtain a fixed income. During the researcher's conversation with Respondent Two, he indicated that he has three children who depend on him for food and money. These words by respondent Two reminded the researcher of the stark reality faced by most informal fishers and street traders in Paternoster. A general lack of job opportunities and formal education has created this vicious cycle of poverty and despair. Due to this reality that confronts informal fishers, Respondent Two had already started to teach his three children how to fish and market their crayfish in the town. Respondent Two stated that "My job is like any other job. I wake up at 4:30am and start loading my boat by 5:30am and by 6 O' clock I cast my first net and reel in a few tails to ensure that I can buy groceries for the month." This narrative of fishing to put bread on the table was a story that each Respondent started off by stating when initiating the interview process.

Respondent Two lived in Paternoster for the past fifteen years and during these years, he was able to monitor and witness the various changes that occurred in and around the town. The quota system was a policy that he spoke about in length, as it had a direct impact on his livelihood. The quota system has really impacted our livelihood, and this is why we continue to fish outside the season (Respondent Two). Respondent Two was clearly alluding to the fact that should their catch size increase, informal fishers would stick to the allocated fishing season. However, restrictions have forced them to continue catching fish to obtain an income. During the Covid 19 pandemic, the catching of fish and crayfish was severely impacted, however, Respondent Two casually informs the researcher that "Covid 19, did impact the sale but we continued to sell despite the various restrictions." Throughout the pandemic period, these informal fishers and street traders remained resilient and adopted new ways of surviving.

4.3.3 Respondents Three-Ten (Informal fishers and Street traders)

All eight respondents during the interview process were at times unwilling to derail off the topic, and in many instances only responded with a 'Yes or No' to the interview questions. However, Respondents three to seven mentioned that the amount of Afrikaans speaking 'Africans' has increased in Hopland. Respondent three emotionally expressed that "these people came from

Vredenburg, and now they are hitting up shacks in Hopland." After questioning Respondent three on what he meant, he immediately became very shy and silent on the matter. Respondent four, however was more willing to speak on the topic and plainly stated that "we are now in competition with these guys coming to Paternoster." The competition which this respondent was referring to was obviously employment, or access to the ocean. During the interview process, Respondent's five to seven, spoke at length about the unequal distribution of fishing rights and seldom went off topic. The consensus for these respondents was that the government was not doing enough to safeguard their rights and that no money was being spent on the small-scale catching and trading of crayfish. Respondent six argued that "why can't we have our own stalls in this Parkinglot? Where we can sell our catch." This statement by Respondent six exhibits that street traders want their business to be accepted by the government and local municipality. Since Respondents eight and nine were relatively new to the area, they could only mention aspects which they had heard from more experienced street traders such as 'crayfish was in abundance' and that business owners were not fully receptive to their business.

4.3.4 Respondent Eleven (business owner of a seafood outlet)

The business owner of this seafood outlet was very reluctant to speak, however after making a purchase at his establishment, he seemed more willing to speak and engage in conversation. From the onset of the conversation, Respondent eleven was completely against informal fishers and street traders. The Respondent believed that what the informal traders were engaging in was against the law and had a direct impact on formal businesses. Respondent Eleven argued that "these fishermen and street traders do not care about my fish shop, they sell the same products that I do at a very cheap price, how can I compete with that? I have rent and staff to pay. Their behaviour towards us is completely ridiculous. I understand that they need to put bread on the table, but at this rate, I will also struggle to do the same." This statement by the owner speaks volumes about the direct and indirect impact of street traders and informal fishers on formal businesses. While questioning Respondent eleven on his understanding of informal fishing and poaching, without hesitation he said that poaching was what those guys at the beach were doing. After conducting the interview, the researcher quickly understood that both informal and formal businesses were merely trying to sustain their respective families. Even though this business owner was competing with street traders and informal fishers he acknowledged that they were

merely trying to generate an income. During the interview, Respondent eleven spoke at length about the Police and how they were to blame for the growth of this trade. “The Police are to blame, as they turn a blind eye to the whole process of catching and selling on the streets” (Respondent eleven). Once again, law enforcement was being blamed for the capture and trade of crayfish. However, even though the Police have a role to play in this industry, there are many role-players who actively contribute towards the growth of informal fishers and street traders. To ensure some form of harmony, both informal and formal businesses need to find and share the market as both are depended on the ocean as their source of income.

4.3.5 Respondent Twelve (business owner of a B&B)

The business owner of a local BNB was equally reluctant to speak directly to the researcher. However, after some convincing that this was merely research in the area, he was way more willing to speak about Paternoster and how street traders impacted his own business. Since the BNB is located a distance from the coast, it does not experience any negative impact of informal fishers or street traders. However, since street traders travel throughout Paternoster in search of clients, they would often cycle on their bicycles in and around the BNB. The Business owner indicated that there have been instances where street traders had a direct conflict with his guests. “There was one specific instance when one of my guests were forced to draw his firearm as the street trader did not take no for an answer” (Respondent twelve). This interaction between the street trader and the guest of the BNB is an indication of the level that street traders would go to make the sale. These traders would bargain up until the client finally submits and purchases their products. During the interview, the business owner also mentioned that loitering was a big issue, and that oftentimes the street traders were generally making a nuance of themselves as they directly approached guests. “We market peace and tranquillity; our guests do not want to be bothered by anyone,” said the business owner. It became apparent that even though there was not really a direct competition with street traders or informal fishers, their physical presence might have deterred tourists from visiting his BNB, as the front court and reception area was open to the public.

4.3.6 Respondent Sixteen (retired Police Sergeant)

Respondent sixteen's interview took place along the beach of Paternoster, and during his years of service in the SAPS, he served in many units, one of which patrolled the coastline of Paternoster. According to Respondent sixteen, "these local boys are just trying to make a living, when I was a Police Officer, I would simply give them a warning, these were the same people that lived in my neighbourhood, I knew their circumstances and understood their daily struggle." This statement by Respondent sixteen was testament to the fact that many street traders and informal fishers were simply trying to generate an income. During the interview process, Respondent sixteen indicated that there were three types of street traders. The one sells for his family while the other sells for his dirty habits and finally, the last one sells to pay off outstanding debt. Respondent sixteen highlighted that during the past few years, small towns on the West Coast have been plagued by the influx of cheap drugs, namely 'tik' and 'dagga'. These were brought in from Cape Town and many young street traders fell victim to these drugs as they were faced with the daily reality of unemployment and poverty.

During the off-season, many informal fishers are given a financial advance on the next season, which automatically meant that during the new season, they were forced to first pay their debt before being able to make a profit. According to Respondent sixteen, "These boys are so desperate during the off-season and these loan sharks prey on their vulnerability". During the off-season, the catching of crayfish was usually frowned upon by residents and environmental lobbyist groups. These entities throughout the off-season attempt to deter informal fishers and street traders, however, nobody seems to question how these individuals would maintain themselves socially and economically.

4.3.7 Respondent Seventeen (detective)

Before leaving the study area, the researcher visited the Vredenburg Police Station to enquire about poaching and the presence of street traders in Paternoster. As he approached the gates of Vredenburg Police Station, he spoke to a police sergeant who was completely unapproachable as he ignored the researcher's questions on poaching in Paternoster. The Sergeant did however

inform the researcher that there was a special unit that focused on poaching along the West Coast and that they were situated in Saldanha Bay. As they concluded this very brief interview, a Detective walked into their conversation, and the sergeant introduces the researcher to him. This Detective was fully clued up on poaching along the West Coast as he was actively investigating local poachers at the time, crime syndicates and even the possible involvement of his own colleagues. According to the Detective, "there are many police officers that simply turn a blind eye to what is happening along the West Coast. The illegal poaching and selling of crayfish, abalone, and mussels is a very profitable business." It is clear from the above statement that marine resources such as crayfish are valuable products, and that poaching is way more complex than it seems. Upon questioning the detective on the conviction rate of poachers and other role-players, he merely commented that the investigation was on going and that he has already solicited the assistance of the Hawks. According to Respondent seventeen, "there are so many people involved in this business, as it feeds many hungry mouths. The guys who fish and trade on the beach are small fry in comparison to the guys that are connected to the overseas market." After completing the interview process, I realised that these small towns along the West Coast often fell victim to these syndicates, as these areas were usually under-resourced and had limited Police visibility.

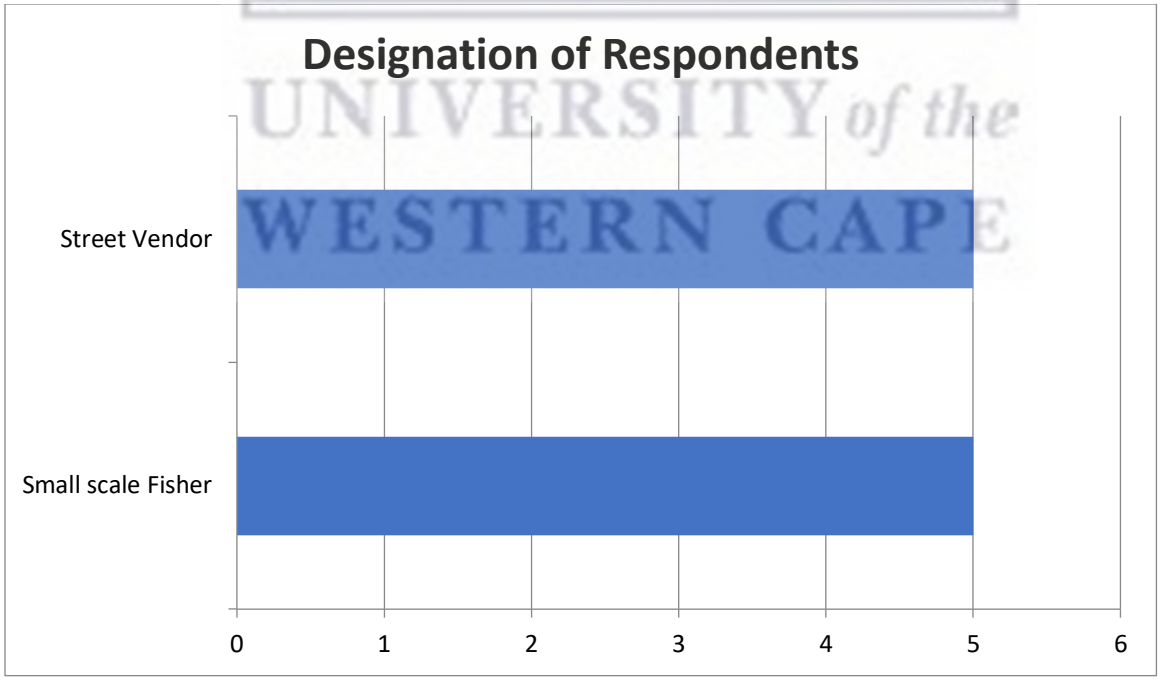


Figure 21: Designation of Respondents

During, the fieldwork, five street vendors and five small-scale fishers were interviewed. No commercial fishers were interviewed; however, all five small-scale fishers once worked in the commercial industry, and all five respondents illustrated that they used their income to either purchase a boat or acquire their own equipment to start their own informal business. All five street vendors started out catching crayfish themselves or assisting a friend or family member with the capturing of crayfish, however they became street traders as they had a better opportunity to obtain more money for the crayfish, as they were now placed in a favourable situation where they could now directly engage with the client. According to Respondent Four, a crayfish the size of an adult male's forearm could be bought for R150 directly from the boat when it docks on the beach. However, the exact same crayfish would be sold anywhere between R150-R200, and this price also varies on the type of client. While observing the group of street traders, they sold smaller crayfish tails for R300 per plastic bag. Respondent Four, during the interview process explained that the 'perfect' client portrayed the following characteristics - they were either Asian or white and drove luxury cars, they were tourists, as they were incapable of bargaining with the street traders. While observing the street traders, they openly joked a lot in the parking lot that the next client would be charged R500 for a plastic bag. Most of the tourists who come to Paternoster, do not understand the true value of crayfish, and automatically pay the exact asking price that is given to them by the street traders. This failure on their behalf to bargain makes them extremely vulnerable to exploitation by street vendors.

4.4 The Abalobi App

The Abalobi App was designed to assist informal fishers with the selling and distribution of crayfish and curb the illegal trade of marine resources. Out of ten respondents, only one informal fisher was able to identify the actual use of the Abalobi App. However, this respondent did not benefit directly from the App, instead, he worked on a boat whereby the captain had the App stored on his phone. The remaining respondents were completely unaware of the Abalobi App and had many questions for me, concerning the operation of this App. After explaining the general use of this App, most of the respondents became very desponded and instead viewed the App as a means for the government to track their movements and the amount of crayfish that they caught. Furthermore, they were very concerned about what would happen during the off-season and whether they would be able to use the app outside the official catching period. All

nine respondents spoke about their general access to a cell phone and that they were not tech-savvy. After posing this question pertaining to access to the Abalobi App, it became perceptible, that many fishers are stuck in their ways, and that they have their own avenues of generating a profit or the ability to identify a client. Even though this App has good intentions and could possibly assist in the selling of crayfish illegally, more work must be done on the ground level. Informal fishers must be allocated a cell phone or some form of device such as a tablet that has the App preloaded on the home screen. Furthermore, the possible next step would be workshops, and training programmes, whereby informal traders are able to practice with the app. The final step would be to introduce restaurant owners to the informal traders, so that some form of networking, would be able to take place in the absence of the Abalobi App.

4.5 Access to a fishing permit

According to the five informal fishers that were interviewed, only one had access to a fishing permit and one informal fisher was catching on another boat Captain's permit. The one respondent who had the licence bluntly said that the permit he had in his possession meant absolutely nothing as he would simply catch enough crayfish to fill up his boat. According to this respondent, "This permit is just in case the Police have any questions for me. In my many years of fishing, no Police Officer has ever stopped me." It is clear from the above statement that this respondent ensured that his papers were up to date in case of possible questioning by the Police. While interviewing this respondent, there was no hint of environmental preservation, instead, the permit was viewed as a safeguard against possible fines or jail time. The one respondent, who was catching on another Captain's permit, merely stated that Police would never check the details of the permit, hence anyone was able to borrow or use the permit. This respondent also alluded to the fact that many boat captains would 'rent' out their fishing permits for money. According to this Respondent, the renting out or borrowing of fishing permits was a common practice in Paternoster, especially when the boat Captain's already obtained their fair share of crayfish for the week. The remaining three Respondents commented on the fact that even though the State gave them new quota systems to follow, they continued to exploit the ocean as the quota system lowered the Kgs that they could fish and trade. Respondent two stated that "the introduction of stricter fishing permits forced many to fish during the off-season as their bag size decreased." All five Respondents also commented on the fact that the government gave many

permits to large-scale fishers who were not originally from Paternoster. These were huge companies that had modern equipment and utilised a variety of technological devices to capture a larger load of crayfish. The small-scale fishers were often in direct competition with these large-scale companies.

4.6 Solving the 'illegal' poaching of crayfish

All ten Respondents who were interviewed believed that what they were engaging in could not be considered poaching as they were small-scale traders and fishers who were merely attempting to secure a livelihood. Even though there was a consensus on their status, each of the ten Respondents had many ideas on how to curb and prevent illegal poaching. For example, Respondent two stated that extending the fishing season and giving bigger quotas, would solve poaching. Respondents three and four, believed that job creation in and around Paternoster was the actual solution to poaching. Many of the street traders stated that they had families to provide for, which meant that poaching was their only option to survive. Following an examination of the participants' responses, it clearly emerges that there are many underlying issues that needed to be solved. Education on environmental preservation was not viewed as important, as there were many comments on how illegal poaching did not exist as there were many crayfish in the ocean. All ten of the respondents' views on poaching was that it is a very small problem in comparison to the various socio-economic issues that they experienced daily, such as unemployment.

Respondents	**Solutions**
Respondent 16	Job creation in and around the town of Paternoster will stop people from only using the ocean as a source of income.
Respondent 17	The education of local fishers and traders are by-far the biggest form of intervention strategy that can be used in Paternoster. The creation of crayfish farming facilities, whereby each fisher is given his/her own tank with their own eggs

	to grow their own crayfish.
Respondent 18	Investment of private companies, to formalise this sector. Have local fishers sign contracts with restaurant owners as a form of controlling the sale of crayfish.
Respondent 19	The Anti-poaching Unit should have a satellite station directly on the beach of Paternoster to monitor the catching and trading of crayfish.
Respondent 20	The selling of crayfish should be more formalised whereby street traders are allocated official stalls, where they can sell their crayfish. Police officers must be stationed at these fish markets.

Table 2: Solutions to poaching

The responses of Respondents 16-20 were truly viable solutions to poaching along the West Coast. Each solution has its own possible successes and challenges, for example, Respondent Seventeen's belief that educational programmes should be established in Paternoster illustrates that both private and government organisations would have to work together to make an educational programme of this magnitude successful. Possible challenges could range anywhere between, a general reluctance to participate in these programmes and a lack of local funding to facilitate such a programme. Crayfish farming can lead to a variety of environmental impacts as crayfish might not survive in these tanks, as the environment might not be conducive towards their survival. There would also be many questions pertaining to who would be selected to run and manage these farms and how the overall benefits would be distributed. A large majority of respondents believed that to solve poaching, the Police should be stationed close to the coast to curb the spread of this practice. This solution has the possibility of once again dividing the community and should only be implemented after careful consideration.

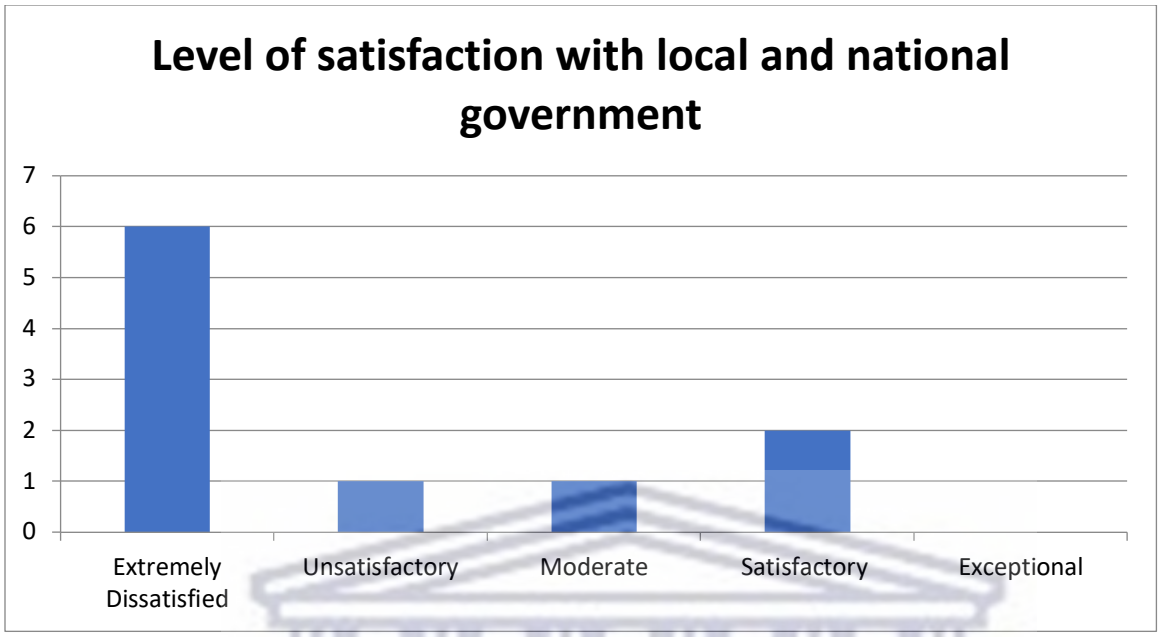


Figure 22: Level of satisfaction with local and national government

The above diagram depicts the level of satisfaction of respondents towards the local and national government and out of the ten Respondents who were interviewed, six were extremely dissatisfied with both the local and national government and their position on small-scale fishers and traders. According to Respondent Four "We are being viewed as the criminals, the government limits our catch and yet we depend on the ocean for survival." The six Respondents that viewed the government in a negative light had a deep suspicion and mistrust of all public officials. The two Respondents, who stipulated that they were satisfied with the government, merely stated that they had not yet experienced any negative interaction with a government official. The level of dissatisfaction with local and national government illustrates the huge divide between informal fishers and the government. Out of the six Respondents three of them had attended workshops where they were able to voice their concerns to public officials. However, according to Respondent seven, "Each and every year we hear the same story, of how we need to work together to ensure that everyone benefits from the ocean." This statement by Respondent seven illustrates that many informal fishers became despondent and therefore view the government as an entity that could not deliver on its promises.

4.7 Fishing as source of income

Within Paternoster, the catching and trading of crayfish and other marine species is a lucrative business that helps many people to survive economically. All the ten Respondents who were interviewed partook either in the trade or capture of crayfish. Eight Respondents relied entirely on crayfish as their main source of income. All eight respondents had no formal training or skills to work in any other sector and crayfish catching and trading was a practice which they had learnt either from a family member or friend. The remaining two Respondents engaged in a combination of revenue-generating activities to secure an income. For example, they would rent out their boats and permits per day. These two individuals also rent out other equipment such as nets and fishing gear to other informal fishers.

4.8 Illegal poaching vs legal fishing

All ten Respondents believed that the 'illegal' trade and catching of crayfish as well as other marine resources are way more profitable than legal fishing which has a fixed season. According to Respondent two, "we make way more money during the off-season, as there is no limit on how many tails we can catch and trade." It is, however, important to note that during the off-season, the size of the crayfish tails is significantly smaller than those which are caught during the season. Respondents 6 and 7 shared the sentiment of Respondent two, as they believed that trading on the street during the off-season was way more profitable than during the season. These three Respondents also blamed the demand which was created by the local market. During the interview process, Respondent eight highlighted that even though many of the residents of Paternoster complained of the 'illicit' capture and trade of crayfish, they were the first to buy during the Covid period when they were unable to leave their homes. According to Respondent eight, "During covid my brother, I was doing house calls, selling directly to the white people at their doorstep." It is clear from the above analysis that the "illicit" capture and trade of crayfish thrives during the off-season, and that customers create the demand for crayfish and other marine species.

4.9 Understanding informal fishing and poaching

Respondent eleven believed that informal fishing and poaching were the exact same practice, as both involved an activity that had no formal license or permit which allowed individuals to fish pass the official quota system. According to Respondent eleven, "These were individuals that had no regard for the preservation of the environment and simply saw the ocean as a source of income." Respondent Eleven was completely unsympathetic towards informal fishers and poachers as he believed that there was an official way for these individuals to go about their business. Respondent twelve had a completely different approach to informal fishers as he viewed these individuals as people who engaged in recreational fishing. This respondent continued to define informal fishers as those that either fished for fun or for the pot. These were individuals that caught small amounts of fish and other species without really having an impact on the environment (Respondent twelve). During the interview process, Respondent twelve mentioned that there was a fine line between the two concepts and that poachers were individuals connected to illegal syndicates and sold fish and crayfish to make millions of Rands. Respondent thirteen viewed informal fishing and poaching as an illegal practice that should be reported immediately to the relevant authorities. Respondent Thirteen posited that "informal fishers, street traders, and poachers are all the same practices that fuel the underground market." Respondent thirteen had a very pessimistic attitude towards informal fishing; however, it is important to note that this Respondent partakes in recreational fishing on weekends without an official permit. During the interview, Respondent thirteen admits that he catches 1-2 fish for the braai. This statement brings into question the divide between recreational and informal fishing. Surely, this Respondent was blurring the lines between the two aspects as both practices are rooted in its desire to bring home food for their families. Respondents Fourteen and Fifteen merely stated that informal fishing and poachers were illegal practices. It is clear from all the responses of the five Respondents that a large majority viewed informal fishers and poachers in a negative light.

4.10 Has informal trading impacted your business?

Out of the five owners, there were two who stated that their businesses were being impacted due to informal street traders. These were the same two business owners who believed that informal street trading, should be considered a serious crime and that it carried the same weight as other

serious crimes that were being committed in and around the town. Upon reviewing the responses of all the Respondents, it quickly became evident that the two business owners owned shops such as the seafood shop and the restaurant, which were in direct competition with the informal street traders. While interviewing the owner of the seafood shop, he spoke at length about how informal traders were impacting his business, and the restaurant owner more-or-less shared the same sentiment as the seafood shop owner.

The three business owners who were not in direct competition with the informal street traders did not view their practice as a serious criminal offence. Even though all three business owners believed that their presence annoyed their guests, they fully understood that these individuals were simply trying to make a living.

4.11 Are Law Enforcement agencies doing enough to stop crayfish poachers?

Out of the five Respondents who answered this question, four responded negatively. According to Respondent eleven, "I have no trust in the police, after numerous phone calls and complaints about street traders I had given up." Despite this negative perception of the Police, Respondent twelve admits that law enforcement officials find it extremely difficult to enforce the law as they are outnumbered by informal fishers and street traders. Furthermore, there have been many instances where the Police have been stoned by the local community (Respondent Thirteen). The fishing community of Paternoster has very deep connections with the ocean and therefore any attempt to curb their access to it is met with resistance. During the interview process, the researcher heard numerous complaints of how Police Officials simply turned a blind eye and often the sale of crayfish and even abalone are done under their watch. There were also complaints pertaining to lack of political intervention, and that local and national government were not addressing this issue. The one Respondent who stated that Police Officials were truly doing enough believed that it was unrealistic to imagine that Police could solely control poachers and street traders. According to Respondent fourteen, "as a community we need to be the eyes and ears to assist the Police. We often blame Police for crime, but we don't ask ourselves what we can do to assist."

This statement by Respondent fourteen was a clear indication that poaching was a practice that needed to be addressed by the entire community. Only through standing together, could the

residents of Paternoster truly curb the onset of poaching. Furthermore, through this process of unity, residents of this town must also recognise the importance of the ocean for these street traders and informal fishers.

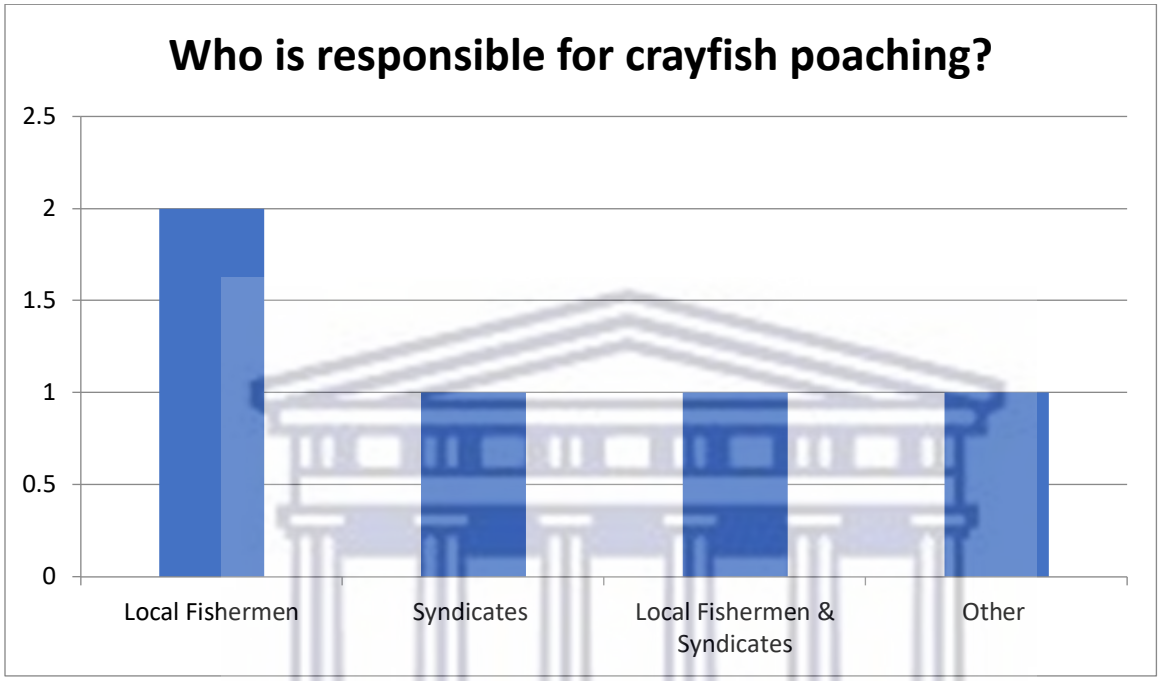


Figure 23: Who is responsible for crayfish poaching?

Respondent seventeen is a Detective who is currently part of a unit investigating the involvement of various syndicates in poaching along the West Coast. These syndicates are well-organised and have many divers, and fishermen who work directly for them. According to Respondent seventeen "these syndicates operate outside the law and generate millions each year. These syndicates are the very same organisations that are involved in human and drug trafficking." According to this Respondent, the local fishermen operate at a small-scale and would never be able to compete with these syndicates. Respondents sixteen and eighteen were the only individuals who stated that local fishermen are to blame for crayfish poaching. Even though both individuals are part of SAPs, they live within proximity to the local fishermen. Both the Constable and Retired Sergeant are from Paternoster and are exposed daily to the local fishermen. In addition, the Constable is not attached to any specialised unit and only patrols the town of Vredenburg. The other individual is a Traffic Officer who monitors the roads leading into Vredenburg. According to Respondent nineteen, there are many individuals from outside of

Vredenburg that are caught during their random stop and searches. Respondent twenty was a self-proclaimed environmental activist who did not belong to any environmental organisation. This Respondent is a local resident of Paternoster and often walks along the beach picking up litter and other sorts of debris. According to this Respondent, both local fishermen and syndicates are to blame as they operate under the same umbrella. Figure 23 indicates that out of the four law enforcement officers, and the one environmental activist, two believed that local fishermen were to blame while the remaining three believed that syndicates, local fishermen/syndicates and other were responsible for poaching in Paternoster.

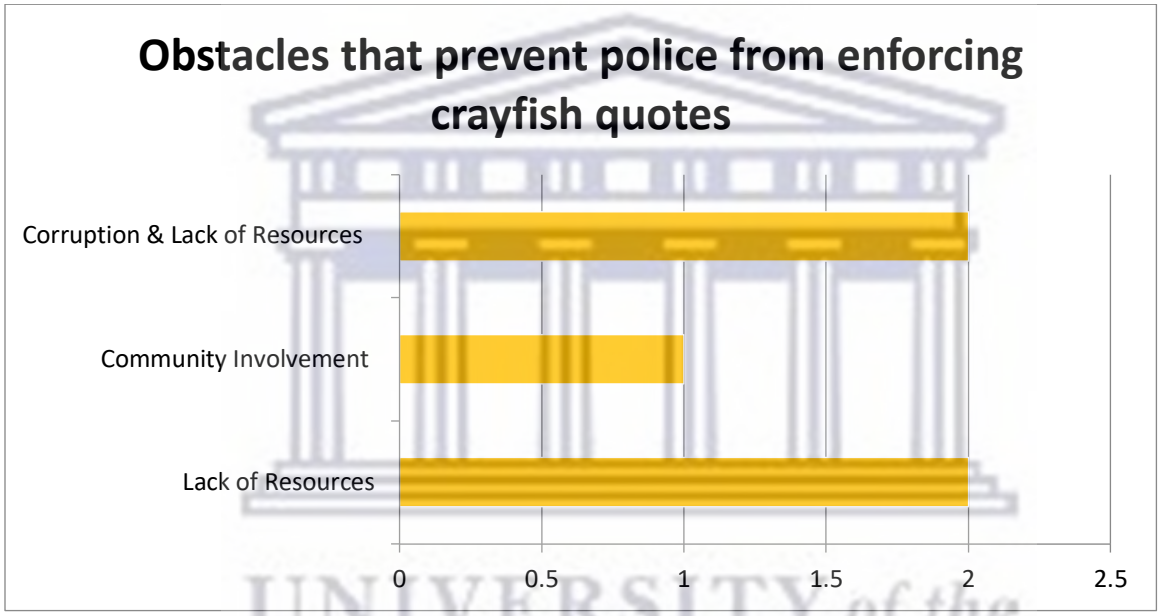


Figure 24: Obstacles that prevent police from enforcing crayfish quotas

The presented data clearly shows that many respondents namely Sixteen, Seventeen, Nineteen and Twenty are unable to fulfil their duties due to corruption and a general lack of resources. One respondent who stated that community involvement was to blame mainly referred to community members mobilising to stop Police Officials from arresting and seizing fishing equipment. Due to the intricate relationship and connection between street traders and informal fishers with the ocean, many community members would protect their access to the ocean as it formed part of their livelihood. According to Respondent Eighteen, "The Police don't patrol directly on the fish market as they are afraid of the fishermen." During the interview process, Respondent Sixteen and Seventeen, mentioned that since SAPs were stationed in Vredenburg, dispatching Police Officers to the town was a slow process due to the availability of vehicles.

According to Respondent Seventeen, "Even when police vehicles are sent out it's usually only one vehicle for the entire town." It is clear from the above statement, that since Vredenburg Police were forced to patrol two towns their resources became relatively strained.

Responses	Commercial Fishing Companies	Small Fishers	Subsistence fishers
Respondent 16	These companies generally follow the rules and regulations.	These fishers do not always follow the quota system and often fish over their allocated amount.	These fishers only catch a small amounts. 1-2 fish are caught for their households
Respondent 17	These companies are by-far the biggest exploiter of the ocean. Even though commercial companies obtain their fishing permits legally, they would actually catch their allocated amount and return later in the day to catch on the same permit.	Small-scale fishers often have permits and sell their crayfish directly on the fish market. Surplus catch is usually given to 'middle-men' that sell directly in Cape Town.	These fishers catch for recreational purposes, and don't usually damage the environment.
Respondent 18	Commercial companies follow the law and catch within their limit.	These are 'illegal' poachers that are connected to syndicates.	These are very small-scale fishes that only catch for their homes, and follow the law.

Respondent 19	Commercial companies follow the quota system as there permits are regulated by the government. Failure to follow the quota system might result in them losing their license.	Small fishers are those that catch without a permit and sell directly in the parking lots of Paternoster.	Subsistence fishers are usually given a quota to catch small amounts of fish and crayfish.
Respondent 20	These companies follow the law.	'Illegal' fishers who exploit the ocean.	Individuals who fish without a permit, but only catch small amounts per day.

Table 3: Adherence to crayfish quotas

It is clear from Table 3: *Adherence to crayfish quotas*, that out of the five individuals who were interviewed, four stated that commercial companies followed the law and stuck to their allocated quota, while only one respondent believed that commercial companies exploited the ocean as they fished multiple times on the same permit. Out of the three categories, small fishers received the worst review as they were perceived as acquiring their stock 'illegally' and without an official permit. According to four Respondents, these individuals fished far beyond the quota system and were often connected to the 'illegal' distribution of marine species. The final category was by-far the most favourable as all five Respondents viewed this practice as sustainable. Locals who were considered as substance fishers were those that only fished small amounts per day. The overall results were truly fascinating as small fishers were viewed as the main reason for the exploitation of crayfish along the West Coast. While huge commercial companies were viewed as totally innocent, they acquired the largest quota as they fished for both the local and international market.

4.12 Should informal crayfish street trading be viewed as illegal?

A total of four Respondents believed that informal street trading was an illegal practice that had to be nipped in the bud by law enforcement agencies. According to Respondent seventeen, "I fully understand that people are merely trying to put food on the table, however at what expense? Nobody is checking to see how much these guys are catching." Respondent seventeen's point was valid as he was advocating for the environmental preservation of the ocean. During the interview process, Respondent eighteen merely stated that there should be a balance between protecting the environment and people trying to earn an income. The one respondent who advocated that street trading should not be viewed as 'illegal' stated that it would be unconstitutional to arrest an individual who was merely trying to provide for his family. This statement by this respondent was a logical point that must be considered before introducing laws around informal fishing.

4.13 Reflections on ethical concerns

While conducting this research, there were many concerns which were voiced by the respondents. During the first interview, the respondent was very reluctant to actively engage in conversation, as the interviewer/researcher was perceived as an undercover Police Officer, government worker or informant. Perhaps to a large extent, the researcher was to blame for this perception as he had his field notebook attached to a clipboard, which gave off a palpable formal look. The first interaction with a street trader was extremely stressful as the researcher remembers fumbling over his questions as he tried to translate his interview questions into Afrikaans. As a researcher, he quickly learnt that nobody would be willing to speak to him had he not switched over to Afrikaans which in Paternoster was the main medium of communication. The questions which he asked, especially the ones related to the illegal harvesting and selling of crayfish were often met with a cringe as the first respondent, would often stand up during the interview process to look around the area to spot a possible Police vehicle. Due to the nature of this type of research and the questions which were asked, most respondents inquired about their anonymity, as they feared being implicated in any sort of crime.

While walking through the parking lots, and passing street corners, many 'possible respondents' avoided eye contact and would only speak to the researcher on condition that he purchased a bag of mussels. Business owners who were interviewed were fearful of being victimised by street traders as they were speaking to an outsider, who was considered a mere tourist in their town. When the researcher took pictures of the bags of crayfish, many respondents were so fearful that they stayed clear of standing in the background of the pictures. Furthermore, two respondents were so paranoid by the researcher's presence and line of questioning that they took photographs of his vehicle. The interview process differed from one street trader to another. Some respondents spoke completely off-topic as they viewed the interview process as an opportunity to speak about race and the government's inability to provide jobs. Despite the randomness of a few of these conversations, the topics that were discussed gave the researcher a deeper understanding of the lived experiences of street traders and small-scale fishers.

It is conceded that this type of research was only possible because the researcher knew that as a researcher, he had to adapt to fit into this community. His quick adjustments in language and demeanour allowed him the opportunity to fully interact with his respondents.

4.14 Research challenges

One of the main challenges was the geographical location of Paternoster as this town is located approximately 137 km away from the researcher's place of residence. Additionally, since this study took place over weekends, the researcher was forced to stay in this town to save on fuel costs. Language was a huge barrier as the researcher oftentimes found himself utilising the most simplistic Afrikaans words and phrases to bring his point across. Due to the expensive nature of this study, he was unable to conduct any follow-up interviews or even take additional photographs of the selling of crayfish. To many of the respondents the researcher had promised a follow-up visit, as he was keen to find out whether they finally obtained their fishing permits. The literature to corroborate/substantiate the findings of this study was sparsely available as a large percent of the information was obtained from newspaper articles which followed recent trends in the fishing industry related to street traders, small scale fishers and poaching. Due to the economic value of these marine species, specifically crayfish and abalone the media outlets were quick to report on this matter.

Chapter 5: Conclusion and Recommendations

5.1 Summary of key research findings

One of the key perceptions obtained through the interview process was that from an infrastructural and investment point of view, the town of Paternoster only benefitted a few wealthy individuals who were able to capitalise on the booming tourist industry. Residents who owned homes along the beach were quickly able to convert their houses into trendy BNBs, hotels, and restaurants while those without the financial means were forced to remain in the surrounding poorer communities of Hopland and Kliprug. Residents who lived in these impoverished communities were in direct competition with foreign nationals who were able to secure formal jobs in restaurants, and construction work as they were able to obtain relevant qualifications and 'papers' which made them more eligible to apply for these posts.

The first ten Respondents were either directly involved in the capture of crayfish or sold crayfish in the neighbouring parking lots and street corners. Laws and policies were perceived by these fishers and street traders as a foreign concept which only hampered and hindered their ability to secure a livelihood. Through the interview process, Respondents were adamant that the West Coast Rock lobster was in abundance, and that local and national government were corrupt individuals who wanted to curb their access to the ocean. All Respondents, even the ones who migrated to Paternoster had a belief that they had a deep-rooted connection to the ocean, and that it was their right to fish.

When it came to questions pertaining to 'who was to blame' for the exploitation of the West Coast Rock lobster, almost all the street traders and small-scale fishers without hesitation placed the blame on large-scale fishing industries who were given large quotas. The formal business outlets, coupled with law enforcement differed in their belief as they were under the impression that small-scale fishers exploited the crayfish population without consideration of the preservation of the ocean. Throughout the interview process, the 'blame game' became more and more apparent, as fingers were continuously pointed to other parties. Business owners who spoke ill of small-scale fishers were often those who were upset that these small-scale fishers sold more-or-less the same products. These negative sentiments were also reiterated by the owner of the BNB, as he viewed these street traders as a nuisance bothering his clients. Despite this

negative perception of small-scale fishers and street traders, the law enforcement officers who were interviewed were completely cognisant of the daily socio-economic struggles that these street traders faced. This research also unearthed that fishing permits were not readily distributed throughout the town of Paternoster and that the introduction of more stringent laws and policies, such as the reduction in the daily catch size, motivated respondents to catch more crayfish.

5.2 Recommendations

Returning female crayfish back to the ocean can contribute to the repopulation of the species. In order to deter 'illegal' poaching government, could extend the dates for the fishing season beyond the allocated 12 days. Furthermore, government should also extend the allocated time, as currently small-scale fishers are only allowed to fish between 8-4 o clock.

To ensure the protection of the natural environment from poachers, local communities must be actively involved in the management of these resources, alongside the government. To create awareness around sustainable fishing, the Responsible Fishing Alliance (RFA) has created various platforms whereby authorities and local fishermen are able to address mutual concerns around the depletion of marine resources. The following recommendations were underpinned by both the literature and the respondents, and not the researcher who was an outsider.

5.2.1 Access to capital and the development of entrepreneurial skills

To ensure the transformation of the fishing industry within South Africa, small-scale fishers need access to capital. Isaacs and Hara (2015: 6) argued that "many of the new operators in the industry did not have access to credit other than the value of the quota when sold". Government intervention was needed, especially in the support of new small-scale fishers who enter the market for the very first time. Through government support, these fishers should also be given entrepreneurial training for small-scale fishers to be able to market their catch and establish a network of potential clients. Following the success of the Abalobi programme, more small-scale fishers must be enrolled and trained to use the App as a means and way to reduce the amount of illegal poaching. The pilot project must be rolled out to more fishing communities and educational workshops must be held with all relevant stakeholders, namely boat Captains, street traders, restaurant owners, law enforcement and recreational fishers. New small-scale fishers

must also be charged a small resource fee for the leasing of fishing rights. According to Isaacs and Hara (2015:6) "such a tax could be used for general development projects like education, health, and housing and the provision of welfare, especially in fishing communities that unsuccessfully applied for fishing rights."

5.2.2 Institutional support for small-scale fishers

During the 1940s, The Fishing Industry Development Corporation (FIDC) was created as a rival to well-established companies such as Irvin and Johnson. The 1940s reforms were foundations on which the modern fishing industry was built, facilitating, and financing the rise of the white monopolies (Van Sittert, 2002). The need to empower a few rights holders must be considered by government to ensure the empowerment of impoverished communities. Similar reform programmes must also be centred around providing financial aid to small-scale fishers and companies to make these individuals competitive with well-established companies.

The exclusive allocations of fishing rights are however not the only things a community requires to overcome poverty and unemployment. For instance, through the allocation process, elites within these fishing communities might broaden their access to these rights, as they have the financial means of acquiring them. Finally, securing fishing rights could be viewed as relatively pointless when small-scale fishers feared for their safety within their communities. These were often the same individuals who were subjected to the theft of boating equipment such as nets and rods. Auld & Ferris (2022: 536) argue that "a good fishery management framework will address problems of vulnerability and marginalisation alongside poverty reduction measures if it is to be effective."

5.2.3 Monitoring and co-management

Even though a verification unit was created to review and verify medium-term rights applications, there has been no internal auditing process that monitors whether new small-scale fishers are actively participating in the capture and trade of crayfish. This unit must be independent of the government to ensure a fair and transparent process is carried out.

The co-management of the fishing industry has often been used as a management strategy; however, they seldom led to the development of fishing communities. Hauck & Sowman,

(2003), Hara & Nielsen (2003), indicated that the existing co-management arrangements have primarily focused on the management of the fish resources rather than being a mechanism for facilitating economic development within fishing communities. Any co-management programmes between the government, NGOs and local communities must focus on how the community would benefit, through this partnership.

5.2.4 Fishing policies

When addressing the needs of fishing communities and ensuring environmental preservation, the laws and policies that are introduced must be context-specific and be in direct response to the lived realities of fishing communities. The current marine living resources act must be amended to ensure that it recognises that subsistence fishers include those who fish for personal consumption and those that sell their catch in the ordinary way, and more than occasional sale. Young (2013:297) argues that "the MLRA therefore has not captured all of those fishers who rely on fishing activities directly or indirectly through the sale of fish, to meet their most basic nutritional needs." The marine living resources act also does not have a management plan in place for the subsistence sector.

The small-scale fisheries policy is an ambiguous policy which did not address the expectations of small-scale fishers. The implementation of this policy was also done in a very distorted manner. Therefore, to ensure the success of this policy, it should recognise that the right to fish was a customary right which small-scale fishers have been practising for centuries. This policy must therefore provide life-time rights to small-scale fishers and must remove the current 3-5 years permit rights. The fishing rights of both small-large scale fishers must be allocated at the same time to prevent unfair allocations. Furthermore, the Department should not allocate commercial rights for the West-Coast Rock lobster, up until a clear directive is given on the allocation of small-scale fishers.

5.2.5 Female empowerment

The training and empowerment of female fishers must be implemented by the government to ensure that more females are involved in the catching, marketing, and trading of crayfish. According to SASSI (2015:1), "Women are the pillars of fishing communities and their hard

work behind the scenes is hardly ever recognised or acknowledged." Through empowerment campaigns, there will be more social unity and the potential for economic growth for females will increase. To ensure the continuous support and empowerment of women, they can partner with retail outlets, who in turn would sell their products such as pickled and smoked mussels. This initiative has already been introduced in Kleinmond, where woman co-operatives are given platforms to sell products to Pick n Pay, local restaurants and other large retail stores.

5.2.6 Provision of employment opportunities for street traders

Local municipalities can forge better relationships with street traders as these traders provide many goods and services to municipal employees, therefore they can formalise a business relationship. The provision of work opportunities will allow the national and local municipality the opportunity to formalise trading activities, reduce unemployment and reduce poverty in the country.

5.2.7 Providing training and education opportunities

Local and national governments must introduce training and educational programmes to increase the skills of these traders. Through these programmes, street traders would be able to improve their entrepreneurial abilities which will enable them to grow their businesses. According to Zogli et al. (2021:415) "Local municipalities working with other government agencies and private institutions must equip informal traders with the relevant and necessary skills, such as developing business plans and financial management/cash flow skills, sales and marketing skills that will assist in growing their businesses." Through these various skills programmes, street traders will be able to obtain the necessary skills to transition from the informal sector to the formal sector. Furthermore, services such as the Sector Education and Training Authority (SETA) also provide much needed financial assistance for these street traders to further their education.

5.2.8 Improving work conditions

To ensure the protection of street traders from the harsh weather elements, trading sites must be equipped with adequate infrastructure such as overhead roofs, formal stalls and access to water

and ablution facilities. These sites must also be given security services and access to visible policing.

5.2.9 Educating street traders on laws and policies

Many street traders are not aware of the laws and policies which govern the selling of goods in the informal sector, therefore government must embark on educational workshops and campaigns to equip street traders with the necessary knowledge. Schachtebeck & Abebrese (2017:137) concludes that "the fostering of a closer working relationship between street traders and the municipality can enhance awareness around policies, as well as ensuring the improvement in the ease of business registration and operating license processers." Through educating street traders on the laws and policies which govern the informal sector there would be fewer transgressions within this sector and to a larger extent, local municipalities would be able to better manage and control street trading.

5.2.10 Monitoring and management strategies

The monitoring and management of the West Coast rock lobster plays an important role in the sustainability of the stock and allocation of annual catch limits. To ensure the successful monitoring of this species data is fed into the Operational Management Procedure Assessment Model. This model includes data on commercial statistics, annual assessments of growth and estimates of the recreational and Interim Relief catch. Catch monitors record fishing efforts and catch landed by commercial near-shore and offshore right holders and Interim Relief fishers on landing slips after each fishing trip (DFFE, 2023). To record the estimated catch of recreational fishers, a telephonic survey was conducted. The growth of the West Coast rock lobster must be monitored through a tagging system of pre-moult males during July and November. The results of this tagging process must then be incorporated into the Moult Probability Growth Model, which is used to determine the growth per moult cycle. DFFE (2023:4) argues that "Information on sex, reproductive state, size frequency and by-catch are also recorded during fisheries independent monitoring survey, and ship-based observer monitoring surveys on board commercial vessels to derive abundance, indices of sub-adult, legal-sized male and female (>75mm carapace length lobsters which are used as inputs into the size-structured assessment model." The information obtained should be then utilised for the present and future management

of this marine species. Recently, previous survey data and methods have been relooked at as environmental changes, leading to variations in the overall catch size. Currently, crayfish are experiencing ocean temperature changes and depleted oxygen levels.

In Paternoster and Saldanha the hoop net has increased, while monitoring of the hoop net catch has decreased. The successful management of this species can only take place once illicit catching is reduced, and formal fishers remain compliant with their permit conditions. Both commercial and small-scale fishers should keep to the allocated fishing season. Fishers should also only capture 4 crayfish per person and transport these crayfish in their whole state.

5.2.11 Diversity of livelihoods

To prevent poverty, unemployment and an over-reliance on the ocean, the government must recognise and invest in other existing assets which are already in place in these fishing communities. An important tool in this regard is the recognition of livelihood diversification, which allows fishers and their households to structure their livelihood activities in a manner which reduces their vulnerability to shocks (Auld & Ferris, 2022). Within these fishing communities many fishers, participate in other business ventures such as tourism and farm labourers to supplement their income.

5.3 Concluding reflections

In conclusion, this master's dissertation has through various Chapters attempted to analyse the lived experiences of street traders and small-scale fishers within the town of Paternoster. Through this study, attention has been drawn to the underlying causes for the various challenges which are experienced in the current fishing industry. Through the literature review, many authors such as De Greef, Isaacs and Hara illustrated the manners in which laws and policies within the fishing industry have limited the fishing rights of fishers along the West Coast. The Marine Living Resources Act coupled with the Small-Scale Fishing policy, have had many limitations and shortcomings which do not fully recognise the way artisan, small-scale and recreational have a deep and intertwined relationship with the ocean. These are the same fishers who caught fish for many years as a livelihood strategy, which addressed poverty and unemployment in their communities. A few of the setbacks to these two policies are the constant

court battles between the government, commercial industries, and small-scale fishers. Previously these courts simply ruled in the favour of the government and allocated temporary fishing rights, which forced small-scale fishers to re-apply on a yearly basis. During 2020, the allocation of fishing rights was once again tabled at a Parliamentary Committee meeting, and the Department of Environment, Forestry and Fisheries (DEFF), was adamant that the Fishing Rights allocation process would be extended to December 2021, and that part of their plan was to amend the current Marine Living Resources Act as the legislation was viewed as old and out-dated. This constant negotiation and talks at the parliamentary level were on the one side an important win for these small–scale fishers. However, immediate action must be implemented by the government to safeguard these fishers' rights to the ocean.

The current framework for the small-scale fisheries policy recognises the needs and vulnerability of small-scale fishers within this sector. Those who were marginalised such as women, migrants and young fishers are further incorporated into this policy. Despite this inclusion, Auld & Feris (2022:534) argues that "the rights allocation scheme it proposes undermines much of what comes before and there is a lack of concrete initiatives that could assist in reducing vulnerability and marginalisation in the sector". The two primary laws governing the fishing industry have facilitated no skills and training programmes aimed at empowering small-scale fishers which has further increased the gap between small- and large-scale industries. Law makers should therefore introduce laws and policies which are context-specific which address the specific realities of these fishers. The introduction of any new policy or law must also recognise the current livelihood diversification strategies of small-scale fishers to prevent an over-reliance on the fishing industry to ensure food security. Small-scale fishers should also be given permits which allow them to both catch and sell the surplus catches. Government must engage in a constant process of consultation and negotiation with small-scale fishers and street traders to ensure a better and transparent partnership. Auld & Feris (2022:548) illustrate that "consultation with affected groups is also vital, and stronger consultation provisions should be included in the current regulatory framework." Through this process of consultation, government would be able to introduce development initiatives which would directly address vulnerabilities in these fishing communities. Government should also not be bullied into allocating more fishing rights to well-established industries, as this further marginalises small-scale fishers. To ensure the fair and

equal distribution of fishing rights, all current rights should be suspended, and a new allocation must be implemented in manner that benefits all parties involved in the fishing industry.

This thesis effectively drew connections between street traders, small-scale fishers, law enforcement and business owners. Through qualitative research methods such as participant observation, interviews, and a case study approach, the study revealed that street traders and small-scale fishers viewed the ocean as a source of survival that is deployed to escape their various socio-economic issues, such as poverty and unemployment. To many of these fishers, the ocean was viewed as a means of sustenance for their families. During the interview process, many stories were told related to how selling crayfish paid for school-fees, and other household appliances which would have been impossible without this illicit selling of crayfish. The business owners who were pessimistic to the notion of street trading were unfortunately blind to the actual realities of these street traders. Within the town of Paternoster, the local municipality and law enforcement must identify ways in which the informal street trading and small-scale capture of crayfish can be incorporated into the official town which can ensure both economic growth and the preservation of crayfish instead of harassing street traders, whose livelihoods hinge on informal street trading. This investigation provided a proxy through which the various environmental, legislative and management issues that continued to plague the bigger crayfish trade could be better understood.

References

African Business. (2022). 'Forestry, Fisheries and the Environment on West Coast Rock lobster Contingency Plan'. Available at https://african.business/2022/03/apo-newsfeed/forestry-fisheries-and-the-environment-on-west-coast-rock-lobster-contingency-plan/ (Accessed on 15/4/2022)

Allison, E.H. and Ellis, F. (2001). 'The livelihoods approach and management of small-scale fisheries'. *Marine Policy Volume 25, Issue 5*.

Anciano, F and Piper, L. (2018). 'Poaching the Bay', Chapter in Anciano, F., and Piper, L (eds). *Democracy Disconnected: Participation and Governance in a city of the South* (pages 122-142), Routledge: 1st edition (October 25, 2018).

Anderson, B., and Jooste, J. (2014). 'wildlife poaching: Africa's surging trafficking threat', *Africa security brief, Volume 28, 1-9.*

Anderson, P. M. L., and O'Farrell, P. J. (2012). 'An ecological view of the history of the City of Cape Town'. *Ecology and Society 17(3): 28.*

Ashirwadam, J. (2014). *Methods of Data Analysis*, M.Th. Communication Tamilnadu Theological Seminary.

Auld, K. and Ferris, L. (2022). 'Addressing vulnerability and exclusion in the South African small-scale fisheries sector: does the current regulatory framework measure up?', Maritime Studies (2022) 21:533–552.

Béné, C, Bjørn, H, and Edward H.A. (2010). 'Not by rent alone: Analysing the pro-poor functions of small-scale fisheries in developing countries'. *Development Policy Review 28*: 325–358.

Béné, C., Macfadyen. G., and Allison, E.H. (2007). 'Increasing the contribution of small-scale fisheries to poverty alleviation and food security', FAO fisheries, technical paper 481, Rome, FAO, 2007, 125p.

Bhowmick, S.K. (2005). 'Street vendors in Asia: A review'. *Economic and political weekly*, 2256 – 2264.

Bonthuys, J. (2020). 'Struggling small-scale fishers are thrown a lifeline by pilot project'. Available at

https://www.dailymaverick.co.za/article/2020-11-09-struggling-small-scale-fishers-are-thrown-a-lifeline-by-pilot-project/ (Accessed on 20/5/2021)

Brand, A. (2000). 'The Forgotten People of the West Coast: Who were the GuriQua?'. Available at http://sawestcoast.com/history.html (Accessed on 09/09/2023)

Chambers, R., and Conway, G.R. (1991). 'Sustainable rural livelihoods: practical concepts for the 21st century', IDS Discussion paper 296, *Institute of development studies.*

Cohen, P.J., Allison, E. H., Andrew, N.L., Cinner, J, Evans, L.S., Fabinyi, M., Garces, L. R., Hall S. J., Hicks, C.C., Hughes, T.P., Jentoft, S., Mills, D.J., Masu, R., Mbaru, E.K., Ratner, B.D. (2019). 'Securing a Just Space for Small-Scale Fisheries in the Blue Economy'. *Frontiers in Marine Science. Volume 6, Article 171*. Available at https://www.frontiersin.org/articles/10.3389/fmars.2019.00171/full

Copes, P., and Charles, A. (2004). 'Socio-economics of individual transferable quotas and community-based fishing management', *Agricultural and resource economics Review 33 (2):* 171-81.

Cruywagen, V and Payne, S. (2021). 'Facing death by drowning or hunger forces Cape coastal communities into stormy seas'. Available at https://www.msn.com/en-za/news/other/facing-death-by-drowning-or-hunger-forces-cape-coastal-communities-into-stormy-seas/ar-AAQ4ho3 (Accessed on 10/4/2022)

Crowe, S., Cresswell, K., Robertson, A., Huby, G., Avery, A. and Sheikh, A. (2011). 'The case study approach', BMC Medical Research Methodology 2011, 11:100.

De Greef, K. (2018). 'Hout Bay protest turns violent after poaching death'. Available at https://www.groundup.org.za/article/hout-bay-protest-turns-violent-after-poaching-death/ (Accessed on 3/10/2021).

De Greef, K. (2016). 'The real estate apartheid'. Available at https://www.kimondegreef.com/feature/the-real-estate-apartheid (Accessed on 20/5/2021).

De Haan, L.J., (2012). 'The Livelihood Approach: A critical exploration'. *Erdkunde, Vol 66. No 4*:345-357.

DeWalt, K.M and DeWalt, B.R (2002) *Participant Observation: A guide for Fieldworkers*, Altamira Press, A division of Rowman & Littlefield Publishers Inc, Walnut Creek, CA.

Deacon, H. J., (1992). 'Human Settlement'. in R.M. Cowling (editor) The ecology of Fynbos: nutrients, fire and diversity. Oxford University Press, Cape Town, South Africa.

DFFE. (2023). 'West Coast Rock Lobster' Available at https://www.dffe.gov.za/sites/default/files/reports/westcoastrocklobster.pdf (Accessed on 9/1/2023)

Donaldson, R., Goutali, M., Sam' an, S., Moe, J., Pauloski, M and Utomo, M. (2013). 'Regulation of street trading in two nodes of Cape Town", Chapter in Kotze, N., Donaldson, R., and Visser, G (Eds), *Life in a Changing Urban Landscape: Proceedings of the IGU Urban Geography Commission (Urban Challenges in a Complex World),* Johannesburg and Stellenbosch, 21 – 26 July 2013.

Engel, K. (2022). 'Lobster walkout a dire blow to struggling West Coast fishing communities' Available at https://www.iol.co.za/capeargus/news/lobster-walkout-a-dire-blow-to-struggling-west-coast-fishing-communities-57e41133-eb11-4327-91ca f0418e06411b?msclkid=5afe6851b17f11eca82d7ee4318726c7 (Accessed on 10/4/2022).

Eriksson, P. & Kovalainen, A. (2008). *Qualitative Methods in Business Research.* London: SAGE.

Etikan, I. (2016) 'Comparison of Convenience Sampling and Purposive Sampling', *American Journal of Theoretical and Applied Statistics 2016*; 5(1): 1-4.

FATF. (2020). 'Money Laundering and the Illegal Wildlife Trade', FATF, Paris, France. www.fatf-gafi.org/publications/methodandtrends/documents/money-laundering-illegal-wildlife-trade.html.

FAO. (2003). 'The State of Food and Agriculture', Agricultural Bio-technology, meeting the needs of the poor? Produced by the editorial production and design group publishing management service FAO.

FAO. (2014). 'The State of food and Agriculture', Innovation in family farming, prepared by members of FAOs Agricultural Development Economics Division (ESA) and Research and extension unit (DDNR).

FAO (Food and Agricultural Organisation of the United Nations). (2021). 'Small-scale Fisheries, Fisheries Division'. Available at http://www.fao.org/fishery/fishcode-stf/activities/ssf/en.

Fisher, R. (2018). 'Time stands still for the poor of paradisic Paternoster'. Available at https://www.iol.co.za/news/opinion/time-stands-still-for-the-poor-of-paradisic-paternoster-12631041 (Accessed on 2/10/2021).

FINSA reporter. (2021). 'Will Commercial Traditional Linefishers Be Making Peace with the Past?'. Available at https://www.fishingindustrynewssa.com/2021/10/01/will-commercial-traditional-linefishers-be-making-peace-with-the-past/ (Accessed on 2/10/2021).

Government Gazette. (1998). 'Management of Marine Living Resources'. Available at https://www.gov.za/sites/default/files/gcis_document/201610/a18-98.pdf (Accessed on 2/10/2021).

Harvey, K. (2021). 'History of Paternoster'. Available at https://www.paternosterproperty.co.za/lifestyle/history-of-paternoster.html (Accessed on 2/10/2021).

Harding, T.S., & Whitehead, D. (2016). 'Analysing data in qualitative research, Schreider_2302_Chapter 8_ main.indd.

Hanrahan, M. (2017). 'Crayfish staff help Czech brewery keep its water as pure as can be' Available on https://web.archive.org/web/20191025221438/https://www.reuters.com/article/us-czech-crayfish-water-purity/crayfish-staff-help-czech-brewery-keep-its-water-as-pure-as-can-be-idUSKCN1C22GP (Accessed on 3/1/2023).

Hauck, M. and Sweijd, N. A. (1999). 'A case study of abalone poaching in South Africa and its impact on fisheries management'. – *ICES Journal of Marine Science, 56*: 1024–1032.

Hauck, M., and Sowman, M. (2001) 'Coastal and fisheries co-management in South Africa: an overview and analysis', *Marine policy 25 (2001)* 173-185.

Hauck, M. & Sowman, M. (2003). *Waves of change*, Cape Town: University of Cape Town Press.

Hart, K. (1973). 'Informal Income Opportunities and Urban Employment in Ghana'. *The Journal of Modern African Studies, 11(1)*, 61–89.

Herbert, S. (2000). 'For Ethnography', Progress in Human Geography 24,4 (2000) pp. 550–568.

Heck, S., Béné, C., and Reyes-Gaskin, R. (2007). 'Investigating in African fisheries: building links to the millennium development goals'. *Fish and fisheries 8 (3):* 211-26.

Hooked on Africa. (2020). 'West Coast Rock Lobster Season 2020/2021 Dates'.

Available at https://www.hookedonafrica.co.za/west-coast-rock-lobster-season-2020-2021-dates/# (Accessed on 2/10/2021).

Hsieh, H.F and Shannon, S.E. (2005). 'Three approaches to qualitative content analysis', *Qualitative Health research, 2005 Nov;15 (9):*1277-88.

Hűbschle, A. and De Greef, K. (2016). 'An exploration of the socio-economic impacts of two drug markets in South Africa', Review by the United States Agency for International Development.

Huibrecht, S. (2022). 'History of Paternoster'. Available at https://www.paternoster.co.za/paternoster/history (Accessed on 9/4/2022).

Ibrahim, M. (2015). 'The Art of data analysis'. Journal of Allied Health Sciences Pakistan, 1(1), 98-104.

Informal Traders in Bellville. (2023). 'Informal Traders in Downtown Bellville'

Available on https://gtp.org.za/wp-content/uploads/2018/05/Informal-Traders-in-Downtown-Bellville1.pdf (Accessed on 3/1/2023).

Irvin, P. (2022). 'Why Interview Is Important in Qualitative Research'

Available on https://interviewnewbie.com/why-interview-is-important-in-qualitative-research-faq/ (Accessed on 12/1/2023).

Isaacs. M. (2003). 'Understanding the social processes and politics of implementing a new fisheries policy, the marine living resources act of 1998', South Africa.

Isaacs, M., Hara, M. & Nielsen, R. (2004). 'Institute for poverty, land and agrarian studies', University of the Western Cape.

Isaacs, M., Hara, M. and Nielsen, R. (2005). 'South African fisheries reform – past, present and future?', Policy Brief; Debating land reform, natural resources and poverty, No.16 AUGUST 2005.

Isaacs. M. (2006) 'Small-scale fisheries reform – Expectations, hopes and dreams of 'a better life for all'. *Marine Policy 30*:51–59.

Isaacs, M., Hara, M. & Nielsen, R. (2007). 'Has reforming South African fisheries contributed to wealth redistribution and poverty alleviation?', *Ocean & Coastal Management 50:* 301–313.

Isaacs, M. & Hara, M. (2008). 'Transformation in the South African Fishing Industry and Its Ability to Redistribute Fishing Rights', *American Fisheries Society*, pp.1-4.

Isaacs, M. (2013). 'Small-scale fisheries governance and understanding the snoek (Thyrsites atun), supply chain in the Ocean View fishing community, Western Cape, South Africa'. *Ecology and Society 18(4): 17.*

Issacs, M. and Hara, M. (2015). 'Backing small-scale fisheries: opportunities and challenges in transforming the fish sector', Institute for Poverty, Land and Agrarian Studies, Rural Status Report 2, Faculty of Economic and Management Sciences.

Issacs, M. and Witbooi, E. (2019). 'Fisheries crime, human rights and small-scale fisheries in South Africa: A Case of bigger fish to fry', Marine Policy, Volume 105, July 2019, p158-168.

Jenkins, A. (2014). 'Informal traders a negative impact on businesses' Available on https://zululandobserver.co.za/54445/informal-traders-a-negative-impact-on-businesses/ (Accessed on 10/1/2023).

Karki, S. (2021). 'Sustainable Livelihood Framework: Monitoring and Evaluation', Int. J. Soc. Sc. Manage. *Vol. 8, Issue-1:* 266-271.

Lambrechts, D. and Goga, K. (2016). 'Money and Marginalisation: The Lost War Against Abalone Poaching in South Africa', *Politikon, 43:2,* 231-249.

Landau, L. (2007). 'Discrimination and development? Immigration, urbanisation, and sustainable livelihoods in Johannesburg'. *Development Southern Africa, vol.24, No 1.*

Ley, D. (1988) 'Interpretive social research in the inner city'. In Eyles, J., (Ed), Research in human geography, Oxford: Blackwell, 121–38. cited in Herbert, S. (2000) 'For Ethnography', *Progress in Human Geography 24,4 (2000)* pp. 550–568.

Leberatto, A. C. (2016). 'Understanding the illegal trade in live wildlife species in Peru', Trends in Organized Crime.

Manaleng, P. (2021). 'Why are people being arrested for possession of crayfish?'. Available at

https://ewn.co.za/2021/04/16/why-are-people-being-arrested-for-possession-of-crayfish (Accessed on 20/5/202).

Marie. (2022). 'The Versatile Uses Of Crayfish Throughout History: Exploring The Benefits Of This Valuable Resource' Available on https://adoptandshop.org/the-versatile-uses-of-crayfish-throughout-history-exploring-the-benefits-of-this-valuable-resource/ (Accessed on 3/1/2023).

Mahlangu, P.B., Edoun, E.I., and Van Heerden, N. (2022). 'Framework for the contributions and constraints of the informal economy on domestic economic growth in South Africa', *Journal of Public Administration, Finance and Law, Issue 24/2022*.

Mafunzwaini, M.M. (2013). *Contribution of informal markets to poverty reduction and household food security food security among street traders in Thulamela local municipality of Vhembe district Limpopo province* (Dissertation).

McCay, B.J. (2004). 'ITQS and community: an essay of environmental governance', *Agricultural and resource economics Review 33 (2):* 162-70.

Merem, E et al. (2019). 'Analyzing the Tragedy of illegal fishing on the West African Coastal Region', *International Journal of Food Science and Nutrition Engineering 2019, 9 (1):* 1-15.

Mitullah W.V. (2004). 'A Review of street trade in Africa: working draft'. Report for WIEGO and organizing.

Modise, A. (2019). 'Minister Barbara Creecy grants small scale fishers in the Western Cape access to fishing'. Available at https://www.environment.gov.za/mediarelease/creecy_grantswesterncapefishers_accesstofishingin2019/20_westcoastrocklobsterseason (Accessed on 20/5/2021).

Morse, S. and MacNamara, N. (2013). *Sustainable Livelihood Approach: A Critique of Theory and Practice*, Springer.

Morris, R. (2000) 'I & J staff reel in R7.5m cash windfall'. Business report, 16 November.

Mujere, N. (2016). 'Sampling in Research', Chapter 6 in Baron, M., and Jones, J (eds.), *Mixed methods research for improved scientific study* (pages 107-121). IGI Global, 2016. DOI: 10.4018/978-1-5225-0007-0.ch006.

Naderifar, M., Goli, H., and Ghaljaie, F. (2017). 'Snowball Sampling: A Purposeful Method of Sampling in Qualitative Research', *Strides in Development of Medical Education 2017 September; 14(3):* e67670.

Ndabeni, L.L. (2014). 'The informal sector and local economic developments in South Africa; An evaluation of some critical factors' Available on http://rozenbergquarterly.com/iide-proceedings-2014-theinformal-sector-andlocal-ec Accessed on (6/1/2023).

Ngcobo, N. (2022). 'Unemployment rate increases to 35.3% in fourth quarter of 2021: Stats SA'

Available at https://www.sabcnews.com/unemployment-rate-increases-to-35-3-in-fourth-quarter-of-2021-stats-sa/?msclkid=634dc6e8b0a711ecba28caffcdaacdf9 (Accessed on 10/4/2022).

Ngcobo, N., Du Plessis, A. & Fuo, O. (2022). 'Street traders in South Africa play a vital role: how their rights can be protected' Available at https://theconversation.com/street-traders-in-south-africa-play-a-vital-role-how-their-rights-can-be-protected-180886 (Accessed on 2/1/2023).

Nielsen, J. R and Hara, M. Forthcoming. (2005). 'Transformation of South African industrial fisheries', Marine Policy.

Oirere, S. (2021). 'South Africa plans review of West Coast Rock Lobster TAC after pushback'.

Available at https://www.seafoodsource.com/news/supply-trade/south-africa-plans-review-of-west-coast-rock-lobster-tac-after-pushback (Accessed 15/4/2022).

Oluwatoyin, O.J., Ayodeji, S., and Akanni, O. (2018). 'Practices and attitude of street traders to sanitary environment in Ibadan metropolis', *British Journal of Multidisciplinary and Advanced Studies Vol.2, No.2,* pp.7-18, 2018.

Ortiz, R. (2019). 'How technology can help transform the fishing industry'.

Available at https://www.greenbiz.com/article/how-technology-can-help-transform-fishing-industry Accessed 11/2/2023.

Paternoster Fishery. (2016). 'Lobster Sustainability Programme'. Available at https://www.paternostervissery.co.za/lobster-sustainability-programme.html (Accessed on 3/10/2021).

Payi, B. (2021). 'Unhappy small-scale fishers seek real allocations'. Available at https://www.iol.co.za/weekend-argus/news/unhappy-small-scale-fishers-seek-real-allocations-fd5e495e-fb83-4044-ac4e-0f05089d76e7 (Accessed on 2/10/2021).

Palmer, C. & Bolderston, A. (2006). 'A Brief Introduction to Qualitative Research', *The Canadian Journal of medical radiation technology / CAMRT* · March 2006.

Peberdy, S., & Rogerson, C. M. (2000). 'Transnationalism and non–South African entrepreneurs in South Africa's small, medium and micro-enterprise (SMME) economy', *Canadian Journal of African Studies, 30(1),* 20-40.

Pires, S. F., Schneider, J. L. & Herrera, M. (2016). 'Organized crime or crime that is organized? The parrot trade in the neotropics', *Trends in Organized Crime, 19(1),* 4–20.

Porter, J.R., Chintakrindi, S. & Capellan, J.A. (2015) 'Social Disorganization Theory', Chapter in Jennings, W.G., Higgins, G.E., Maldonado-Molina, M.M and Khey, D.N (eds.) *The Encyclopedia of Crime & Punishment* (pages 1179-1186) John Wiley & Sons.

Praveen, H. & Showkat, N. (2017). 'Content Analysis', chapter in Satapathy, P.K (Ed) *Communications Research* (Pages 1-9).

Reid, R. (2016). 'Paternoster: Fishing Boats, Beaches and Crayfish'. Available at https://www.roxannereid.co.za/blog/paternoster-fishing-boats-beaches-and-crayfish (Accessed on 3/10/2021).

Reinert, K.A. (2021). 'The basic needs approach', Elgar Encyclopedia of Development, Schar School of Policy and Government, George Mason University.

Roelf, W. (2020). 'South Africa's lobster Catchers Suffer in Coronavirus fallout'. Available at https://www.reuters.com/article/us-china-health-safrica-idUSKBN20F1KE (Accessed on 15/4/2022).

Roe, D. (2002). 'Making a killing or making a living: Wildlife trade, trade controls, and

rural livelihoods' *(No. 6). IIED*.

Rogerson, C. M. (1998). 'Formidable entrepreneurs': The role of foreigners in Gauteng SMME economy, *Urban Forum, 9(1),* 143-153.

SABC News. (2018). 'Alleged abalone syndicate to appear in court'. Available at

https://www.sabcnews.com/sabcnews/alleged-abalone-syndicate-appear-court/ (Accessed on 3/2/2021).

SASSI. (2015). 'The challenges facing the small-scale fishers'. Available at https://wwfsassi.co.za/the-challenges-facing-the-small-scale-fishers/ (Accessed on 5/1/2023).

Sauer, W.H.H., Penney, A.J., Erasmus, B.Q., Mann, S.L., Brouwer, S., Lamberth, J., & Stewart, T.J. (1997). 'An evaluation of attitudes and responses to monitoring and management measures for the South African boatline fishery'. *South African Journal of Marine Science 18:* 147- 163.

Sapkota, T.S. (2021) 'Sustainable Livelihoods approach: Alternative to Rural Development', *Triyuga Academic Journal, Vol.2, January 2021*.

Schachtebeck, C. & Abebrese, B.N. (2017) 'Street Trading in South Africa: A Case of the Tshwane Central Business District', *AUDŒ, Vol. 13, no. 3,* pp. 129-139.

Schutte, D.W. (1994). 'Report of the Committee of Inquiry into fishermen's community trusts'. Ministry of Environment Affairs and Tourism, Cape Town. Commissioned by the Human Science Research Council.

Schmuck, R. (1997). 'Practical action research for change'. Arlington Heights, IL: IRI/Skylight Training and Publishing.

Scoones, I. (1998). 'Sustainable Rural Livelihoods: A Framework for Analysis'. IDS Working Paper 72. Brighton: Institute for Development Studies.

Serrat, O. (2008). 'The Sustainable Livelihoods Approach', Knowledge Solutions, Asian Development Bank, November 2008.

Serrat, O. (2017). 'Proposition 5: The Sustainable Livelihoods Approach', Knowledge Solutions, Asian Development Bank, 2017.

Sea Harvest Group. (2023). 'Our commitment to transformation'. Available at

https://seaharvestgroup.co.za/transformation/#transformation Accessed on 18/3/2023.

Shaw, M. (1998) 'Safety and Governance Programme'. *Institute for Security Studies, Occasional Paper No. 28.*

Shava, G.N., Hleza, S., Tlou, F., Shonhina, E., and Mathonsi, E. (2021) 'Qualitative content analysis, utility, usability and processes in education research', *International Journal of research and innovation in Social Sciences (IJRISS), Volume V, Issus VII, July 2021.*

South Africa Venues. (2022). 'Map of Paternoster, Western Cape'. Available at https://www.sa-venues.com/maps/westerncape/paternoster.php (Accessed on 7/8/2022).

Social protection and Human rights. (2015). 'Introduction to a rights-based approach'. Available at https://socialprotection-humanrights.org/introduction-to-a-rights-based-approach/Accessed on 11/2/2023.

Sowman, M. (2011). 'New perspectives in small-scale fisheries management: challenges and prospects for implementation in South Africa'. African Journal of Marine Science 2011, 33(2): 297–311.

Skinner, C. (1999). 'Local government in transition: A gendered analysis of trends in urban policy and practice regarding street trading in five South African cities'. *Research report no. 18.* Durban: School of Development Studies, University of Natal.

Skinner, C. (2000). 'Getting institutions, right? Local government and Street traders in four South African cities'. *Urban Forum, 11,* 49-71.

Skinner, C. (2008). 'Street trade in Africa: A review', Working Paper No. 51.

Strydom, H. (2021). 'History of Paternoster'. Available at https://www.paternoster.co.za/paternoster/history (Accessed on 2/10/2021).

Statistics South Africa. (2022). 'Quarterly Labour Force Survey Quarter 4:2021' Available at https://www.documentcloud.org/documents/21562080-p02114thquarter2021 (Accessed on 10/4/2022).

Steinberg, J. (2005). 'The Illicit Abalone Trade in South Africa'. *ISS Paper 105,* 1–14.

Stewart, F. (1989). 'Basic needs strategies, Human rights, and the Right to development', *Human rights quarterly, Vol. 11 No.3* (Aug. 1989) pp. 347-379.

Sustainable Fisheries Partnership, (2014) 'The seafood industry guide to FIBs'. Available on https://drive.google.com/file/d/1QVlA_40az7XXBSZ_UTe8nIcrelbhZZhb/view (Accessed on 4/1/2023).

Sumaila, U.R. (2010). 'A cautionary note on individual transferable quota's'. *Ecology and Society 15 (3):* 36.

The Greater Tygerberg Partnership. (2023). 'Informal Traders', Available on https://gtp.org.za/informal-traders/ (Accessed on 3/1/2023).

Till., K.E. (2009). 'Ethnography', International Encyclopedia of human geography, pages 626-63, Virginia, Tech University, Alexandria, VA, USA.

Todaro, M.P., & Smith, S.C (2015). *Economic Development*, 12th edition, George Washington University, Pearson.

TRAFFIC. (2008).'What's driving the wildlife trade? A review of expert opinion on economic and social drivers of the wildlife trade and trade control efforts in Cambodia, Indonesia, Lao PDR, and Vietnam'. East Asia and Pacific Region Sustainable Development discussion papers. East Asia and Pacific Region Sustainable Development Department. Washington DC: World Bank.

Turok, I., Scheba, A. & Visagie, J. (2017). 'Reducing Spatial Inequalities through Better Regulation'. Report to the High-Level Panel on the Assessment of Key Legislation and the Acceleration of Fundamental Change. Human Sciences Research Council.

Van As. H. (2020). 'Poaching of Marine Living Resources', *South African Crime Quarterly, No 69, 2020.* Institute for Security Studies & University of Cape Town.

Van Sittert, L. (2002). 'Those who cannot remember the past are condemned to repeat it': Comparing fisheries reforms in South Africa. *Marine Policy, 26:*295–305.

Van Heerden, S., & Donaldson, R (2013). 'Informal economy and urban ecology", Chapter in Kotze, N., Donaldson, R., and Visser, G (eds), *Life in a Changing Urban Landscape: Proceedings of the IGU Urban Geography Commission (Urban Challenges in a Complex World)*, Johannesburg and Stellenbosch, 21 – 26 July 2013.

Virdin, J., and Basurto, X. (2019). 'Local communities play outsized but overlooked role in global fisheries'. Available on https://theconversation.com/amp/local-communities-play-outsized-but-overlooked-role-in-global-fisheries-123143 (Accessed on 4/1/2023).

Watson, D. (2014). "Poverty and basic needs", Chapter in Kaplan, D and Thompson, P (eds), *Encyclopedia of food and Agricultural Ethics*, Springer Science Business media Dordrecht 2014, Department of Economics, American University of Nigeria, Adamawa, Nigeria.

Witbooi, E. (2006). "Law and fisheries reform: Legislative and policy developments in South African fisheries over the decade 1994–2004", *Marine Policy 30(1):*30-42.

Wickes, R & Sydes, M. (2018). 'Social Disorganisation theory', Available on https://www.oxfordbibliographies.com/display/document/obo-9780199756384/obo9780199756384-0192.xml (Accessed on 5/2/2023).

Wilkinson, K. (2015). 'Analysis: Are foreigners stealing jobs in South Africa?'. Available at https://africacheck.org/fact-checks/blog/analysis-are-foreigners-stealing-jobs-south-africa (Accessed on 4/2/2023).

Wolcott, H.F. (2001). *The art of fieldwork*. Walnut Creek, CA: AltaMira Press.

Young, M. (2013). 'Achieving equity in the fishing industry: The fate of informal fishers in the context of the policy for the small-scale fisheries sector in South Africa', 2013, *Volume (16), No 5*.

Zogli, L.K.J., Dladla, N. & Dlamini, B.I. (2021). 'Assessing the challenges faced by informal street traders operating in Durban, South Africa', *International Journal of Entrepreneurship and Business Development, Volume 04 Number 04 July 2021*.

Appendices

UNIVERSITY OF THE WESTERN CAPE /

UNIVERSITEIT VAN WES-KAAPLAND

DEPARTMENT OF GEOGRAPHY, ENVIRONMENTAL STUDIES, AND TOURISM /

DEPARTMENT GEOGRAFIE, OMGEWINGSTUDIES EN TOERISME

Interview A: Interview Questions (Street traders and subsistence fishers)

Onderhoud vrae (Straathandelaars en bestaansvissers)

1. Are you a resident of Paternoster, If YES, for how long? / *Is u 'n inwoner van Paternoster. Indien JA, vir hoe lank?*

2. Name any changes that you have observed in Paternoster. / *Noem enige veranderinge wat u in Paternoster waargeneem het*

3. Which of the changes that you have mentioned impacted on you:/ *Watter veranderinge het, of beïnvloed u:*

   (a) Positively/*Positief*

   (b) Negatively/*Negatief*

4. Are you a small-scale, commercial fisher or just vending for someone on the street? / *Is u 'n klein-skaal visser, 'n kommersiële visser of doen u straatverkope namens iemand?*

5. If you are dependent on the sea, were/are there any laws that affected your livelihood? / *As jy afhanklik is van die see, was / is daar enige wette wat jou lewensbestaan beïnvloed het*

6. Do you think that there is a depletion in marine-resource availability along the **West Coast**? If your answer is YES, who/what is responsible for the depletion? / *Dink u dat daar 'n afname in die beskibaarheid van mariene bronne aan die Weskus is? Indien JA, wie/wat is verantwoordelik vir die afname?*

7. Are you benefiting from tourism in Paternoster? Explain your answer please. / *Trek u voordeel uit toerisme in Paternoster? Verduidelik u antwoord asseblief.*

8. Who/what do you think controls Paternoster's fishing industry? / *Wie/wat beheer die vis industrie in Paternoster?*

9. How has Covid-19 impacted your livelihood? / *Hoe het, of beïnvloed Covid-19 u lewensbestaan?*

10. How did/have changes in the allocation of fishing permits and quotas impacted your livelihood? Explain your answer please. / *Hoe het, of beïnvloed veranderinge in die allokering van permitte en kwotas u lewensbestaan? Verduidelik u antwoord asseblief.*

11. Which location(s) in the town is best for you to sell your crayfish at? / *Watter plek/plekke in die dorp is die beste om u kreef te verkoop? Verduidelik u antwoord asseblief.*

12. Which time(s) of the year is most profitable for you to sell your crayfish on street? / Explain your answer please. / *Watter tyd/tye van die jaar is mees winsgewend vir u om kreef op straat te verkoop? Verdudelik u antwoord asseblief.*

13. Who are your best clients? Explain your answer please. / *Wie is u beste kliënte? Verduidelik u antwoord asseblief.*

14. Who/what supply crayfish to you for street trading? *Wie/wat verskaf kreef aan u om op straat te verkoop?*

15. What can/should be done to solve 'illegal' poaching in Paternoster? / *Wat kan/moet gedoen word om onwettige stropery te beëindig in Paternoster?*

16. On a scale of 1-5 how satisfied are you with the way local and national government respond, or have responded to the plight of small-scale and subsistence fishers? / *Op 's skaal 1-5, hoe tevrede is u met die manier waarop plaaslike en nasionale regering reageer, of gereageer het op die probleme van klein-skaal en bestaansvissers?*

1. Extremely Dissatisfied/ *Baie onbevredigend*	2. Unsatisfactory/ *Onbevredigend*	3. Moderate / *Matig*	4. Satisfactory / *Bevredigend*	5. Exceptional / *Uitsonderlik*

17. Are you using the Abalobi App? / *Maak u gebruik van die Abaloi App?*

Yes/Ja	No/Nee

18. Do you have a fishing permit or quota? / *Het u 'n permit of 'n kwota?*

Yes/Ja	No /Nee

19. Is fishing your main source of income? / *Is visvang u hoofbron van inkomste?*

Yes/Ja	No /Nee

20. Is illegal poaching and trade more profitable than legal fishing? Explain your answer please. / *Is onwettige stropery en handel meer winsgewend as wettige vissery? Veduidelik u antwoord asseblief.*

Thank you / *Dankie* 😊

Appendix B: Interview Questions (Residents/Business Owners)

UNIVERSITY OF THE WESTERN CAPE /

UNIVERSITEIT VAN WES-KAAPLAND

DEPARTMENT OF GEOGRAPHY, ENVIRONMENTAL STUDIES, AND TOURISM /

DEPARTMENT GEOGRAFIE, OMGEWINGSTUDIES EN TOERISME

B. Interview Questions (Residents/Business Owners)

Onderhoud vrae (Inwoners/Sake-Eienaars)

1. What is your understanding of 'informal' fishing or poaching? / *Wat is u begrip van Informele (vis)vangs of stropery?*

2. How, if at all, does/had informal street trading impacted your business and its profitability? Explain your answer please. / *Indien wel, hoe beïnvloed, of het informele*

straatverkope u besigheid en winsgewendheid beïnvloed? Verduidelik u antwoord asseblief.

3. How, if at all, does/had informal street trading impacted your life and/or property? Explain your answer please. / *Indien wel, hoe beïnvloed, of het informele straatverkope u lewe en/of eiendom beïnvloed? Verduidelik u antwoord asseblief.*
4. Do you think that law enforcement agencies are doing enough to stop crayfish poaching as well as informal crayfish street trading? Explain your answer please. / *Dink u dat wetstoepassingagentskappe genoeg doen om kreef stropery asook informele kreef straathandel te stop? Verduidelik u antwoord asseblief.*

5. Do you consider informal street trading as a crime? If yes, do you consider it as more serious than other crimes in the town? Explain your answer please. / *Beskou u informele straathandel as 'n misdaad? In ja, is dit meer ernstig as ander misdaad in die dorp? Verdudelik u antwoord asseblief.*

6. If you belong to a civic organisation or lobbying group, what steps does your organisation take to combat poaching as well as (cray) fish informal street trading? / *As u aan 'n gemeenskapsorganisasie of drukgroep behoort wat doen u organisasie om stropery so wel as informele (kreef/vis) straatverkope aan te spreek?*

Thank you/*Dankie* 😊

Appendix C: **Interview Questions (Law Enforcement & Environmental Agencies)**

UNIVERSITY OF THE WESTERN CAPE /

UNIVERSITEIT VAN WES-KAAPLAND

DEPARTMENT OF GEOGRAPHY, ENVIRONMENTAL STUDIES, AND TOURISM /

DEPARTMENT GEOGRAFIE, OMGEWINGSTUDIES EN TOERISME

C. Interview Questions (Law Enforcement & Environmental Agencies)

Onderhoud vrae (Wetstoepassing- en Omgewingsagentskappe)

1. What is your understanding of the poaching of marine resources? / *Wat is u begrip van die stroop van mariene bronne?*
2. Who or what is primarily responsible for crayfish poaching in the Paternoster area? /Wie of wat is hoofsaaklik verantwoordelik vir kreef stropery in die Paternoster omgewing?
3. Where and when does crayfish poaching normally occur? / *Waar en wanneer vind kreef stropery gewoonlik plaas?*

4. Which crayfish quota-related act/policy/bylaw is most difficult to apply/enforce? / *Watter kreefkwota verwante wet/beleid/plaaslike verordening is die moeilikste om toe te pas/af te forseer?*

5. What obstacles/circumstances prevent you from executing your crayfish quota monitoring and enforcement duties (effectively), if any? / *Watter struikelblokke of omstandighede verhoed u om u pligte rakende kreefkwota monitering en wetstoepassing (effektief) uit te voer, indien enige?*

6. Provide your opinion on the adherence to (crayfish) quota regulations by: / *Wat is u opinie rakende die wetsgehoorsaamheid van die volgende groeperinge as dit kom by kreefkwota regulasies*:

   (a) Commercial fishing companies / *Kommersiële vis maatskappye*

   (b) Small fishers / *Kleinskaal vissers*

   (c) Subsistence fishers / *Bestaansvissers*

7. Is, or do you consider informal crayfish street trading as illegal? Explain your answer please. / *Is, of beskou u informele kreef straathandel as onwettig? Verdudelik u antwoord asseblief.*

8. What do you consider as sustainable ways to mitigate and/or solve crayfish poaching as well as crayfish street trading? / *Wat bestempel u as volhoubare maniere om die problem van kreef stropery asook straat kreefhandel te verminder en/of op te los?*

Thank you/*Dankie* 😊

Appendix D: Information Sheet

UNIVERSITY *of the*
WESTERN CAPE

Information Sheet

Dear Participant

My name is Ashlin Theo Ontong. I am a Master's candidate in the Department of Geography, Environmental Studies and Tourism in the Faculty of Arts and Humanities, University of the Western Cape (UWC).

The purpose of this study is to obtain a better understanding of the various impacts of informal crayfish street trading in Paternoster. The researcher through this study will obtain information by observing the fishing community in their natural environment. This approach would ensure that a better understanding of this community would be obtained. To achieve this, aim the researcher would have to engage in face-to-face conversations/interviews with street traders and other interested parties.

Through this thesis I hope to identify the various socio-economic, historical, and legal processes that have contributed towards the growth of the informal trade of crayfish. A further objective of this study is to illustrate the various market-driven interests, the dependence on this livelihood and sustainable marine harvesting practices. This study will therefore investigate the problems, patterns and processes associated with informal crayfish street trading in Paternoster.

I am hereby kindly requesting your participation in this research, by means of an interview. If you are willing and agreed to voluntarily participate in this research, please be assured that your participation will be done with complete confidentiality and anonymity and without any cause for harm or embarrassment. As the respondent, you will be afforded the opportunity to withdraw from this research at any given time. All information obtained throughout this interview process will be kept confidential by the researcher. The researcher will also ensure that all information related to the identity of the respondent will be kept anonymous. This is a low-medium risk study and notably, all human interactions and talking about self or others carry some number of risks. I will nevertheless minimize such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a counselling organization located close to where you stay. The information gathered through this research will only be used for its intended purpose.

Covid 19 Protocols

Throughout the interview process, the researcher and participant will adhere to strict covid 19 protocols which include:

a) The washing of hands with soap and water.
b) All items brought to the interview site, including but not limited to pens, pencils, erasers, notepads, and clipboards will be sanitized.
c) During the interview process, social distancing of 1.5 m will be maintained between the researcher and **the** participant.
d) As far as possible all interviews will be conducted outside, to prevent the spread and contraction of covid 19.
e) A facemask will be worn by both the researcher and the participant.
f) If the researcher or participant has been in contact with any person infected with covid 19, all interviews will be conducted remotely through the usage of online platforms such as Whatsapp, Google teams or video call.
g) The researcher will always carry a bottle of sanitiser and digital temperature reader, to scan and sanitize both parties before the onset of an interview.

Your assistance in this research project will be greatly appreciated. Should you have any questions, queries, comments, reservations or concerns regarding this research or your role and right as participant, please feel to contact me, Ashlin Ontong, at 3332899@myuwc.ac.za/ ashlin391994@gmail.com or my supervisor, Michael Dyssel, at mdyssel@uwc.ac.za.

The UWC Research Ethics Office can also be contacted at 021 9594111, research-ethics@uwc.ac.za

Thank you in anticipation,

Ashlin Theo Ontong

UNIVERSITY of the WESTERN CAPE

Inligtingsblad

Geagte deelnemer

My naam is Ashlin Theo Ontong. Ek is 'n MA kandidaat in die Departement Geografie, Omgewingstudies en Toerisme in die Fakulteit Lettere en Wysbegeerte, Universiteit van Wes - Kaapland (UWK).

Die doel van hierdie studie is om 'n beter begrip te verkry van die verskeie impakte van informele kreefstraathandel in Paternoster. Die navorser sal deur hierdie studie inligting bekom deur die vissersgemeenskap in hul natuurlike omgewing waar te neem. Hierdie benadering sal verseker dat 'n beter begrip van hierdie gemeenskap verkry sal word. Om hierdie doel te bereik, sal die navorser van aangesig tot aangesig gesprekke/onderhoude met straathandelaars en ander belangstellendes moet voer.

Deur hierdie tesis hoop ek om die verskillende sosio-ekonomiese, historiese en wetlike prosesse te identifiseer wat bygedra het tot die groei van die informele handel in kreef. 'n Verdere doelwit van hierdie studie is om die verskillende markgedrewe belange, die afhanklikheid van hierdie bestaan en volhoubare mariene oespraktyke te illustreer. Hierdie studie sal dus die probleme, patrone en prosesse wat met informele kreefstraathandel in Paternoster geassosieer word, ondersoek.

Hiermee versoek ek graag u deelname aan hierdie navorsing, deur middel van ‘n onderhoud. As u bereid is om vrywillig aan hierdie navorsing deel te neem, kan u verseker wees dat u deelname met volledige vertroulikheid en anonimiteit sal plaasvind sonder dat dit enige skade of verleentheid sal veroorsaak. As die respondent sal u die geleentheid gebied word om op enige gegewe tydstip aan hierdie navorsing te onttrek. Alle inligting wat gedurende hierdie onderhoudsproses verkry word, sal deur die navorser vertroulik gehou word. Die navorser sal ook verseker dat alle inligting wat verband hou met die identiteit van die respondent anoniem gehou sal word. Dit is 'n lae-medium risiko studie en veral alle menslike interaksies en praat oor self of ander dra 'n mate van risiko's. Ek sal nietemin sulke risiko's verminder en dadelik optree om u te help as u enige ongemak, sielkundig of andersins ervaar tydens die proses van u deelname aan hierdie studie. Waar nodig, sal 'n gepaste verwysing gemaak word na 'n beradingsorganisasie naby waar jy bly.
Die inligting wat deur hierdie navorsing ingesamel word, sal slegs vir die geoormerkte doel daarvan gebruik word.

Covid 19 Protokolle
Gedurende die onderhoudproses sal die navorser en deelnemer aan streng medevid 19-Protokolle hou wat insluit:

a) Die was van hande met seep en water.
b) Alle items wat na die onderhoudsterrein gebring word, insluitend maar nie beperk nie tot penne, potlode, uitveërs, note-kussings, knipborde, sal ontsmet word.
c) Tydens die onderhoudproses sal sosiale distansieering van 1.5m tussen die navorser en deelnemer gehandhaaf word.

d) Sover moontlik sal alle onderhoude buite gevoer word om die verspreiding en inkrimping van covid 19 te voorkom.
e) ‘n gesigsmasker sal deur sowel die navorser en die deelnemer gedra word.
f) As die navorse of deelnemer kontak gehad het met enige persoon wat besmet is met covid-19, sal alle onderhoude op afstand gevoer word deur die gebruik van aanlynplatforms soos Whatsapp, Google-spanne of video-oproep.
g) Die navorser sal te alle tye ‘n bottel sanitiser en digitale temperatuurleser dra om beide partye te skandeer en te ontsmet voor die aanvang van ‘n Onderhoud.

U hulp in hierdie navorsingsprojek sal baie waardeer word. As u enige vrae, kommentaar, voorbehoude of bekommernisse het rakende hierdie navorsing of u rol as deelnemer, kontak my, Ashlin Ontong, gerus by 3332899@myuwc.ac.za/ashlin391994@gmail.com of my studieleier, Michael Dyssel by mdyssel@uwc.ac.za. Die UWK-navorsingsetiekkantoor kan ook gekontak word by 021 9594111, research-ethics@uwc.ac.za

Dankie in afwagting,
Ashlin Theo Ontong

Appendix E: Consent Form

UNIVERSITY *of the* WESTERN CAPE

University of the Western Cape

Private Bag X17, Bellville 7535, Cape Town, South Africa
Telephone: (021) 959 9306

Project title: An analysis of crayfish street trading challenges in Paternoster

Researcher: Ashlin T. Ontong (email: 3332899@myuwc.ac.za)

Consent form

Dear interviewee, thank you for being willing to participate in the interview part of my study. To obtain relevant information for this Masters Dissertation I will be taking an approach which involves the researcher observing people in their natural environment. The overall aim with this approach is to gain a deeper understanding of this fishing community. The researcher will therefore engage in face-to-face conversations/interviews with street traders and other interested parties. This research will therefore attempt to unpack the practice of informal crayfish street trading in Paternoster.

This letter of consent serves to inform you about your right to confidentiality and the fact that you could withdraw at any stage of the data collection process if you so wish. As the participant you are allowed to utilise an alias to ensure confidentiality and anonymity. The researcher in this master's Dissertation recognises and acknowledges the Protection of Personal Information Act (POPIA). The researcher will therefore ensure the protection of the participants identity and will

not share any personal information without the consent of the participants. An infringement upon this human right is illegal and the guilty party can be fined or must pay compensation to the participant, should there be a breach in this act. Please read the form carefully before signing.

1. I confirm that I have read and understood the information sheet explaining the above project and I have had the opportunity to ask any questions about the said project. ☐
2. I understand that I am free not to participate and have the right to withdraw from the study at any time, without having to explain myself. ☐
3. I am aware that this interview might result in information which may be published (in the form of a Masters Dissertation) ☐
4. I agree to take part in the above research project. ☐
5. I am aware that an alias can be used to ensure that my anonymity is maintained. ☐

Signature (Participant): …… Date: ……

Signature (Researcher): …… Date: ……

UNIVERSITY of the WESTERN CAPE

Universiteit van Wes -Kaapland

Faculty of Arts

Private Bag X17, Bellville 7535, Cape Town, South Africa
Telephone: (021) 959 9306

Projek Titel: ‘n Analise van kreef-straathandel uitdagings in Paternoster

Navorser: Ashlin T. Ontong (epos: 3332899@myuwc.ac.za)

Toestemmingsvorm

Geagte onderhoudvoerder, dankie dat u bereid is om deel te neem aan die onderhoud van my studie. Ten einde relevante inligting vir hierdie Meestersverhandeling te verkry, sal ek 'n benadering volg wat behels dat die navorser mense in hul natuurlike omgewing waarneem. Die algehele doel met hierdie benadering is om 'n dieper begrip van hierdie vissersgemeenskap te kry. Die navorser sal dus van aangesig tot aangesig gesprekke / onderhoude met straathandelaars en ander belangstellendes voer. Hierdie navorsing sal dus poog om die praktyk van informele kreefstraathandel in Paternoster uit te pak.

Hierdie toestemmingsbrief dien om u in te lig oor u reg op vertroulikheid en die feit dat u op enige stadium van die data-insamelingsproses kan onttrek as u wil. As deelnemer word u toegelaat om 'n alias te gebruik om vertroulikheid en anonimiteit te verseker. Die navorser in hierdie Meestersverhandeling erken die Wet op die Beskerming van Persoonlike Inligting (POPIA). Die navorser sal dus die beskerming van die deelnemers se identiteit verseker en sal geen persoonlike inligting deel sonder die toestemming van die deelnemers nie. 'n Oortreding van hierdie mensereg is onwettig en die skuldige party kan beboet word of vergoeding aan die deelnemer moet betaal, indien daar 'n oortreding in hierdie wet is.

Lees asseblief die vorm noukeurig voor ondertekening.

1. Ek bevestig dat ek die inligtingsblad gelees en verstaan het wat die bogenoemde projek verduidelik en ek het die geleentheid gehad om enige vrae oor die genoemde projek te vra. ☐
2. Ek verstaan dat ek vry is om nie deel te neem nie en het die reg om te eniger tyd aan die studie te onttrek, sonder om myself te verduidelik. ☐
3. Ek is bewus daarvan dat hierdie onderhoud kan lei tot inligting wat gepubliseer kan word (in die vorm van 'n Meestersverhandeling) ☐
4. Ek stem in om aan bogenoemde navorsingsprojek deel te neem. ☐
5. Ek is bewus daarvan dat 'n alias gebruik kan word om te verseker dat my anonimiteit gehandhaaf word. ☐

Handtekening (Deelnemer):……..… Datum: ……....

Handtekening (Navorser):…… Datum: ……..…

Appendix F: **The selling of crayfish in parking lots**

Appendixes F are pictures that were taken of crayfish that were being sold by street traders in the parking lots of Paternoster.

Appendix G: List of respondents

Respondent Number	***Category***	***Location***	***Type of interview***	***Date & Time***
Respondent 1	Informal Fisher/ Street Trader	Parking-Bay	Informal & Formal	15 April 2022 (09h00-11h00)
Respondent 2	Informal Fisher/ Street Trader	Beach	Informal	15 April 2022 (12h00-13h00)
Respondent 3	Informal Fisher	Beach/Parking-Bay	Informal	15 April 2022 (14h00-15h00)
Respondent 4	Informal Fisher	Beach/Parking-Bay	Informal/Formal	15 April 2022 (15h00-17h00)
Respondent 5	Informal Fisher	Parking-Bay	Informal/Formal	15 April 2022 (17h00-18h00)
Respondent 6	Street Trader	Parking-Bay/street corner	Informal	16 April 2022 (09h00-10h00)
Respondent 7	Street Trader	Parking-Bay/street corner	Informal	16 April 2022 (11h00-

				12h00)
Respondent 8	Street Trader	Parking-Bay/street corner	Informal	16 April 2022 (12h00-13h00)
Respondent 9	Street Trader	Parking-Bay/street corner	Informal/Formal	16 April 2022 (14h00-15h00)
Respondent 10	Street Trader	Parking-Bay/street corner	Informal	16 April 2022 (15h00-16h00)
Respondent 11	Seafood Shop Owner	Paternoster Waterfront	Informal/Formal	16 April 2022 (16h00-17h00)
Respondent 12	BNB Owner	Along the coast	Informal/Formal	16 April 2022 (17h00-18h00)
Respondent 13	Restaurant Owner	Paternoster Waterfront	Informal/Formal	17 April 2022 (09h00-10h00)
Respondent 14	BNB Owner	Along the coast	Formal	17 April 2022 (10h00-11h00)
Respondent 15	Gallery Owner	Paternoster Waterfront	Informal	17 April 2022

				(11h00-12h00)
Respondent 16	Police Officer (Sergeant)	Beach	Informal	17 April 2022 (12h00-13h00)
Respondent 17	Police Officer (Detective)	Police station	Informal/ Formal	17 April 2022 (15h00-18h00)
Respondent 18	Police Officer (Constable)	Police station	Informal/formal	17 April 2022 (14h00-15h00)
Respondent 19	Police Officer (Traffic Services)	Entrance to Vredenburg	Informal	15 April 2022 (07h00-08h00)
Respondent 20	Environmental Activist	Beach	Informal/Formal	16 April 2022 (08h00-09h00)