

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

Patrick Surmon

Dissertation submitted in partial fulfilment of the requirements
for the degree of Masters of Architecture to the
School of Built Environment and Development Studies.
University of KwaZulu-Natal
Durban, South Africa
November 2019

Supervisor: Bridget Horner
Dissertation Document

PLAGIARISM DECLARATION

I, PATRICK CRAIG SURMON declare that,

1. The research reported in this thesis, except where otherwise indicated, is my original research.
2. This thesis has not been submitted for any degree or examination at any other university.
3. This thesis does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.
4. This thesis does not contain other persons' writing, unless specifically acknowledged as being sourced from other researchers. Where other written sources have been quoted, then:
 - Their words have been re-written but the general information attributed to them has been referenced.
 - Where their exact words have been used, then their writing has been placed in italics and inside quotation marks, and referenced.
5. This thesis does not contain text, graphics or tables copied and pasted from the internet, unless specifically acknowledged, and the source being detailed in the thesis and in the reference sections.

Signed

DECLARATION

I declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly acknowledged. This document is submitted in partial fulfilment of the requirements for the degree of Masters in Architecture at the School of Built Environment and Development Studies, University of Kwa-Zulu Natal, Durban, South Africa. None of the work has been previously submitted for any degree or examination in any other University.

PATRICK SURMON

STUDENT NO. 211535320

NOVEMBER 2019 AT THE UNIVERSITY OF KWA-ZULU NATAL

ACKNOWLEDGEMENTS

I would like to thank the following people for their unconditional support, meticulous helping hand and unprecedented patience:

- Bridget Horner, for your guidance, support and insightful theoretical and methodological input into this dissertation. It is your time, endless patience and encouragement as my supervisor that drove me towards the completion of this dissertation.
- Lawrence Ogunsanya, for your guidance, understanding and support during the prolonged process of completing this dissertation.
- Ivor Daniel, for your endless encouragement, guidance and support in enabling my completion of this dissertation. For the continued support from the D&A team.
- My friends and family for your unwavering support and never-ending encouragement.

DEDICATION

This dissertation is dedicated to my loving parents. Thank you for your endless encouragement to follow my dreams and to face the challenges that lie ahead, not only as an aspiring architect, but in every aspect of life. You never fail to provide me with unwavering support and encouragement in everything I do. Your continued belief in me has guided me along many great paths in life.

I am who I am because of you.

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

ABSTRACT

In postmodern urban theory there is a contemporary movement that undertakes to explore the social complexities of space in modern cities. This postmodern theoretical approach in urban thinking juxtaposes the dehumanising emphasis on metropolitan conformity of modernist urbanism. It is an approach that investigates urban spatiality as a physical product of the human social condition.

The global phenomenon of rapid urbanisation has resulted in modern cities that have become increasingly complex in the way that they enable and organise the living together of people. By its very nature, a city's most valuable and fundamental commodity is space. The increasing demand for access to the finite amount of urban space

within cities has, in many instances, resulted in a spatial conflict between people and urban communities, all of whom compete to gain access to the resources and opportunities that a city offers. One of the marginalising results of the phenomenon of escalating competition over urban space is the inevitable disruption or displacement of traditional communities who once occupied a space.

This dissertation explores the case of Durban's subsistence fishing community as an example of a traditional urban community that has been subject to urban displacement. Issues such as racially biased apartheid urban planning, urban gentrification, privatisation of urban public spaces and the growth of large fishing enterprises have all had a negative impact on the success of both on-shore and

off-shore subsistence fisherfolk alike. The inability to find adequate space prevents the once thriving community of fishers from practising their trade.

A qualitative research study explores the case of Durban's subsistence fishing community through the lens of spatial justice theory. An adaption of an existing spatial justice research model is developed as an investigative framework that examines the three Spatial Justice components (spatial claim, spatial power and spatial links) regarding the subsistence fishing community's occupation of urban space in Durban. The three components of Spatial Justice evaluate: the historical and cultural significance of the subsistence fishing community in Durban, how the community negotiates urban space, and what can be

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

implemented to enhance subsistence fishing practices. The research investigation established three broad based findings: Firstly, Durban's subsistence fishing community has a rich cultural heritage that is currently not fully embraced by the city. Secondly, it is found that some of the spaces that are used by the subsistence fishers are the residual, 'unwanted' urban public spaces that are left over and cut-off from the surrounding urban framework. Finally, it is established that there is little provision, in the form of infrastructure or management systems, that seeks to enhance the practices of the subsistence fishing community in Durban.

The research findings are used to inform a proposed architectural response that aims to reintegrate subsistence fishers as part of

Durban's urban community. Ultimately the building aims to provide a platform for Durban's subsistence fishing community's future development within the current physical and social context of the city.

TABLE OF CONTENT

PLAGIARISM DECLARATION _____	i
DECLARATION _____	ii
ACKNOWLEDGEMENTS _____	iii
DEDICATION _____	iv
ABSTRACT _____	v
CHAPTER ONE - INTRODUCTION TO RESEARCH	1
1.0	2
INTRODUCTION _____	2
1.1	4
RESEARCH BACKGROUND _____	4
GLOBAL PHENOMENON	4
APARTHEID PLANNING	5
URBAN GENTRIFICATION	5
PRIVATISATION OF PUBLIC SPACE.....	6
BIG BUSINESS & CORPORATISATION	7
THE CASE OF DURBAN'S SMALL SCALE FISHERS.....	8
MOTIVATION FOR RESEARCH.....	8
1.2	10
DEFINING THE PROBLEM _____	10
PROBLEM STATEMENT	11
AIM OF RESEARCH.....	11
KEY OBJECTIVE	11
OTHER OBJECTIVES	11

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

1.3	12
RESEARCH SCOPE _____	12
ASSUMPTIONS.....	12
KEY QUESTION.....	13
OTHER QUESTIONS.....	13
1.4	14
THEORETICAL CONCEPTS _____	14
NEOLIBERALISM.....	14
SPATIAL JUSTICE.....	14
SOCIAL BEING.....	14
SPATIALITY.....	15
JUSTICE.....	16
1.5	17
RESEARCH FRAMEWORK _____	17
1.6	20
DISSERTATION STRUCTURE _____	20
1.7	23
CONCLUSION _____	23
CHAPTER TWO - CONCEPTUAL & THEORETICAL FRAMEWORK	24
2.0	25
INTRODUCTION TO THEORY _____	25
2.1	26
NEOLIBERALISM _____	26
2.2	29
SPATIAL JUSTICE _____	29

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

SOCIAL BEING	30
SPATIALITY.....	33
JUSTICE.....	38
SPATIAL JUSTICE CONCLUDED	39
2.3	41
CONCLUSION	41
CHAPTER THREE - SPATIAL JUSTICE RESEARCH DESIGN	42
3.0	43
INTRODUCTION	43
3.1	44
SPATIAL JUSTICE RESEARCH	44
PURPOSE OF CASE STUDY	44
3.2	45
SPATIAL JUSTICE FRAMEWORK	45
SPATIAL CLAIM - THE RIGHT TO BE & BECOME	46
SPATIAL POWER - THE RIGHT TO THRIVE & EXPRESS	47
SPATIAL LINKS - THE RIGHT TO ACCESS & CONNECT	48
3.3	50
METHODOLOGY - FROM THEORY TO RESEARCH DESIGN	50
CASE STUDY FRAMEWORK.....	50
CASE STUDY ASSESSMENT GUIDE.....	51
METHODOLOGY CONCLUDED	55
3.4	56
CONTEXT OF THE CASE STUDY	56
DURBAN, SOUTH AFRICA'S MARITIME CITY.....	56

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

SITE LOCATION	57
3.5	59
LIMITATIONS OF THE RESEARCH	59
3.6	60
CONCLUSION	60
CHAPTER FOUR - CASE STUDY PART 1 - SPATIAL CLAIM	61
4.0	62
INTRODUCTION	62
4.1	63
A HISTORY OF SUBSISTENCE FISHING IN DURBAN	63
EARLY YEARS OF SUBSISTENCE FISHING	63
POST WAR RELOCATION	65
APARTHEID RELOCATION	65
NEOLIBERAL DEVELOPMENT.....	66
4.2	67
SPACES USED FOR SUBSISTENCE FISHING TODAY	67
ON-SHORE FISHING SPOTS	67
OFF-SHORE SUBSISTENCE FISHERS.....	73
4.3	74
MOULDING, CHANGING AND RESHAPING URBAN SPACE	74
A HISTORY OF ADAPTING TO CHANGE.....	74
ON-SHORE FISHERS' FIGHT FOR SPACE	75
4.4	79
IDENTITY, HERITAGE AND MEMORY	79
THE IDENTITY OF A CITY.....	79

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

A MARITIME CITY.....	80
SUBSISTENCE FISHING & URBAN IDENTITY.....	81
URBAN IDENTITY OF DURBAN'S SUBSISTENCE FISHERS.....	82
4.5	85
CONCLUSION.....	85
CHAPTER FIVE - CASE STUDY PART 2 - SPATIAL POWER	87
5.0	88
INTRODUCTION.....	88
5.1	89
EVALUATING SPATIAL QUALITIES.....	89
ENGAGED PUBLIC SPACES.....	91
SPACES ON THE PERIPHERY.....	93
SPACES OF TRANSITION.....	95
SPACES OF RUIN & NEGLECT.....	97
5.2	98
ABILITY TO PRACTICE IN SPACE.....	98
ABILITY TO FISH.....	99
ABILITY TO TRADE.....	102
ARCHITECTURAL PRECEDENTS.....	103
5.3	108
ABILITY TO CONTRIBUTE TO PUBLIC LIFE.....	108
POVERTY ALLEVIATION, ENVIRONMENTAL PROTECTION & URBAN EXPERIENCE.....	108
5.4	110
CONCLUSION.....	110

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

CHAPTER SIX - CASE STUDY PART 3 - SPATIAL LINKS	111
6.0	112
INTRODUCTION _____	112
6.1	113
SPATIAL BARRIERS _____	113
BARRIERS AT THE BEACHFRONT.....	114
BARRIERS AT THE ESPLANADE	115
BARRIERS AT GRUNTER GULLY	117
BARRIERS AT THE HARBOUR PIERS.....	118
6.2	120
SHARING SPACES _____	120
SPATIAL CONFLICTS WITH SURFERS.....	120
SPATIAL CONFLICTS WITH TRANSNET.....	121
6.3	122
SPATIAL CONNECTIONS _____	122
6.4	123
CONCLUSION _____	123
CHAPTER SEVEN - FINDINGS AND RECOMMENDATIONS	124
7.0	125
INTRODUCTION _____	125
7.1	126
THEORETICAL FRAMEWORK & RESEARCH METHODOLOGY _____	126
7.2	127
FINDINGS & RECOMMENDATIONS _____	127
RESEARCH FINDINGS.....	127

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

RECOMMENDATIONS.....	131
7.3	133
CONCLUSION.....	133
FURTHER RESEARCH.....	133
PART 2	135
CHAPTER EIGHT - A FISHING CENTRE IN DURBAN HARBOUR	135
INTRODUCTION TO DESIGN	136
FROM THEORY TO DESIGN.....	137
ARCHITECTURAL PRINCIPLES & PRECEDENTS - SPATIAL CLAIM.....	138
ARCHITECTURAL PRINCIPLES & PRECEDENTS - SPATIAL POWER.....	139
ARCHITECTURAL PRINCIPLES & PRECEDENTS - SPATIAL LINKS.....	140
DESIGN PRINCIPLE CONCEPT	141
DESIGN PROPOSAL	142
LIST OF FIGURES	149
REFERENCES	155
APPENDICES.....	161

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:
Towards the design of a FISHING CENTRE in Durban Harbour

CHAPTER ONE
INTRODUCTION TO RESEARCH



Photograph of a fishing site at
Durban Harbour
(Photograph by author; 2017)

1.0

INTRODUCTION

"...[P]ost-modernist urbanism conceives of a multiplicity of diverse and reverberating lifeworlds... whose combination moves toward an unknown city." (Caulfield, 1994: 109)

In postmodern urban theory there is a contemporary movement that undertakes to explore the social complexities of space in modern cities. This postmodern theoretical approach in urban thinking juxtaposes the dehumanising emphasis on metropolitan conformity of modernist urbanism. It is an approach that investigates urban spatiality as a physical product of the human social condition.

The global phenomenon of rapid urbanisation has resulted in modern cities that have become

increasingly complex in the way that they enable and organise the living together of people. By its very nature, a city's most valuable and fundamental commodity is space. All spaces within the confines of a city are generated as either a result or byproduct of organising a society in terms of access to, or exchange with, urban resources such as: trade, commerce, production, transportation, communication, education, recreation and economic opportunity, (Farooq, 2013). The increasing demand for access to the finite amount of urban space within cities has, in many instances, resulted in a spatial conflict between people and urban communities, all of whom compete to gain access to the resources and opportunities that a city offers.

One of the marginalising results of the phenomenon of escalating competition over

urban space is the inevitable disruption or displacement of traditional communities who once occupied a space. While motives for redevelopment or other changes in urban spatiality may vary, the result of urban displacement goes beyond the mere physical displacement of a community. It is the attrition of established traditional social networks, it is the erosion of a heritage and culture from urban space (Knight & Gharipour, 2016).

The case of Durban's subsistence fishing community is an example of a traditional urban community that has been subject to urban displacement. Issues such as racially biased apartheid urban planning, urban gentrification, privatisation of urban public spaces and the growth of large fishing enterprises have all had a negative impact on the success of both on-shore and off-shore subsistence fisherfolk alike. The

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

inability to find adequate space prevents the once thriving community of fishers from practising their trade.

This research explores the case of Durban's subsistence fishing community, examining reasons for the spatial marginalisation of the subsistence fishing community and continues to develop a methodological framework towards finding space for community within the urban framework of the city. Research findings are used to inform a proposed architectural response that aims to reintegrate subsistence fishers as part of Durban's urban community. Ultimately the building will aim to provide a platform for Durban's subsistence fishing community's future development within the current physical and social context of the city. The building will be a multifaceted response that is derived from the accumulative

involvement of the fishing community, local urban community members, government, historians, tourists, entrepreneurs, conservationists and architects.

The research does not intend to provide a "model answer" in the form of an architectural solution that addresses all of the issues and challenges that are faced by the local subsistence fishing community. Instead, it is an exploration in the possibility for architecture to act in a mediatory capacity, between a displaced community and the city, responding to a complex array of social, economic and environmental issues.

1.1

RESEARCH BACKGROUND

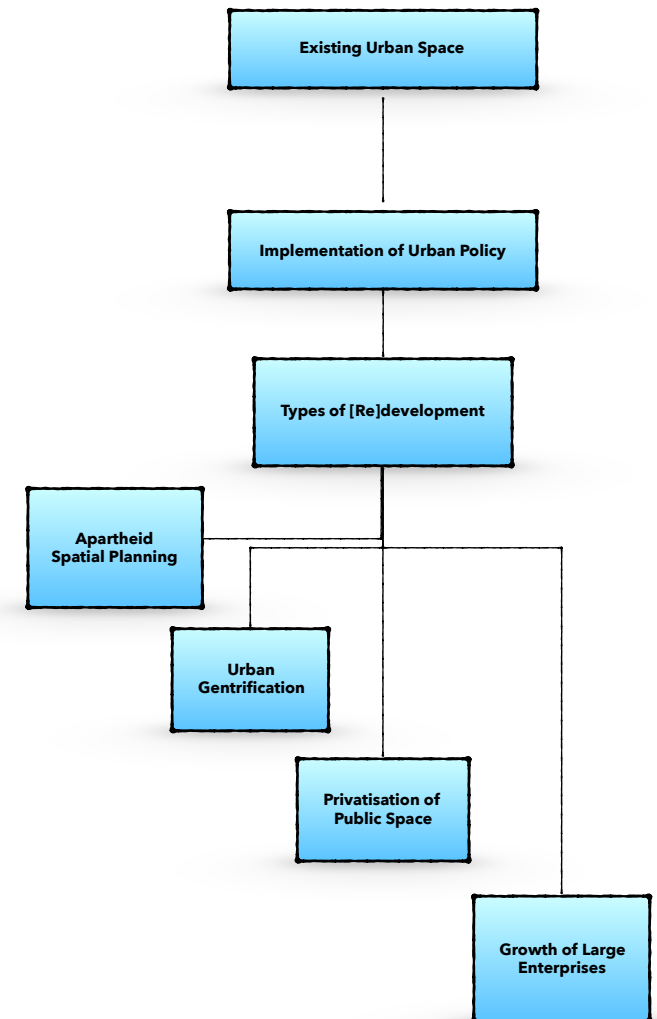
"The New Urban Agenda represents a shared vision for a better and more sustainable future - one in which all people have equal rights and access to the benefits and opportunities that cities can offer, and in which the international community reconsiders the urban systems and physical form of our urban spaces to achieve this." (Clos, 2017: iv)

GLOBAL PHENOMENON

In recent years, as a result of the increasing prevalence of urban-spatial competition and spatial marginalisation through urban displacement, urban theorists have explored the matrix of issues regarding the organisation and allocation of urban space as a hybrid result of

political, geographical, economic and social agendas.

Historically, urban (re)development has often resulted in the displacement of communities or groups of people who previously occupied the space. As economic prosperity and political power are the fundamental driving forces behind the development of today's modern capitalist cities, the 'less prosperous' are strong-armed to make way for further development. *"Regardless of motives, traditional communities, sometimes defined by ethnic, racial, or other cultural connections, are often disrupted"* (Knight & Gharipour, 2016: 6).



1.1: Diagram of Research Background Sections

(illustration by author; 2017)

APARTHEID PLANNING

In South Africa, the detrimental effects of urban displacement are widely seen throughout most urban areas across the country. Like many colonial countries, South Africa has a history of oppression based on cultural or racial lines. Moreover, racial marginalisation was further ingrained by means of apartheid governance and the implementation of the Group Areas Act in 1950. The implementation of apartheid spatial planning resulted in Black, Coloured and Indian people being forcefully displaced from urban centers and relocated to demarcated areas on the outskirts of major cities and towns. Although forced relocation had devastating effects on the communities at the time of implementation, in that families and established communities were uprooted and torn apart, the longterm effect is equally concerning. Today, more than two decades after the demise of apartheid,

economic opportunity, that is afforded by access to urban amenities and spaces, is still entrenched along racial lines (Abdulla, 2017).

URBAN GENTRIFICATION

Although apartheid spatial planning has been allocated the lion's share of the blame for the spatial marginalisation of communities within South African cities, capitalist driven development has also played a leading role in determining the allocation of urban space. Like many cities around the world, trends of urban redevelopment or renewal (which are proponents of twenty-first century "global cities") are being replicated within the South African urban context. Over the last two decades, capital driven development has resulted in the 'renewal' of many urban areas in South African cities. Typically low-income areas adjacent to city centres are selected for

redevelopment as the relatively cheap land costs render investors the potential for maximum return. These areas are then transformed into easily marketable trendy urban areas or neighbourhoods comprising of either (or a combination of) business spaces, residential apartments or recreational spaces, designed to attract "...a pleasant tableau of the multiracial middle classes eating wood-fired pizza and playing with their smart phones" (Myambo, 2017). While many hail the fashionable streets of gentrified areas as an improvement on the urban city scape, an ideological perspective that is typical of today's global[ising] cities, one cannot ignore the plight of the displaced low-income communities who once occupied the spaces. The marginalised communities are forced to move to affordable areas further towards the peripheries of the cities, while 'their' urban space gets re-

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

appropriated for the city's more affluent inhabitants. The net effect of this type of urban displacement is two fold: Firstly the physical displacement of low-income communities further entrenches socioeconomic inequality as peripheral relocation makes it increasingly difficult for these communities to gain access to urban economic opportunities afforded by the city. Myambo (2017) explains that the South African urban reality is one where the spatial dynamics of apartheid urban planning have merely been replaced with a spatial segregation along socioeconomic discriminatory lines. Secondly, a community's urban culture, social networks and heritage that once defined the unique and dynamic socio-spatial character of the urban space is lost (Knight & Gharipour, 2016). Gentrification of low-income spaces within South African cities displaces the rich spatial energy, that is rooted in local heritage,

with a spatial energy that conforms to new global ideologies (Visser, 2003). These spaces have been described to, *"...have more in common with its equivalents in Euro-America than less developed local areas adjacent to it"* (Myambo, 2017).

PRIVATISATION OF PUBLIC SPACE

Urban displacement does not necessarily only occur at residential level. In more recent years, global ideologies that have been enforced through the implementation of neoliberal economic policies have become yet another contributing factor towards urban displacement within South African cities. Ideally, cities are required to provide their citizens with services and spaces that promote livability, however in an increasingly 'globalised' economy, South African cities are being managed in such a way as to attract and enhance monetary capital. The

'business like' mode of city management often results in the citizens' needs being compromised in favour of capital gains (Thrift, 1999).

One of the most important services that a city provides its citizens with is access to urban public spaces. Public spaces are unique in their ability to facilitate the living out of every day life, providing a platform for organic social interactions and exchanges between people, often cementing the existential commonality of a 'society' defined by equal access to the urban space. Accessible public spaces also provide places for poorer citizens to work, reap resources and generate an income to sustain their livelihoods. Although public spaces are an invaluable social asset to a city, global urban ideologies have led to these spaces becoming more privatised, reserved and regulated, with

barriers to entry in terms of which many ordinary citizens do not qualify (Dray, 2009).

In South Africa, a country that is diversely rich in traditional practices, urban public spaces have been, and continue to be, used by many communities as a means to provide for their basic subsistence needs. The privatisation and development of these spaces (in order to attract investment) poses a threat to the communities that rely on these spaces to live. Mitchell in Dray (2009: 2), questions the justification of this type of development in that a *"...move to a more secure and ordered city has led to the exclusion of the poor and marginalised from public spaces."* This poses the question; is it just (fair) for the development of urban public space to result in exclusion of the poor?

BIG BUSINESS & CORPORATISATION

Another 21st century phenomenon of a capitalist driven economy, such as South Africa, is the growth of large business enterprises. Since 1994, South Africa has positioned itself on the global stage to attract foreign investment and has encouraged the development of large-scale corporations by means of regulatory and tax incentives. The monetary wealth that is generated by large businesses in South Africa is seen as favourable to the growth of the capitalist economy. While large businesses may add value in their ability to optimise economies of scale in order to produce/provide affordable goods and services at large scales for South African consumers, the high level of competition creates an economic environment in which small businesses struggle to survive (SME South Africa, 2017).

In these cases small subsistence driven industries or privately owned businesses within South Africa are being displaced at an economic level by the ever growing large scale enterprises. The resultant economic displacement of small businesses or small-scale industries is visibly reflected within the urban spaces of South African cities, where spaces that were once occupied by small businesses or industries now stand vacant or have been redeveloped to accommodate the ever growing large scale businesses. The spatial urban displacement of small-scale businesses and industries again results in the the attrition of the unique and culturally definitive spatial characteristics within South African cities (Murray, 2008).

THE CASE OF DURBAN'S SMALL SCALE FISHERS

In *Legends of the Tide: The Seine-netters & the roots of the Durban fishing industry*, Govender and Chetty (2014) give a historical account of the "...forgotten fishing community who lived and worked in the heart of Durban's harbour" . In the mid 1800s subsistence fishing communities, who were comprised predominantly of previously indentured Indian labourers, established settlements in and around the Durban harbour. Encouraged by port authorities the communities began to thrive and started to fish on a commercial scale. Thus Durban's fishing industry was born.

From 1890 to the present, spatial displacement began to erode the once thriving small commercial fishing industry. Today's remaining community of subsistence and small-scale

commercial fishers, some of whom come from a lineage of local fishermen dating back to the 1800s, wage a constant battle over access to space in and around Durban harbour. Like many low-income South African communities, the subsistence fisherfolk of Durban are victims of spatial marginalisation and urban displacement. Over the years, issues such as: apartheid planning, gentrification, the privatisation of public spaces, coastal oil and gas exploration, harbour pollution as well as the arrival of international large fishing companies have all contributed to the social and spatial exclusion of the local subsistence fishing community who practice their trade in Durban today.

MOTIVATION FOR RESEARCH

"The fishers have ... become 'invisible' to the state and through their exclusion from these spaces have effectively been excluded from 'the public' and from being citizens of the city of Durban with the associated rights to public spaces being denied" (Drey & Scott, 2009).

On both a global and local scale, low-income communities are being spatially displaced within the cities in which they inhabit (Knight & Gharipour, 2016). The spatial displacement of low-income communities, that has occurred due to various urban development policies/strategies, has resulted in further marginalisation of communities that already have limited access to urban and economic resources. The implementation of Neoliberal urban planning and [re]development strategies are done with the intention to stimulate economic growth,

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

improve the aesthetics of city spaces, and to further a city's standing amongst other global cities (Curtis, 2016); 'benefits' however are often realised at the expense of low-income communities who are being deprived of access to spaces and resources that they use in order to sustain their livelihoods. An exploration into the implications of spatial marginalisation for capital gain is important because it brings into focus the injustice of the cultural, social, spatial and economic cost of capitalist driven urban development as well as the degeneration of low-income citizens' rights to access urban spaces and the city. *"The voice of the public needs to be heard with regards to such developments and their rights acknowledged in order for the city to fully represent its citizens and function effectively and in a just manner"* (Drey , 2009: 3).

In Durban, one of the groups that have been marginalised through urban displacement and exclusion is the subsistence fishing community, who are currently under threat of losing their livelihoods (Naidoo, 2017). It is important to explore the case of Durban's subsistence fishing community, and the current conflictual issues that the community faces, as the community is currently under threat of losing their livelihoods and cultural identity that is associated with traditional subsistence practices. The loss of this community, who are a dynamic urban community that is rich in culture and social rooting, will result in the loss of their important contribution towards the social urban identity of the city as a whole.

In most cases, architecture and built form are the vehicles through which urban displacement is enforced. From an architectural standpoint, there is a need to understand the social implications of built form within urban spaces, and how the built environment has the potential to either suppress and marginalise, or mediate between and uplift urban communities.

This dissertation will explore the potential for architecture to redress issues of urban spatial displacement in order to change the current conflictual socio-spatial dynamics within a city.

1.2

DEFINING THE PROBLEM

The local subsistence and small-scale fishing community of Durban appears to be overlooked regarding their significance as part of the city's urban culture. Despite the implementation of *The Small-Scale Policy* in The Marine Living Resources Act 18 of 1998 (MLRA), that "seeks to address imbalances of the past and ensure that small-scale fishers are accommodated and properly managed" (SA Yearbook, 2013/14), the historical, cultural and economic value of Durban's subsistence fishing community is not recognised. Neoliberal urban planning and development strategies have failed to include and provide space for Durban's subsistence fishing community which has resulted in urban spatial displacement that means that today's remaining subsistence and small-scale fishers

"...are in danger of losing their livelihoods, lifestyles and culture" (Drey & Scott, n/d).

Govender & Chetty (2014) and Drey & Scott (n/d) explain that a history of spatial exclusion has forced Durban's subsistence fishing community to continually migrate and practice in the unwanted spaces in and around Durban's harbour and beaches. According to Drey (2009: 61), Durban's subsistence-commercial fishers have *"...become 'invisible' to the state and through their exclusion from these spaces have effectively been excluded from 'the public' and from being citizens of the city of Durban with the associated rights to public spaces being denied."* As a result of spatial exclusion, there is currently no platform that caters for Durban's subsistence fishers that enables the community to thrive in and contribute towards the urban spaces of the city (McCann, 2014).

Many studies outline both the historic and current socio-spatial conflicts between Durban's subsistence fishers and the city, as well as the negative affect that urban development has had on subsistence fishing practices in Durban. However despite; the introduction of the *Small-Scale Policy* in the MLRA and Drey's research detailing the critical situation that is faced by Durban's subsistence fishing community, there is currently no proposed solution that attempts to *"...ensure that small-scale fishers are accommodated and properly managed"* (SA Yearbook, 2013/14) in the context of Durban.

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

PROBLEM STATEMENT

Competition over the use of urban public space has resulted in the spatial marginalisation of Durban's subsistence fishing community. Issues such as racially biased apartheid urban planning, environmental pressures, the growth of large fishing enterprises and the privatisation of urban public space have all had a negative impact on the success of both on-shore and off-shore subsistence fisherfolk alike. The inability to find adequate space prevents the once thriving community of fishers from practising their trade.

AIM OF RESEARCH

The aim of this research is to investigate an approach towards finding space and an appropriate architectural response, for a community that has been subject to urban displacement which has resulted in their preclusion from participating within the urban spaces of a South African city.

In order to investigate this notion, the research explores the case of the subsistence fishers in and around Durban harbour. In gaining an understanding of both past and current socio-spatial issues that affect Durban's subsistence fishers, the intent is to find space for the local subsistence fishing community and to propose a platform for the community's future development.

KEY OBJECTIVE

To find space and an appropriate architectural response, that empowers Durban's subsistence fishing community.

OTHER OBJECTIVES

1. To investigate the spatial claim of Durban's subsistence fishing community.
2. To understand the socio-spatial issues that currently impact the success of Durban's subsistence fishing industry.
3. To investigate the relationships and connections between the subsistence fishing community and the surrounding urban systems.

1.3

RESEARCH SCOPE

The research will focus on the subsistence and small-scale fishing communities that operate in and around Durban harbour and the surrounding beaches. The geographic area of study runs along Durban's shoreline (including the harbour bay) from the harbour's southern pier to the mouth of the Umgeni River.

While the the study explores Durban's current subsistence fishing community, historic factors such as culture, social change and spatial displacement will need to be examined as influential factors that have shaped the modern fishing community in existence today.

The study will focus on the small-scale or subsistence fishing community in Durban which

is defined as fishing at a scale that "...includes economic activities at a level exceeding the occasional sale or barter but which are nevertheless aimed primarily at satisfying subsistence needs" (Young, 2013: 291).

Through the lens of spatial justice theory, and by means of grass-roots research, the dissertation will explore and analyse the community's relationship with heritage (memory), space, and urban-spatial connections. The understanding of the social-spatial relationships investigated will serve as a guideline from which to inform an architectural response that proposes a new space and platform for the subsistence fishing community. The architectural response will aim to bridge the gap between today's struggling subsistence fishing community and the memory of a once thriving subsistence fishing industry in Durban, through the development of a facility

that is spatially just regarding both memory and urban social-spatial connections.

ASSUMPTIONS

This dissertation adopts the assumption that the built environment can play a role in the reintegration of a displaced community within the context of a city. If the issue is addressed, it is assumed that the research findings can contribute towards an understanding of spatially marginalised urban communities and that the the spatial reintegration of these communities has the potential to enhance the spatial, cultural, social and economic value of a city.

KEY QUESTION

Where, and in what form, can space be found to develop an appropriate architectural response that empowers Durban's subsistence fishing industry?

OTHER QUESTIONS

1. What role does the subsistence fishing community play as part of Durban's urban cultural identity?
2. What socio-spatial issues currently affect the Durban's subsistence fishing community?
3. What are the relationships and connections between the subsistence fishing community and the urban framework of the city?

1.4

THEORETICAL CONCEPTS

NEOLIBERALISM

According to Drey (2009), neoliberalism is the driving ethos behind development policy-making in South Africa and globally. As such once needs to understand the plight of Durban's subsistence fishers in the context of a neoliberal capitalist economy. Thompson (2005), explains Harvey's notions of neoliberalism as the dominance of capital, whereby capitalism is elevated to a "*mode of production*" that influences political decision making and becomes the overriding logic within an urban culture. Neoliberalism promotes increased privatisation and economic deregulation as a means to stimulate economic growth within a capitalist economy (Thompson, 2015). Neoliberalism is criticised for having a social

marginalising agenda as it achieves continual capital accumulation "...by *dispossessing people of their economic rights and of various forms of ownership and economic power*" (Thompson, 2005: 25).

SPATIAL JUSTICE

The concept of spatial justice was first introduced by Edward Soja in *Seeking Spatial Justice* (2010). Soja expands on David Harvey's writings on social justice (1973), and Henry Lefebvre's ideas on society's relationship with space (1991) to develop the notion that social justice or injustices become physically manifested within a space. Soja's ideas of spatial justice can be used as a theoretical lens through which the relationship between people and space can be understood. Spatial justice is understood as the accumulative understanding

of urban theory surrounding social being, spatiality and justice.

SOCIAL BEING

Social Being, deals with the organising of a society, their belonging to community or place and the associated rights/ responsibilities of such belonging. The two main concepts of social being that form the foundations of spatial justice theory are: citizenship and rights to the city. These two concepts are both understood as a response to the global neoliberal agenda.

The concept of citizenship was first established in ancient Greek times and it refers to a person who is a member of a political community (Dagger in Drey, 2009). Citizenship is more than the political involvement or legal status of belonging, it is also defined by a person's or community's access to resources, both social

and economic (de la Paz, 2004). *"Citizenship therefore represents a relationship between the individual and the state, in which the two are bound together by reciprocal rights and obligations"* (Heywood, 1994:155).

Lefebvre (1991), introduces the idea of the right to the city, in which he argues that people or communities have a fundamental right to influence the spaces that they occupy.

SPATIALITY

The concept of spatiality is somewhat complex as it is a multifaceted discussion regarding theories that focus on people's occupation of urban space. There are four key concepts that underpin the notion of spatiality regarding spatial justice, namely: space vs place, public space, micro-publics and everyday urbanism.

To understand the existential quality or emotive value that people associate with urban spaces, one needs to explore the theoretical notion of the difference between space and place. Although the terms space and place may seem similar, social geography distinguishes the difference between the two as a means to empirically evaluate space as it pertains to people who use it. In architectural theory, space is generally understood as being a platform in which bodies are located, or the physical environment as a platform in which life is carried out (Agnew, 2011). In contrast, place is the physical environment or platform to which people assign meaning. Therefore space becomes place when it has been given meaning or assigned emotive value. There is a social transformative relationship in that, *"what begins as undifferentiated space becomes place as we get to know it better and endow it with*

value" (Tuan, 1977: 6). Place therefore is a space from which people derive meaning, it enables the obtaining of identity and evokes a sense of commonality; it generates a social bond between people who occupy such spaces (Crang, 1998).

Public spaces play a significant role in creating visual connections between people who occupy them, they allow all members of a society to become visible to one another (Mitchell & Scott, 1995). In third world cities, public spaces become an important equalising entity between all members of society in that they are *"...spaces where the elite are forced to recognise the existence of the poor in the city"* (Drey, 2009: 19).

The urban argument of the importance of micro-publics is discussed by Lefebvre (1991) whereby

he explains the need for cities to promote the living together of a heterogeneous society. To promote the co-existence of differences within an urban society enriches the meaning and sense of place that exists within the publicness of urbanity.

Crawford (2004) expands on Lefebvre's ideas on everyday urbanism as a study of urbanity in assessing how one derives socio-spatial meaning from experiencing the everyday activities that occur within the public realm.

JUSTICE

Civics Academy (2018), explains justice as, "... what we as a society regard as "right" based on our moral concepts of ethics, rationality, law, religion, equity and fairness. Justice needs to be in the light of the democratic principle of the 'rule of law'. The rule of law is a concept that

denotes that all decisions need to be made in accordance with the law. Nobody is exempt from the law."

Spatial justice however is concerned with theories around social justice, which examines justice in a social context. Social justice, in general terms, is described as people having equal rights and opportunities to live an acceptable, healthy life (Tayob, 2016).

1.5

RESEARCH FRAMEWORK

Case Study Research Design

This dissertation will be qualitative (Babbie et al, 2006: 270), utilising a case study, to analyse social action and human behaviour (D'ahl. 2017: 21) in the contest of the urban space which they occupy. Groat & Wang in Adhya (2008: 46) define a case study as, "an empirical inquiry that investigates a phenomenon or setting" and is designed to explore:

1. Cases in their contexts
2. Patterns of relationships
3. Theory development
4. Multiple sources of evidence
5. The potential generalisation to theory

By adopting the case study research design methodology as described above this research dissertation seeks to:

1. Explore the subsistence fishing community in Durban.
2. Investigate the relationships between the subsistence fishing community and their spatial claim, socio-spatial contribution, spatial negotiation and how this has informed architectural responses.
3. Explore social-spatial theory in terms of society's occupation of urban space.
4. Make use of varying data collection methods from multiple sources to assess the subsistence fishing community in terms of their current negotiation of the urban framework.

5. Contextually evaluate the application of social-spatial urban theory in deriving a new understanding of Durban's subsistence fishing community.

From Theory to Research Design

Following a detailed exploration of spatial justice theory, this dissertation adapts an existing spatial justice framework model to develop a new approach towards the assessment of spatial justice for a community that has been spatially displaced from an urban system.

The Design Studio for Social Intervention (ds4si) proposes a framework for spatial justice which is a method of analysis that endeavours to reveal social [in]justices within spaces (Bailey et al, 2011). This framework proposes a set of questions that enable one to gain an understanding of spatial justice within a given urban context. The framework analyses spatial justice as the accumulative assessment of spatial claim, spatial power and spatial links.

The research design, that is developed within this dissertation, is formulated by adapting the aforementioned spatial justice framework in order to investigate the three secondary research questions. The research design aims to investigate:

1. Spatial claim, by assessing the historical spatial occupation of the subsistence fishing community and the role that their heritage plays as part of the Durban's urban cultural identity.
2. Spatial power, by assessing the current social, spatial and environmental issues that have an affect on the successful practice of subsistence finishing in Durban.
3. Spatial links, by investigating the physical qualities of the spaces that subsistence

fishers currently occupy as well as their relationship to the surrounding urban systems.

Data analysis towards the investigation of Spatial Claim

The first research question is investigated by the analysis of both primary and secondary data. Literature reviews, as well documented site observation and informal interviews form the foundation of the Spatial Claim assessment. A discussion that details the historical spatial occupation of Durban's subsistence fishing community establishes past socio-spatial issues. Further empirical analysis of data is used to establish: patterns of spatial negotiation, reasons for the practice of subsistence fishing, the importance of heritage/memory for the fishing community and the significance of the

community's heritage and culture as part of Durban's maritime cultural identity .

Data analysis towards the investigation of Spatial Power

Primary and secondary data is used to formulate the discussion regarding the second research question. The research investigates and evaluates the current social, spatial and environmental issues that have an affect on the successful practice of subsistence finishing in Durban. Informal interviews with some of Durban's subsistence fishers inform an understanding of the spatial requirements of subsistence fishers that will enable the community's development.

Observing Spatial Links

The third research question is investigated by observing and documenting the current physical attributes of the space that are currently occupied by the subsistence fishing community. Analysis of the primary data collected is then used to establish the current relationship between the subsistence fishing community and the surrounding urban systems. Notions of fracture and ecological links are discussed in terms of gaining an understanding of how they dictate patterns of how the fishing community negotiates urban space and practice their trade.

Theoretical Evaluation - Developing Principles in Finding Space

Results obtained from the three data collection exercises described above are analysed and used to inform the development of a mediatory approach and methodology towards finding space for Durban's subsistence-commercial fishing industry. The findings are also used to construct key principles that serve to inform the design and development of a fishing centre in Durban harbour.

1.6

DISSERTATION STRUCTURE

Chapter 1- Introduction:

This chapter sets the framework upon which the research argument is based. The research background outlines the global phenomenon of contested urban spaces, its relevance in the South African context, and its application in understanding the gaps in the story of Durban's subsistence fishing community. The motivation for the research is discussed, from which the main objectives of the dissertation are derived. The scope of the research problem explains the critical path that the research will follow and sets out the key questions that the research will address. The main theoretical concepts are highlighted as they inform the research methods, structure and tools required to investigate an approach towards finding space

for a community that is precluded from participating within the urban spaces of the city.

Chapter 2 - Conceptual & Theoretical Framework:

The theoretical lens, through which this dissertation seeks to explore the case of Durban's subsistence fishing community, is composed of contemporary urban theory that deals with ideas around society's intricate negotiation/relationship with urban space. This chapter explores the concept of neoliberalism and the presiding ideology that governs South African urbanism. A detailed exploration of spatial justice theory is then undertaken in order to identify the main political, economic, social and spatial issues that affect urban communities as a result of the implementation of neoliberal urban development. The chapter concludes by unpacking a spacial justice framework, which is a

method of analysis that endeavours to reveal social [in]justices within spaces. The framework serves as a base from which the research framework is constructed.

Chapter 3 - Spatial Justice Research Design:

This chapter sets up and explains the case study research design. The context of the study is explored as it highlights the need to develop a new approach towards the assessment of spatial justice for a community that has been spatially displaced from an urban system. The existing spatial justice framework, through which the realities of spatial justice within urban spaces can be interpreted and understood, is adapted to form a research frame work that aims to assess a displaced urban community through the lens of spatial justice.

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

The Chapter 4 - Case Study Part 1:

This chapter undertakes the first part of the case study research exploration of Durban's subsistence fishing community, through investigating spatial claim. The spatial justice framework, as discussed in chapter 3, is used in an effort to answer the first research question.

Spatial claim is investigated by means of a literature review, documented site observation and informal interviews, whereby the historical spatial occupation of Durban's fishing community is documented. The collection and analysis of the fishing community's spatial negotiation, serves to establish the historical and social relevance of the subsistence fishing community as part of Durban's urban and cultural heritage, thereby substantiating a justified notion of spatial claim.

The Chapter 5 - Case Study Part 2:

This chapter undertakes the second part of the case study research exploration of Durban's subsistence fishing community, through investigating spatial power. The spatial justice framework, as discussed in chapter 3, is used in an effort to answer the second research question.

The chapter investigates the current socio-spatial dynamics of space that impact the fishing community's ability to succeed in and contribute towards the urban spaces in Durban today, otherwise known as spatial power. The concept of Spatial Power is explored through a discursive review that is based on the collaborative findings of both secondary and primary data collection. The discussion aims to establish the current socio-spatial realities that govern the

success of the subsistence fishing community in Durban.

The Chapter 6 - Case Study Part 3:

The third component of the spatial justice research investigation is explored in this chapter through understanding notions of spatial links. Physical attributes of the urban environment are observed in order to establish the current relationship between the subsistence fishing community and the surrounding urban systems. Notions of fracture and ecological links are discussed in terms of gaining and understanding in how they dictate patterns of how the fishing community negotiates urban space and practices their trade.

Chapter 7 - Findings & Recommendations:

Findings that were obtained from the exploration of the three data collection exercises in the preceding chapters, are analysed and used to inform the development of a mediatory approach and methodology towards finding space for Durban's subsistence-commercial fishing industry. The findings are also used to construct key principles that serve to inform the design and development of a fishing centre in Durban harbour.

community and to propose a platform for the community's future development.

Chapter 8 - Design Intervention:

The concluding chapter presents the proposed architectural response in the form of a Fishing Centre in Durban harbour. Key principals, that have been generated as a product of the research dissertation, are translated into an architectural intervention that intends to provide a space for the local subsistence fishing

1.7

CONCLUSION

The chapter establishes the global issue of urban displacement within cities and how there is a need for a considered approach towards architecture and urban [re]development that does not have a marginalising effect on sectors of society. Moreover there is a need for the development and implementation of a considered approach, both politically and architecturally, towards redressing communities that have already been displaced within our urban spaces.

It was established that the subsistence fishing community in Durban is a community that has been marginalised through various means of urban displacement. They are a community with a rich cultural heritage however, spatial

displacement has resulted in a decline of subsistence fishing practices and the attrition of their cultural contribution towards the urban place-making of Durban. Despite the introduction of the Small-Scale Policy in the MLRA and the body of research documenting the fact that Durban's subsistence fishing community is under threat, there is currently no proposed solution that aims to redress the effects of spatial exclusion by means of spatial reintegration.

The research problem highlights the issues that effect the subsistence fishing community and puts forward the intent to find space for the local subsistence fishing community and to propose a platform for the community's future development. The research focuses on the case of the subsistence fishing community that operate between the mouth of the Umgeni river

and Durban harbour's souther pier. The scope of the research is explained from which the research questions are generated. The key concepts and theories have been briefly explained which establishes the lens through which the research is discussed.

The next chapter undertakes a detailed exploration of the theoretical and conceptual framework from which the research design is generated.

CHAPTER TWO
CONCEPTUAL & THEORETICAL
FRAMEWORK



*Photograph of Subsistence
Fishers at Blue Lagoon
(Photograph by author; 2019)*

2.0

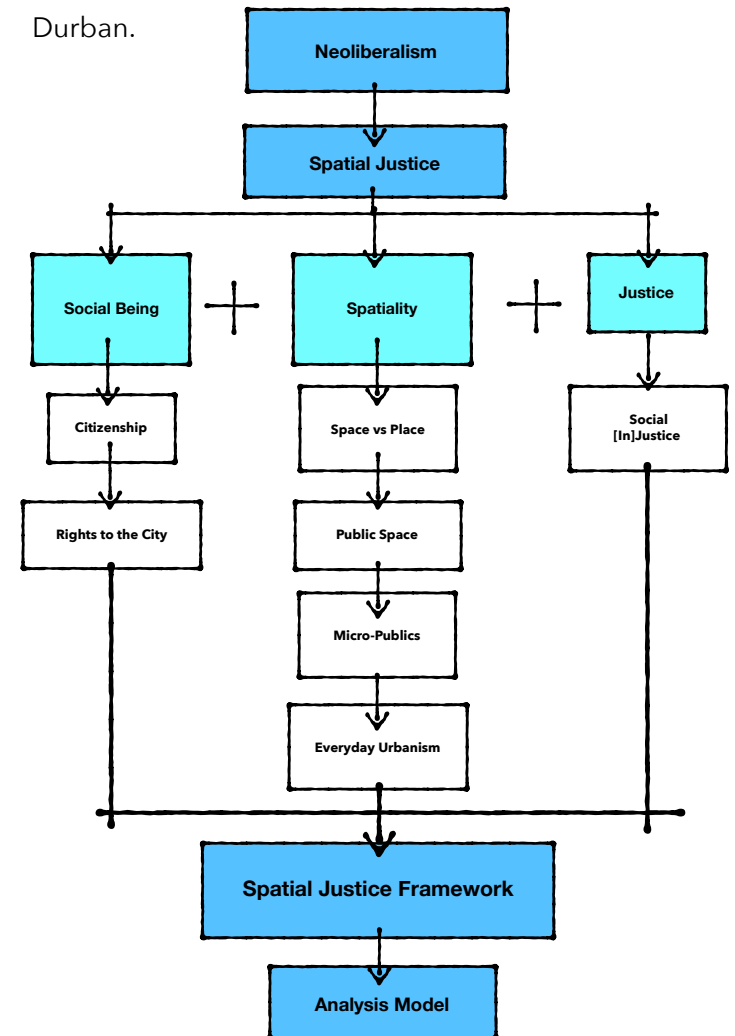
INTRODUCTION TO THEORY

"Perhaps our most tangible, tactile understanding of freedom, of liberation is in the physical space to move about as we please. Maybe because freedom at its most basic level is experienced in doing and, conversely, oppression/repression is experienced in what we are made to believe we cannot do" (Makani Themba, in Bailey et al, 2011).

This chapter conducts a literature review of the key concepts and theories that together form the lens through which the research is explored. Spatial justice theory is the conceptual stimulus that informs the focus of this research; as such this chapter will discuss the key components of spatial justice theory and its application in urban analysis. The chapter introduces the concept of

neoliberalism which, according to Drey (2009), has become the predominant ethos behind urban development, both globally and in South Africa. Spatial justice theory is then explored as a critique on, or reaction to, the socio-spatial impact of neoliberal urban development. The three primary theoretical components of spatial justice, (namely: social being, spatiality and justice) are explored and further deconstructed into key concepts, namely: citizenship, rights to the city, space vs place, public space, micro-publics, everyday urbanism and social [in]justice (fig 2.1). These concepts form the foundations of spatial justice theory and underwrite a framework for spatial justice, which is a methodology for spacial justice analysis. An understand of this model is important as it will inform the design principles towards finding space and developing an architectural platform

for the subsistence fishing community in Durban.



2.1: Diagram of the theoretical concepts of spatial justice
(illustration by author; 2017)

2.1

NEOLIBERALISM

Today, the management and [re]development of our cities is somewhat driven by a global competition for economic resources. As discussed in the first chapter, neoliberalism is the driving ethos behind development policy-making in South Africa and globally (Drey, 2009). Thompson (2005: 23), explains Harvey's notions of neoliberalism as the dominance of capital, whereby capitalism is elevated to a "*mode of production*" that influences political decision making and becomes the overriding logic within an urban culture. Furthermore neoliberalism promotes the deregulation of an economy and the privatisation of resources in order to maximise economic gain and capital growth (Thompson, 2015). The promotion of freedom for the individual and deregulation of

the private sector is intended to stimulate economic growth in order to maximise the well-being of individuals (Pryke, 1999). Drey (2009), adds that aside from economic prosperity, governmental implementation of neoliberal policies lessens the responsibilities of government, as privatisation and the deregulation of state resources/markets results in a scenario that requires less governing by the state. However, due to the increased power that the private sector has regarding planning, implementation and distribution of resources, the well-being of citizens and communities is then determined by the more powerful forces within the private sector. The state relinquishes its responsibilities towards peoples social well-being as it trusts that the private sector will make decisions in a responsible and trust-worthy manner (Thrift, 1999). Herein lies the dilemma for which neoliberalism is criticised: that cultural

or social aspects of everyday citizenship are often compromised in favour of capital development and economic gain. Thompson (2005: 25), argues that neoliberalism achieves continual capital accumulation "...by *dispossessing people of their economic rights and of various forms of ownership and economic power*" (Thompson, 2005: 25).

Deregulation and the promotion of a free market economy is another neoliberal agenda that is intended to create a competitive trading environment, which enables consumers to have access to goods and services at lower prices (Treanor, 2005). This deregulation however again empowers those with economic means, which results in the growth of large business enterprises. While large businesses may add value in their ability to optimise economies of scale in order to produce/provide affordable

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

goods and services at large scales for consumers, the high level of competition creates an economic environment in which small businesses struggle to survive (SME South Africa, 2017).

Neoliberal urbanism is the implementation of urban development with a neoliberal agenda. Urban [re]development and planning is then conducted as an investment towards economic gain, whereby public spaces are becoming privatised in order to attract investment. Harvey (2006), describes the distribution or allocation of urban space as, "*accumulation through dispossession*", in that public spacial resources are privatised and redistributed to the economic elite. Due to the fact that neoliberal urbanism places the value of economic growth above all else, little regard is given towards the 'actual' cost of dispossession, both spatially and

economically. The cost of dispossession in favour of economic prosperity needs to be valued as the sum of the geographic value (land), historical value (memory) and social value (culture), and not as just the monetary value associated with time and purchases (Hart, 2006).

In Durban, like in many cities across the globe, neoliberal economic policies and urban [re]development has had a negative affect on the wellbeing of many of the city's low-income or economically 'inferior' citizens. The promotion of large businesses has resulted in the weakening, and in some cases the demise, of many of the city's small businesses who cannot compete against the larger players in the free market economy. Neoliberal urban planning in Durban has also dispossessed the city's ordinary citizens of access to public spaces, which are usually considered as state resources, that have

since been privatised and given over to the public sector. These two factors are of particular significance when exploring the contexts of Durban's subsistence fishing community, as the promotion of large fishing enterprises and the dispossession of public spaces, has affected the subsistence fishers ability to practice their trade (Drey, 2009: 10).

This dissertation seeks to investigate the possibility of an approach towards urban development, that is able to be implemented within a neoliberal context, that:

- Preserves and uplifts the social and cultural aspects of urbanity and urban community.
- Enables the growth of large businesses and the provision of affordable goods without compromising the success of the small business sector.
- Redresses the effects of spatial disposition in such a way as to allow for sustainable prosperity of both the private sector as well as the urban communities who make use of the space.

2.2

SPATIAL JUSTICE

Like all social/political movements or ideologies, their resultant effects or outcomes are subject to critique whereby the overlooked or unforeseen consequences are explored. In this context, spatial justice theory has developed as a reaction to the effects of neoliberal policies and urbanism. Spatial justice theory juxtaposes neoliberalism's elevation of capitalism in that it places value on the social wellbeing of everyday citizens.

As mentioned in chapter one, the concept of spatial justice was first introduced by Edward Soja in *Seeking Spatial Justice* (2010). Soja expands on David Harvey's writings on social justice (1973), and Henry Lefebvre's ideas on society's relationship with space (1991) to

develop the notion that social justices or injustices become physically manifested within a space. Spatial justice theory has been developed as a theoretical point of view that combines both social and spatial urban theories/concepts in order to form a holistic approach towards conceptualising the intricate interrelations between them (Tayob, 2016). This dissertation examines the case of Durban's subsistence fishing community through the lens of spatial justice in order to develop an approach towards finding space for a displaced urban community. Tayob (2016: 128), states that; *"(t)he concepts of spatiality, social being and justice, are the three pieces that make up Edward Soja's theory of spatial justice (and) the combination of these three aspects allows us to understand the complex relationships between each element."* As such it is important to explore

and understand each of the components that accumulatively inform spatial justice theory.

2.2



2.2: The spatial justice equation
(illustration by author; 2017)

SOCIAL BEING

The first component of the spatial justice 'equation' as depicted in fig 2.3, is social being. This component primarily deals with notions regarding the organisations of society, their belonging to community or place and the associated rights/ responsibilities of such belonging. The two main concepts of social being that forms the building blocks of spatial justice theory are: citizenship and rights to the city. These two concepts are both understood as a response to the global neoliberal agenda.

Citizenship

In order for a person to be considered in the decision making processes regarding the running of a city/country, they need to be classified as a citizen. The concept of citizenship was first established in ancient Greek times and it refers to a person who is a member of a

political community (Dagger in Drey, 2009). It is apparent from this first basic definition that the notion of citizenship is synonymous with exclusion, in that there is a system that categorises people as either included or excluded. Citizenship however, is more than the political involvement or legal status of belonging, it is also defined by a person's or community's access to resources, both social and economic (de la Paz, 2004). "*Citizenship therefore represents a relationship between the individual and the state, in which the two are bound together by reciprocal rights and obligations*" (Heywood, 1994:155). In this regard the notion of citizenship provides a sense of security and protection for people who belong to a place as it is assumed that decisions regarding the governance of a city/country will be made towards the improvement of the citizen's well-being.

It becomes apparent, when one explores these basic definitions of citizenship, that the neoliberal approach of assigning control over state resources to the private sector effectively severs the "*relationship between the individual and the state*" and the associated reciprocity of "*rights and obligations*" (Heywood, 1994:155). Spatial justice theory questions the state's abandonment of responsibility towards the wellbeing of its citizens, and evaluates how the rights and responsibilities associated with citizenship are being upheld in the context of space.

Rights to the City

Lefebvre (1991), introduces the idea of the right to the city, in which he argues that people or communities have a fundamental right to influence the spaces that they occupy. Due to the fact that the neoliberal state has relinquished

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

its responsibility towards the well-being of its citizens, and the private sector makes developmental decisions to achieve the objective of capital accumulation rather than social well-being, Lefebvre's discussions regarding right to the city pose an alternative notion regarding urban occupation and [re]development.

"Lefebvre presents a radical vision for a city in which users manage urban space for themselves, beyond the control of both the state and capitalism. However, while it calls for profound change, Lefebvre's vision is also eminently practical; it can very much serve as a guide and inspiration for concrete action to change the city today" (Purcell, 2014: 141).

The right to the city is however a broad concept that has been adapted or interpreted to suit

various applications. The multiple applications of 'right to the city' is all too broad as is apparent in the United Nations' New Urban Agenda (2017). This research paper adopts the basic principles of Lefebvre's *right to the city* as stated by Purcell (2014: 142), in that the common ideas that all interpretations of right to the city acknowledge are:

1. Emphasis is on the users of urban space.
2. Entitlement to a right to the city is determined by inhabiting a space and not just citizenship status.
3. Urban space has a value that is greater than the economic or exchange value that is obtained from the space.

4. Property rights of owners overrides the rights of the people who use the space; as such the capital gain determines the use of space more than the spatial use value.

5. Right to the city is an argument advocating that the rights of urban inhabitants precedes the rights of property owners.

The right to the city is an argument that is synonymous with the argument of social justice, whereby justice, sustainability and inclusion are all advocated for regarding the rethinking of urban policy making and development strategies (Purcell, 2014: 141).

David Harvey (1973), elaborates on the social implications that the right to the city embodies,

in that there is a fundamental link between identities of self, and the city. Furthermore, if inhabitants derive identity of self from urbanity, then the inhabitants have a right to have the power to change self identity by changing the spaces of the city that they inhabit. The 'right' that is described above is a collective right as a community, rather than an individual right. It is a right for the collective to stake a claim in the process of the evolving urban framework; to mould, change and reshape themselves and the urban spaces that they inhabit.

Spatial justice adopts and reaffirms the ideology that communities have a fundamental right to access and influence the urban spaces that they inhabit. From this standpoint Soja (2010), evaluates the actualities of the implementation of the rights to the city within urban spaces and

uses it as a measure to determine the state of [in]justice that is manifested within urban space.

Social Being Concluded

In the case of the subsistence fishing community in Durban, an understanding of the concepts of citizenship and the associated urban rights of people who occupy urban spaces are imperative in that this research explores the current status of the community's social well-being regarding their practice of subsistence fishing in Durban.

SPATIALITY

The second component of the spatial justice 'equation' as depicted in figure 2.3, is the concept of spatiality, focusing on people's occupation of urban space in particular. Spatial justice theory is based on a combination of urban spatial theories that deal with the complex relationship between space and society, with emphasis on the notion that the value of space lies in its contribution to the social wellbeing of a community as a whole rather than the potential for space to generate surplus capital. There are four key concepts that underpin the notion of spatiality regarding spatial justice, namely: space vs place, public space, micro-publics and everyday urbanism. All of these concepts enforce the notion that the value of space, and in the case of this research, urban space, is greater than just its economic value. The four ideas discussed below all argue that

the value of space should be assessed according to what the space means, on a social and emotional level, to urban inhabitants.

Space vs Place

The argument against neoliberal ideologies is that neoliberalism tends to assign value to something according to its potential to generate capital accumulation. Urban space is one such example, whereby space is treated as a commodity and valued as such, while the social value of the space tends to be overlooked. In order to conceptualise a holistic notion of the true value of urban spaces, both economically and socially, one needs to understand the theoretical difference between space and place.

The concepts of space and place are explained by Tuan (1977), in that a 'space' becomes a 'place' once meaning has been assigned to it. As

discussed in the first chapter, the idea of 'meaning' that is associated with space refers to the existential quality or emotive value that people associate with it. In a social context, places contribute towards the intrinsic social realm of society as people derive a sense of self and identity from spaces to which meaning can be assigned. The social value of place is found in the roll that spaces play in the everyday lives of people or communities, they knit a society together, evoke a sense of commonality and generate social bonds between people who share in the occupation of these spaces (Crang, 1998).

In an urban context, it is important to grasp a wholistic understanding of the link between human emotion and space as it will better inform decisions regarding the [re]development of the urban environment in which we live

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

(Manzo and Perkins, 2006). In this light Drey (2009), highlights four principles towards understanding the emotive impact of spaces whereby meaning is assigned to urban spaces. The four principles highlighted are; place-attachment, place-identity, place-memory and spatial character.

Place-attachment is a general notion that can be understood as the "...affective bond between people and places" (Manzo and Perkins, 2006: 337). It is a socio-spatial relationship or bond that occurs at varying scales, with varying role players and their related relationships or exchanges. Thus place-attachment has the ability to influence people and their attitudes towards the spatial dimension of urbanity and can affect a community as a whole. The bond that is formed between a person/community and space may also enforce a feeling of

security, thus influencing people's decisions to remain in a space (Drey, 2009). Manzo and Perkins (2006), highlight the somewhat darker effects of place-attachment as the emotional bond can manifest negatively in the form of spatial entrapment or cause territorial conflict.

Place-identity differs from place-attachment in that it refers to the extrapolation of one's self identity through spatial experience (Manzo and Perkins, 2006: 337). The connection between a person's self identity and space contributes to their sense of belonging, being a part of something or somewhere (Drey, 2009).

Both of the aforementioned concepts may result in the formation of a memory that is associated with space. Human life is lived out and experienced within physical space, therefore all memories or recollections of the past are

associated with the spaces in which the occurred (Drey, 2009). Place associated memory can be experienced individually, in that one recalls personal memories or experiences, or collectively as a social memory that instills commonality between people or groups:

"Social memories may concern events that happened during our life or that took place before we were born and therefore belong to the history of the family, ethnic group, state, or the world. In the latter cases, what we "remember" depends not on personal experience but on oral traditions, cultural transmissions or own motivation to do the detective work in discovering the past." (Lewicka, 2008: 212).

How people occupy, negotiate, configure, reconfigure and use urban spaces contributes towards a sense of 'place'. The way in which physical space is used (or not used) creates an

experiential 'feeling' that one experiences within the space, thus defined as the character of space (Canter, 1977).

The concept of place underpins a holistic understanding towards determining the true value of urban space. Spatial justice theory adopts this understanding as a means of assessing social justice within an urban framework.

Public Space

"A public space refers to an area or place that is open and accessible to all peoples, regardless of gender, race, ethnicity, age or socio-economic level. These are public gathering spaces such as plazas, squares and parks. Connecting spaces, such as sidewalks and streets, are also public spaces" (UNESCO, n/d).

Public spaces are arguably one of the city's most important resources as they are intentionally created for the people who occupy a city. UNESCO (n/d), emphasises that public spaces are intended to be inclusive in that all people have should have the opportunity to access and make use of this urban resource.

Public spaces enable urban social cohesion in that they facilitate the public lives of all people who share the urban environment. These spaces play a significant role in creating visual connections between the people who occupy them as they allow all members of a society to become visible to one another (Mitchell & Scott, 1995). In third world cities, public spaces become an important equalising entity between all members of society in that they are *"...spaces where the elite are forced to recognise the*

existence of the poor in the city" (Drey, 2009: 19).

Public spaces also contribute towards the promotion of a feeling of safety within the city. Accessible, open and busy public spaces result in increased levels of public visibility, thus deterring people from acting in a manner that is not inline with what is deemed to be acceptable public behaviour (SaferSpaces, 2018) .

In a capitalist driven society, public spaces play a crucial role for citizens who are unable to find formal means of employment. Public urban spaces provide a platform in which poorer citizens can work, reap resources and generate an income to sustain their livelihoods, thus counterbalancing the social and economic marginalising effects of exclusion from formal job markets.

It is evident, through the discussion of the importance of public space, that public spaces are a key component in the making of a successful "people-centred" city (*SaferSpaces*, 2018). Spatial justice theory recognises the importance of public spaces and argues that the success of public spaces, as 'socially just' spaces, is determined by their degree of accessibility, as the spaces can only serve their social urban purpose if people can use them (Soja, 2010).

Micro-Publics

Modern, globalising cities of today are becoming increasingly complex in their need to accommodate a vastly diverse urban society with equally diverse requirements and functions. Neoliberal urban politics and spacial planning are challenged by today's multi-cultural urban society, as many of the communities who occupy the city do not fit into the neoliberal utopian

ideals of how a city should be used (Harvey, 2006).

Again Lefebvre (1991), appeals against the dictatorial implementation of neoliberal urban planning and [re]development implementations as the 'commodification' approach has excluded and marginalised many groups or communities who do not want to (or cannot afford to) conform to homogenous neoliberal ideals. Lefebvre argues the need for the cities to promote the living together of a heterogeneous urban society, whereby differences should be allowed for and accommodated within the spatial public realm of the city. Sandercock in Adhya (2008: 17), argues the need for "micro-publics", "*which allow differences to coexist in the everyday experience, functioning, and analyses of publicness*". The coexisting of these differences within urban public spaces enriches

the meaning and sense of place that exists within the publicness of urbanity, thus further adding to the 'true value' of the space.

Everyday Urbanism

The final concept that describes the social value that is imbedded within urban space is the notion of everyday urbanism. Following his argument for the need for urban micro-publics, Lefebvre (1996), argues that social-spatial meaning is often derived from the everyday activities, interactions and exchanges that take place within the space. Everyday urbanists expand on Lefebvre's ideas in that they seek to study urbanism by viewing human behavior within the context of the public spatial realms of a city (Crawford, 2004). This approach explores the seemingly ordinary or benign everyday exchanges or activities that take place within urban spaces and extrapolate deeper social

meanings that are enabled by urban space. Crawford (2004), argues that the true richness and qualities of a city are found in the occurrence the the ordinary and unnoticed day to day activities and in the everyday common places.

Everyday urbanism highlights the importance of the public realm as it is the basis or platform for social exchange and everyday activities (de Certeau,1984). The fundamental notion of an interdependence between the urban social and urban spatial realms forms the basis of the argument, in that everyday urbanism seeks to redress the lack of understanding or forsaken connections between the meaning that is associated with urban life and the public spatial realm. The empirical approach of assessing the meaning that is attached to the spatial aspects of urbanity, by means of observing the ordinary

day to day social activities of people within a space, is important in that it is used to assess or observe social justices within a spacial context.

Spatiality Concluded

The four concepts of spatiality highlight the fact that the value of urban spaces lies in the way in which they are occupied. How accessible spaces are, the memories and meanings associated with the space, how people use space and the interactions that occur within space all contribute to a sense of social cohesion and richness that defines the character of a city. Urban spaces are essential in affording opportunities and enriching the well-being of the people who occupy these spaces. In the case of Durban's subsistence fishing community, this research investigates the community's relationship with, and occupational patterns of, Durban's urban spaces.

JUSTICE

The third and final component of the spatial justice 'equation' as depicted in figure 2.3, is the concept of justice, with particular focus on the discussion surrounding social justice in relation to the urban context. In a broad sense, Civics Academy (2018), explains justice as, "...what we as a society regard as "right" based on our moral concepts of ethics, rationality, law, religion, equity and fairness. Justice needs to be in the light of the democratic principle of the 'rule of law'. The rule of law is a concept that denotes that all decisions need to be made in accordance with the law. Nobody is exempt from the law."

Social Justice

Following the broad description of justice above, this dissertation examines justice in a social context. Over the last three decades the notion of social justice has been of particular

interest regarding South Africa's transition towards a post-apartheid democratic society. As such an understanding of what social justice is, becomes imperative in evaluating what a just society would look like.

Social justice, in general terms, is described as people having equal rights and opportunities to live an acceptable, healthy life (Tayob, 2016). In their report *Understanding the Social Justice Sector in South Africa*, Chipkin and Meny-Gibert (2013: 4-8) propose three basic factors that together define social justice.

1. Social justice is concerned with the allocation and distribution of goods and services that are of value.
2. Social justice evaluates fairness and equality associated with access to rights, benefits and

burdens related to economic, political and social spheres.

3. Social justice is regulated by the state and the economy, each of which keeps the other in check regarding ensuring the fairness of access and distribution.

In his writings on spatial justice Soja (2010), explains that social justice examines peoples situational oppressions or obstructions that impede access to basic opportunities, rights and freedoms. The social justice system "...looks to ensure that those who are less advantaged or marginalised receive their fair share of benefits and assistance" (Tayob, 2016: 128). This paper brings into question the fairness of distribution and access to state resources that currently have a marginalising effect on Durban's subsistence fishing community.

SPATIAL JUSTICE CONCLUDED

By exploring the three components of spatial justice (social being, spatiality and social justice), Soja's theory can be understood as the study of the complex relationship between each element and the way in which they interact. The spaces that are created, defined, moulded and characterised by these interactions can then be defined as either just or unjust in how they relate to the people who use them (Soja, 2010). The intention of this method of analysis is that it becomes a tool in assessing [in]justice in a way that is critically spatial (Tayob, 2016).

"Spatial injustice, then, in its simplest form is the connection between space and social justice and the way those intersections are made visible (or sometimes invisible) in society"(Soja,2010: 2).

Spatial justice attempts to recognise and assign value to aspects of urban socio-spatial dynamics that are otherwise overlooked by today's presiding neoliberal ideologies. By recognising that the environmental qualities of the spaces we occupy have the ability to influence, change and construct the nature of the social aspects of our lives, one can begin to understand the importance of urban spaces, as either oppressive or uplifting, in how they determine the well-being of the people who use them (Tayob, 2016). Tayob explains that by exploring [in]justice from a spatial standpoint one is able to identify spatial qualities that give rise to [un]just circumstances.

From an architectural standpoint, an awareness of spatial justice encourages an approach towards urban intervention that explores the social dynamics of the site and urban spaces,

and the potential for such intervention to be either, socially enabling or oppressive (Themba, 2011). Tayob (2016: 128), concludes: *"Through this theoretical lens we are able to situate our entire being - physically, mentally, emotionally - into understanding and experiencing what factors are influencing the production and definition of space in a specific context."*

As discussed in the first chapter of this paper, the notion of spatial equality and justice is of particular importance within the South African context as urban [re]development needs to be carried out in such a way as to redress spatial injustices that have been entrenched due to an apartheid past (Abdulla, 2017). *"In fact, it is clear that any and every marginalized group has had space itself used as part of the terrain through which they experience injustice in their day to day lives."* (Bailey et al, 2011: 2).

In order to find space for Durban's displaced subsistence fishing community, this dissertation undertakes to gain an in-depth understanding of the relationship between a community (social) and their urban context (site/space). Achieving an architectural objective of reintegrating a spatially displaced community necessitates a comprehensive understanding of:

1. The everyday practices of the marginalised community.
2. The issues that are currently hindering the community's practices and success.
3. What the future potential for the community may be if spatial injustices are redressed.

2.3

CONCLUSION

The conceptual and theoretical frameworks that have been discussed, together form the lens through which the research is explored. The notion of spatial justice theory was introduced as the principal stimulus behind the focus of this research.

The discussion pertaining to the ideologies and concepts of neoliberalism revealed that these, in more recent years, have become the dominant ethos behind urban development, both globally and in South Africa. Neoliberalism is understood as the dominance of capital, whereby capitalism is elevated to a mode of production that influences political decision making and becomes the overriding logic within an urban culture.

Following this, a detailed exploration of the key theoretical concepts that make up spatial justice theory, (namely: social being, spatiality and justice) has revealed the social complexity regarding the use and development of public spaces within our cities. Spatial justice theory can be viewed as both a theoretical standpoint, as well as foundation from which methods of analysing urban public spaces can be derived. Spatial justice has the potential to be a useful framework towards rectifying spatial inequalities found in the continually evolving public spaces within our cities.

This research paper seeks to adopt, and build onto, theoretical notions that are rooted within spatial justice theory in order to carry out research that is designed to evaluate how spatial justice issues can be interpreted in the case of Durban's subsistence fishing community. In

order to derive an architectural response that aims to address the socio-spatial issues that the subsistence community currently face, the theoretical ideologies of spatial justice need to be translated into a research framework. This research framework, that is developed in Chapter Three, is constructed in such a way as to record, document and interpret the realities of spatial in/justices that manifest within the urban spaces that are occupied by Durban's subsistence fishers.

CHAPTER THREE
SPATIAL JUSTICE RESEARCH
DESIGN



*Photograph of fishing site at
Durban Harbour North Pier
(Photograph by author; 2019)*

3.0

INTRODUCTION

"Rethinking our assumptions about who gets to use space can help us imagine new types of space." (Bailey et al, 2011: 20)

At this point we have understood the theoretical lens of spatial justice and its importance in achieving an architectural objective of reintegrating a spatially displaced community, however, it raises the question: How can spatial justice theory be employed as a method of analysis and interpretation of space? This chapter explores this notion and sets up the premise of the case study research design.

The chapter begins by establishing the primary objective of the case study research, regarding the exploration of the relationship between

Durban's subsistence fishing community, and the urban spaces in which they practice.

The chapter continues to explore analytical approaches that offer pragmatic methods for documenting, analysing and interpreting social [in]justices within real world spaces. The spatial justice framework, as proposed by the Design Studio for Social Intervention, is an analytical tool for investigating the visible realities of spatial justice regarding communities and the spaces they inhabit (Bailey et al, 2011). Although the existing framework is regarded as a useful tool in towards conducting an analytical investigation of spatial justice, the proposed research method is primarily designed to assess communities that occupy or live in a particular space.

Due to the fact Durban's subsistence fishing community, is currently seen as a community without space, there is a need to adapt the existing spatial justice assessment guide in order to define an appropriate approach towards the assessment of spatial justice for a community that has been spatially displaced from an urban system. The chapter concludes by setting out the research methodology, an adaption of the existing Spatial Justice framework, that serves as a method for documenting and assessing Durban's displaced urban subsistence fishing community through the lens of Spatial Justice.

3.1

SPATIAL JUSTICE RESEARCH

As stated in chapter one, the broader aim of this research is to investigate an approach towards finding space and an appropriate architectural response, for a community that has been subject to urban displacement which has resulted in their preclusion from participating within the urban spaces of a South African city. More specifically the research focuses on the case of Durban's subsistence fishing community as the vehicle through which exploration of this broader research objective may be achieved. It is assumed that by developing an investigative approach towards gaining an understanding of the urban socio-spatial dynamics regarding Durban's subsistence fishing community, that is focused on delivering data towards achieving an architectural solution, that the principles

adopted and derived from this research are able to be extrapolated, and reapplied, in order to assess the possibility for architecture to act as a catalytic vehicle towards the reintegration of other similarly displaced South African Communities.

PURPOSE OF CASE STUDY

The principle objective of this research is to find space and an appropriate architectural response, that empowers Durban's subsistence fishing community.

To achieve this architectural objective, the case study research is necessary in order to gain a clear understanding of the underlying issues that prohibit the subsistence fishing community from successfully participating as part of Durban's urban community. To establish the principle issues, that are to be addressed, a

qualitative research methodology is to be adopted that enables myself as the researcher a structured framework for collecting and analysing data.

3.2

SPATIAL JUSTICE FRAMEWORK

"If we are going to say "spatial justice", we must have a sense of what rights belong to this frame. What does spatial justice—and injustice—look and feel like?" (Bailey et al, 2011: 4)

The Design Studio for Social Intervention (ds4si) proposes a framework for spatial justice, a method of analysis that endeavours to reveal social [in]justices within spaces (Bailey et al, 2011). The framework is described as a "short hand" for identifying spatial [in]justices and proposes that spatial [in]justices can be observed through the analysis of three subcategories; spatial claim, spatial power and spatial links (Bailey et al, 2011: 4-5). Each of the three categories are then further developed to form a spatial assessment guide, whereby a set

of questions is used to investigate the realities of spatial justice that pertain to particular spaces or scenarios. The ability to recognise spatial [in]justices is important in that only once it is observed and understood can informed measures be implemented towards correcting spatially unjust circumstances (Bassett, 2013).

SPATIAL CLAIM - THE RIGHT TO BE & BECOME

The first category that is investigated in the observation of spatial [in]justice is spatial claim. Spatial claim deals with one's right and ability to occupy a space or to be in space. This includes the ability or right to dwell or to stay in a place, to work in a space, to experience and enjoy a space as well as to feel safe within a space (Bailey et al, 2011).

In modern capitalist urban environments of today (that have been governed according to neoliberal policies) ownership of both space and resources is interpreted to be the prevailing spatial claim, "*...often at the expense of sovereign struggles, squatters' rights, autonomous zones, nomadism and other alternate forms of spatial claim*" (Bailey et al, 2011: 4). Furthermore, the ongoing privatisation of urban public spaces, that were once state

resources, that allowed a vast array of people to stake a claim in their use, has resulted in cities that reserve claim in the use of urban spaces and amenities for a select few.

The ds4si propose the following investigative questions that have been developed towards the assessment of spatial claim within a community. (Bailey et al, 2011: 15)

1. Who uses the place, who does not, and why?
2. How is the space used?
3. What talents and gifts do people have here?
4. What is unique about the history and culture of the area?

SPATIAL POWER - THE RIGHT TO THRIVE & EXPRESS

The second category that is investigated in the observation of spatial [in]justice is spatial power. The notion of spatial power is about one's ability to accomplish or succeed within a particular space, as well as how one is able to contribute back towards the space in which one occupies (Tayob, 2016). To investigate the notion of spatial power is to ascertain the spatial conditions, that manifest within a particular urban space, that either contribute towards or hinder people's ability to succeed within the space. Furthermore, it is an investigation in how the spatial conditions allow or prohibit, "... *people's ability to shape, decorate, celebrate and contribute to their spaces...*" (Bailey et al, 2011: 15).

The ds4si propose the following investigative questions that have been developed towards the assessment of spatial power within a community. (Bailey et al, 2011: 15)

1. What qualities would you use to describe the place?
2. How are people able to practice, contribute and create here?
3. What messages and behaviours does the space suggest?
4. What prevents anyone from full participation in personal or public life?

SPATIAL LINKS - THE RIGHT TO ACCESS & CONNECT

The third category that is investigated in the observation of spatial [in]justice is spatial links. Spatial links deals with notions of accessibility and connection regarding the use of critical public infrastructure and how a space is linked to the surrounding spaces of the city (Tayob, 2016).

While the first two categories (spatial claim and spatial power) assess spatial justice in observing the social dynamics of spatiality, spatial links seeks to explore the physical environments of space that are often in plain sight, yet are often overlooked. In order to assess both accessibility and connection one needs to investigate spatial justice in terms of two determining elements: "...*understanding fracture and working with the*

existing ecology of a place" (Bailey et al, 2011: 16).

Understanding Fracture

The first investigative line of questioning that is aimed at gaining an understating of spatial links is to do with the concept of fracture or fragmentation. All urban communities are subject so some form of fragmentation, being historical ties, development conditions, connection to the urban environment or social conditions, all of which contribute towards the urban culture of the people who occupy the space in question (Bailey et al, 2011).

The ds4si propose the following investigative questions that have been developed towards the assessment of fracture. (Bailey et al, 2011: 15)

1. What barriers exist in the physical environment?
2. What breaks and obstacles can be found in the system?
3. What invisible, historical or social barriers divide people?
4. What historic memory exists in the place and the people here?

Ecology of Place

The second investigative line of questioning that is aimed at gaining an understating of spatial links is to do with understanding the ecology of place. Through investigating the ecological links of the space in question one is able to "...work with, rather than against, what wants to exist in that place" (Bailey et el, 2011: 15).

The ds4si propose the following investigative questions that have been develop towards the assessment of the ecology of place. (Bailey et el, 2011: 15)

1. What connects this place to other places?
2. What natural and social flows exist in the place?
3. What institutions relate to and affect the place?
4. What dreams and aspirations exist for the place?

3.3

METHODOLOGY - FROM THEORY TO RESEARCH DESIGN

The spatial justice framework, as presented by the ds4si, is a useful starting point towards the development of the research framework that serves as the investigative vehicle for this study. (Bailey et al, 2011: 4-5). The spatial justice framework sets out a line of questioning as a method for documenting the social [in]justices that are observed within a given space. It is a tool that allows the researcher to assess, evaluate and compare specific criteria under the three spatial justice principles, namely: spatial claim, spatial power and spatial links (Bailey et al, 2011: 4-5). In short, it is a methodology that enables empirical evaluation by the researcher for measuring the spatial "just-ness" of a site (Tayob, 2016: 154).

CASE STUDY FRAMEWORK

This paper adopts the three principles as give by the ds4si (2011) as the foundation for the case study research methodology. In so doing, the three research objectives, as well at the correlating research questions, are able to be examined individually as each of the objectives/questions is directly linked to one of the three spatial justice principles. By establishing the relationship between the three research objectives/questions and the principles of the spatial justice framework, a relevant case study assessment framework is constructed as follows:

Principle 1- Spatial Claim

- Objective 1: To explore the Spatial Claim of Durban's subsistence fishing community.
- Research Question: What role does the subsistence fishing community play as part of Durban's urban cultural identity?

Principle 2 - Spatial Power

- Objective 2: To understand the socio-spatial issues that currently impact the success of Durban's subsistence fishing industry.
- Question 2: What socio-spatial issues currently affect the success of Durban's subsistence fishing community?

Principle 3 - Spatial Links

- Objective 3: To investigate the relationships and connections between the subsistence fishing community and the surrounding urban systems.
- Question 3: What are the relationships and connections between the subsistence fishing community and the surrounding physical urban systems?

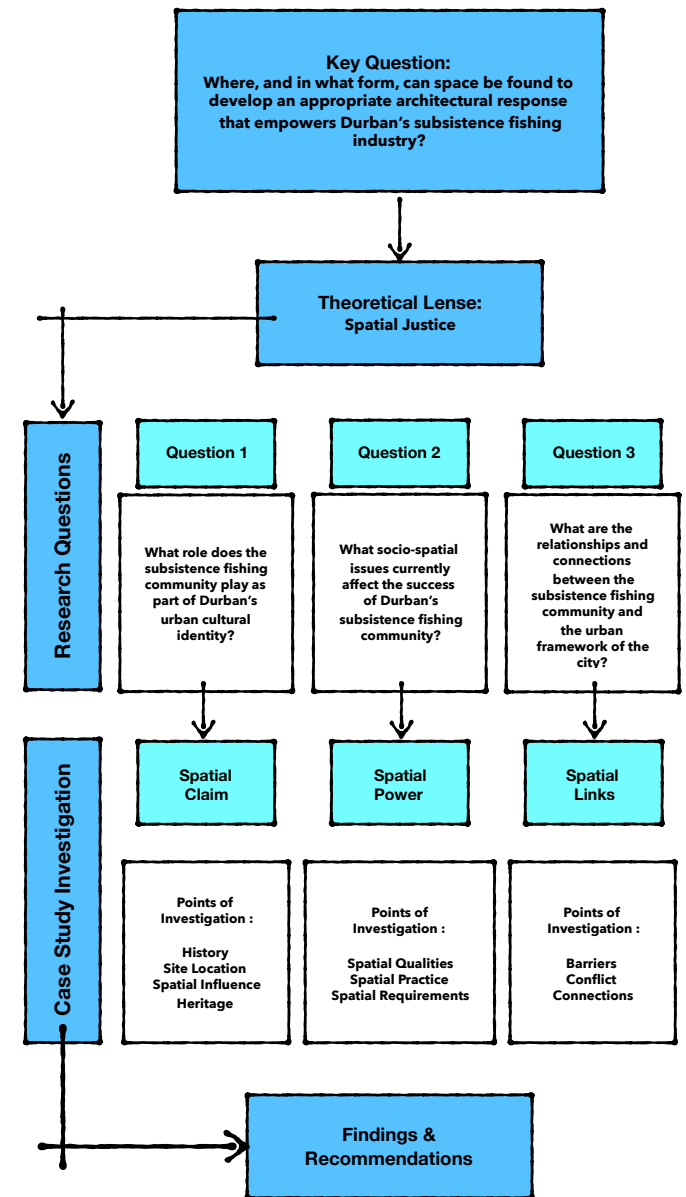
FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

CASE STUDY ASSESSMENT GUIDE

The spatial justice framework, that has been set out above, establishes the key focus principles of spatial justice that are investigated in this research. In order to administer the case study research, in such a way as to ensure that the data collection and research is geared towards evaluating the case of Durban's subsistence fishing community from critically spatial and architectural perspective, a similar case study assessment guide has been formulated. The ds4is (2011) proposes an assessment guide for the empirical evaluation of spatial [in]justices, as a set of investigative questions. In much the same way, the case study assessment model that has been formulated for the purpose of this research, establishes points of investigation for each of the three spacial justice principles that are to be explored. With the three research objectives in mind, each set of investigative

points sets up the framework for the discussion that evaluates the respective spatial justice subcategories.

Both primary and secondary data has been collected (in the form of literature reviews, informal interviews and observational analysis of the site) in order to compose the investigative discussion for each of the three subcategories of spatial justice.



3.1: *Diagram of research investigation.*
(Image by author, 2019)

Spatial Claim Assessment Guide

The first principle of spatial justice that is to be investigated, in the context of this case study, is *Spatial Claim*. Spatial claim assesses the right and ability for a person or community to occupy a space or to be in space. Theoretical notions of citizenship and spatial claim, under the umbrella of social being, are core components of spatial justice, which have been explored in chapter 2 of this paper. Chapter two establishes that:

Citizens and communities who occupy an urban space have a right to collectively stake a claim in the process of the evolving urban framework; to mould, change and reshape themselves and the urban spaces that they inhabit.

As such, an investigation towards assessing spatial claim regarding the subsistence fishing community's occupation of space in Durban, is

one that necessitates the exploration of the subsistence fishers historical spatial negotiation of spaces in and around Durban.

Research Question 1: What role does the subsistence fishing community play as part of Durban's urban cultural identity?

Approach: To investigate spatial claim, by assessing the historical spatial occupation of the subsistence fishing community and the role that their heritage plays as part of the Durban's urban cultural identity. This discussion is primarily composed of a review of literature that details the history of Durban's subsistence fishing community, as well as primary data that has been collected by observing the spaces that are occupied by the fishing community in Durban today.

Points of Investigation:

1. Establish the historical background of the subsistence fishing community in Durban.
2. Determine the spaces that are used by the subsistence fishers today.
3. Critically assess how much the subsistence fishers have been able to mould, change and reshape themselves and the urban spaces that they inhabit.
4. Investigate if, and how, the city recognises the heritage and memory of subsistence fishing.

Spatial Power Assessment Guide

The second principle of the spatial justice framework is the notion of spatial power. Spatial power assesses the community's ability to accomplish or succeed within a particular space, it also seeks to understand how they are able to contribute back towards the spaces that they occupy (Tayob, 2016). Chapter two of this paper discusses the importance of urban spatiality as the second component of spacial justice theory. It has been established that:

In a capitalist driven society, public spaces play a crucial role for citizens who are unable to find formal means of employment. Public urban spaces provide a platform in which poorer citizens can work, reap resources and generate an income to sustain their livelihoods, thus counterbalancing the social and economic

marginalising effects of exclusion from formal job markets.

As such, an investigation towards establishing the current situation of spatial power necessitates an understanding of how the city's urban spaces either enhance or diminish the subsistence fishers ability to practice their trade. The investigation also seeks ascertain an understand of the urban spatial qualities that affect the fisher's ability to contribute towards Durban's socio-spatial urbanity.

Research Question 2: What socio-spatial issues currently affect the success of Durban's subsistence fishing community?

Approach: To investigate spatial power, by assessing the current social, spatial and environmental issues that have an affect on the

successful practice of subsistence fishing in Durban. The points of investigation are to be assessed by observing the spaces that are currently used by the local subsistence fishing community, as well as by engaging with the people who use these spaces.

Points of Investigation:

1. Evaluate the spatial qualities of the fishing spots that are used by the subsistence fishers.
2. Determine how the fisherfolk are able to practice in the spaces provided for them.
3. Determine how spatial attributes (or lack there of) prohibit the fisherfolk from contributing towards the public life of the city.

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

Spatial Links

The third, and final, principle of the spatial justice framework that is to be investigated is the notion of spatial links. An investigation towards assessing spatial links is one that seeks to assess how the spaces in question affects the user's ability to access and connect with these spaces, as well as with the surrounding urban systems. The two sub categories of spatial links have been defined as; understanding fracture, and ecology of place. Again the theoretical underpinnings of spacial links have been set out in chapter two in the discussion around urban spatiality.

How accessible spaces are, how people use space and the interactions that occur within space all contribute to a sense of social cohesion, community success and an imbedded cultural richness that defines the character of a

city. Urban spaces are essential towards affording opportunities and enriching the well-being of the people who occupy these spaces.

An investigation that assesses the spatial links, regarding accessibility and connection, between Durban's subsistence fishers and the surrounding urban systems/ spaces, seeks to understand how the spaces that are used by the community either enhance or impede these notions of access and connection.

Research Question 3: What are the relationships and connections between the subsistence fishing community and the urban framework of the city?

Approach: To investigate spatial links, by observing and documenting the physical qualities of the spaces that subsistence fishers

currently occupy as well as their relationship to the surrounding urban systems.

Points of Investigation:

1. Assess what barriers exist in the spaces used by the subsistence fishers.
2. Assess any spatial issues that cause friction between the subsistence fishing community and other users of these spaces.
3. Identify the connections between the spaces that are used by the subsistence fishers and other urban systems.

METHODOLOGY CONCLUDED

Chapter two has explained that there are a multitude of political, civil, social and environmental issues that accumulatively influence the socio-urban dynamics of any urban community, all of which need to be carefully understood in order to establish a wholistic understanding of the complexities regarding urbanism. In the case of Durban's subsistence fishing community, conducting research that attempts to cover all aspects of urban, social and civil life would be impractical as such research would require going beyond the scope of this architectural dissertation. Ergo, the purpose of this dissertation is to focus the research by exploring the spatial marginalisation of the subsistence fishing community from an architectural perspective; one that is critically spatial in nature.

The lens of spatial justice theory, is one step towards narrowing the research focus in such a way as to unpack the urban spatial issues that frame a relevant architectural understanding. Spatial justice theory however, still poses a potential issue, regarding a lack of focus in conducting research, as it is in itself a broad based, all encompassing socio-spatial theory. The spatial justice framework, and field assessment guide, as proposed by the ds4is (2011) provides a research methodology that further narrows the research focus, by investigating notions of spatial justice in terms of spatial claim, spatial power and spatial links.

This section has detailed the research methodology that is to be implemented in investigating the of the case of Durban's subsistence fishing community. The case study assessment guide that has been formulated, as

the research methodology, focuses on spatial claim, spatial power and spatial links as the three spatial justice principles to be investigated. This narrower scope of research is primarily geared towards an investigation that serves to directly inform the design of a proposed architectural solution.

3.4

CONTEXT OF THE CASE STUDY

The research methodology, as detailed in the previous section of this paper, is one that focuses on identifying specific spatial issues regarding the case of Durban's subsistence fishing community. However, before a preceding with the detailed case study, it is important to understand the context and location in which the study takes place.

DURBAN, SOUTH AFRICA'S MARITIME CITY

Durban is a port city that is located on the eastern seaboard of South Africa, in the province of KwaZulu-Natal. Since early colonial settlement in 1824, when a trading post was established on the banks of the natural harbour, the protected bay has served as a primary maritime point of entry for the region (World

Port Source, 2019). Durban was officially founded in 1835, on the site of the Port Natal trading post, and has developed to become South Africa's third largest city and plays a crucial role as the country's primary seaport (Encyclopaedia Britannica, 2019).

Aside from the port city playing a major role in facilitating much of South Africa's manufacturing and import/export related industries, Durban's warm subtropical climate and beautiful beaches have also established the city as a primary destination for South African tourism.

In post-apartheid years, the city centre and other areas that surround Durban's port have been subjected to an ongoing battle of economic decline that has arisen as a result of a shrinking manufacturing industry as well as mass corporate migration out of the city centre. The

economic decline has led to high levels of unemployment as well as an increased crime rate in the port and CBD areas (World Port Source, 2019).

The poorer population that inhabit the city have established a booming micro-business sector, both formal and informal, that provides basic levels of subsistence living and employment for many of the people who live there. Despite the economic setbacks, the Port of Durban is incentivising many projects that aim to revitalise the city with new residential and waterfront developments (World Port Source, 2019).

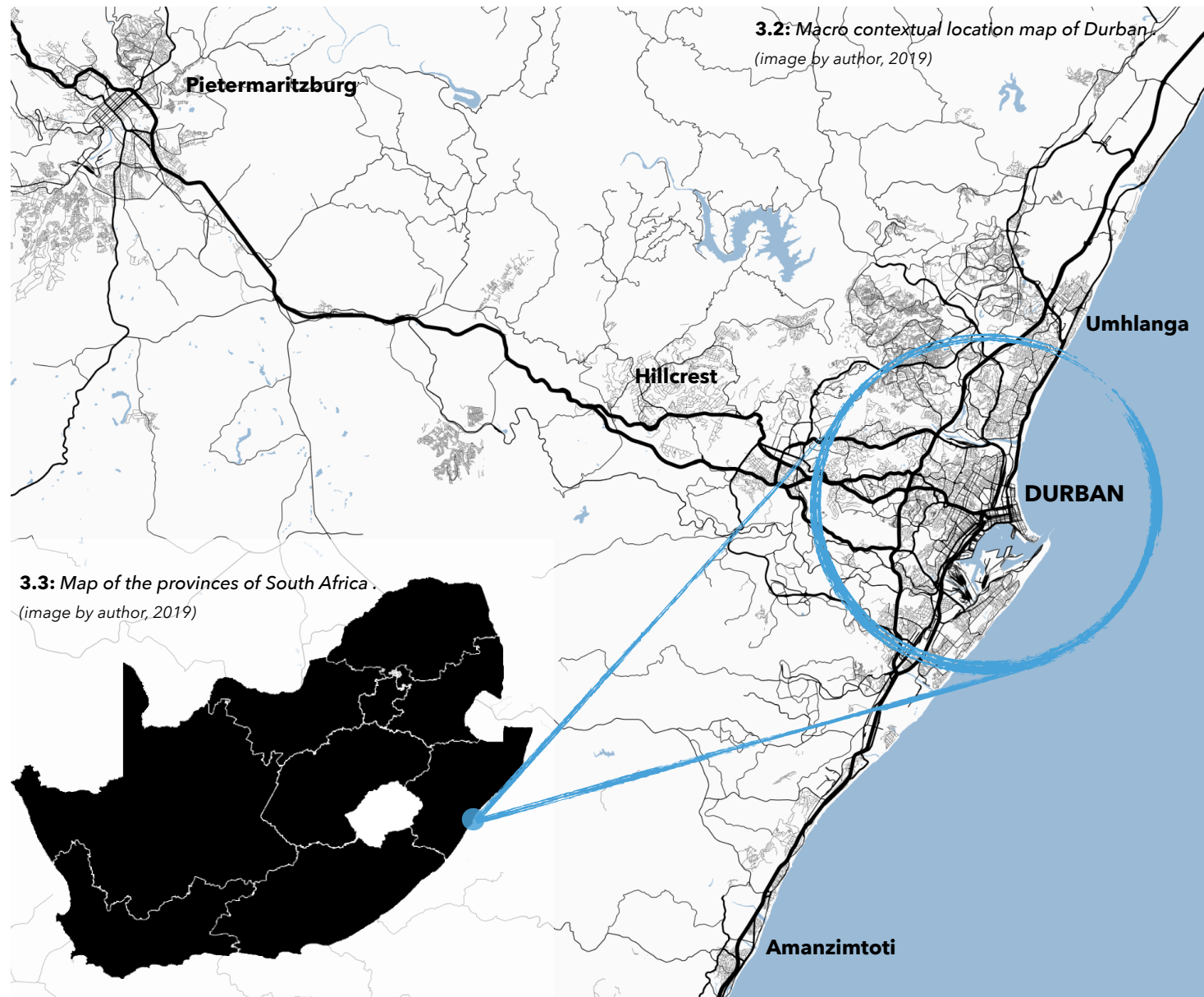
Today the Port of Durban is still the dominant economic contributor to the city and the province, as it provides for more than half of the province's employment, income and output (World Port Source, 2019).

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

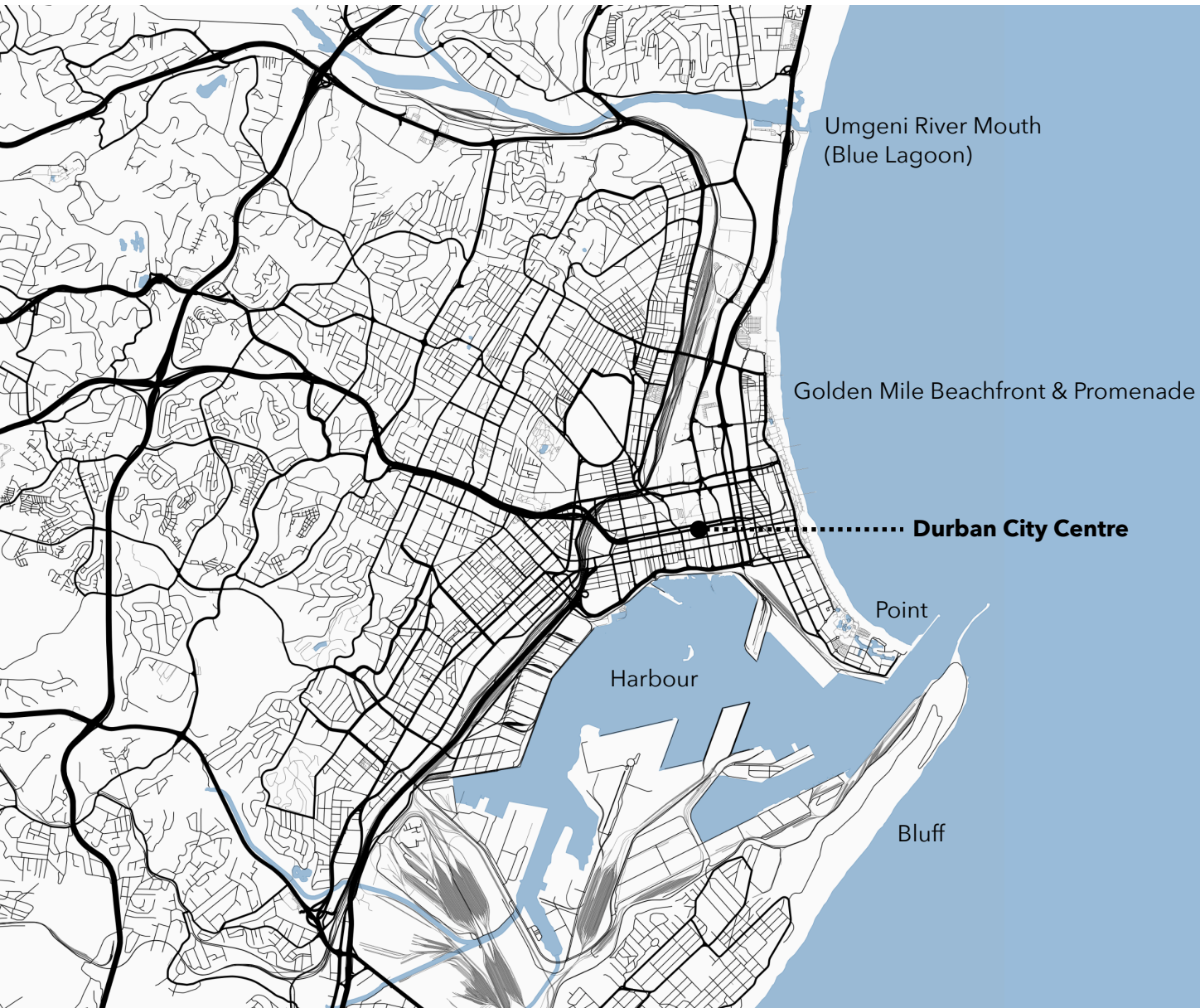
SITE LOCATION

Durban is located on the eastern seaboard of South Africa, in the province of Kwa-Zulu Natal. The city boasts a large natural harbour around which the majority of the city's urban development has taken place.

The site that has been chosen to form the basis of this investigation is the shorelines that relate to the central area of the city of Durban. While subsistence fishers do make use of beaches in both the norther and southern areas of the municipal district, the public urban fishing sites of the city's central areas have been the focus area of most of the spatial disputes. For this reason the geographic area of study is defined as the shoreline that runs from the Umgeni River in the north, to the harbour's southern pier. The investigation area includes Durban harbour bay.



FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:
Towards the design of a FISHING CENTRE in Durban Harbour



3.4: Investigation site location boundary map.
(image by author, 2019)

3.5

LIMITATIONS OF THE RESEARCH

The data presented in this research paper was collected by means of a review of current literature and by constant visits to site, whereby unstructured interviews were conducted with subsistence fishers who were found to be fishing in these sites. Site investigation by means of observation and photographic documentation, regarding the physical attributes of the site as well as the way in which people negotiate these spaces, is also presented in this body of research.

The nature of this investigative research required frequent visits to the fishing sites in an attempt to document the use of the site at various times as well as to document the various users of the spaces in order to provide accurate

data collection. It is important to note that the primary research that is documented in this paper is limited to the time that I as the researcher has spent on site.

The research was also found to be limited to the level of communication between myself and the subsistence fishers on site, as cultural and language barriers made it difficult to accurately record all the views of the fishers that were interviewed. The informal semi-structured nature of the interviews however, did provide an easier communication platform between myself and the subsistence fishers than the formal interviews that were initially attempted. While many of the fishers that were interviewed in this study were forthcoming and happy to share information, some of the subsistence fishers were less willing to share information as it

appears that they were not clear regarding the purpose of my research.

The research is also limited by the scope of the chosen theoretical, spatial justice research framework. While adopting the spatial justice framework assisted to focus the data that has been collected, it is important to note that socio-spatial factors that fall outside of the scope of spatial justice may also need to be investigated in order to derive a complete understanding regarding the reintegration of a displaced urban community.

Despite the challenges that I as the researcher encountered, I was able to record, document and synthesise data that has informed the design of a proposed fishing centre in Durban Harbour.

3.6

CONCLUSION

This chapter sets out the research methodology that is to be followed in conducting the research that is presented in this paper. The chapter establishes the primary objective of the case study research design as an exploration of the relationship between Durban's subsistence fishing community and the urban spaces in which they practice.

The chapter explored spatial justice, a theoretical platform that was presented in chapter two of this paper, as an approach that offers pragmatic methods for documenting, analysing and interpreting social [in]justices within real world spaces. The spatial justice framework, as proposed by the Design Studio for Social Intervention, was discussed as an

analytical tool for investigating the visible realities of spatial justice regarding communities and the spaces they inhabit (Bailey et al, 2011).

It was found that the existing framework is regarded as a useful tool towards conducting an analytical investigation of spatial justice, however the proposed research method is primarily designed to assess communities that occupy or live in a particular space. Thus, due to the fact Durban's subsistence fishing community is currently seen as a community without space, the chapter explained the adaption that have been made to the existing spatial justice assessment guide in order to arrive at an appropriate approach towards the assessment of spatial justice for a community that has been spatially displaced from an urban system.

The chapter continues by setting out the research methodology, an adaption of the existing spatial justice framework, that serves as a method for documenting and assessing Durban's displaced urban subsistence fishing community through the lens of spatial justice.

The urban context of Durban and the location of the research site was established in order to set the spatial parameters of the research investigation. The chapter concluded by highlighting the limitations of the research methodology that has been derived, however it is explained that despite the limitations to the research methodology, useful documentation of the research has been achieved in order to inform an architectural solution.

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:
Towards the design of a FISHING CENTRE in Durban Harbour

CHAPTER FOUR
CASE STUDY PART 1 - SPATIAL
CLAIM

*KZNSFF orchestrated walk against ExxonMobil's plans to drill for oil and gas off Durban's southern coastline.
(image available at: < <https://bereamail.co.za/113720/durban-fisherman-want-access-to-all-traditional-fishing-grounds/>>)*



FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

4.0

INTRODUCTION

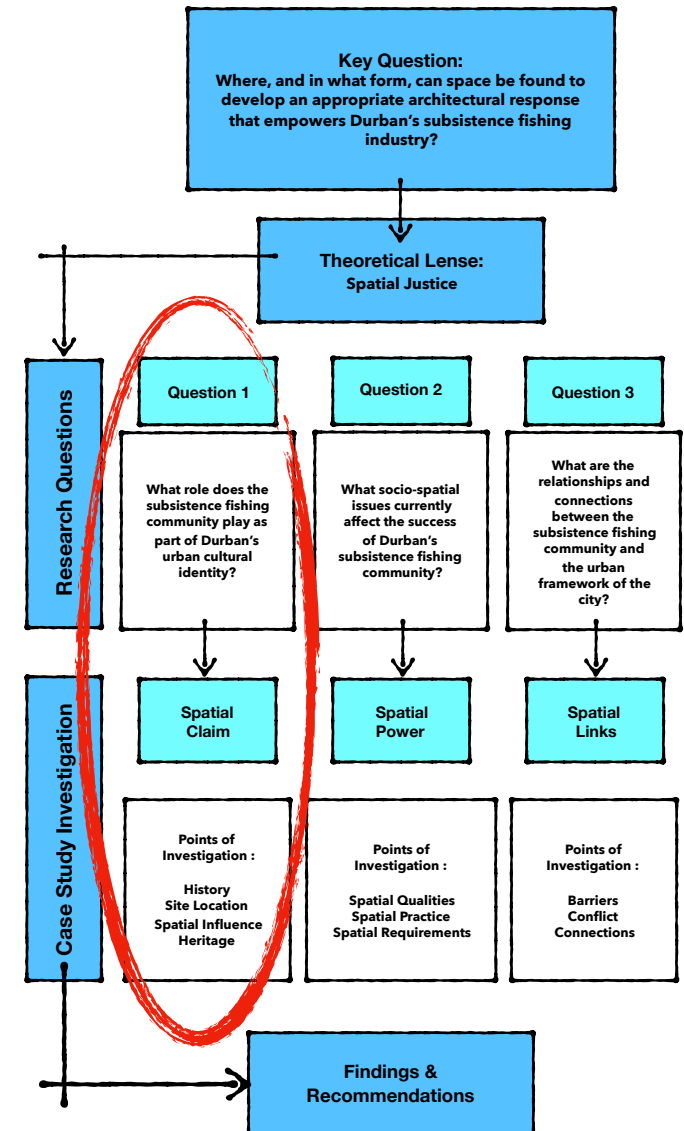
This chapter forms the first part of the three part research investigation, whereby a detailed investigation of spatial claim is undertaken regarding the case of Durban's subsistence fishing community. An investigation towards gaining and understanding of spatial claim is a discussion regarding the fundamental right and ability for the subsistence fishing community to occupy a space or to be in space. Furthermore, an exploration of spatial claim establishes the significance of the subsistence fishing community and their heritage as contributing factors to the urban identity of Durban. The discussion takes the form of a qualitative assessment that extrapolates data from literature, site observation records and informal interviews that have been conducted with some

of Durban's local subsistence fishers. For the purpose of research that is architecturally informative, a holistic understanding of spatial claim is gain through the exploration of the following investigative points:

1. Establish the historical background of the subsistence fishing community in Durban.
2. Determine the spaces that are used by the subsistence fishers today.
3. Critically assess how much the subsistence fishers have been able to mould, change and reshape themselves and the urban spaces that the inhabit.
4. Assess how, urban spaces recognise the heritage and memory of subsistence fishing.

4.1: Diagram of research investigation - Spatial Claim.

(Image by author, 2019)



4.1

A HISTORY OF SUBSISTENCE FISHING IN DURBAN

The first point of investigation towards assessing a notion of spatial claim is to understand the history of subsistence fishing in Durban. In order to justify an argument that advocates the notion that the subsistence fishers have a right to occupy and practice in some of Durban's public spaces, the historical value of the subsistence fishing community needs to be evaluated.

For more than a century, the subsistence fishers of Durban have relied on access to public space in and around the beach and harbour area to pursue their fishing activities (Dray, 2009; Kalina et al, 2019). Over this time, this access has been shaped by the impact of disease, by socio-political engineering of public space during the

Apartheid years and latterly, by neoliberal economic demands on the city in the post-Apartheid era .

EARLY YEARS OF SUBSISTENCE FISHING

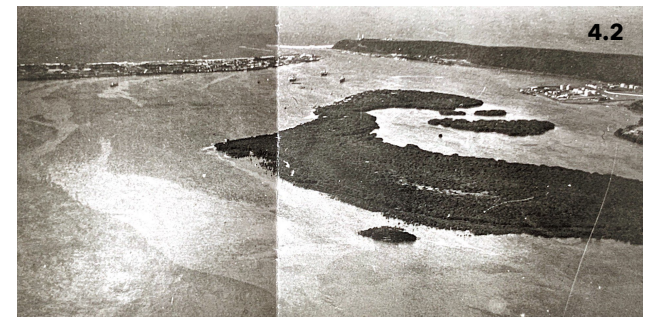
The majority of subsistence fishers in the Durban area are of Indian descent, tracing their ancestry back to the indentured labourers brought to Natal (then a British colony) from India in 1860 to work on the white-owned sugar plantations of Natal (Marie, 1986). Once, the five year period of indenture was complete, many labourers chose to remain in Natal, rather than return to India and became involved in market gardening, hawking and fishing (Marie, 1986). Many of the Indians involved in fishing settled on Salisbury Island in the Durban harbour and took up both line fishing and seine net fishing, a skill that they had brought from India (Dray, 2009).

4.2: *Salisbury Island in Durban Harbour, 1900. Area where subsistence fishers first established themselves in Durban*

(image by Govender and Chetty, 2014)

4.3: *Seine-netting in Durban Harbour, the early years of Durban's fishing industry .*

(image by Govender and Chetty, 2014)



FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

An outbreak of plague in 1900 saw the Salisbury Island residents moved to Fynnlands on the Bluff so that a medical facility could be constructed on Salisbury Island (Dray, 2009). The community was soon well-established and thriving in Fynnlands where they lived in stilted homes and participated mainly in line fishing from boats. Other communities, more involved in seine netting, were established close to the Durban Point and in the Bayhead areas (Kalina et al, 2019). These line fishers and seine fishers were able to gain major control of the fresh fish market in the Durban area (Dray, 2009). Residents had easy access to their fishing grounds and to the market for the sale of their catches.



4.4: Early Seine-netting in Durban, a crew's haul of shad on Addington Beach.

(image by Govender and Chetty, 2014)

4.5: Preparing Fish for Market on Salisbury Island.

(image by Govender and Chetty, 2014)



4.6: The Village at Fynnlands. Master fishermen's wood & iron cottage .

(image by Govender and Chetty, 2014)

4.7: The Village at Fynnlands. Fishermen's children playing on boat .

(image by Govender and Chetty, 2014)

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

POST WAR RELOCATION

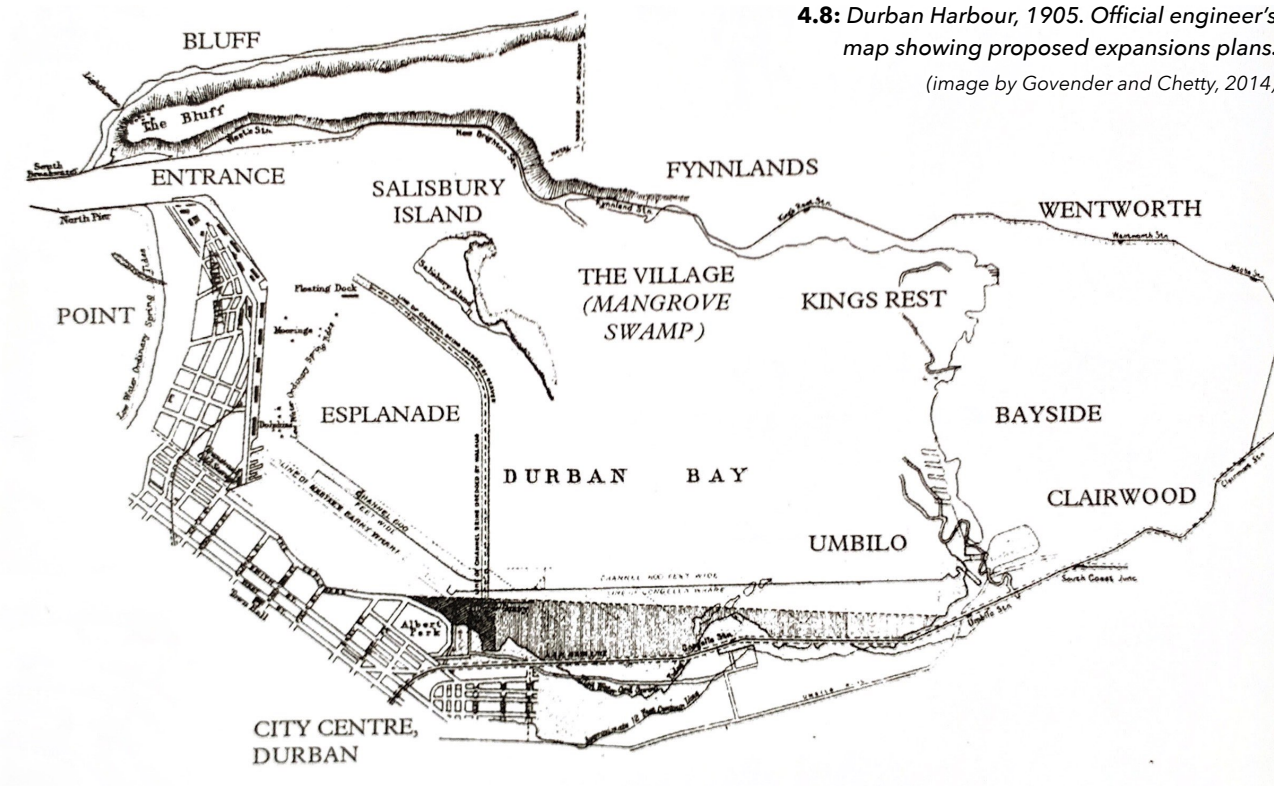
The years following the end of the Second World War saw significant change in the subsistence fishing community of Durban. The immediate post-war period was a period of

rapid industrial growth which necessitated expansion of the harbour. The Fynnlands community had to make way for oil storage facilities and were relocated to areas such as Clairwood, Wentworth, Bayhead and Merebank (Kalina et al, 2019).

APARTHEID RELOCATION

This dissolution of the harbour fishing community was further compounded by one of the social engineering policies of the Apartheid government, the Group Areas Act of 1950. Indian families were forcibly removed from areas closer to the city of Durban to Chatsworth, the designated Indian township further south of the city (Kalina et al, 2019). The Fynnlands relocation and the subsequent Group Areas forced removals meant that majority fishing communities were broken up and then diluted within Indian communities from non-fishing backgrounds (Kalina et al, 2019).

During the Apartheid years, access to fishing spots along the Durban beach area was further compromised for the subsistence fishers due to increased petty-Apartheid municipal legislation which designated certain fishing spots for White



people only. Non-white fishers were allocated inferior spots on the Durban piers (Dray 2009).

NEOLIBERAL DEVELOPMENT

Post 1994, the question of access and ease of fishing did not improve for Durban's subsistence fishers. The emergence of the blue economy, or a frame of thinking that encourages better use and protection of the world's oceans as a source for sustainable income generation and growth (Kalina et al, 2019), should have had positive repercussions for Durban's subsistence fishers. However, post 9/11 fears, following the terrorist attacks in the USA, saw the development of more stringent international laws in terms of harbour access. Such laws require local compliance if a city such as Durban is to benefit from what has been described as neoliberal pressure to embrace international trade and investment (Kalina et al, 2019). The result of

compliance with these regulations has meant that the Durban harbour area is far less accessible to the public and thus to subsistence fishers. Furthermore, government looks to maximise profit from the emerging blue economy by promoting access for corporate fishing structures at the expense of the more informal sectors of the economy (Kalina et al, 2019). The subsistence fishers have been historically dependent on ease of access if they are to be sustainable.

The history of the subsistence fishers in Durban is thus one of rich cultural, community and spiritual connection to their fishing activities (Dray 2009). Despite the injustices of the past political system and the negative impact of so-called, economic progress in latter decades, subsistence fishers have managed to maintain

their presence in Durban, albeit on an increasingly less inclusive basis.

4.2

SPACES USED FOR SUBSISTENCE FISHING TODAY

The second point of investigation towards assessing a notion of spatial claim is to identify the spaces that are currently used by the subsistence fishing community. A fundamental aspect, regarding the notion of spatial claim, is to understand the boundaries and locations of the spaces that are occupied by the community in question. Only once these spaces have been determined can one begin to assess spatial justices regarding how a community makes use of a space.

Due to the fact that the sites where on-shore fishing is permitted in and around Durban have varied so much in recent years, many fishermen are still unclear as to which areas can legally be

used for fishing. For this reason, a concrete investigation that establishes the confirmed spaces that are legally used for on-shore subsistence fishing is required in order to further the investigation of spatial justice for the subsistence fishing community.

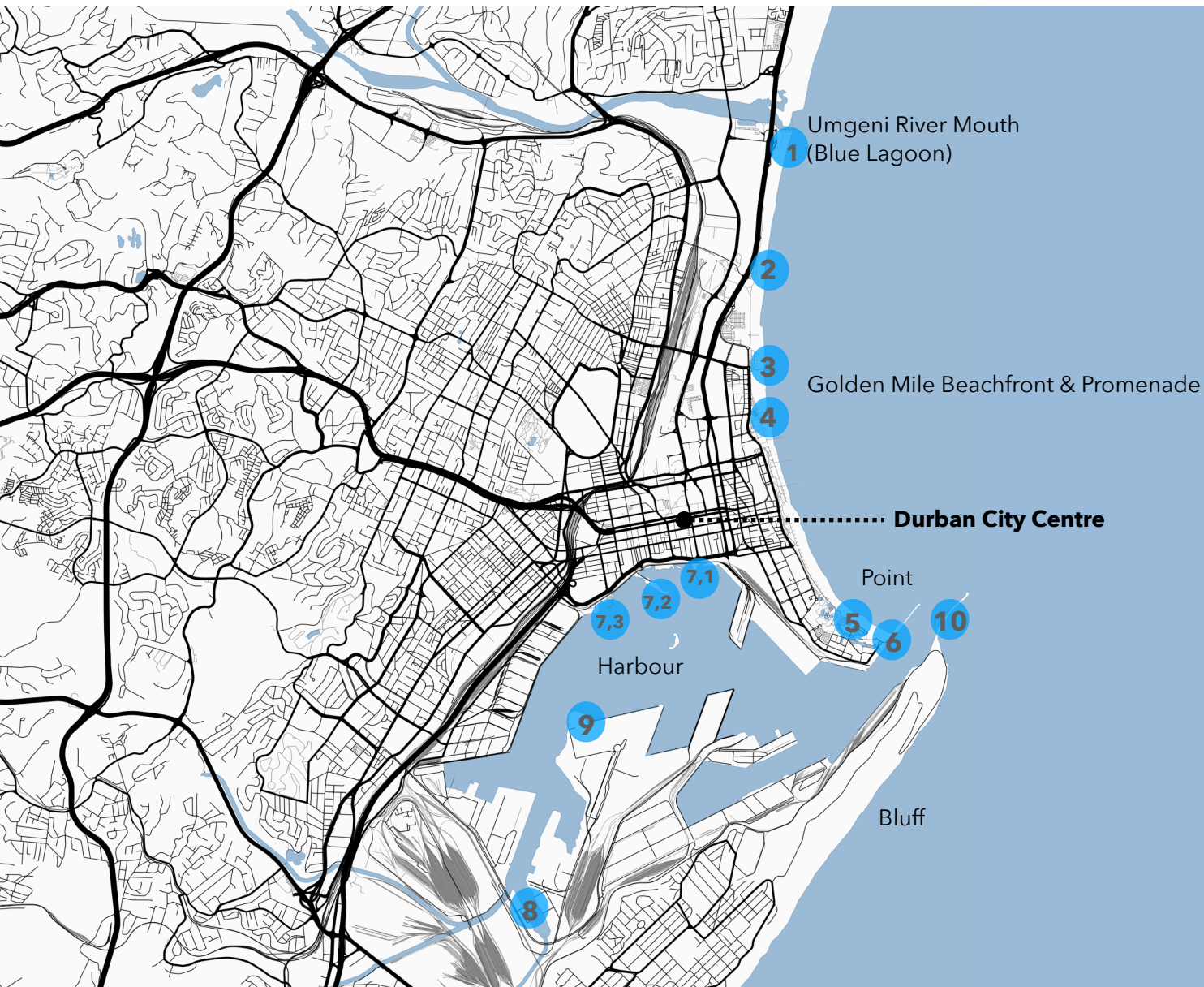
Due to the fact that on-shore fishers rely on access to public urban space in order to practice fishing, it stands to reason that the majority of the spatial justice research that is investigated in this paper focuses on the on-shore subsistence fisher' negotiation of space. However, in order to derive a wholistic understanding of the spatial justice issues that impact Durban's subsistence fishing community, in such a way as to inform an architectural response that addresses the collective needs of the community as a whole, it is also necessary to establish the imposed boundaries that determine where and how

Durban's off-shore subsistence fishers operate today.

ON-SHORE FISHING SPOTS

Today, Durban's subsistence fishing community (who comprise of over 12 000 members) have regulated access to 12 on-shore fishing spots between the Umgeni River mouth and Durban Harbour. The map on the following page indicates the sites in Durban Harbour and the surrounding beaches that are open to fishing as of August 2019.

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour



4.9: Map of the study area highlighting the 11 fishing sites .

(image by author, 2019)

- 1. Blue Lagoon**
- 2. Sunkist Pier**
- 3. Battery Beach Pier**
- 4. Snake Park Pier**
- 5. Vetch's Beach**
- 6. Harbour North Pier**
- 7. Esplanade**
 - 7,1. Maritime Museum
 - 7,2. Durban Marina
 - 7,3. Wilsons Wharf
- 8. Grunter Gully**
- 9. Round Bush**
- 10. Harbour South Pier**

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

1- Blue Lagoon

Located on the northern boundary of the investigation site at the mouth of the Umgeni River, Blue Lagoon is one of Durban's most popular and iconic fishing spots. The site is at the northern end of the beachfront promenade and has been used as a fishing spot for generations. The subsistence fishers are able to fish off of the large pier at the river mouth as well as from the adjacent beach.

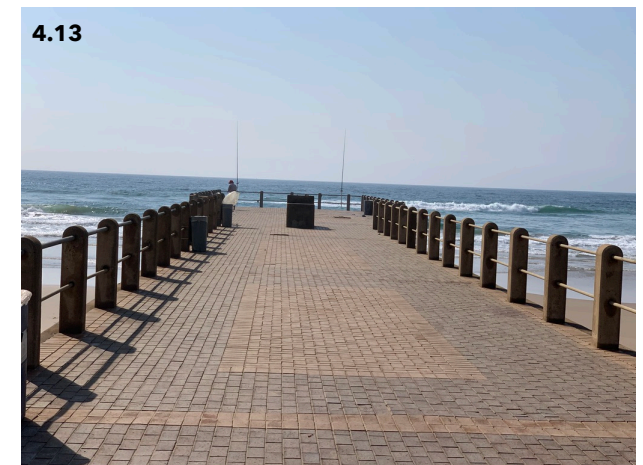
2- Sunkist Pier

Sunkist pier is the first demarcated fishing pier south of Blue lagoon. The pier is accessed from the beachfront promenade in front of Moses Mabhida stadium.



4.10: Umgeni River Mouth at Blue Lagoon.
(Photograph by author, 2019)

4.11: Fishermen at Blue Lagoon.
(Photograph by author, 2019)



4.12: Entrance to Sunkist Pier from the promenade.
(Photograph by author, 2019)

4.13: Fishermen at Sunkist Pier.
(Photograph by author, 2019)

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

3- Battery Beach Pier

Located just south of the popular Suncoast Casino, Battery Beach Pier is a popular spot for both surfers and fishermen alike. Again access to the pier is gained from the promenade.

4- Snake Park Pier

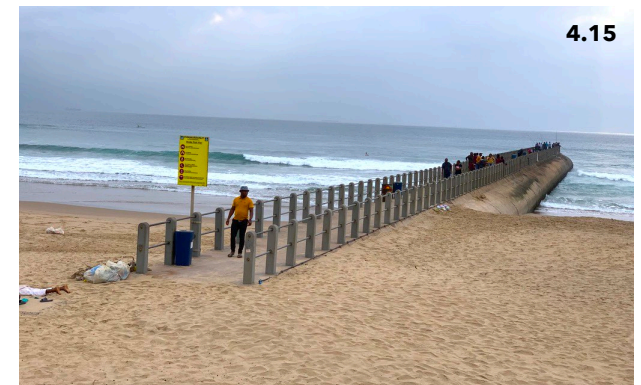
Snake Park Pier has seen a lot of media coverage over the last few years, as it was one of the few fishing spots that remained in use during the beachfront development that has occurred over the last 15 years. The pier is located in what is considered to be the beachfront "hub" and is a popular spot for surfers and fisherfolk.

5- Vetch's Beach

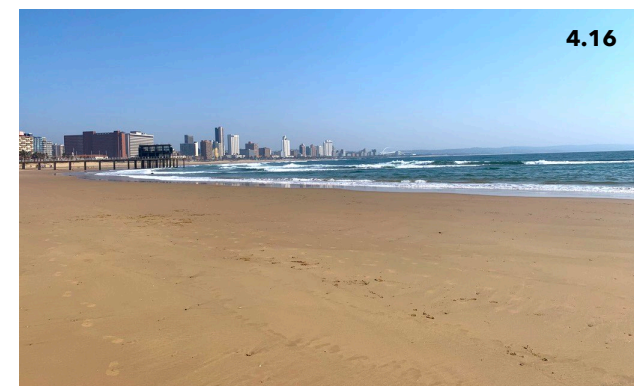
Vetch's Beach is the southern most fishing spot before the beachfront meets the harbour entrance. The calmer water and abundant marine life, due to the natural rock reef that is located between Moyo Pier and the harbour entrance, makes this beach a popular spot for water-sport enthusiasts, divers and fishers alike. Currently the beachfront promenade is being extended along this beach to connect Ushaka Marine World to the northern pier at the harbour entrance.



4.14



4.15



4.16

4.14: Battery Beach Pier.
(Photograph by author, 2019)

4.15: Snake Park Pier.
(Photograph by author, 2019)

4.16: Vetch's Beach.
(Photograph by author, 2019)

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

6- Harbour North Pier

The northern pier at the entrance to Durban Harbour is the most recent site that has been reinstated as a fishing area. This area was one of the first fishing spots to be used by early subsistence fishers, however after 9/11 and the port development project in 2005 to widen the harbour mouth, fishing at this historical fishing ground was prohibited until late 2018.

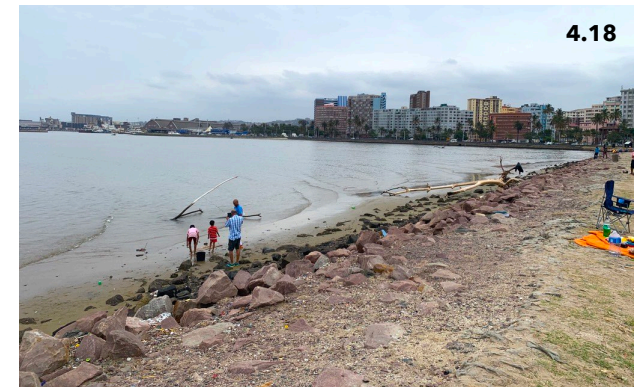
7- Esplanade

The Esplanade is an area that runs for 1,7km along the edge of Durban Harbour, adjacent to the city centre. This is the site of early European settlement in the bay and is where Durban was first established. Today the Esplanade is one of the few areas of Durban Harbour that is accessible to the public. As such, the esplanade is home to the Bat Centre, Natal Maritime

Museum, Durban Marina, Point Yacht Club, Royal Natal Yacht Club and Wilson's Wharf, which together host the majority of the harbour's public recreational activities. Within this area there are three demarcated fishing spots; Maritime Museum, Durban Marina and Wilson's Wharf. Many commercial trawlers make use of Fish Wharf which is adjacent to Wilson's Wharf at the western end of the Esplanade.



4.17



4.18



4.19

4.17: Fishing site adjacent to the Maritime Museum.

(Photograph by author, 2019)

4.18: Fishing site at the Marina.

(Photograph by author, 2019)

4.19: Fishing site at Wilson's Wharf.

(Photograph by author, 2019)

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

8- Grunter Gully

Grunter Gully is located at the most in-land point of Durban Harbour bay, at the Bayhead area, where the uMbilu, uMhlatuzana and aManzimnyama tributaries feed into the harbour bay (Demetriades & Forbes, 2009). Although this area of the harbour is accessible to the public, hosting the Bluff Yacht Club, Island Sailing Club, Bobbie's Boat Club and Fish Eagle Campsite, the industrial nature of the Bayhead wharf renders the area somewhat less popular for subsistence fishing. The newly reinstated line fishing wharf is located adjacent to the commercial trawlers wharf, a wharf that is predominantly used by Lusitania Food Products (PTY) Ltd.

9- Round Bush

Located on a protruding beach in the middle of Durban harbour, Round Bush is a little know

fishing spot to those outside of the fishing community. The site was reopened for fishing in 2014 and is a popular site for the veteran anglers who know how navigate the unmarked dirt roads between the container storage sites in order to get there.

10- Harbour South Pier

The southern pier at the entrance to Durban Harbour is another spot that has been used by subsistence fishers for over a century. Although the area was closed to fishing during the construction of the widened harbour mouth, the fishing spot was soon reopened following the completing of the construction project.

4.20: Harbour North Pier.

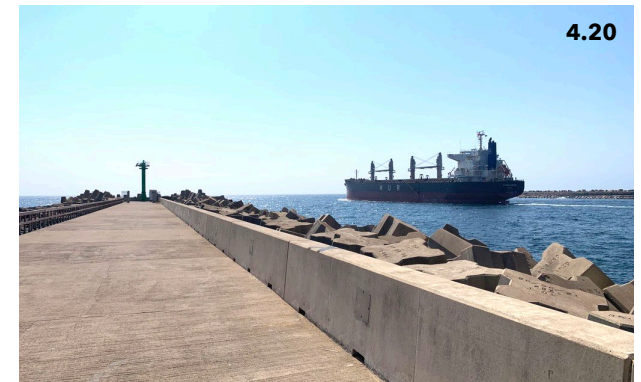
(Photograph by author, 2019)

4.21: Harbour South Pier.

(image available at: < <https://www.iol.co.za/dailynews/news/victory-for-fishermen-as-harbour-ban-is-assessed-1512873>>)

4.22: Grunter Gully.

(Photograph by author, 2019)



4.20



4.21



4.22

OFF-SHORE SUBSISTENCE FISHERS

Durban's off-shore subsistence fishers have practice traditional seine-netting methods off of the city's coastline for over 150 years (Rondganger, 2013). Off-shore subsistence line fishing is carried out in small or medium sized boats. The boats are launched at the Marina in Durban Harbour or at one of the slipways in Grunter Gully and some of the off-shore subsistence fishers make use of the beach front launch facility at Vetch's beach. While the smaller boats are usually launched and then removed from the water after use, the larger subsistence fishing vessels dock at the Marina, Wilson's Wharf or at Grunter Gully.

In 2012, legislative changes were implemented as an attempt to govern the largely unregulated informal practice of off-shore seine-netting in Durban (Nair, 2012). The following operational

restrictions currently apply to off-shore subsistence seine-netting in Durban (Rondganger, 2013):

- Off-shore subsistence seine netting is only permitted from non-motorised vessels.
- Off-shore subsistence seine-netting is only permitted between the Umgeni River mouth at blue lagoon and the Durban Harbour South Pier.
- Off-shore subsistence seine-netting is only permitted between from 4.30am to 6pm in summer and from 6am to 6pm in winter.

4.3

MOULDING, CHANGING AND RESHAPING URBAN SPACE

"FISHERFOLKS in Durban say they want government to grant them access to traditional fishing grounds all along the Indian Ocean coastline." (Nkgadima, 2017)

The third point of investigation towards assessing a notion of spatial claim is to establish how Durban's subsistence fishing community has been able to mould, change and reshape themselves and the urban spaces that they inhabit. This component of spatial claim is underpinned by Lefebvre's (1991) theories regarding the right to the city, in which he advocates for the argument that people or communities have a fundamental right to influence the spaces that they occupy.

Citizens and communities who occupy an urban space have a right to collectively stake a claim in the process of the evolving urban framework; to mould, change and reshape themselves and the urban spaces that they inhabit.

It is therefore necessary to establish and discuss how the subsistence fishing community has been able to exercise their urban right to adapt both themselves as a community, as well as the urban spaces in which they practice.

A HISTORY OF ADAPTING TO CHANGE

The first section of this chapter told the story of the history of Durban's subsistence fishing community, and how the subsistence fishing community has had to adapt, both themselves as well as the spaces in which they practice, as a result of continual spatial exclusion. This evolutionary adaptation of both self and space,

has been fundamental in securing the subsistence fishing community's methods of survival, whereby their culture, heritage, trade and way of life, has been passed down from generation to generation.

Today, one might argue that the modern subsistence fishing community's way of life may bear little resemblance to that of their forefathers. That the true essence of the subsistence fishing community's culture has been lost due to an ongoing need for the community to adapt to the imposition of spatial exclusion. Each time, in so doing, a portion of their heritage or culture is slowly eroded from the maritime identity of the collective urban community that has inhabited Durban Harbour. However, from a spatial justice point of view, the history of adapting, in order to survive inflicted adversity, has become inherent in the

subsistence fishers' way of life, and essentially embedded within their culture. Despite a history of having to face adverse conditions, the notion of spatial claim has provided an existential theoretical platform for the subsistence fishing community to adapt both themselves as well as the spaces that they have occupied in order to preserve their way of life.

ON-SHORE FISHERS' FIGHT FOR SPACE

Today the fishing community has again adapted to the social, spatial and political constructs that govern urban spacial occupation in Durban. Factors, that affect Durban's subsistence fishing community, have been explored in detail by Drey in her thesis entitled; *THE POLITICS OF THE PRIVATISATION OF PUBLIC SPACE: THE SUBSISTENCE FISHERS OF DURBAN, KWAZULU-NATAL* (2009). Drey's in-depth investigation provides a detailed analysis of the numerous

social, economic and environmental factors that are to be understood regarding the current set of circumstances that affect Durban's struggling subsistence fishing community. While the issue of spatial marginalisation has plagued the poor subsistence fishing community for over a century, today's remaining subsistence fishers have continued to wage a battle against their persistent exclusion from the urban spaces that were once made available to them.

Losing Space

In the modern urban context of Durban, neoliberal factors have again resulted in the subsistence fishers exclusion from urban public spaces. Since 2005, public urban development projects along Durban's beachfront and harbour, many of which were expedited in preparation for the 2010 FIFA world cup, have had a dramatic impact regarding the exclusion

of the poorer communities who once made use of these public spaces for their survival. One such group that has been detrimentally "...*affected by this privatisation of space is the poor and marginalised fishers, as they do not fit the profile of the high income consumers for whom the coastal developments are planned*" (Drey & Scott, 2009).

Over the course of the next decade, neoliberal development agendas continued to impose pressure on the subsistence fishing community through the erosion of spaces made available for their trade. By 2013 subsistence fishers were confined to making use of only a couple of fishing spots, which left them struggling "...*to find sufficient, safe spaces for fishing to provide for their families where they are not chased away by police or security*" (Hanekom, 2017). It was at this time where the subsistence fishing

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

community reached the height of desperation. "The ban on fishing at prime spots on Durban beaches - the harbour and the Bluff - has hit poor fishermen who depended on fishing to eke out a livelihood, many being sole breadwinners of their respective families" (Govender, 2011). With so many of the fishing spots now closed, the desperate community of over 12 000 subsistence fishers jostled for space in the few remaining fishing spots, namely: Snake Park pier, Sunkist pier and Blue Lagoon (SDCA, 2017). These fishing spots became dangerously over crowded, and the subsistence fishers (who had access to transport) were often forced to travel to the south coast to find available fishing grounds.

In an interview with one of the local fishermen (2018), when asked where he is allowed to fish, he responded by saying that..."it is hard to know

where I am allowed to fish. I talk to someone and they tell me I can fish here, and then sometimes the police just come here to chase me away."



4.23: Aerial view of Moses Mabhida Stadium & beachfront promenade development.

(image available at: <https://www.planetware.com/tourist-attractions-/durban-saf-kz-durb.htm>)



4.24: Over crowding at Snake Park Pier in 2011.

(image available at: < <https://www.iol.co.za/the-post/news/fishermen-up-in-rods-1099217>>)



4.25: Police & port security question fishermen for fishing at Grunter Gully.

(image available at: < <https://bereamail.co.za/27905/anglers-win-right-to-grunters-gully/>>)

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

Civil Society

As has been discussed in chapter two of this paper, neoliberal planning and development policies that have been implemented by the government, otherwise referred to as the public sector, have in essence transferred the responsibility of ensuring the well being of urban citizens to the economic market place, otherwise referred to as the private sector (Cooper, 2018). Due to the fact that both the public and private sectors have adopted development strategies that advocate capital gain, the fishing community has turned to civil society as a social space that acts as a vehicle to uphold the interests of the urban community. According to Cooper (2018), civil society can be understood as the social space (not physical space) that falls outside the scope of family, market or the state. In a world that is dominated by a neoliberal capitalist agenda, non-profit and

non-government organisations (NGO's) have developed to become formal vehicles that operate within the sphere of civil society in order to mediate between government, the market and the well-being of citizens. Civil society aids the creating of positive social change by playing the following roles (Cooper. 2018: 2):

- *Service provider (for example, running primary schools and providing basic community health care services).*
- *Advocate/campaigner (for example, lobbying governments or business on issues including indigenous rights or the environment).*
- *Watchdog (for example, monitoring government compliance with human rights treaties).*

- *Building active citizenship (for example, motivating civic engagement at the local level and engagement with local, regional and national governance).*

- *Participating in global governance processes (for example, civil society organisations serve on the advisory board of the World Bank's Climate Investment Funds).*

Like so many times in their unsteady history, today's subsistence fishers have found themselves in a position of needing to adapt in order to survive. By making use of the sphere of civil society, that has offered empowerment to many disempowered members of society, the subsistence fishing community has established an NGO that advocates for the rights of Durban's subsistence fishers. The KwaZulu-Natal Subsistence Fishers Forum (KZNSFF) is an NGO

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

that has been formed to represent over 12 000 subsistence fishers in Kwa-Zulu Natal. The organisation has played a large role in advocating the rights of the poor fishing community, and have been instrumental in organising demonstrations of active citizenship, as well as mediating discussions with both government and the private sector.

Over the last decade, the KZNSFF have held many peaceful walks and marches in order to raise awareness of the issues that affect the subsistence fishing community. One of the key issues that has been brought to light is the fact that Durban's subsistence fishers are in danger of losing their livelihoods due to limited access to fishing grounds. The KZNSFF have also entered into negotiations with municipal and port authorities in this regard. Since 2013, municipal and port authorities have responded

to the subsistence fisherfolk's pleas, and have reopened many of the public sites to subsistence fishers (Moodley, 2018). As a result of the decade long negotiations and civil protests that have been orchestrated by the KZNSFF, Durban's subsistence fishing community now has access to many of their historical fishing grounds. The municipality has also began to provide basic facilities at some of the fishing spots, such as fish cleaning tables, ablutions and fresh water.

4.26: KZNSFF orchestrated protest on the ban of fishing at traditional fishing grounds.

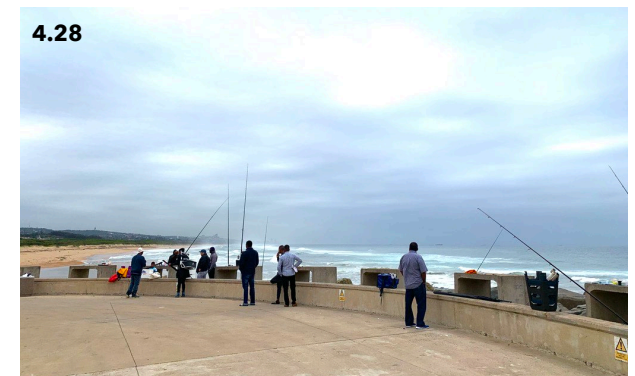
(image available at: < <https://citizen.co.za/news/1614326/fishermen-encouraged-to-make-their-voices-heard/>>)

4.27: Subsistence fishers begin fishing at Harbour North Pier again in 2018 after ban is lifted.

(image available at: < <https://www.africannewsagency.com/photos/news/SOUTH-AFRICA---Durban---Natal-Subsistence-Fishing-Forum-7251461>>)

4.28: Concrete tables and benches provided for the subsistence fishers at Blue Lagoon.

(Photograph by author, 2019)



4.4

IDENTITY, HERITAGE AND MEMORY

"We come to love cities because we identify with them, beyond a point of convenience and the fact that cities house everything one might need. People often say "oh I didn't like that city very much, I didn't get a good vibe" - the vibe they are talking about is the spirit of the city - and every city's spirit is different." (Verhaar, 2012)

The final point of investigation towards assessing a notion of spatial claim is to assess how the city recognises the heritage and memory of subsistence fishing. The theoretical premise of this point of evaluation is grounded in the notion of spatiality, whereby the notion argues that the value of space should be assessed according to what the space means, on

a social and emotional level, to urban inhabitants.

THE IDENTITY OF A CITY

By their very inception, cities develop for the purpose of fulfilling a demand that is required within a region or country. Whether it be access to minerals, agriculture, trade routes, education or commerce, a city is largely defined by the nature of the activities that it has evolved to facilitate. As such, cities adopt an existential sense of identity, a sense of place that stems beyond the basic collective of urban amenities, but rather a unique, intangible quality that is derived from a city's physical attributes as well as the unique needs and activities that the city accommodates. *"The essence of urbanity is that it reflects the needs and values of the communities that live in and occupy the places of a city"* (Verhaar, 2012). In other words, each

city adopts a unique identity, one that is derived from its history, culture and development in such a way as to be distinguishable from other cities.

Both the city as well as its inhabiting communities stand to benefit from this symbiotic sense of spatial identity making. In accommodating for the inclusion of a given activity, particularly one that is unique to the urban setting, the city promotes the well being of the communities that live off or partake in said activity. Reciprocally, the city benefits from catalysing the prosperity of various communities through inclusion as part of the urban collective that adds to the richness and diversity of the urban identity of the city. While current urban activities that take place within cities enforce a sense of urban identity, as the activities are visible and are inherent to the daily experiences of people within the city, cities and communities

are also able to derive a sense of identity from past activities, events or communities. In order to adopt a sense of identity from a past occurrence, a city or community may celebrate the memory through a memorial ritual or by means of a physical construct that memorialises the past, such as statues, landmarks and museums. By making the memory visible to the current urban community, through ritual or physical construct, a city is able to elevate heritage and memory to become a defining factor of current urban identity.

A MARITIME CITY

Many coastal towns and cities across the globe derive a sense of identity from the maritime activities that take place in that city. The urban identity of most port cities is a result of urban development and cultural evolution over centuries, and *"...is based on the coherence of*

its economic and institutional structures and their particular local ensemble of culture, informal rules and history" (Warsewa, 2017: 150). As such, the people who live in or occupy the urban spaces are able to derive, experience or feel part of the urban identity.

Due to the advancement of air travel and conveniences afforded by modern urbanity, many maritime cities have become less reliant on their ports and coastlines as the predominant facilitators of trade, transport, travel, food provision and recreation, thus threatening the diverse richness of their maritime based identity.

Urban development strategies, adopted by many modern maritime cities, have responded to the threat of cultural attrition by making port and maritime based activities accessible to the urban public or by memorialising past maritime histories.

Since early colonial settlement, Durban has derived a large sense of its urban identity from its maritime and coastal activities that the city facilitates. Although the historical urban identity of Durban was founded on its colonial heritage, ocean based trade and manufacturing industry, over time the city has taken on an identity that celebrates a diverse multicultural urban population, as well as secondary maritime and coastal based activities. Such secondary activities include: ocean travel, whaling, fishing, ocean based recreation and tourism.

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

SUBSISTENCE FISHING & URBAN IDENTITY

Many maritime cities around the world attribute a portion of their urban identity to the inclusion of a successful and vibrant subsistence fishing community. In these cities, subsistence fishing and fishing practices have been a part of the citizens' lives for generations. Whether it be the poorer communities that make a subsistence living from fishing, or the people who go to market to buy the catch, in these cities subsistence fishing is simply an inherent experiential part of urban life. The inclusion of traditional subsistence fishing practices within the urban framework of modern cities, affirms the humble practices of the poor fishing communities as an important part of the city's urban network and urban identity, as well the value of their cultural contribution to the city's maritime heritage and identity.



4.29: Subsistence fishers hauling nets at Fish Hoek beach, Western Cape, South Africa.

(image available at: <<https://www.iol.co.za/capetimes/news/picture-essay-being-hooked-on-fishing-no-easy-way-of-life-14145639>>)



4.30: Trading area at the old Maputo Fish Market, Maputo, Mozambique.

(image available at: <<https://www.wantedinafrica.com/news/japan-funds-new-fish-market-in-maputo.html>>)



4.31: Fishing boats arriving at Kivukoni (Mzizima) Fish Market, Dar es Salaam, Tanzania.

(image available at: <<https://wowtravel.me/top-12-things-to-do-in-dar-es-salaam/>>)



4.32: West African subsistence fishing boats.

(image available at: <<https://www.hakaimagazine.com/news/west-africas-artisanal-fishers-rival-industrial-fleet/>>)

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

URBAN IDENTITY OF DURBAN'S SUBSISTENCE FISHERS

In contrast with many maritime cities, both globally and throughout Africa, subsistence fishing is less visible within the everyday urban spaces of Durban. As discussed in the preceding sections of this chapter, a history of spatial relocation and exclusion has led to the subsistence fishers of Durban being forced to adapt to making use of the residual spaces that are left over. Although the community of subsistence fishers has been able to maintain their presence within Durban, their rich heritage and cultural value seems to be under-acknowledged regarding their inclusion as part of the city's modern urban identity. Neoliberal development and the commodification of urban public spaces has resulted in the development of a city where subsistence fishing has been made far less visible and experiential for all who

occupy Durban's urban spaces. Thus, a history of spatial marginalisation has diluted the subsistence fishers cultural contribution to Durban's urban identity.

Value of Space

In order to understand the impact of excluding subsistence fishers from the urban spaces of the city, and that spatial exclusion erodes the potential for subsistence fishing to add to Durban's collaborative urban cultural identity, one needs to understand the value of space for the subsistence fishing community. Many of the subsistence fishers that were interviewed communicated that the primary value of accessing fishing spots is to generate an income. While some of the fishers made use of the spaces in order to temporarily provide an income between jobs, others identified themselves as professional subsistence fishers

4.33



4.33: A subsistence fisher couple who lived at and fished from the Snake Park Pier in Durban.

(Drey, 2009)

4.34



4.34: Despite adverse fishing conditions, a persistent fisherman fishes to provide for his family .

(Photograph by author, 2019)

who fish as a means of supporting families and children. The fishing spots in Durban empower the poor fishing communities by allowing them to generate a basic source of income, thus alleviating some of the pressures that are felt due to South Africa's high unemployment rate. Not only do subsistence fishers value the fishing spots as a space to fish in order to generate a source of income, but the spaces are also valued as social meeting places and as places of "great history and memories" (Drey, 2009: 97).

In their ability to access public fishing sites, Durban's subsistence fishing community is able to maintain a sense of cultural identity. Despite having encountered difficulties in maintaining access to public fishing sites, the subsistence fishing community have still been able to eke out a living in the residual spaces, thereby preserving a sense of tradition and memory.

Through ongoing participation within the urban spaces of Durban, the subsistence fishing community is still able to contribute to the practices of everyday urbanism that forms part of Durban's urban identity, albeit on a level of peripheral existence.

Acknowledgment of Memory

Many of Durban's historic maritime events and practices have been celebrated and memorialised in the displays at the KwaZulu-Natal Maritime Museum, which is located along the Esplanade on the northern edge of Durban Harbour. The displays at the museum tell a detailed story of the history of Durban Harbour, showcasing many aspects of Durban's maritime history including: early settlement, the development of the harbour, historic war vessels, passenger vessels and whaling to name a few. The museum is a physical construct that

memorialises past maritime events and communities, all of which have played a role in shaping the city of Durban we see today. Durban's maritime identity, that is experienced and moulded by citizens and visitors alike, is strengthened by the spatial memorialisation of the city's unique maritime history.

Despite the spatial memorialisation of Durban's maritime heritage, a visit to the museum reveals that there is a noticeable omission of the subsistence fishing community as part of Durban's maritime story. In *Legends of the Tide: The Seine-netters & the roots of the Durban fishing industry*, Govender and Chetty (2014) give a historic account of Durban's subsistence fishing community. The book tells the story of the early fishing communities, a story that is rich in heritage and embedded in culture, and details how the thriving subsistence fishing

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

communities, that once lived on the shores of Durban Harbour, play a significant part in the the story of Durban's maritime history. This apparent exclusion of acknowledging the significance of the subsistence fishers' history, further reinforces the marginalisation of the community, thus excluding the memories of subsistence fishing from the cultural identity of Durban today.



4.35

4.35: Maritime Museum entrance .

(Photograph by author, 2019)



4.37

4.37: Maritime Museum exhibit.

(Photograph by author, 2019)



4.36

4.36: Maritime Museum exhibit display hall.

(Photograph by author, 2019)



4.38

4.38: Maritime Museum exhibit.

(Photograph by author, 2019)

4.5

CONCLUSION

This chapter has explored spatial claim as the first part of the spatial justice assessment in the case of Durban's subsistence fishing community. In gaining an understanding of the right and ability of the subsistence fishing community to occupy a space or to be in space, the question of establishing the significance of the role that the subsistence fishing community plays as part of Durban's urban cultural identity is answered. Furthermore the discussion of spatial claim establishes where and how the subsistence fishing community have occupied space in Durban.

The history of Durban's subsistence fishing community is found to be one that dates back over one and a half centuries and it is a story

that is embedded with culture and tradition. It was established that, despite a history of spatial exclusion and marginalisation, the subsistence fishers have continued to practice their trade, albeit on a less inclusive basis.

Due to the fact that access to fishing grounds in Durban has change so much over the last two decades, many fishers are unclear of the exact spaces that are made available to them. The fishing spots that are used by on-shore subsistence fishers today have been identified as a starting point from which to conduct an analytical assessment of spatial justice pertaining to the subsistence fishers who operate in Durban today.

The chapter continues to explore the notion of how the subsistence fishers have been able to mould, change and reshape themselves and the

urban spaces that they inhabit. Due to the fact that the subsistence fishers have had to endure continual spatial displacement, the fishers have not been able to shape the urban spaces that they occupy in any permanent way. Nevertheless, the subsistence fishing community has proven to be adaptable to change, and despite having to endure a history of spatial relocation and displacement, have been able to adapt their practices to utilise the residual urban spaces, in so doing preserving their trade.

In recent years, the subsistence fishing community have made use of the civil society sphere as a means of voicing their claim as a relevant community in Durban. The civil mobilisation of the subsistence fishing community has proven to be a useful vehicle for instigating spatial change, as many fishing sites

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

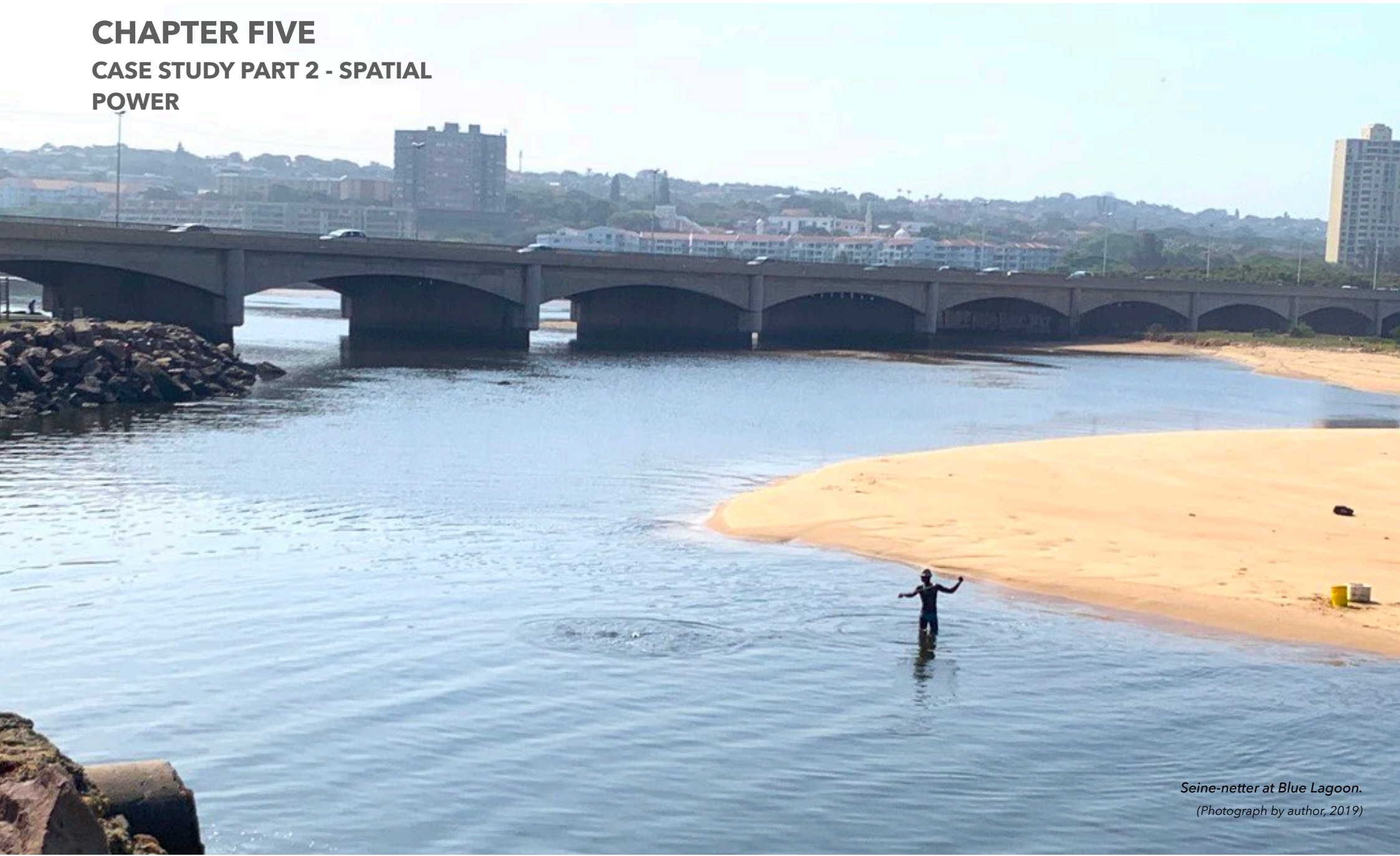
Towards the design of a FISHING CENTRE in Durban Harbour

have been reinstated as a result of civil engagement.

Finally the chapter concludes with a discussion of how the heritage and memory of subsistence fishing is recognised as a part of Durban's urban identity. A history of spatial marginalisation has weakened the subsistence fishers' cultural contribution to Durban's urban identity. Despite the limited access to urban spaces, the subsistence fishing community is still able to contribute towards the practices of everyday urbanism that forms part of Durban's urban identity, albeit on a level of peripheral existence. It is important to note that the memory and heritage of the subsistence fishing community seems to have been forgotten to those who do not engage with the subsistence fishing community directly. The noticeable omission in the telling of the subsistence fishers' story from

the exhibits at the KwaZulu-Natal Maritime Museum is a direct reflection of the fact that the memory of the great maritime fishing communities that once thrived in Durban Harbour is forgotten.

CHAPTER FIVE
CASE STUDY PART 2 - SPATIAL
POWER



Seine-netter at Blue Lagoon.
(Photograph by author, 2019)

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

5.0

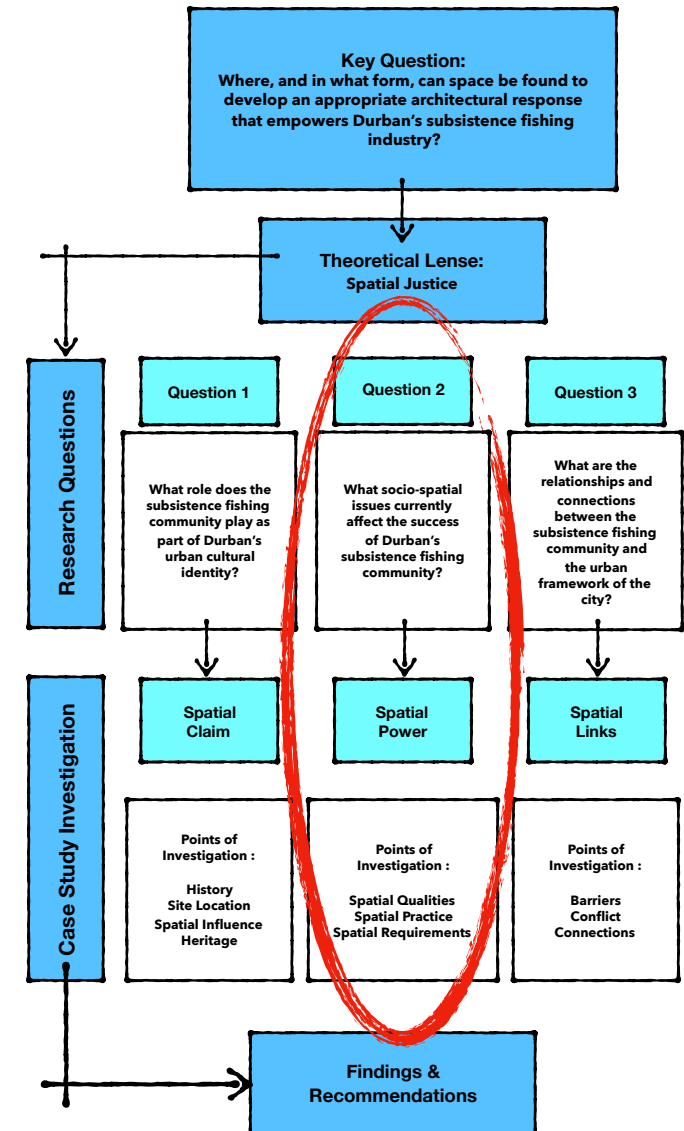
INTRODUCTION

This chapter forms the second part of the three part research investigation, whereby a detailed investigation of spatial power is undertaken regarding the case of Durban's subsistence fishing community. An investigation towards gaining and understanding of spatial power, regarding the case of Durban's subsistence fishing community, is important as it allows for the qualitative evaluation of the community's ability to accomplish or succeed within a particular space as well as how they are able to contribute back towards the spaces that they occupy (Tayob, 2016). Furthermore, an exploration of spatial power establishes understanding of how the city's urban spaces either; enhance or diminish the subsistence fishers' ability to practice their trade. The

discussion takes the form of a qualitative assessment of spatial power that again extrapolates data from a collection of literature, site observation records and informal interviews that have been conducted with some of Durban's local subsistence fishers. Spatial Power is understood through the exploration of the following investigative points:

1. Evaluate the spatial qualities of the fishing spots that are used by the subsistence fishers.
2. Determine how the fisherfolk are able to practice in the spaces provided for them.
3. Determine how spatial attributes (or lack thereof) prohibits the fisherfolk from contributing towards the public life of the city.

5.1: Diagram of research investigation - Spatial Power.
(Image by author, 2019)



5.1

EVALUATING SPATIAL QUALITIES

The first point of investigation towards assessing a notion of spatial power is to evaluate the spatial qualities of the fishing spots that are used by the subsistence fishers today. It is necessary to evaluate the spatial qualities of the fishing sites as the intrinsic characteristics of these spaces directly influences the subsistence fishers' ability to practice their trade. An understanding of the spatial qualities and characteristics enables the assessment of spatial (in)justices regarding how the subsistence fishing community is able to make use of a space.

This section analyses the fishing sites that have been identified in Chapter Four. Due to the various locations of the fishing sites within the

case study investigation area, the nature of the spaces that are used for subsistence fishing differ in their spatial qualities and characteristics.

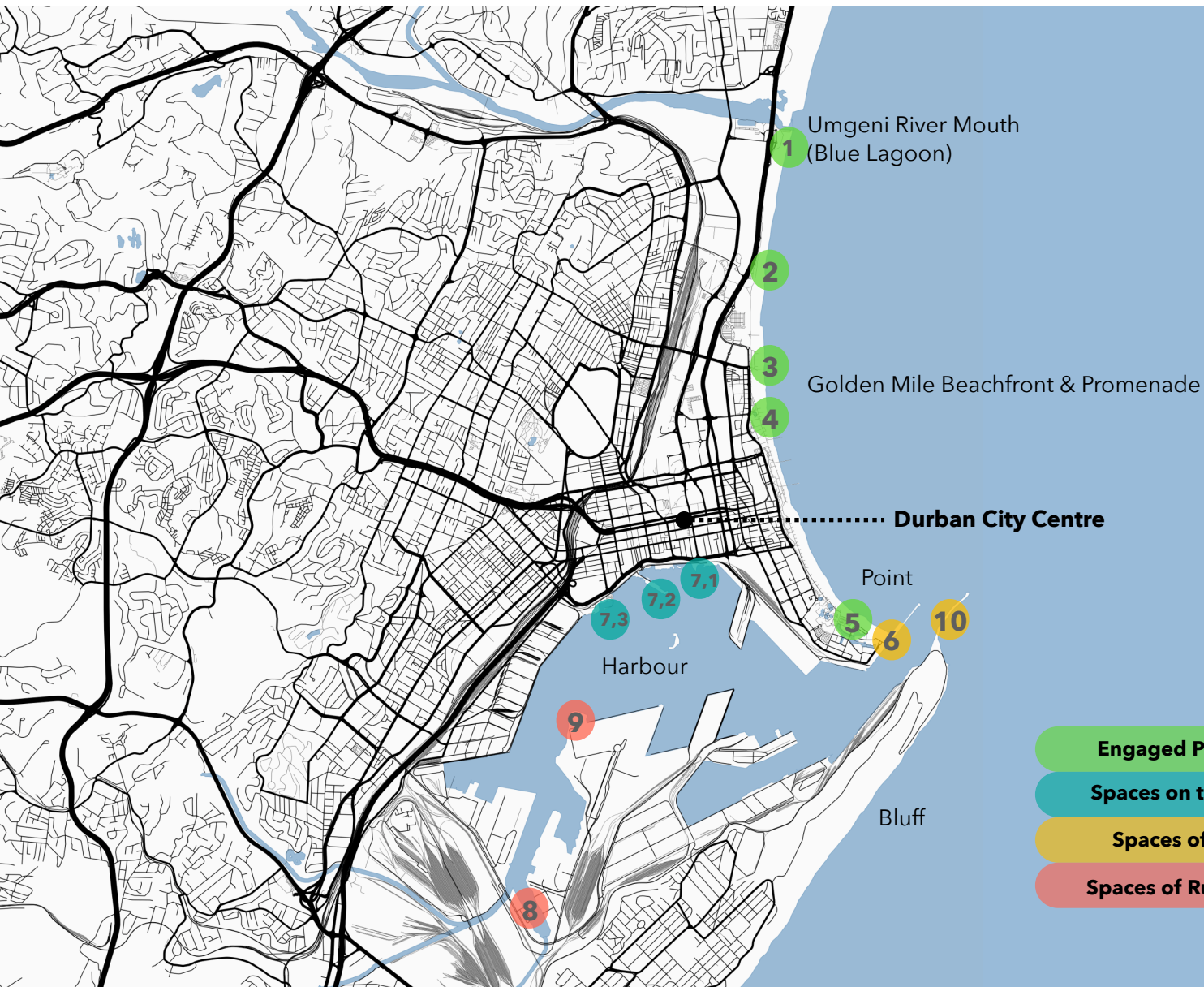
The spatial qualities of each of the fishing sites have been determined by means of a site investigation, where elements that depict spatial characteristics have been observed, appraised and photographed. Although some of the attributes that define the spatial qualities of each of the fishing sites are unique to each individual site, the investigation has identified four main classifications for describing and understanding the overall spatial qualities of the fishing sites, namely:

- Engaged public spaces
- Spaces on the periphery
- Spaces of transition

- Spaces of ruin and neglect

Each of the eleven fishing sites, as identified in Chapter Four of this paper, can be evaluated and organised into one of the four classifications, according to the similarity of the qualities that can be experienced in the spaces. The map on the following page identifies the categories of each of the fishing sites.

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour



5.2: Map of fishing sites according to spatial quality.

(Image by author, 2019)

- 1. Blue Lagoon**
- 2. Sunkist Pier**
- 3. Battery Beach Pier**
- 4. Snake Park Pier**
- 5. Vetch's Beach**
- 6. Harbour North Pier**
- 7. Esplanade**
 - 7,1. Maritime Museum
 - 7,2. Durban Marina
 - 7,3. Wilsons Wharf
- 8. Grunter Gully**
- 9. Round Bush**
- 10. Harbour South Pier**

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

ENGAGED PUBLIC SPACES

Of the 12 fishing sites that have been identified, it is evident that all of the sites that are located along Durban's promenade can be classified as sites that are engaged with public spaces. The beachfront promenade runs from Blue Lagoon to Harbour North Pier and serves as the largest urban public recreational space in the city. The beachfront hosts a multitude of spaces that are able to facilitate various recreational activities, such as picnic sites, swimming beaches, jet-ski and boating areas, swimming pools, theme-parks, skate parks, gardens, restaurants, cycling, running, outdoor gymnasiums, fishing and renowned surfing spots. Although some of the spatial qualities of the various beachfront fishing sites may differ, all of the five sites are easily accessible to the public, are reasonably clean and most importantly, are directly engaged with



5.3: Shipping container market stalls at Blue Lagoon.

(Photograph by author, 2019)



5.4: Subsistence fishers making use of the public space at Blue Lagoon.

(Photograph by author, 2019)



5.5: Local seine-netter casting his net in the uMgeni river mouth at Blue Lagoon.

(Photograph by author, 2019)

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

and form an important part of the city's most public space. These five fishing sites that have been identified play a vital role of uplifting and dignifying the practices of subsistence fishing, as the spaces incorporate fishing as an important visible part of Durban's beachfront experience. Members of the public are able to freely engage with the fishers, many of whom take pride in sharing tales of their trade, and the fishers often draw spectators who gather to witness the reeling in of a catch. These spaces are amongst the most visible and public in the city, and by facilitating the livelihoods of the subsistence fishing community these spaces in turn include fishing as a part of Durban's urban identity.



5.6: Promenade at the entrance to Snake Park Pier.

(Photograph by author, 2019)



5.7: Surfers & fishermen at Snake Park Pier.

(Photograph by author, 2019)



5.8: Construction of new promenade at Vetch's Beach.

(Photograph by author, 2019)

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

SPACES ON THE PERIPHERY

The three fishing sites that are located along the Esplanade adjacent to the KwaZulu-Natal Maritime Museum, Durban Marina and Wilson's Wharf, are fishing sites that are classified as spaces that lie on the periphery of semi-public urban amenities. The Museum, Marina and Wilson's Wharf are termed as semi-public due to the fact that there are barriers to entry in gaining full access to these spaces. These barriers to entry, namely: entrance fees, membership fees or ability to afford shopping and restaurant dining, prohibit members of the public who do not have the financial means to afford these activities from accessing these spaces. As such, these semi-public spaces are fenced off as a means of controlling access. The three fishing sites that have been identified are located directly adjacent to these semi public amenities, yet unlike the inclusive and connected qualities



5.9: Fences at the then trance to the Natal Maritime Museum.

(Photograph by author, 2019)



5.11: Fences between the Natal Maritime Museum & the adjacent fishing site.

(Photograph by author, 2019)



5.10: Left over spaces on the harbour edge that is used by subsistence fishers.

(Photograph by author, 2019)



5.12: Homeless person's belongings that have been left on the Maritime Museum fishing site.

(Photograph by author, 2019)

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

of the beachfront fishing sites, the overriding spatial quality experienced here is one of separation and exclusion. The disparity and contrast between the clean and cared for spaces of the semi-public amenities and the ill-maintained and polluted areas of the adjacent fishing sites, creates a sense that these fishing sites are the left over, unwanted spaces along the esplanade harbour edge. Although these spaces are visible and reasonably accessible by the public, the degraded peripheral fishing sites allude to a notion that the poor subsistence fishers who make use of these spaces are of lesser importance than those with the economic means to make use of the semi-public amenities adjoining each of the sites.



5.13: *Upmarket restaurant adjacent to fishing site at Durban Marina.*

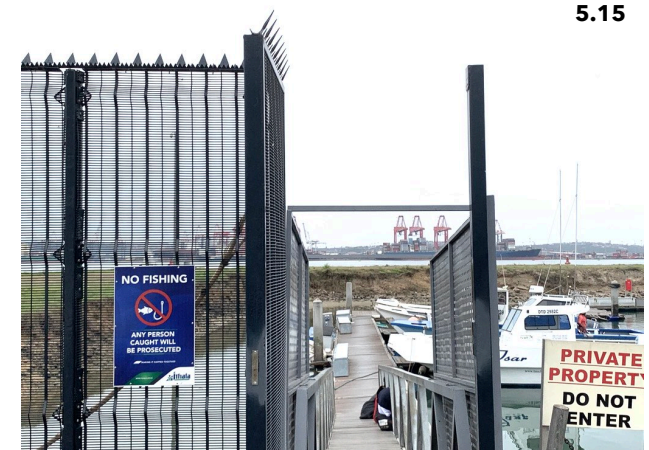
(Photograph by author, 2019)

5.14: *Left over space behind the upmarket restaurant that is used as a fishing site at Durban Marina*

(Photograph by author, 2019)

5.15: *Barriers & fences at Wilson's Wharf.*

(Photograph by author, 2019)



FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

SPACES OF TRANSITION

The two sites that have been identified as spaces of transition are the North and South piers at the entrance to Durban Harbour. The transitional classification of these two spaces refers to the fact that these spaces are in the process of being developed into engaged fishing sites. Both the Northern and Southern piers at the entrance to Durban Harbour have been used as traditional fishing grounds since 1860, and have continued to be used as such until the widening of the harbour entrance which began in the mid 2000s (Govender & Chetty, 2014). Shielded from the winds by the Bluff, the spatial quality of these sites has historically been one that celebrates a working fishing community through making their practices visible to all who arrive and depart by sea. Unlike the recreational spaces found at Durban's beachfront, the spatial quality of the



5.16

5.16: Early Seine-netting boats at Durban Harbour North Pier.

(image by Govender and Chetty, 2014)



5.17

5.17: Fisher at Durban Harbour North Pier, 2007.

(image available at: < https://ports.co.za/news/article_2007_02_18_5427.html>)



5.18

5.18: Subsistence fishers return to Durban Harbour North Pier after 10 year ban, 2017.

(image available at: < <https://bereamail.co.za/117654/fisherfolk-reel-in-prizes-at-lucky-dip/>>)

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

harbour piers is more industrial in nature, reflecting the working nature of the industrial port. Since the inception of the harbour expansion project, fishing has been banned on these piers for nearly a decade. Although both of the harbour piers have been reinstated as fishing sites, the spaces have not yet been developed to accommodate the fishers and still reflect a spatial quality that is somewhat militant in nature, indicative of the access restrictions that were imposed over the last decade. Although the norther harbour pier has recently been reinstated as a fishing ground, barbed wire barriers and outdated "no fishing" signposts contribute to a spatial quality that criminalises the act of fishing in these spaces rather than celebrating the reinstatement of these sites. The provision of amenities at these sites is part of the current development plans for these areas (Lestrade, 2018).



5.19: *No fishing sign that is yet to be removed at Harbour North Pier.*
(Photograph by author, 2019)



5.20: *Another sign that is yet to be removed at Harbour North Pier.*
(Photograph by author, 2019)



5.21: *Concrete barriers, railings & barbed wire at Harbour North Pier.*
(Photograph by author, 2019)

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

SPACES OF RUIN & NEGLECT

The spatial qualities that are experienced at Grunter Gully and Round Bush are vastly different from those experienced at any of the other fishing sites. Due to the fact that both of the sites are located near the mangrove reserve, a natural fish breeding ground, as well as Grunter Gully's location between the uMbilu, uMhlatuzana and aManzimnyama tributaries, one would assume that these sites would have developed into popular fishing sites that are enjoyed by many.

Grunter Gully used to be a site that was teeming with marine life (Demetriades & Forbes, 2009). However, over the last two decades, high levels of pollution produced by the heavy industrial area has completely transformed the once coveted fishing grounds into a space of ruin and neglect. Fishing in this area was banned from

2009 to 2014. One would assume that the recent reinstatement of the site as a fishing ground would indicate that the pollution levels here have decreased. Unfortunately a visit to the site reveals that this is most certainly not the case. At this site the stench of polluted water fills the air, and the space that is allocated for subsistence fishing is strewn with litter and industrial waste.

By contrast, the water quality found at Round Bush is much cleaner. This small fishing spot is a secluded beach that lies behind the large walls of a container storage and shipping facility.

Although fishing is permitted at both sites, subsistence fishers are often harassed by police authorities who are unaware of the reinstatement of the fishing grounds (Walford, 2014).



5.22

5.22: Subsistence fishers confronted by police at Grunter Gully.

(image available at: < <https://bereamail.co.za/27905/anglers-win-right-to-grunters-gully/>>)



5.23

5.23: Abandoned building & polluted water at Grunter Gully.

(Photograph by author, 2019)

5.2

ABILITY TO PRACTICE IN SPACE

The second point of investigation towards assessing a notion of spatial power is to evaluate how the fisherfolk are able to practice in the spaces provided for them. It is necessary to understand how the subsistence fishers currently make use of the spaces that are provided for them, so as to establish the potential for intervention, both spatially and architecturally, in order to improve the subsistence fishers' ability to practice in space. Information that is discussed in this section is important in finding a solution to redressing the spatial injustices that are seen to occur regarding the subsistence fishers' ability to practice their trade.

In order to evaluate how the fisherfolk are able to practice in the spaces that are provided for them, it is necessary to understand the types of practices that subsistence fishing entails. In essence, unlike recreational anglers who fish as a means of entertainment or recreational activity, subsistence fishers fish in order to feed themselves and their families as well as to sell excess catch to generate a small subsistence income. As such, the practice of subsistence fishing can be understood as a two part process; catching fish and selling fish.

Many factors affect and influence the subsistence fishers' ability to both catch and sell fish, such as: licenses, environmental concerns and legislation that prohibits the selling of fish. For the purpose of this architectural dissertation, this section conducts an investigation of the fishing practices from a perspective that is

critically spatial to determine how the spaces are used and what spaces/amenities need to be provided.

This section concludes with the exploration of architectural precedents as a means of understanding potential methods of spatial intervention that pose solutions to each of the the spatial issues that have been raised.

ABILITY TO FISH

There are three primary methods of subsistence fishing: on-shore line fishing, on-shore seine-netting and off-shore seine netting. Each of these practices has different methods and requirements regarding the use of space.

On-Shore Line Fishing

The on-shore line fishers make use of the fishing sites that have been identified in Chapter Four. The spaces that are currently made available to on-shore line fishers are sufficient in that all on-shore subsistence fishers are able to access reasonably uncrowded fishing grounds. Fishers who make use of the five beachfront fishing sites have access to good fishing grounds, ablutions, tables for preparing bait, running water and rubbish bins to keep the sites clean.

The harbour Esplanade sites however, are less successful in the facilitation of successful on-shore line fishing. These sites have little or no amenities, such as public ablutions and waste disposal bins, and are highly polluted with litter and debris as a result. While these harbour sites do occasionally yield good catches, the excessive amount of debris and litter that is found floating in the water along the harbour edge combined with the less than degraded quality of spaces, do not reflect a sanitary environment that is conducive to safe food harvesting.

When asked what spatial amenities could be added to improve their ability to fish, the on-shore subsistence line fishers expressed the need for the following:

- Access to running water, ablutions and change rooms at all fishing sites.
- Facilities, such as bins and instructive signage that encourage subsistence fishers to keep the sites clean.
- Many of the subsistence fishers live on the street for periods of time, either due to homelessness or as migrant workers who travel to the city for temporary work. These subsistence fishers request storage facilities that allow for the safe-keeping of fishing gear at night and personal belongings during the day.
- A method of removing litter from the water in the harbour.

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

On-Shore Seine Netting

Seine netters are found casting their nets at Blue Lagoon or along the banks of the Esplanade. Again these sites provide sufficient space for the seine netters to cast their net's, and the shallow waters here are easily accessible to those who practice this traditional method of subsistence fishing. While the on-shore seine netters are satisfied with the fishing conditions at Blue Lagoon, the issues that were raised by the line fishermen, regarding the lack of amenities and high levels of pollution at the harbour Esplanade fishing sites, were reiterated by the scene netters. The on-shore seine netters highlighted the negative impact that the litter that is found in the harbour has on their ability to fish, as the litter that is found in the water gets trapped in the fisher's nets and contaminates the catch.



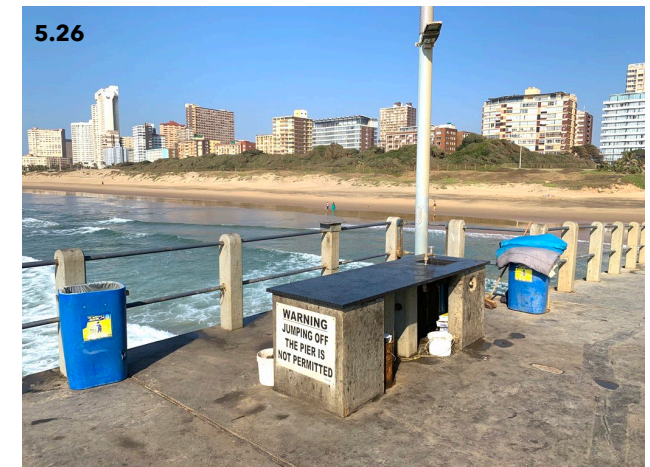
5.24: Litter accumulating in the harbour at the Maritime Museum fishing site.

(Photograph by author, 2019)



5.25: On-shore line subsistence fishers wading through litter to fish in Durban Harbour.

(Photograph by author, 2019)



5.26: Rubbish bins, bait cleaning table & fresh water supply at Battery Beach Pier.

(Photograph by author, 2019)

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

Off-Shore Fishing

The previous chapter established that off-shore subsistence fishing is carried out in small or medium sized boats that predominantly operate out of Durban Harbour. Many of the issues that affect the practice of off-shore subsistence fishing in Durban are legislative rather than spatial in nature.

The primary spatial issue that was raised by the off-shore subsistence fishers was the need for a dedicated fish landing area within Durban Harbour. Unlike the commercial trawlers, who have a designated fish landing dock, off-shore subsistence fishers do not have a space that allows for the efficient off-loading and storage of their catch.

5.27: Off-shore seine netters launching boat at Vetch's beach before the ban on motorised vessels.

(image available at: < <https://www.iol.co.za/dailynews/news/beach-net-loopholes-are-closed-1284523>>)

5.28: Off-shore seine netters row boat at Vetch's beach.

(image available at: < https://www.getaway.co.za/photography/portrait-durban-beachfront/attachment/durbanbeachfront_tcunniffe058/>)



ABILITY TO TRADE

In the early 1900s, subsistence fishing communities who used to operate in and around Durban's Harbour had easy access to prosperous fishing grounds as well as to a local fresh fish market that provided a space for the fishers to formally sell their catch. After the end of the Second World War, port development and the relocation of the subsistence fishing communities saw to the closure of the old fish market (Govender and Chetty, 2014). Although a new fish market has been constructed at the Victoria Street Market, few subsistence fishers are permitted to sell their catch in this space. The location of the current fish market does not lend itself to the efficient trade of subsistence catches as it is located two kilometres from the nearest fishing sites and boat docks along the Esplanade.

Therefore, the biggest spatial issue that the subsistence fishers reportedly face, regarding their ability to practice subsistence fishing, is the lack of a facility that establishes a route to market in order to facilitate the sale of their catch. Both on-shore and off-shore fishers report that they would benefit from the provision of an efficient route to market, and a functional seafood market space that allows all subsistence fishers a safe and controlled method to sell their fresh catch soon after it is landed.

ARCHITECTURAL PRECEDENTS

This section of the chapter has investigated how the fisherfolk are able to practice in the spaces provided for them. Through this investigation it has been determined that architectural intervention could facilitate the practice of both on and off-shore subsistence fishers through the provision of the following amenities/ facilities:

- Running water and ablutions and storage lockers at all on-shore fishing sites.
- Bins & fish cleaning facilities at on-shore fishing sites.
- A method of removing litter from the water in the harbour.
- Fish landing facilities for off-shore fishers.

- A facility that establishes a route to market that enables the subsistence fishers to sell their catch soon after it is landed.

The following investigation analyses architectural/ engineering precedents that offer possible solutions to the needs that have been raised by the subsistence fishing community.

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

Fish Cleaning Facilities

The provision of fish cleaning facilities is one of the basic amenities that is needed in order to facilitate the sanitary cleaning and preparation of fish before it is sold. In Durban, rudimentary fish cleaning facilities are available at some of the beachfront fishing sites (see fig. 5.26), however there are no public fish cleaning facilities that are large enough to provide sufficient space for the subsistence fishers to clean and prepare their catch.

The simple fish cleaning stations that are located at the small boat harbour in Valdez, Alaska, are an example of a possible solution that could be proposed in order to meet the subsistence fishers' needs. These fish cleaning stations are located directly adjacent to the fishing boat docks so that the catch can be brought to the cleaning stations immediately after being

landed. The long fish cleaning tables, with fresh water shower taps are drained into a flush drainage system in order to endure that the debris that is removed from the fish can be easily washed away and disposed of. The fish cleaning tables are housed under a simple timber framed shelter.



5.29: Areal view of small boat harbour, Valdez Alaska.

(image available at: < <https://www.valdezak.gov/gallery.aspx?PID=54>>)



5.30: Fish cleaning station at Valdez small boat harbour..

(image available at: < <https://thegoodthebadandtherv.com/2016/06/19/valdez-trails/>>)

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

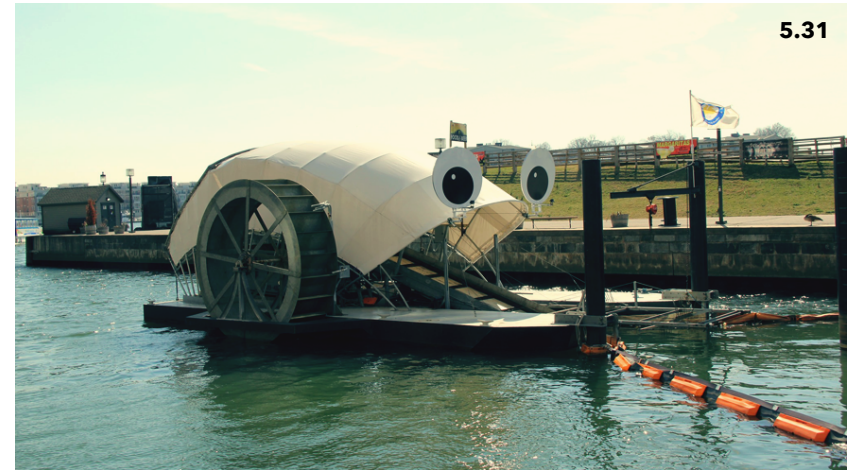
Water Trash Removal

One of the major concerns that were raised by both on and off-shore subsistence fishers was the litter that is found floating in Durban Harbour.

The self-sustaining trash collector that is depicted in the figures alongside provides a possible solution to removing waste from the waters of Durban harbour. Although this trash collector is designed to remove trash in bodies of water that provide a current to move the water wheel, the trash collector is also powered by solar panels which may be more suitable for a harbour environment. The floating trash collector has the ability to be scaled up in size in order to increase the size and volume of the trash that it is able to remove from the water.

5.31: Trash collector stationed in Baltimore harbour, USA.

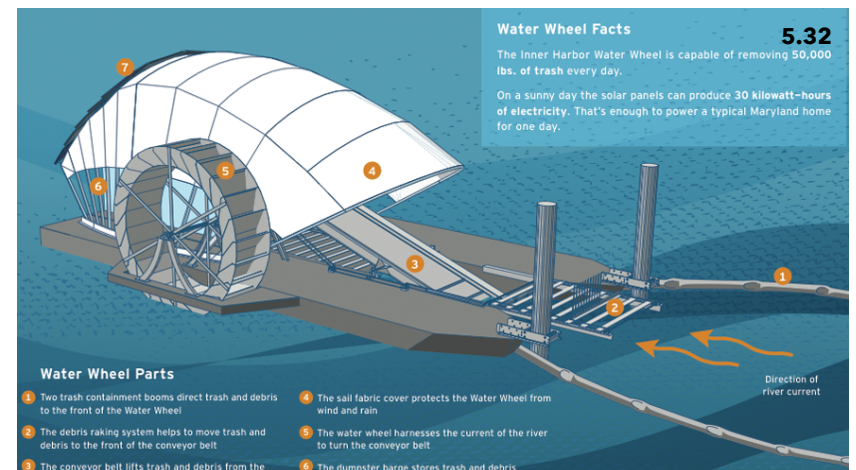
(image available at: < <http://www.designindaba.com/articles/creative-work/meet-mr-trash-wheel-clever-water-pollution-solution>>)



5.31

5.32: Trash collector design diagram.

(image available at: < <http://www.designindaba.com/articles/creative-work/meet-mr-trash-wheel-clever-water-pollution-solution>>)



FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

Fish Markets

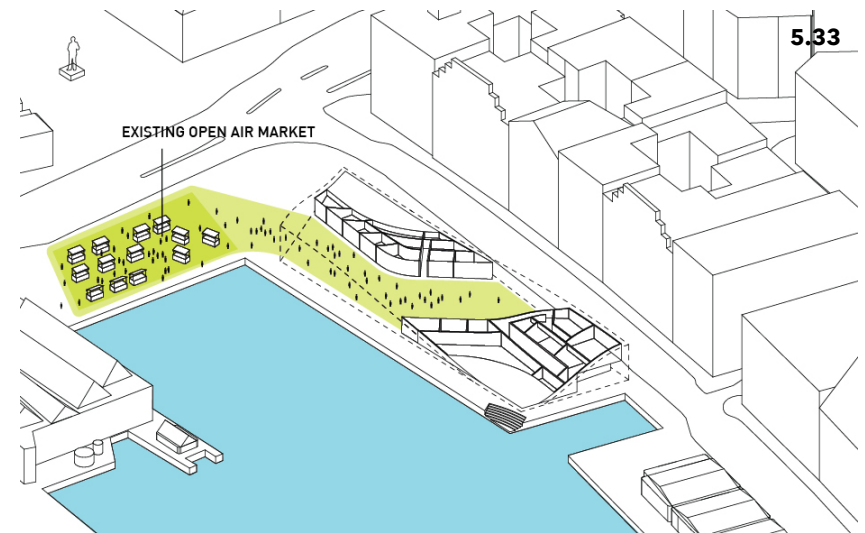
The provision of a fish landing area as well as a fresh fish market are two of the large amenities that are needed in order to establish a route to market in order to facilitate the sale of fish. The following two architectural precedents offer both first world and third world architectural solutions for the provision of fish market spaces.

Proposed Fishmarket - Bergen, Norway

This proposed fish market is a first world facility that connects with existing public spaces on the waters edge. It incorporates all the "first world" amenities that are required for the handling of fresh fish.

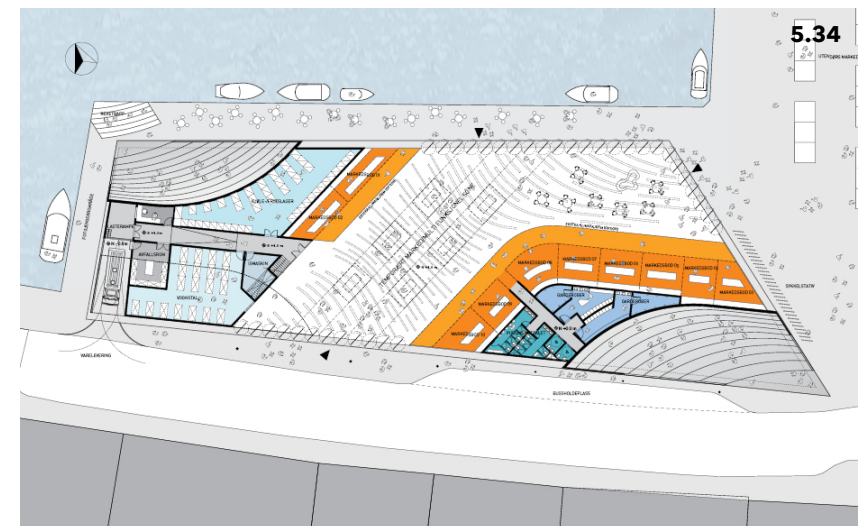
5.33: Proposed fish market in Bergen, Norway.

(image available at: < <http://jdsa.eu/bgn/>>)



5.34: Plan indicating storage facilities and amenities for fish market in Bergen, Norway.

(image available at: < <http://jdsa.eu/bgn/>>)



FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

Kivukoni (Mzizima) Fish Market - Dar es Salaam, Tanzania

This example of a third-world, African, fresh fish market is located on the edge of the city's harbour. It is a bustling market that provides an essential link between the subsistence fishers and the market place. It includes a boat landing area where the fishermen dock and offload their catch, an an open informal auction area as well as a large sheltered market space. The central location of the market within the city, as well as the market's accessibility (for both the general public as well as the fishermen), make this market a thriving public space of engagement and trade.

5.35: Kivukoni (Mzizima) Fish Market, Dar es Salaam, Tanzania.

(image available at: < <https://wowtravel.me/top-12-things-to-do-in-dar-es-salaam/>>)



5.35

5.36: Fish landing docks at Kivukoni (Mzizima) Fish Market, Dar es Salaam, Tanzania.

(image available at: < <https://wowtravel.me/top-12-things-to-do-in-dar-es-salaam/>>)



5.36

5.3

ABILITY TO CONTRIBUTE TO PUBLIC LIFE

The final point of investigation towards assessing a notion of Spatial Power is to evaluate how the subsistence fishers are able contribute in the public life of Durban's urban community. It has been established that the subsistence fishing community, who operates in Durban today, is largely precluded from being able to fully contribute towards the everyday public lives of the city's urban inhabitants through the inclusion of their practices. In order to justify the reinstatement of a prominent subsistence fishing industry in Durban, the subsistence fishers current and potential future contribution to the public life of the city needs to be understood. From an architectural perspective, gaining an understanding of the potential contribution

towards public life will serve to inform the spatial and architectural requirements that are needed to promote this contribution.

POVERTY ALLEVIATION, ENVIRONMENTAL PROTECTION & URBAN EXPERIENCE

"Public spaces offer important sites of livelihood where people, especially the poor, can earn a living. The poor or those that are formally unemployed can participate in informal activities in these spaces which can help to reduce poverty in countries such as South Africa where unemployment is high" (Brown in Drey, 2009: 111).

Many subsistence fishers are poor members of society who are not formally employed in the market economy. These people rely on Durban's coastlines for subsistence fishing as a means to survive in a city where formal employment is

difficult to obtain. Subsistence fishing provides over 12 000 fishers, who operate in and around Durban, with a means of survival (Drey, 2009). Thus subsistence fishing contributes to the public life of Durban as a solution towards poverty alleviation for people who are unable to gain formal employment.

The subsistence fishers depend on a healthy marine environment in order to sustainably provide marine resources. In recent years there has been a drive to educate subsistence fishers across the globe on blue economy strategies. The blue economy is a frame of thinking that encourages better use and protection of the world's oceans as a source for sustainable income generation and growth (Kalina et al, 2019). The initiative has the potential to yield positive repercussions for Durban's subsistence fishers, Durban's marine environmental health as

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

well as the improvement of the public lives of those who enjoy the coastal offerings of Durban. Blue economy centred education and management initiatives could change subsistence fishing practices in such a way as to reverse the detrimental effects that over-fishing has had on Durban's marine resources as well as to include subsistence fishers as ambassadors of the blue economy initiative.

The discussion of spatial claim has established that the subsistence fishing community plays a role in contributing to the urban identity and cultural experience of Durban. This notion is relevant in the discussion of spatial power, in that a contribution towards the unique urban identity and cultural experience of Durban is synonymous with the contribution towards the daily lives of those who partake in Durban's urban spaces. A spatial and architectural

investment that serves to promote a successful and well managed subsistence fishing industry is therefore an investment in the cultural diversity of the public experience in Durban.

5.4

CONCLUSION

This chapter has explored spatial power as the second part of the spatial justice assessment in the case of Durban's subsistence fishing community. The subsistence fishers' ability to accomplish or succeed within a particular space as well as how they are able to contribute back towards the spaces that they occupy, has been established to answer the second research question. Furthermore, an exploration of spatial power has demonstrated how the city's urban spaces either enhance or diminish the subsistence fishers ability to practice their trade.

The spatial qualities of the fishing sites that are currently used by the subsistence fishers have been evaluated as either engaged public spaces, spaces on the periphery, spaces of

transition or spaces of ruin and neglect. Each of the fishing sites has been categorised according to their relationship and engagement with public space as well as the behaviours that the spatial qualities suggest occur within the spaces. An understanding of the spatial qualities and characteristics has enabled the assessment of how the subsistence fishing community is able to make use of these spaces.

How the subsistence fishers are able to practice within the urban spaces has been evaluated regarding their ability to both catch and sell fish. The investigation has established that the addition of basic amenities at all of the on-shore fishing sites, as well as a designated landing area for off-shore fishers within the harbour, would vastly improve the spatial conditions for subsistence fishing. It has also been established that there is a need to develop a platform that

provides the subsistence fishers an efficient and well-managed route to market to facilitate the selling of their catch.

The ability for the subsistence fishing community to contribute to the public life of the city is assessed, in order to justify the reinstatement of a prominent subsistence fishing industry in Durban. It has been established that the subsistence fishing community contributes to public life in that fishing offers a solution towards poverty alleviation for people who are unable to gain formal means of employment. It has also been established that the subsistence fishing community has the potential to play a role in both the implementation of a blue economy environmental strategy (that aims to sustainably manage marine resources), as well as contributing to the urban identity and cultural experience of Durban.

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:
Towards the design of a FISHING CENTRE in Durban Harbour

CHAPTER SIX
CASE STUDY PART 3 - SPATIAL
LINKS



*Map indicating the three furthest points
of the investigation site.
(Image edited by author,
sourced from google earth, 2019)*

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

6.0

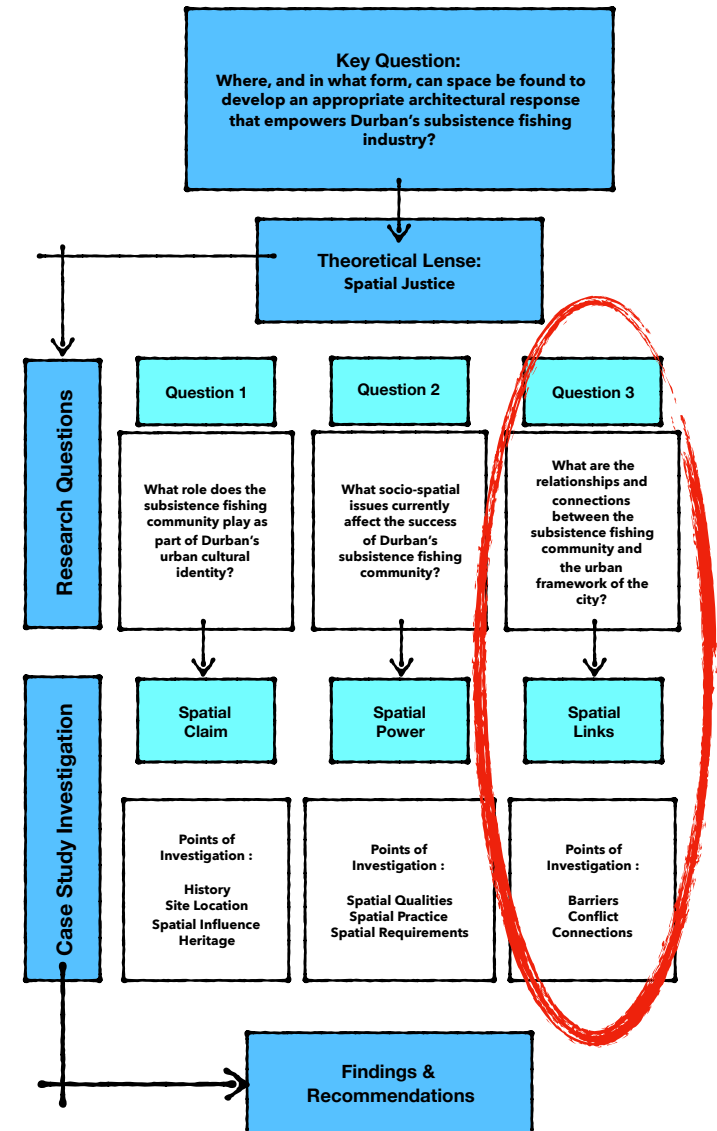
INTRODUCTION

This chapter concludes the research in a discussion that deals with spatial links as part of the spatial justice research investigation. The notion of spatial links is one that examines the spatial attributes of the sites that are used by the subsistence fishing community and evaluates how these attributes affect the fishers' ability to access these spaces and connect with the surrounding urban systems. Urban public spaces do not stand in isolation; public spaces are connected to each other by a network that makes up the urban environment of a city. It is in the connectivity of spaces that synergies between the various users of these spaces are established. How easily spaces are accessed, and the the relationship between public spaces and urban networks, directly affects the usability

of the spaces in question. This chapter explores the spatial links that exist between the fishing sites and the urban framework in order to assess how the links either enable or diminish the subsistence fishers' ability to make productive use of these spaces. By means of observing and documenting the physical qualities of the spaces that subsistence fishers currently occupy, this chapter explores the following investigative points:

1. Assess what barriers exist in the spaces used by the subsistence fishers.
2. Assess any spatial issues that cause friction between the subsistence fishing community and other users of these spaces.
3. Identify the connections between the spaces that are used by the subsistence fishers and other urban systems.

6.1: Diagram of research investigation - Spatial Links.
(Image by author, 2019)



6.1

SPATIAL BARRIERS

The first point of investigation towards assessing a notion of spatial links is to establish the physical barriers that exist in the spaces that are used by the subsistence fishers. These barriers directly affect how the fishing sites are accessed as well as the degree of connection between these sites and the rest of the city. It is necessary to establish the physical barriers that exist in these spaces in order to understand whether an architectural or urban intervention can redress the impact that these barriers have regarding spatial links and the subsistence fishers' ability to practice their trade.

In the same way that the spatial qualities of the fishing sites were discussed in the previous chapter, this component of the case study

evaluates each of the 12 fishing sites according to their location. Although some of the physical barriers that exist within each of the fishing sites are unique to each individual site, the investigation adopts a wholistic approach that identifies the primary barriers that exist within the four distinct urban areas where the fishing sites are located namely; the beachfront, the Esplanade, Bayhead and the harbour piers.

The spatial barriers of each of the fishing sites have been determined by means of a site investigation, where the physical barriers that affect spatial links have been observed and documented. The pages that follow depict the primary physical barriers for each of the four urban areas as identified above.

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

BARRIERS AT THE BEACHFRONT

The fishing sites that are located along the beachfront promenade have very few barriers that restrict access to these sites or barriers that sever connection between the sites and the urban framework. All of the sites are easily accessible from the large beachfront promenade and there are ample parking facilities available at all of the sites. The only notable physical barrier that affects access is the M4 freeway that restricts access to the fishing sites at Blue Lagoon and Sunkist Pier. The southern half of the beachfront promenade is directly accessible from Durban CBD as well as the residential apartments along the beachfront. The beachfront's accessibility and multitude of recreational activities attract crowds of people who enjoy this space, as such many of the city's poorer citizens are able to earn a living through informal means of trade or entertainment.



FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

BARRIERS AT THE ESPLANADE

The three fishing sites that are located along the Esplanade on the northern edge of Durban Harbour are affected by prominent physical barriers that restrict access to these sites. Although the three sites are in close proximity to the city centre, access to the harbour's edge is restricted due to the railway line that severs these spaces from the rest of the city. Public access across the railway line from the city is limited to one vehicular railway crossing and two (somewhat degraded) pedestrian tunnels. Fences, walls and barbed wire line the edges of the railway line, rendering Maritime Place (the name of the road that runs along the waters edge) a spatial island that is cut off from the rest of the city.

6.3: Map indicating physical barriers that affect the esplanade fishing sites.

*(Image edited by author,
sourced from google earth, 2019)*



FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

Not only is the harbour cut off from the rest of the city, but in Chapter Five it was established that the fishing sites are further separated from the adjoining semi-public amenities by security fences and bollards that isolate these spaces from the engaged public frameworks of the city.

The fences and barriers have been put in place as a means of security and control for the semi-public amenities. However in separating these amenities from the public framework, the residual public spaces, which include the fishing sites, are vulnerable to crime and vandalism due to the lack of connection between these spaces and the rest of the city's public realm.



6.4

6.4: Railway line that separates Maritime place from the city at the KZN Maritime Museum.

(Photograph by author, 2019)



6.6

6.6: Entrance to one of the pedestrian tunnels that crosses the railway line.

(Photograph by author, 2019)



6.5

6.5: Fences and litter along the edges of the railway line.

(Photograph by author, 2019)



6.7

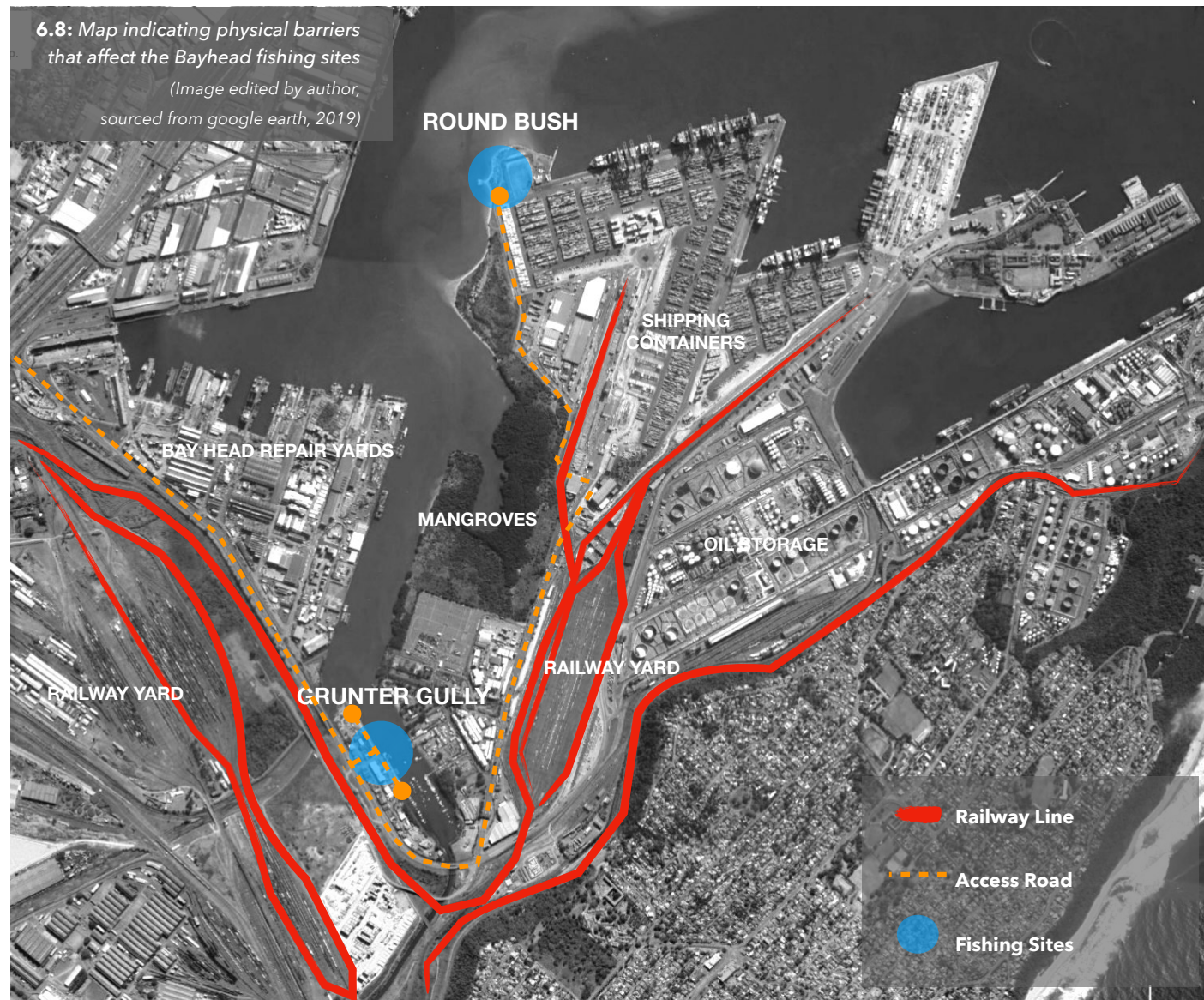
6.7: Walking through one of the pedestrian tunnels that crosses the railway line.

(Photograph by author, 2019)

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

BARRIERS AT GRUNTER GULLY

It has been established that Grunter Gully is the least desirable of the 12 fishing sites due to the high level of pollution that is produced by the surrounding industrial industries. While there are fences and rock-covered embankments that restrict access to some of the fishing areas closer to the tributary inlets at Grunter Gully, the majority of the spaces at these sites are largely free of physical obstacles and barriers. The barriers that one encounters at Bayhead are experienced on a larger urban scale as the sites are situated in a heavy industrial zone of the port. Surrounded by railway lines, container yards, export warehouses and oil storage facilities, the two Bayhead sites are distinctly removed from any of the city's public spaces that facilitate visible everyday urban life.



FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

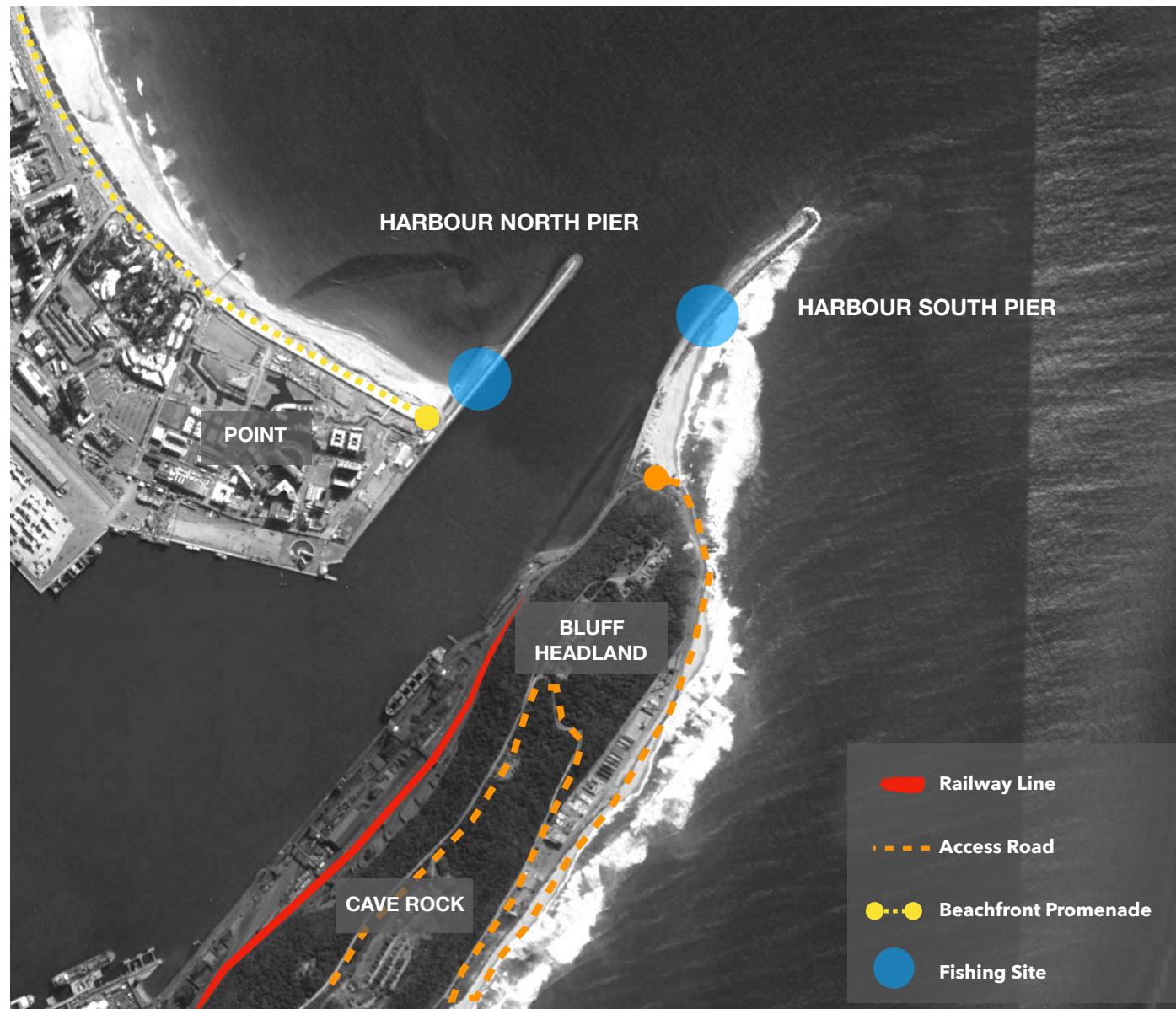
BARRIERS AT THE HARBOUR PIERS

Although the two piers that form the northern and southern banks of the entrance to Durban Harbour appear similar to one another, the two sites are distinctly different from each other due to the barriers that affect access to these sites.

North Pier is soon to be accessed from the new extension of the beachfront promenade, which is currently under construction. As a newly reinstated fishing site, many of the physical barriers have yet to be removed from this space. As such, mesh fences, concrete barriers, barbed wire coils and other barricades still remain as restrictive obstacles in some of the areas at North Pier.

6.9: Map indicating physical barriers that affect the Harbour Piers.

*(Image edited by author,
sourced from google earth, 2019)*



FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

The harbour's southern pier has been reinstated as a fishing site for a few years and is a popular site for local subsistence fishers. Although the site is well regarded as a high yielding fishing spot, the primary barrier here is one of access. Far removed from any residential or civic areas, the site is accessed from the Bluff by means of a small access controlled road that runs through the protected Cave Rock Reserve. Often security prohibits the general public from making use of this road, which forces the subsistence fishers to walk for 2 kilometres along the beach in order to access this site.



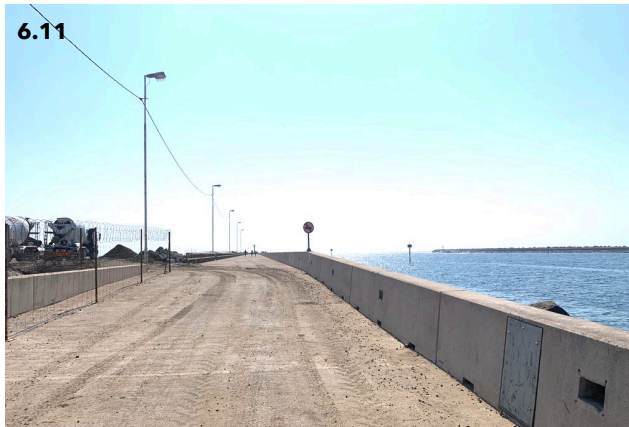
6.10

6.10: Concrete barriers, post and rail fence and barbed wire line the edged of Harbour North Pier.
(Photograph by author, 2019)



6.12

6.12 View towards the bluff from North Pier.
(Photograph by author, 2019)



6.11

6.11: Concrete barriers, a bonnox fence line the edged of Harbour North Pier.
(Photograph by author, 2019)



6.13

6.13: A view of the Harbour South Pier as it joins the Bluff headland.
(image available at: <<https://grahamlesliemccallum.wordpress.com/2014/05/26/cave-rock-durban/>>)

6.2

SHARING SPACES

The second point of investigation towards assessing a notion of spatial links is to establish the spatial conflicts that exist between the subsistence fishing community and other users of the shared public spaces. It stands to reason that not all communities or groups of people who make use of the same public spaces will be able to share these space in a harmonious manner. As a result of sharing public spaces, the activities that are enjoyed by some, are seen to interfere with the activities of others. This section of the research highlights the existing spatial conflicts as a means to inform a possible spatial solution that addresses these conflicts.

Informal interviews, site observation and literature reviews form the basis of the research

that explores ongoing spatial conflicts between the subsistence fishing community and other users of public space. From this investigation, two primary spatial conflicts have been observed.

SPATIAL CONFLICTS WITH SURFERS

"The decision to ban fishing from Durban's central beachfront piers has re-ignited longstanding tensions between anglers, beach visitors and surfers..." (Carnie, 2010).

Due to the fact that surfers and fishers both make use of the beachfront piers, conflicts between these two communities are common place. The surfing community's side of the argument is based on the fact that many surfers get injured by fishing hooks and sinkers that are left in the water by the anglers. The surfers also complain about the smell of the piers due to

litter and bait that is left there by the subsistence fishers. The subsistence fishers argue that the surfers approach them in a manner that initiates conflict; often surfers will cut their fishing lines while they are trying to fish. Some of the subsistence fishers that were interviewed were of the opinion that surfing is a luxury recreational activity that interferes with the poor fishing community's ability to make a living.

While the issues that have been raised by both parties are of valid concern, little seems to have been done in order to mediate between the two groups in order to improve the situation. A local surfer suggested that the provision of bait disposal facilities and running water on the fishing piers would help the fishers in keeping the piers clean. The surfer also suggested that biodegradable fishing hooks should be used

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

when fishing at any of the beachfront piers and beaches.

SPATIAL CONFLICTS WITH TRANSNET

Another spatial conflict that has been prevalent is an ongoing battle between Transnet port authorities and the subsistence fishing community. In chapter four, it was discussed that the subsistence fishing community have had to engage in the civil society sphere as a means of initiating debates and discussions with Transnet in order to gain access to some of the fishing grounds in Durban Harbour.

In 2009 a blanket ban on fishing was implemented in Durban Harbour by Transnet due to regulatory controls that were enforced in accordance with the "...National Ports Act (12 of 2005) and the International Ship and Port Facility Security Code"(Walford, 2015). The ban was

lifted in 2014 in response to the KZNSFF's persistent engagement with Government and Transnet authorities. The fishing sites, as identified in Chapter Four, are now available to subsistence fishers who have been awarded permits. Despite, this many of the subsistence fishers who attempt to make use of these sites, particularly grunter Gully and Round Bush, have been harassed by police and port security officials who have not been made aware that these sites are reinstated as fishing grounds for permit holders (Hanekom, 2014).

6.14



6.14: Surfers & subsistence fishers at Snake Park Pier.

(Photograph by author, 2019)

6.15



6.15: KZNSFF members hold their fishing permits at Grunter Gully after being confronted by police authorities.

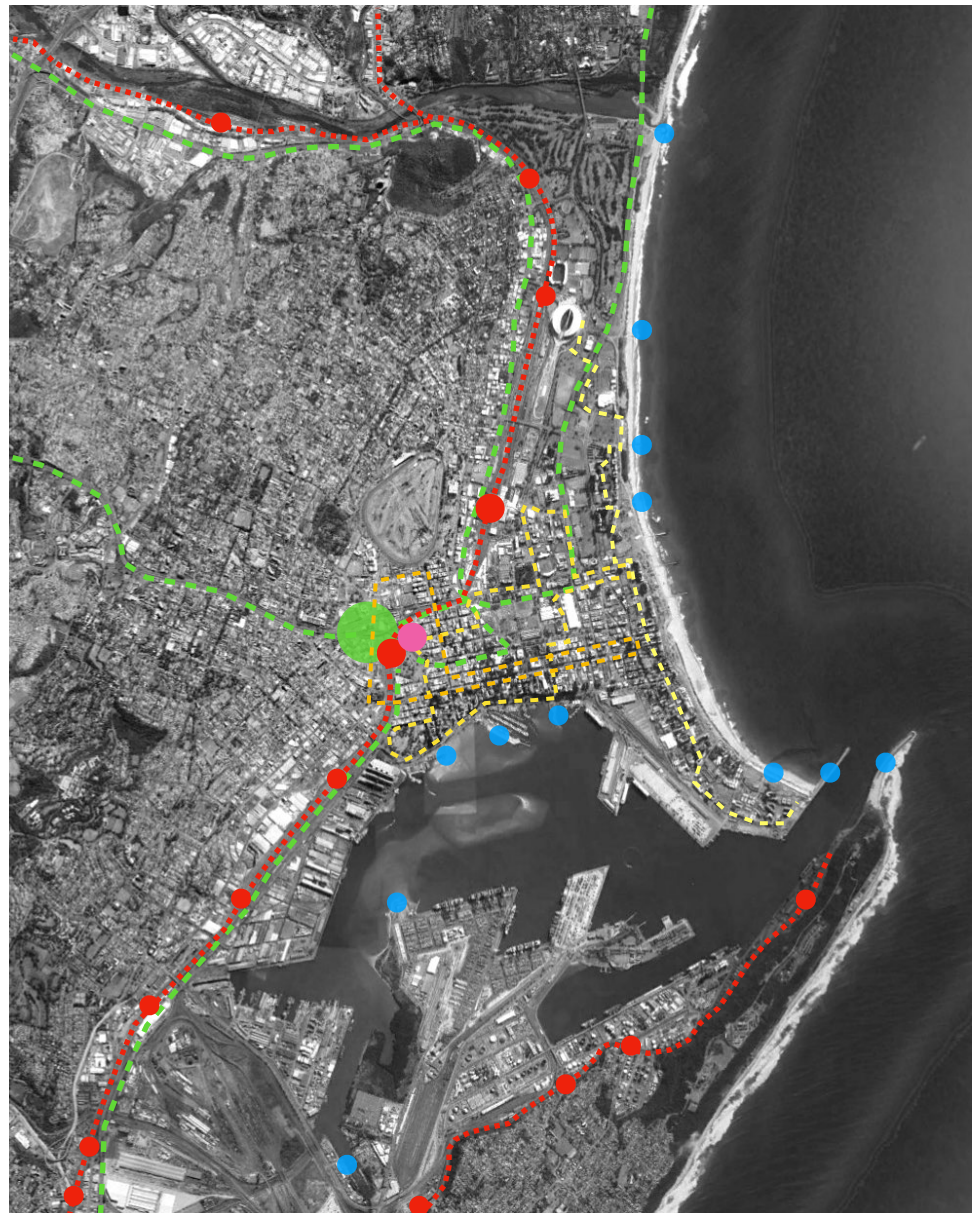
(image available at: <<https://southlandssun.co.za/22037/anglerslines-cast-off-grunter-gully/>>)

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

6.3

SPATIAL CONNECTIONS

The final point of investigation towards assessing a notion of spatial links is the identification of the connections between the spaces that are used by the subsistence fishers and other urban systems. For the purpose of this investigation the urban systems that form the basis of this investigation are spatial constructs that enable the fishers to practice their trade namely: access to transport and access to trade. Site observation and literature form the basis of the research that identifies the connections between the subsistence fishing sites and the supporting urban systems. The information gathered has been used to construct a map as a spatial representation of the relationship between the fishing sites, transport systems, and spaces in which the fish are sold.



6.16: Map indicating transport systems & fish markets in relation to fishing sites.

(Image edited by author, sourced from google earth, 2019)

- Passenger Railway Lines
- Passenger Train Stations
- - - People Mover Bus Routes
- - - Primary Taxi Routes
- Warwick Junction Transport Interchange
- Victoria Street Fish Market
- Fishing Sites

6.4

CONCLUSION

This chapter has explored spatial links as the third part of the spatial justice assessment in the case of Durban's subsistence fishing community. How the subsistence fishing community is able to relate to the urban context regarding spatial barriers, spatial conflicts and spatial connections has been established in order to answer the third research question. How easily the fishing sites are accessed, and the relationship between these sites and the surrounding urban context, directly affects the usability of the spaces in question.

Physical and spatial barriers that affect the fishing sites have been identified. These barriers directly affect how the fishing sites are accessed as well as the degree of connection between the

fishing sites and the rest of the city. It has been found that the beachfront fishing sites are largely unobstructed by spatial barriers and are strongly connected to the public spaces of the city. Despite their close proximity to the city's CBD as well as to prominent semi-public amenities, the fishing sites along the Esplanade are affected by many spatial barriers that greatly hinder the usability and accessibility of these spaces. The Harbour South Pier, Grunter Gully and Round Bush fishing sites have proven to be more difficult to access.

The primary spatial conflicts have been identified between the subsistence fishing community and other users of urban space. The first point of conflict over the use of public spaces is between the subsistence fishers and Durban's surfing community. Both of these

communities object to how the other make use of the space.

The final assessment of spatial links has been assessed in establishing the spatial relationships between the fishing sites and the established urban systems of transport and trade. Most of the fishing sites are restively easily accessible by means of public transport. However the only point of sale of fish is at the Victoria Street fish market, which is not located near any of the on-shore fishing sites or near the marina where subsistence fishing boats are able to offload their catch.

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:
Towards the design of a FISHING CENTRE in Durban Harbour

CHAPTER SEVEN
FINDINGS AND
RECOMMENDATIONS



Bait pumping on the sand banks in Durban harbour.

(Photograph by author, 2019)

7.0

INTRODUCTION

The research and analysis that has been carried out in this paper for the case of Durban's subsistence fishing community, set out to respond to the problem statement as identified in chapter one:

Competition over the use of urban public space has resulted in the spatial marginalisation of Durban's subsistence fishing community. Issues such as racially biased apartheid urban planning, environmental pressures, the growth of large fishing enterprises and the privatisation of urban public space have all had a negative impact on the success of both on-shore and off-shore subsistence fisherfolk alike. The inability to find adequate space prevents the once thriving community of fishers from practising their trade.

This research paper explores the problem by adopting a theory driven research framework of analysis in order to achieve the research aim that responds to the problem statement:

The aim of this research is to investigate an approach towards finding space and an appropriate architectural response, for a community that has been subject to urban displacement which has resulted in their preclusion from participating within the urban spaces of a South African city.

In order to investigate this notion, the research explores the case of the subsistence fishers in and around Durban harbour. In gaining an understanding of both past and current socio-spatial issues that affect Durban's subsistence fishers, the intent is to find space for the local subsistence fishing community and to propose a

platform for the community's future development.

This concluding chapter explores the findings and outcomes of the research, that has been conducted in the preceding investigative chapters of this dissertation, in order to derive architectural principles and recommendations that answer the primary research question:

Where, and in what form, can space be found to develop an appropriate architectural response that empowers Durban's subsistence fishing industry?

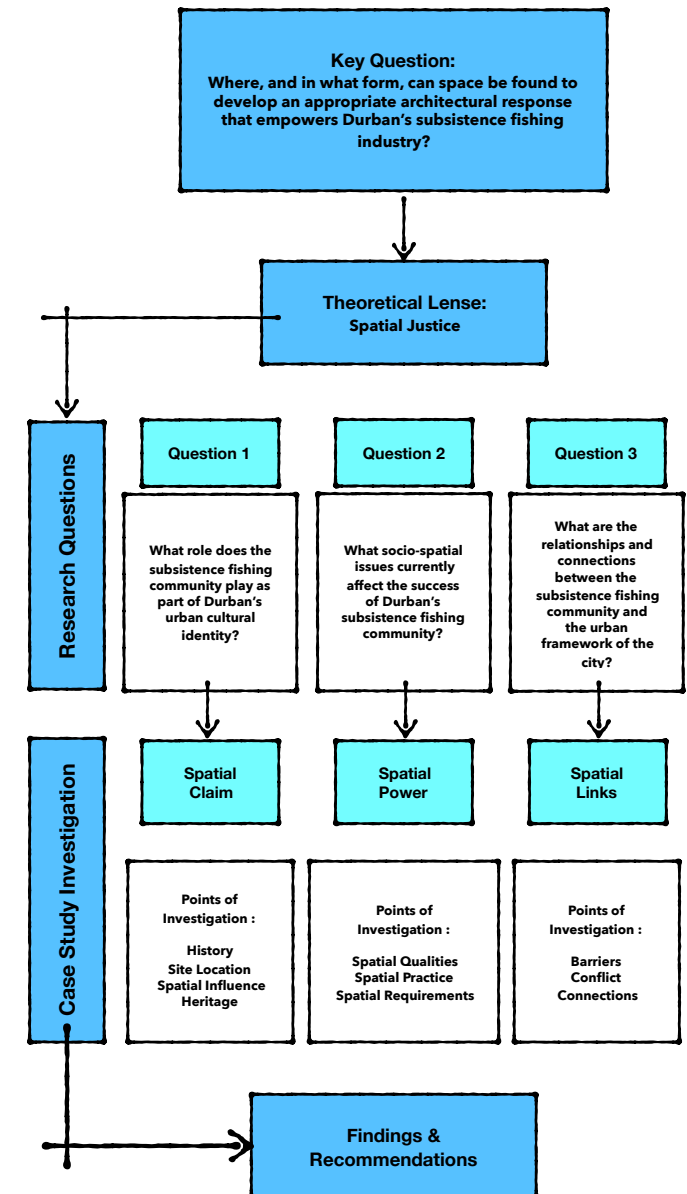
7.1

THEORETICAL FRAMEWORK & RESEARCH METHODOLOGY

Chapter Two establishes that neoliberalism has become the dominant ethos behind urban development, both globally and in South Africa, whereby capitalism is elevated to a mode of production that influences political decision making and becomes the over-riding logic within an urban culture.

Edward Soja's spatial justice theory offers a method of interpreting how social justices or injustices become physically manifested within a space as a way of understanding the intricate interrelations between people, society and space in today's neoliberal context (Tayob, 2016).

The three principles of spatial justice as give by the ds4si (2011) have been adopted to form the research framework. In so doing, the three secondary research questions have been examined individually as each of the questions is directly linked to one of the three spacial justice principles. By establishing the relationship between the three secondary research questions and the principles of the spatial justice framework, a case study research framework and methodology was developed.



7.1: Diagram of research investigation.
(Image by author, 2019)

7.2

FINDINGS & RECOMMENDATIONS

RESEARCH FINDINGS

It has been found that the subsistence fishing community that operates in Durban today is still subjected to forms of spatial marginalisation and displacement. The implementation of neoliberal urban development policies has excluded the subsistence fishing communities from being considered as a valuable entity in Durban, in favour of development agendas that seek to generate economic wealth.

The research findings are established from the three part case study research investigation, which explored the spatial justice of Durban's subsistence fishing community regarding: spatial claim, spatial power and spatial links.

Spatial Claim

The principle of spatial claim was explored for the case of Durban's subsistence fishing community in which the community's ability to occupy a space or to be in space was investigated. This first part of the case study investigation has established the historical significance of the subsistence fishing community, where and how the subsistence fishing community have occupied space in Durban, as well as the significance of the role that the subsistence fishing community plays as part of Durban's urban cultural identity.

The history of Durban's subsistence fishing community is found to be one that dates back over one and a half centuries and it is a history that is embedded with culture and tradition. It has been found that, despite being subjected to a history of spatial displacement, the

subsistence fishers have managed to continue practising their trade, albeit on a less inclusive basis.

It has been found that many fishers are unclear as to what spaces have been made available to them as a result of ever-changing legal restrictions. The fishing sites and spaces that are used by both on and off-shore subsistence fishers today were identified as a starting point from which to conduct an analytical assessment of spatial justice pertaining to the subsistence fishers who operate in Durban today.

It has been found that as a result of continual spatial displacement, the subsistence fishers have not been able to shape the urban spaces that they occupy in any permanent way. Nevertheless, the subsistence fishing community has proven to be able to adapt their practices to

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

utilise the residual urban spaces in order to preserve their trade.

It has also been found that the subsistence fishing community have made use of the civil society sphere as a means of voicing their social and spatial claim as a relevant community in Durban. The civil mobilisation of the subsistence fishing community has proven to be a useful vehicle for instigating spatial change, as many fishing sites have been reinstated as a result of civil engagement. The successful reinstatement of fishing sites now provides on-shore subsistence fishers with adequate space in which to access Durban's fishing grounds.

Finally it has been found that a history of spatial marginalisation has weakened the subsistence fishers cultural contribution to Durban's urban identity. Despite the limited access to urban

spaces, the subsistence fishing community is still able to make a marginal contribution towards the visible practices of everyday urbanism that forms part of Durban's urban identity. It is important to note that the memory and heritage of the subsistence fishing community seems to have been forgotten to those who do not engage with the subsistence fishing community directly. The noticeable omission in the telling of the subsistence fishers' story from the exhibits at the KwaZulu-Natal Maritime Museum is a direct reflection of the fact that the memory of the great maritime fishing communities that once thrived in Durban Harbour is forgotten.

Spatial Power

The principle of spatial power was explored for the case of Durban's subsistence fishing community in which the fisher's ability to accomplish or succeed within a particular space as well as how they are able to contribute back towards the spaces that they occupy, has been established to answer the second research question. Furthermore, an exploration of spatial power has demonstrated how the city's urban spaces either enhance or diminish the subsistence fishers ability to practice their trade.

It has been found that the spatial qualities of the fishing sites that are currently used by the subsistence fishers vary as a result of their relationship to adjacent urban spaces. The fishing sites that are located along the beachfront and promenade can be described as engaged public spaces or as spaces of

transition, while the harbour fishing sites are described as being spaces on the periphery or as spaces of ruin and neglect. These descriptions of the fishing sites are informed by the respective site's relationship and engagement with public spaces as well as the behaviours that the spatial qualities suggest occur within the spaces. An understanding of the spatial qualities and characteristics has enabled the assessment of how the subsistence fishing community is able to make use of these spaces.

It has been found that the addition of basic amenities at all of the on-shore fishing sites, as well as a designated landing area for off-shore fishers within the harbour, would vastly improve the spatial conditions for subsistence fishing. It has also been established that there is a need to develop a platform that provides the

subsistence fishers an efficient and well-managed route to market to facilitate the selling of their catch.

In order to justify the reinstatement of a prominent subsistence fishing industry in Durban, the investigation has established that the subsistence fishing community is in fact able to contribute towards urban public life. This contribution is primarily based on the fact that subsistence fishing offers a solution towards poverty alleviation for people who are unable to gain formal means of employment. It has also been established that the subsistence fishing community has the potential to play a leading role in both the implementation of a blue economy environmental strategy (that aims to sustainably manage marine resources), as well as contributing to the urban identity and cultural experience of Durban.

Spatial Links

The principle of spatial links was explored for the case of Durban's subsistence fishing community in which the fishers' ability to relate to the urban context regarding spatial barriers, spatial conflicts and spatial connections has been established in order to answer the third research question. How easily the fishing sites are accessed, and the relationship between these sites and the surrounding urban context, directly affects the usability of the spaces in question.

The physical and spatial barriers that affect the fishing sites have been identified. These barriers directly affect how the fishing sites are accessed as well as the degree of connection between the fishing sites and the rest of the city. It has been found that the beachfront fishing sites are largely unobstructed by spatial barriers and are

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

strongly connected to the public spaces of the city. Despite their close proximity to the city's CBD as well as to prominent semi-public amenities, the fishing sites along the Esplanade are affected by many spatial barriers that greatly hinder the usability and accessibility of these spaces. The Harbour South Pier, Grunter Gully and Round Bush fishing sites have proven to be more difficult to access.

Spatial conflicts that have arisen between the subsistence fishing community and other users of urban space have been identified. It has been found that proper education and management of the subsistence fishers, as well the establishment of a working relationship with environmental institutions such as the Wild Oceans Project, could be instrumental in conflict resolution through catalysing synergies between the various users of these public spaces.

Finally it has been found that most of the fishing sites are restively easily accessible by means of public transport. However, as found in the investigation of spatial power as well as spatial links, the only point of sale for fish is at the Victoria Street fish market, which is not located near any of the on-shore fishing sites or near the marina where subsistence fishing boats are able to offload their catch.

RECOMMENDATIONS

Based on the research findings as discussed in the preceding section, this section develops principles and recommendations towards answering the two components of the primary research question.

Finding Space

The first part of the primary research question asks the locational question of:

Where can space be found to develop an appropriate architectural response that empowers Durban's subsistence fishing industry?

The research findings suggest that an architectural response, that is geared towards the social and spatial reintegration of Durban's

subsistence fishing community, would be best suited at the existing fishing site, adjacent to the Kwa-Zulu Natal Maritime Museum, located along the Esplanade at Durban harbour. The points below summarise the main research findings pertaining to the proposed site selection:

- Fishing sites located along the beachfront promenade are well connected and easily accessible. These sites are engaged with the public space and an architectural intervention could detract from the public-ness of the shared beachfront spaces.
- The two harbour piers are heavily restricted by Transnet authorities. An intervention here would be impractical as this is the mouth of Durban Harbour.
- An architectural intervention needs to service both on-shore and off-shore subsistence fishers alike. For this reason, a site that is located within the harbour would be most practical.
- The Esplanade fishing sites, located on the edge of the harbour, are adjacent to the city. Physical barriers currently sever the connection between these sites and the city. An architectural intervention here could reconnect the city to the harbour's edge, and maximise the use of this under-utilised space.
- The Maritime Museum and Bat Centre are two semi-public amenities that are severely disconnected from the city's public space. An architectural intervention here could serve to reconnect these two primary cultural buildings to the public realm of the city.

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

- The fishing site that is adjacent to the Maritime Museum is the most polluted and neglected of the three Esplanade fishing sites. It contains a neglected and vandalised monument of Vasco da Gama, and marks the site of early settlement in Durban. Spatially the site could be developed into a significant public park on the harbour edge.

Architectural Response

The second part of the primary research question asks the architectural question of:

What architectural response is needed to empower Durban's subsistence fishing industry?

In accordance with the three principles of spatial justice: spatial claim, spatial power and spatial links, the research findings suggest that an architectural response, that is geared towards

the social and spatial reintegration of Durban's subsistence fishing community, should apply the three principles of spatial justice in accordance with the following key design objectives:

1. Provide a space in which the subsistence fishing community can derive a sense of belonging to the urban community.
2. Acknowledge and celebrate subsistence fishing as an important part of Durban's Maritime heritage and culture.
3. Enable the successful practice of subsistence fishing as an integrated part of the urban economy.
4. Allow the subsistence fishing community to contribute towards the urban community.

5. Minimise the impact of existing physical barriers that currently obstruct access.
6. Enable working synergies between the general public, educational institutions, environmentalists and the subsistence fishing community.

7.3

CONCLUSION

In conclusion, the research findings have established that there is a need for an architectural intervention that aims to reintegrate the subsistence fishers as part of Durban's urban community. The research findings in this chapter suggest that an intervention in the form of a proposed Fishing Centre in Durban Harbour, that utilises the three principles of spatial justice as well as the key design objectives, would serve to redress the current spatial injustices that affect the city's subsistence fishing community as it will offer a platform for the community's future development.

FURTHER RESEARCH

Although there has been a considerable amount of research that has covered the socio-spatial issues that affect Durban's subsistence fishing community, further research is needed in order to fully understand the spatial, social and environmental factors that will enable the successful practice of subsistence fishing in Durban. This research document outlines the potential for architecture, from a spatial perspective, to act as a catalyst for social change within an urban context; however many non-spatial factors need to be investigated in order to derive a complete understanding of the potential to invoke implementations that catalyse social change within the urban context.

One such gap that requires further investigation is that there is a need to establish the relationship between the requirements of the

subsistence fishing community and the city's future development plans. It is necessary to be able to draw this comparison in order to establish the potential for changes to be made to current municipal planning and development policies that will benefit both the subsistence fishing community as well as the urban community of Durban as a whole.

Another area that requires further investigation is how current national and provincial legislation affects the future of subsistence fishing in both South Africa and Durban. *The Small-Scale Policy* in The Marine Living Resources Act 18 of 1998 (MLRA), that "seeks to address imbalances of the past and ensure that small-scale fishers are accommodated and properly managed" (SA Yearbook, 2013/14) needs to be investigated and challenged regarding the development of new policies that seek to implement strategies

whereby urban subsistence fishing may be a viable solution to poverty alleviation.

Finally, further research needs to be done regarding the possibility for the implementation of a blue economy environmental strategy in South Africa. Research towards understanding the environmental factors, as well as the possible for the establishment of working synergies between communities who depend on marine resources, needs to be conducted in order to develop a strategy that includes subsistence fishing communities as part of a sustainable marine resource management strategy.

PART 2

CHAPTER EIGHT

A FISHING CENTRE IN DURBAN HARBOUR

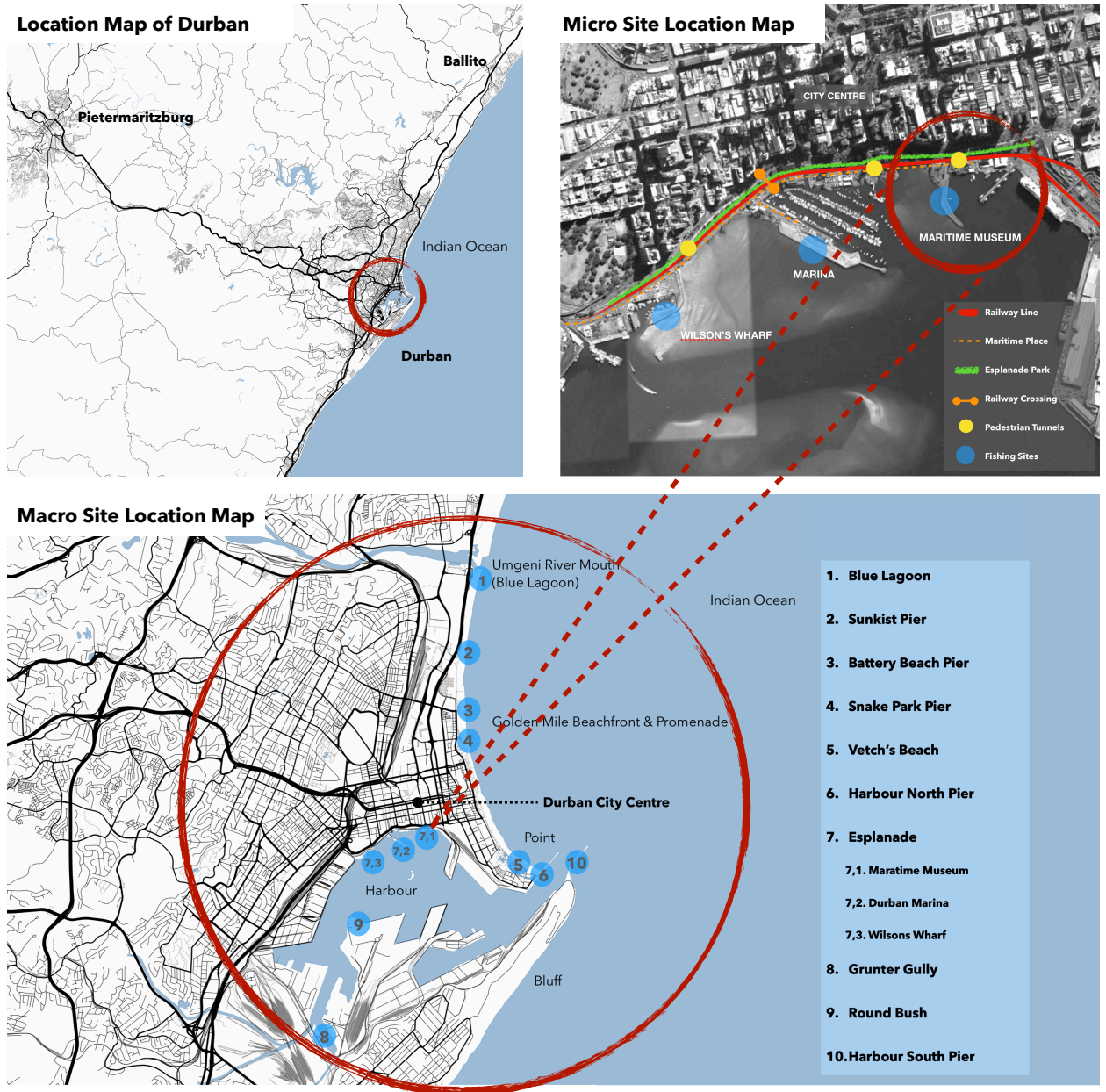


FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

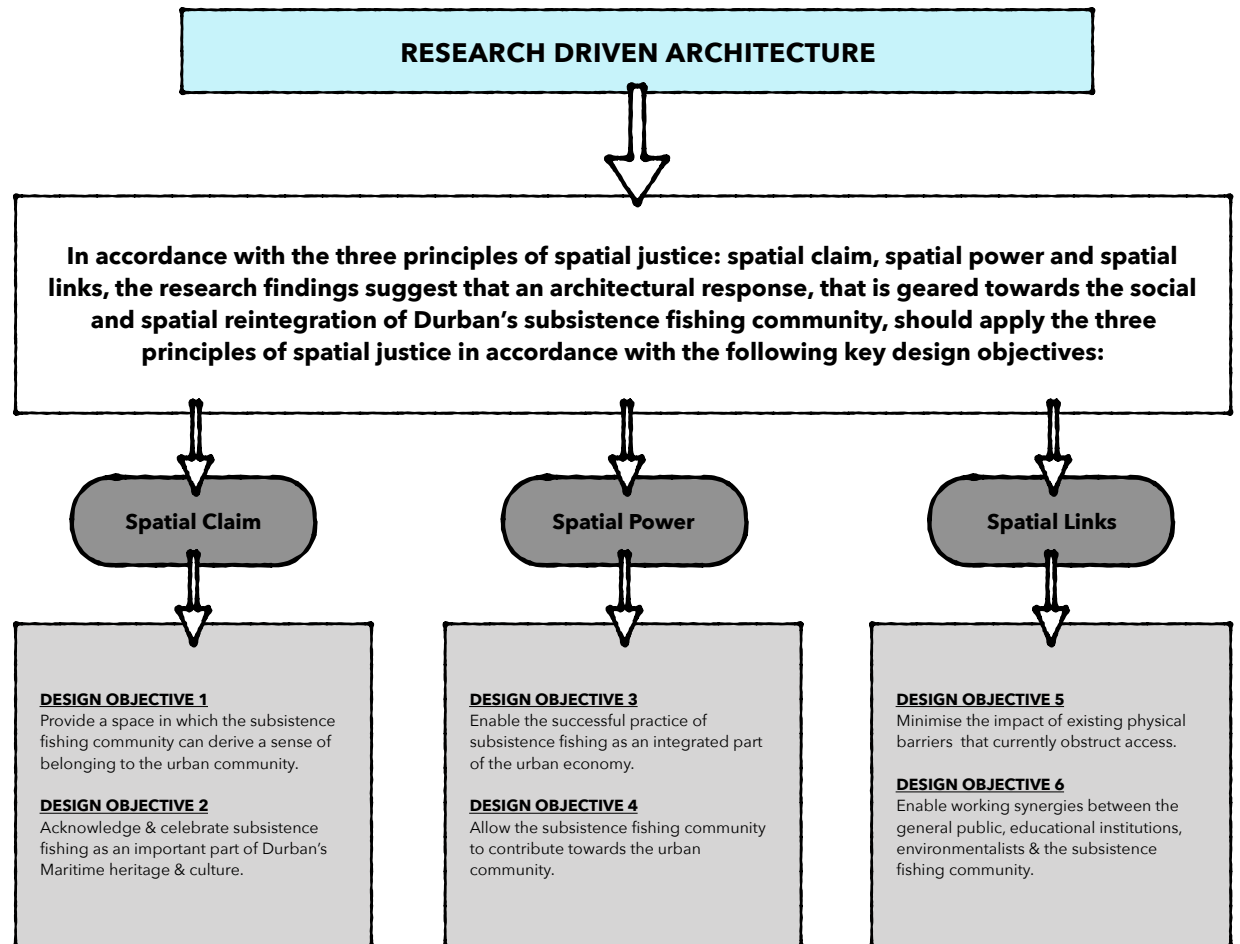
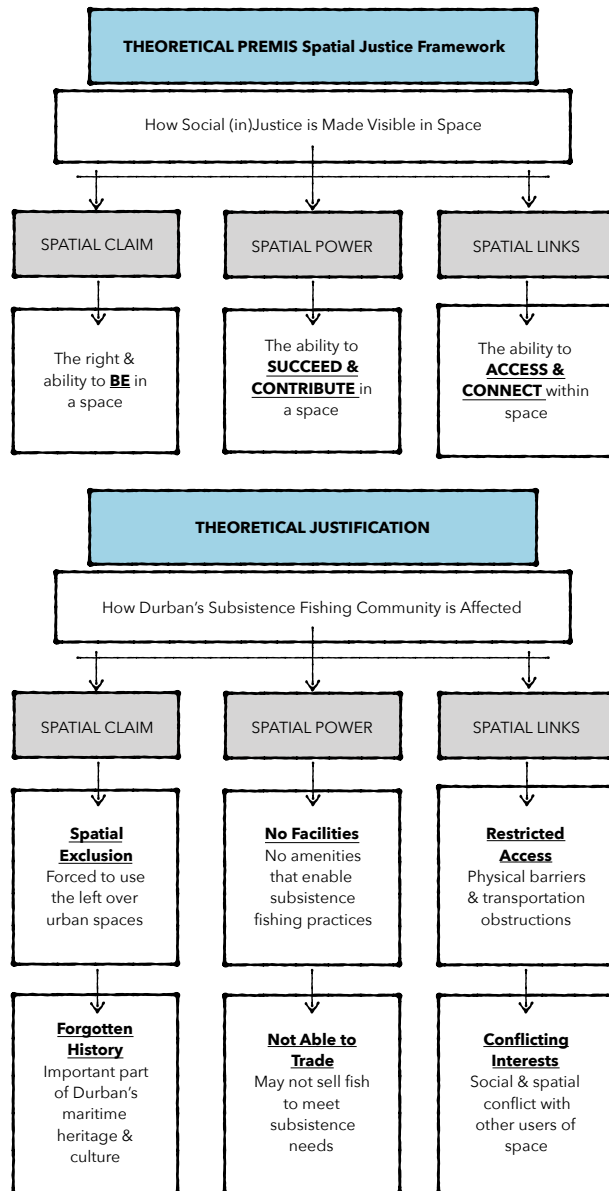
INTRODUCTION TO DESIGN

This chapter presents the final design proposal. The design is informed by the research findings as discussed in the previous chapter regarding each of the three **theoretical principles** of spatial justice (spatial claim, spatial power & spatial links). The **design objectives**, as established in Chapter Seven, are used to develop spatial justice **design principles** towards developing an architectural response that achieves the aforementioned design objectives.

The proposed intervention is a Fishing Centre in Durban Harbour. The site has been determined by the research findings in Chapter Seven as the fishing site at the Maritime Museum at Durban Harbour (see 7,1 on Macro Site Location Map).



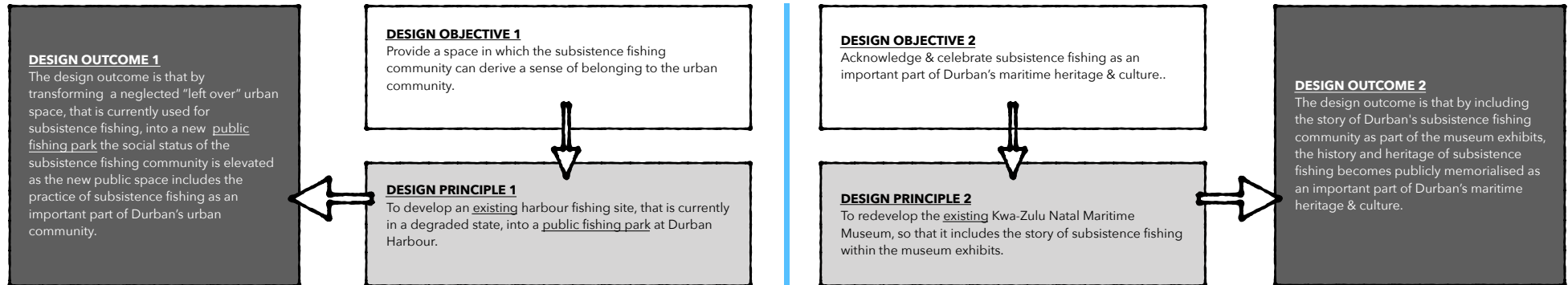
FROM THEORY TO DESIGN



FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

ARCHITECTURAL PRINCIPLES & PRECEDENTS - SPATIAL CLAIM

Spatial Claim



ARCHITECTURAL PRECEDENT - FISHING AT LONDON DOCKS

In contrast to the images of the Durban harbour fishing sites that were presented in the previous chapters, the public fishing docks at Canary Wharf in Central London is an example of an engaged public urban fishing site that includes fishing as a celebrated urban activity.

(image available at: <https://sites.google.com/site/coolingangling/home/fishing-the-london-docks>)



ARCHITECTURAL PRECEDENT - BRIGHTON FISHING MUSEUM, UK.

The seaside town of Brighton boasts a fishing museum that exhibits the history of fishing as part of the town's heritage and culture. The fishing museum is directly linked to the public spaces of the city, thus the importance of the town's fishing heritage becomes embedded into the spatial urban public identity of the maritime town.

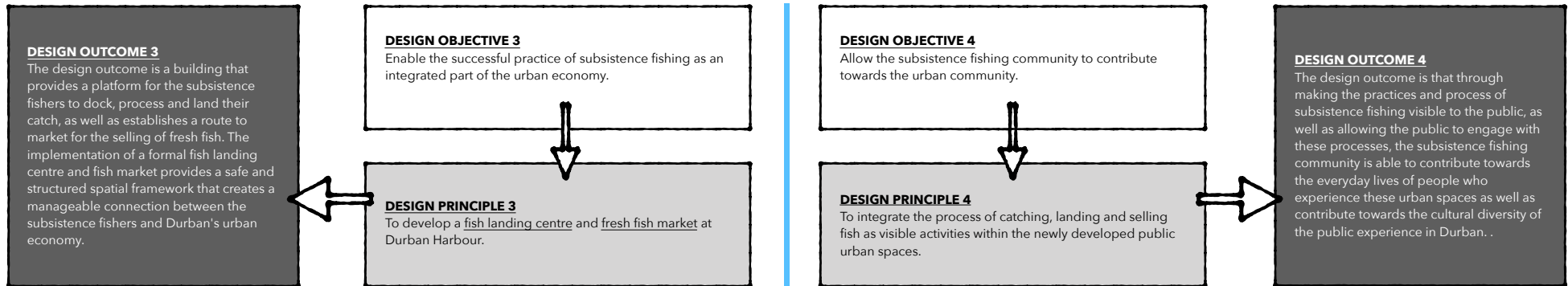
(image available at: <https://www.geograph.org.uk/photo/5900017>)



FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

ARCHITECTURAL PRINCIPLES & PRECEDENTS - SPATIAL POWER

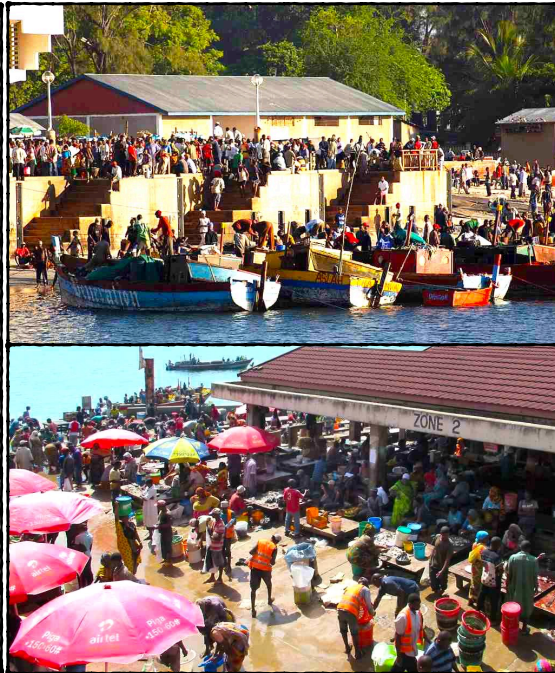
Spatial Power



ARCHITECTURAL PRECEDENT - Kivukoni (Mzizima) Fish Market - Dar es Salaam, Tanzania

This example of a third-world, African, fresh fish market is located on the edge of the city's harbour. It is a bustling market that provides an essential link between the subsistence fishers and the market place. It includes a boat landing area where the fishermen dock and offload their catch, an open informal auction area and a large sheltered market space. The central location of the market within the city as well as the market's accessibility (for both the general public as well as the fishermen) make this market a thriving public space of engagement and trade..

(images available at: <https://wowtravel.me/top-12-things-to-do-in-dar-es-salaam/>)



ARCHITECTURAL PRECEDENT - Sassoon Fishing Docks, Mumbai, India.

The Sassoon fishing docks in Mumbai is an example of how the processes of fish landing, fish cleaning and fish selling are able to engage with public space, thus facilitating dynamic interactions between people in the public urban spaces of the harbour fishing docks.

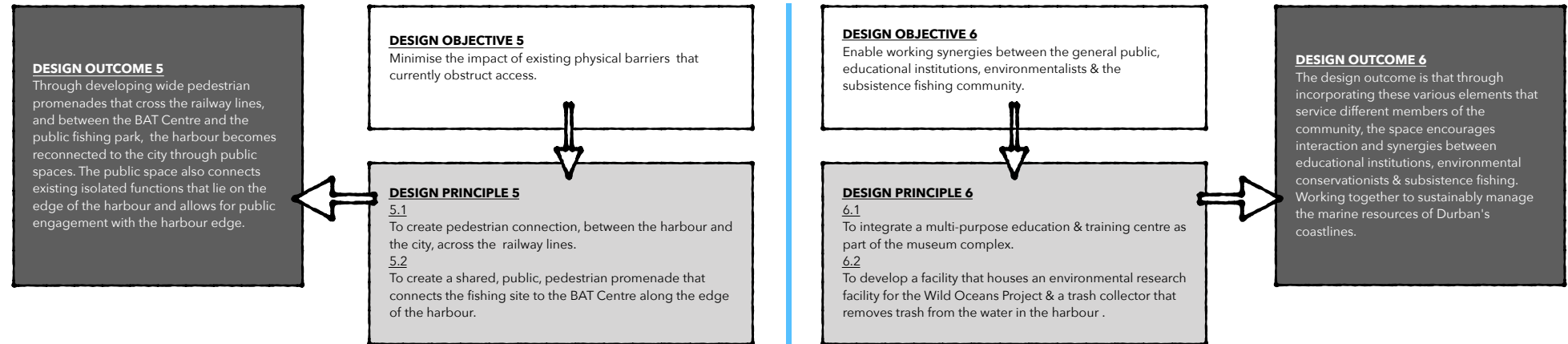
(image available at: <https://www.goyajournal.in/blog/6-am-at-sassoon-docks>)



FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

ARCHITECTURAL PRINCIPLES & PRECEDENTS - SPATIAL LINKS

Spatial Links



ARCHITECTURAL PRECEDENT - PEDESTRIAN RAILWAY CROSSING
The image alongside depicts an approach towards creating pedestrian friendly paths across railway lines.

(image available at: <<https://www.rosehillrail.com/products/pedestrian-crossings/>>)



ARCHITECTURAL PRECEDENT - Proposed International Oceanic Fishing Cultural Center and Museums in China.
The fishing cultural centre combines museums, research facilities, education centres, public spaces and residential buildings to create a multi-faceted facility.

(image available at: <https://www.archdaily.com/338961/tanmen-oceanic-fishing-cultural-center-and-museum-proposal-office-for-architectural-culture/5130f14eb3fc4bd6170000c1-tanmen-oceanic-fishing-cultural-center-and-museum-proposal-office-for-architectural-culture-image?next_project=no>)

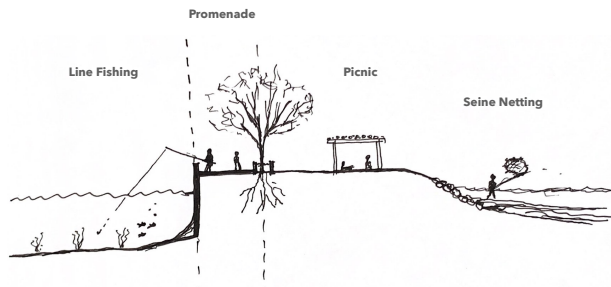
FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

DESIGN PRINCIPLE CONCEPT

Spatial Claim

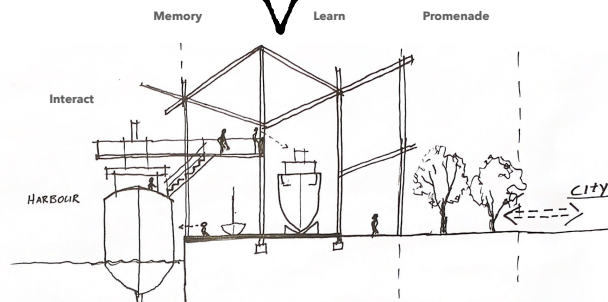
DESIGN PRINCIPLE 1

To develop an existing harbour fishing site, that is currently in a degraded state, into a public fishing park at Durban Harbour.



DESIGN PRINCIPLE 2

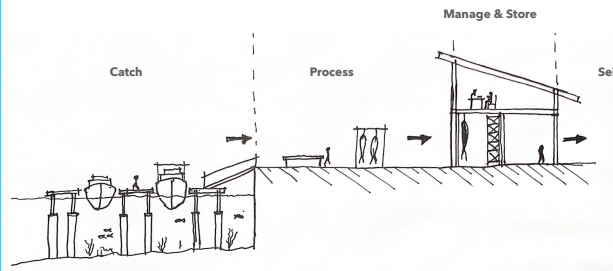
To redevelop the existing Kwa-Zulu Natal Maritime Museum, so that it includes the story of subsistence fishing within the museum exhibits.



Spatial Power

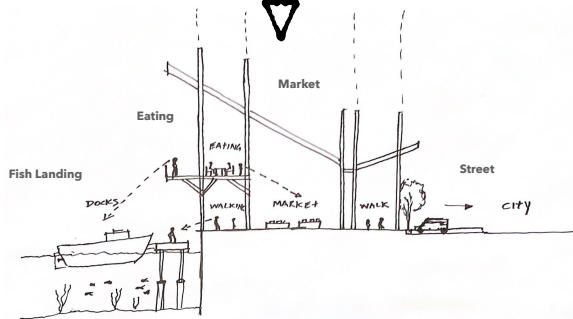
DESIGN PRINCIPLE 3

To develop a fish landing centre and fresh fish market at Durban Harbour.



DESIGN PRINCIPLE 4

To integrate the process of catching, landing and selling fish as visible activities within the newly developed public urban spaces.

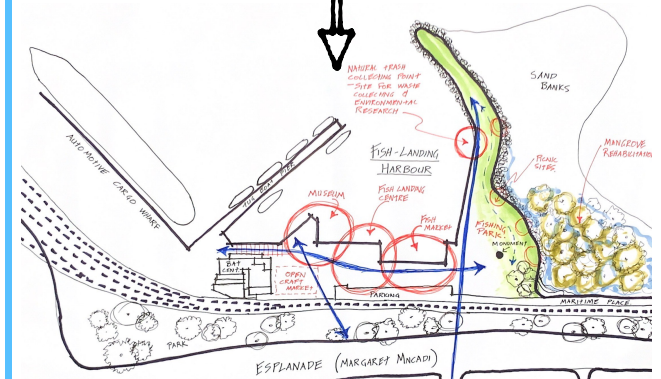


Spatial Links

DESIGN PRINCIPLE 5

5.1 To create pedestrian connection, between the harbour and the city, across the railway lines.

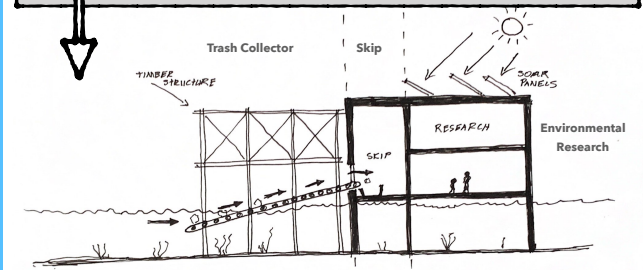
5.2 To create a shared, public, pedestrian promenade that connects the fishing site to the BAT Centre along the edge of the harbour.



DESIGN PRINCIPLE 6

6.1 To integrate a multi-purpose education & training centre as part of the museum complex.

6.2 To develop a facility that houses an environmental research facility for the Wild Oceans Project & a trash collector that removes trash from the water in the harbour.



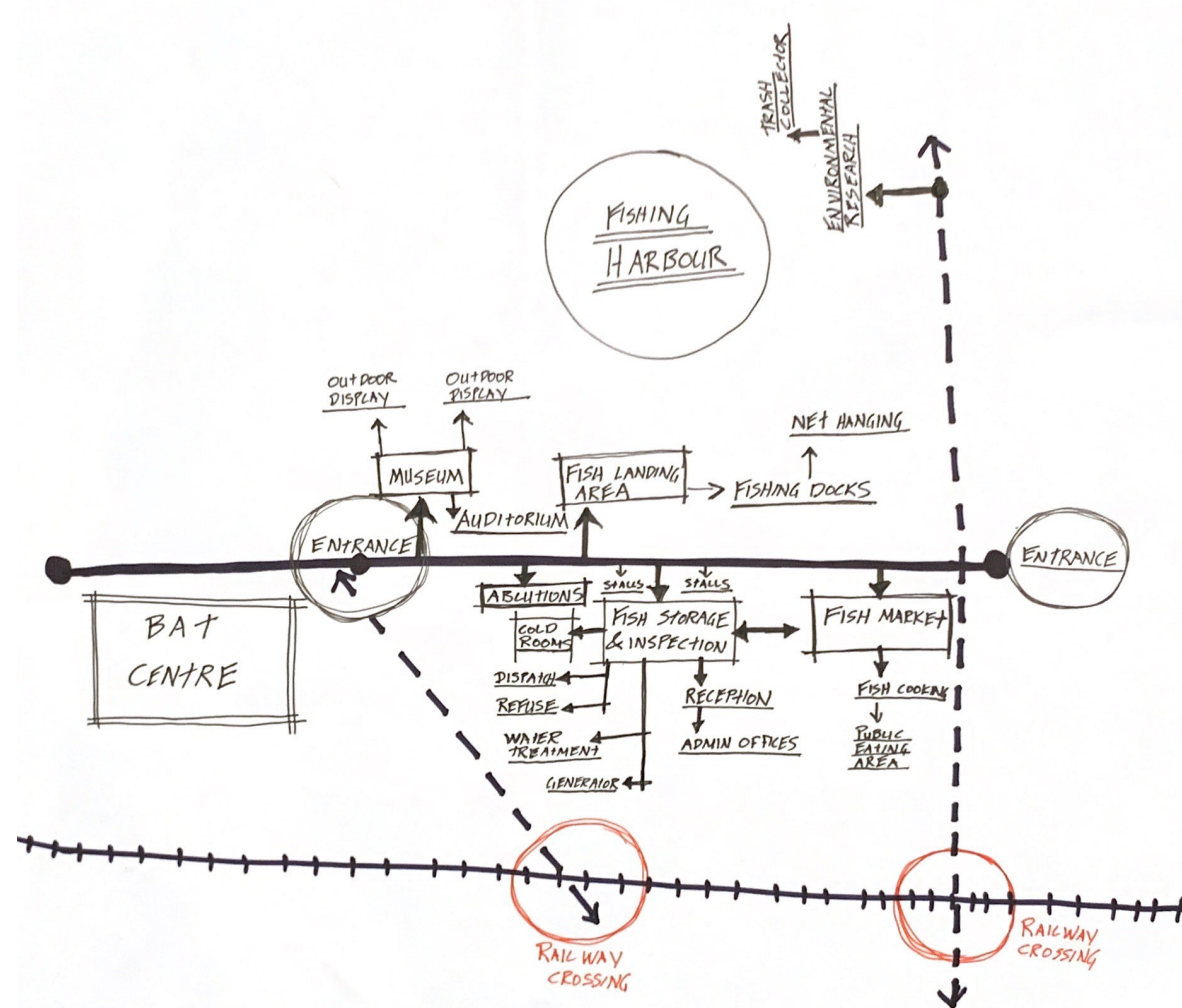
FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

DESIGN PROPOSAL

Accommodation Schedule

Maritime Museum & Education Centre			
1	Museum Entrance & Reception	1	55 m ²
2	Education Centre & Coffee Shop	1	255 m ²
3	Kitchen	1	15 m ²
4	Curator's Office	1	15 m ²
5	Meeting Room	1	20 m ²
6	Museum Ablutions	2	45 m ²
7	Auditorium	1	190 m ²
8	Large Boat Exhibit Gallery	1	150 m ²
9	Small Boat Exhibit Gallery	1	150 m ²
10	Outdoor Gallery	1	150 m ²
11	Museum Tour Jetty	2 boats	
12	JR More Exhibit	See size of boat	
13	SAS Durban Exhibit	See size of boat	
14	Ulundi Exhibit	See size of boat	
48	Upper Gallery Lounge	1	100 m ²
49	Flexible Exhibition Gallery	1	550 m ²
Fish Landing Centre & Fish Market			
15	Fresh Fish Market	30 stalls	500 m ²
16	Suspended Picnic Decks	4	120 m ²
17	Fish Landing Docks	10	
18	Fish Cleaning & Auction Area	Courtyard	660 m ²
19	Retail Kiosks	3	45 m ²
20	Refuse Room	1	60 m ²
21	Public Ablutions	4	200 m ²
22	Public Locker Foyer	2	25 m ²
23	Receiving Area	1	55 m ²
24	Pre-order Dispatch	1	35 m ²
25	Cold Storage	5	100 m ²
26	Refrigeration plant	1	20 m ²
27	Flake Ice Plan	1	20 m ²

28	Flake Ice Storage	1	20 m ²
29	Fish Market Dispatch	1	35 m ²
30	Service Yard	1	100 m ²
31	Admin Entrance & Reception	1	65 m ²
50	Casual Meeting Lounge	1	35 m ²
51	Open Office Space	10 people	100 m ²
52	Meeting Room	12 people	35 m ²
53	Natural Rainwater Filtration System	Roof	
54	Natural Rainwater Filtration Pump Station	Roof	
55	Fish Market Food Hall	100 people	300 m ²
56	Fish Market Bring & Cook Kitchen	1	40 m ²
Environmental Research Centre			
32	Harbour Trash Collector	1	
33	Trash Collector Skip Room	2 skips	55 m ²
34	Trash Collector Turbine Room	1	55 m ²
35	Research Centre Wet Area	1	55 m ²
36	Research Boat Jetty	3 boats	
37	Research Centre Entrance	1	25 m ²
38	Waiting Area	1	30 m ²
39	Ablutions	2	25 m ²
40	Boardroom	12 people	30 m ²
57	Meeting Lounge	1	30 m ²
58	Open Office	4 people	55 m ²
59	Research Laboratory	4 stations	55 m ²
TOTAL AREA REQUIRED			4 680 m²



FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

LIST OF FIGURES

Fig.	Chapter 1	Page	Fig.	Chapter 4	Page
Cover	<i>Photograph of a fishing site at Durban Harbour</i> <i>(Photograph by author; 2017)</i>	1	Cover	<i>KZNSFF orchestrated walk against ExxonMobil's plans to drill for oil and gas off Durban's southern coastline.</i> <i>(image available at: < <a 899="" 900="" 922"="" 934="" data-label="Page-Footer" href="https://bereamail.co.za/113720/durban-fisherman-want-access-to-all-traditional-fishing-grounds/> >)</i></td> <td>61</td> </tr> <tr> <td>1.1</td> <td><i>Diagram of Research Background Sections</i>
<i>(illustration by author; 2017)</i></td> <td>4</td> <td>4.1</td> <td><i>Diagram of research investigation - Spatial Claim.</i>
<i>(Image by author, 2019)</i></td> <td>62</td> </tr> <tr> <td>Fig.</td> <td>Chapter 2</td> <td>Page</td> <td>4.2</td> <td><i>Salisbury Island in Durban Harbour, 1900. Area where subsistence fishers first established themselves in Durban</i>
<i>(image by Govender and Chetty, 2014)</i></td> <td>63</td> </tr> <tr> <td>Cover</td> <td><i>Photograph of Subsistence Fishers at Blue Lagoon</i>
<i>(Photograph by author; 2019)</i></td> <td>24</td> <td>4.3</td> <td><i>Seine-netting in Durban Harbour, the early years of Durban's fishing industry .</i>
<i>(image by Govender and Chetty, 2014)</i></td> <td>63</td> </tr> <tr> <td>2.1</td> <td><i>Diagram of the theoretical concepts of spatial justice</i>
<i>(illustration by author; 2017)</i></td> <td>25</td> <td>4.4</td> <td><i>Early Seine-netting in Durban, a crew's haul of shad on Addington Beach.</i>
<i>(image by Govender and Chetty, 2014)</i></td> <td>64</td> </tr> <tr> <td>2.2</td> <td><i>The spatial justice equation</i>
<i>(illustration by author; 2017)</i></td> <td>29</td> <td>4.5</td> <td><i>Preparing Fish for Market on Salisbury Island.</i>
<i>(image by Govender and Chetty, 2014)</i></td> <td>64</td> </tr> <tr> <td>Fig.</td> <td>Chapter 3</td> <td>Page</td> <td>4.6</td> <td><i>The Village at Fynnlands. Master fishermen's wood & iron cottage .</i>
<i>(image by Govender and Chetty, 2014)</i></td> <td>64</td> </tr> <tr> <td>Cover</td> <td><i>Photograph of fishing site at Durban Harbour North Pier</i>
<i>(Photograph by author; 2019)</i></td> <td>42</td> <td>4.7</td> <td><i>The Village at Fynnlands. Fishermen's children playing on boat .</i>
<i>(image by Govender and Chetty, 2014)</i></td> <td>64</td> </tr> <tr> <td>3.1</td> <td><i>Diagram of research investigation.</i>
<i>(Image by author, 2019)</i></td> <td>51</td> <td>4.8</td> <td><i>Durban Harbour, 1905. Official engineer's map showing proposed expansions plans.</i>
<i>(image by Govender and Chetty, 2014)</i></td> <td>65</td> </tr> <tr> <td>3.2</td> <td><i>Macro contextual location map of Durban .</i>
<i>(image by author, 2019)</i></td> <td>57</td> <td>4.9</td> <td><i>Map of the study area highlighting the 11 fishing sites .</i>
<i>(image by author, 2019)</i></td> <td>68</td> </tr> <tr> <td>3.3</td> <td><i>Map of the provinces of South Africa .</i>
<i>(image by author, 2019)</i></td> <td>57</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3.4</td> <td><i>Investigation site location boundary map.</i>
<i>(image by author, 2019)</i></td> <td>58</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> </div> <div data-bbox="> <p style="text-align: right;">149</p> </i>	

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

4.10	Umgeni River Mouth at Blue Lagoon. <i>(Photograph by author, 2019)</i>	69	4.23	Aerial view of Moses Mabhida Stadium & beachfront promenade development. <i>(image available at: https://www.planetware.com/tourist-attractions-/durban-saf-kz-durb.htm)</i>	76
4.11	Fishermen at Blue Lagoon. <i>(Photograph by author, 2019)</i>	69	4.24	Over crowding at Snake Park Pier in 2011. <i>(image available at: < https://www.iol.co.za/the-post/news/fishermen-up-in-rods-1099217>)</i>	76
4.12	Entrance to Sunkist Pier from the promenade. <i>(Photograph by author, 2019)</i>	69	4.25	Police & port security question fishermen for fishing at Grunter Gully. <i>(image available at: < https://bereamail.co.za/27905/anglers-win-right-to-grunters-gully/>)</i>	76
4.13	Fishermen at Sunkist Pier. <i>(Photograph by author, 2019)</i>	69	4.26	KZNSFF orchestrated protest on the ban of fishing at traditional fishing grounds. <i>(image available at: < https://citizen.co.za/news/1614326/fishermen-encouraged-to-make-their-voices-heard/>)</i>	78
4.14	Battery Beach Pier. <i>(Photograph by author, 2019)</i>	70	4.27	Subsistence fishers begin fishing at Harbour North Pier again in 2018 after ban is lifted. <i>(image available at: < https://www.africannewsagency.com/photos/news/SOUTH-AFRICA---Durban---Natal-Subsistence-Fishing-Forum-7251461>)</i>	78
4.15	Snake Park Pier. <i>(Photograph by author, 2019)</i>	70	4.28	Concrete tables and benches provided for the subsistence fishers at Blue Lagoon. <i>(Photograph by author, 2019)</i>	78
4.16	Vetch's Beach. <i>(Photograph by author, 2019)</i>	70	4.29	Subsistence fishers hauling nets at Fish Hoek beach, Western Cape, South Africa. <i>(image available at: < https://www.iol.co.za/capetimes/news/picture-essay-being-hooked-on-fishing-no-easy-way-of-life-14145639>)</i>	81
4.17	Fishing site adjacent to the Maritime Museum. <i>(Photograph by author, 2019)</i>	71	4.30	Trading area at the old Maputo Fish Market, Maputo, Mozambique. <i>(image available at: < https://www.wantedinafrica.com/news/japan-funds-new-fish-market-in-maputo.html/>)</i>	81
4.18	Fishing site at the Marina. <i>(Photograph by author, 2019)</i>	71			
4.19	Fishing site at Wilson's Wharf. <i>(Photograph by author, 2019)</i>	71			
4.20	Harbour North Pier. <i>(Photograph by author, 2019)</i>	72			
4.21	Harbour South Pier. <i>(image available at: < https://www.iol.co.za/dailynews/news/victory-for-fishermen-as-harbour-ban-is-assessed-1512873>)</i>	72			
4.22	Grunter Gully. <i>(Photograph by author, 2019)</i>	72			

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

4.31	<i>Fishing boats arriving at Kivukoni (Mzizima) Fish Market, Dar es Salaam, Tanzania.</i> <small>(image available at: < https://wowtravel.me/top-12-things-to-do-in-dar-es-salaam/>)</small>	81	5.4	<i>Subsistence fishers making use of the public space at Blue Lagoon.</i> <small>(Photograph by author, 2019)</small>	91
4.32	<i>West African subsistence fishing boats.</i> <small>(image available at: < https://www.hakaimagazine.com/news/west-africas-artisanal-fishers-rival-industrial-fleet/>)</small>	81	5.5	<i>Local seine-netter casting his net in the uMgeni river mouth at Blue Lagoon.</i> <small>(Photograph by author, 2019)</small>	91
4.33	<i>A subsistence fisher couple who lived at and fished from the Snake Park Pier in Durban.</i> <small>(Drey, 2009)</small>	82	5.6	<i>Promenade at the entrance to Snake Park Pier.</i> <small>(Photograph by author, 2019)</small>	92
4.34	<i>Despite adverse fishing conditions, a persistent fisherman fishes to provide for his family .</i>	82	5.7	<i>Surfers & fishermen at Snake Park Pier.</i> <small>(Photograph by author, 2019)</small>	92
4.35	<i>Maritime Museum entrance .</i> <small>(Photograph by author, 2019)</small>	84	5.8	<i>Construction of new promenade at Vetch's Beach.</i> <small>(Photograph by author, 2019)</small>	92
4.36	<i>Maritime Museum exhibit display hall.</i> <small>(Photograph by author, 2019)</small>	84	5.9	<i>Fences at the then trance to the Natal Maritime Museum.</i> <small>(Photograph by author, 2019)</small>	93
4.37	<i>Maritime Museum exhibit.</i> <small>(Photograph by author, 2019)</small>	84	5.10	<i>Left over spaces on the harbour edge that is used by subsistence fishers.</i> <small>(Photograph by author, 2019)</small>	93
4.38	<i>Maritime Museum exhibit.</i> <small>(Photograph by author, 2019)</small>	84	5.11	<i>Fences between the Natal Maritime Museum & the adjacent fishing site.</i> <small>(Photograph by author, 2019)</small>	93
Fig.	Chapter 5	Page	5.12	<i>Homeless person's belongings that have been left on the Maritime Museum fishing site.</i> <small>(Photograph by author, 2019)</small>	93
Cover	<i>Seine-netter at Blue Lagoon.</i> <small>(Photograph by author, 2019)</small>	87	5.13	<i>Upmarket restaurant adjacent to fishing site at Durban Marina.</i> <small>(Photograph by author, 2019)</small>	94
5.1	<i>Diagram of research investigation - Spatial Power.</i> <small>(Image by author, 2019)</small>	88	5.14	<i>Left over space behind the upmarket restaurant that is used as a fishing site at Durban Marina</i> <small>(Photograph by author, 2019)</small>	94
5.2	<i>Map of fishing sites according to spatial quality.</i> <small>(Image by author, 2019)</small>	90			
5.3	<i>Shipping container market stalls at Blue Lagoon.</i> <small>(Photograph by author, 2019)</small>	91			

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

5.15	Barriers & fences at Wilson's Wharf. <i>(Photograph by author, 2019)</i>	94	5.26	Rubbish bins, bait cleaning table & fresh water supply at Battery Beach Pier. <i>(Photograph by author, 2019)</i>	100
5.16	Early Seine-netting boats at Durban Harbour North Pier. <i>(image by Govender and Chetty, 2014)</i>	95	5.27	Off-shore seine netters launching boat at Vetch's beach before the ban on motorised vessels. <i>(image available at: < https://www.iol.co.za/dailynews/news/beach-net-loopholes-are-closed-1284523>)</i>	101
5.17	Fisher at Durban Harbour North Pier, 2007. <i>(image available at: < https://ports.co.za/news/article_2007_02_18_5427.html>)</i>	95	5.28	Off-shore seine netters row boat at Vetch's beach. <i>(image available at: < https://www.getaway.co.za/photography/portrait-durban-beachfront/attachment/durbanbeachfront_tcunniffe058/>)</i>	101
5.18	Subsistence fishers return to Durban Harbour North Pier after 10 year ban, 2017. <i>(image available at: < https://bereamail.co.za/117654/fisherfolk-reel-in-prizes-at-lucky-dip/>)</i>	95	5.29	Areal view of small boat harbour, Valdez Alaska. <i>(image available at: < https://www.valdezak.gov/gallery.aspx?PID=54>)</i>	104
5.19	No fishing sign that is yet to be removed at Harbour North Pier. <i>(Photograph by author, 2019)</i>	96	5.30	Fish cleaning station at Valdez small boat harbour.. <i>(image available at: < https://thegoodthebadandtherv.com/2016/06/19/valdez-trails/>)</i>	104
5.20	Another sign that is yet to be removed at Harbour North Pier. <i>(Photograph by author, 2019)</i>	96	5.31	Trash collector stationed in Baltimore harbour, USA. <i>(image available at: < http://www.designindaba.com/articles/creative-work/meet-mr-trash-wheel-clever-water-pollution-solution>)</i>	105
5.21	Concrete barriers, railings & barbed wire at Harbour North Pier. <i>(Photograph by author, 2019)</i>	96	5.32	Trash collector design diagram. <i>(image available at: < http://www.designindaba.com/articles/creative-work/meet-mr-trash-wheel-clever-water-pollution-solution>)</i>	105
5.22	Subsistence fishers confronted by police at Grunter Gully. <i>(image available at: < https://bereamail.co.za/27905/anglers-win-right-to-grunters-gully/>)</i>	97	5.33	Proposed fish market in Bergen, Norway. <i>(image available at: < http://jdsa.eu/bgn/>)</i>	106
5.23	Abandoned building & polluted water at Grunter Gully. <i>(Photograph by author, 2019)</i>	97	5.34	Plan indicating storage facilities and amenities for fish market in Bergen, Norway. <i>(image available at: < http://jdsa.eu/bgn/>)</i>	106
5.24	Litter accumulating in the harbour at the Maritime Museum fishing site. <i>(Photograph by author, 2019)</i>	100	5.35	Kivukoni (Mzizima) Fish Market, Dar es Salaam, Tanzania. <i>(image available at: < https://wowtravel.me/top-12-things-to-do-in-dar-es-salaam/>)</i>	107
5.25	On-shore line subsistence fishers wading through litter to fish in Durban Harbour. <i>(Photograph by author, 2019)</i>	100			

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY: Towards the design of a FISHING CENTRE in Durban Harbour

5.36	<i>Fish landing docks at Kivukoni (Mzizima) Fish Market, Dar es Salaam, Tanzania.</i> <small>(image available at: < https://wowtravel.me/top-12-things-to-do-in-dar-es-salaam/>)</small>	107	6.8	<i>Map indicating physical barriers that affect the Bayhead fishing sites</i> <small>(Image edited by author, sourced from google earth, 2019)</small>	117
Fig.	Chapter 6	Page	6.9	<i>Map indicating physical barriers that affect the Harbour Piers.</i> <small>(Image edited by author, sourced from google earth, 2019)</small>	118
Cover	<i>Map indicating the three furthest points of the investigation site.</i> <small>(Image edited by author, sourced from google earth, 2019)</small>	111	6.10	<i>Concrete barriers, post and rail fence and barbed wire line the edged of Harbour North Pier.</i> <small>(Photograph by author, 2019)</small>	119
6.1	<i>Diagram of research investigation - Spatial Links.</i> <small>(Image by author, 2019)</small>	112	6.11	<i>Concrete barriers, a bonnox fence line the edged of Harbour North Pier.</i> <small>(Photograph by author, 2019)</small>	119
6.2	<i>Map indicating physical barriers that affect the beachfront fishing sites.</i> <small>(Image edited by author, sourced from google earth, 2019)</small>	114	6.12	<i>View towards the bluff from North Pier.</i> <small>(Photograph by author, 2019)</small>	119
6.3	<i>Map indicating physical barriers that affect the esplanade fishing sites.</i> <small>(Image edited by author, sourced from google earth, 2019)</small>	115	6.13	<i>A view of the Harbour South Pier as it joins the Bluff headland.</i> <small>(image available at: <https://grahamlesliemccallum.wordpress.com/2014/05/26/cave-rock-durban/>)</small>	119
6.4	<i>Railway line that separates Maritime place from the city at the KZN Maritime Museum.</i> <small>(Photograph by author, 2019)</small>	116	6.14	<i>Surfers & subsistence fishers at Snake Park Pier.</i> <small>(Photograph by author, 2019)</small>	121
6.5	<i>Fences and litter along the edges of the railway line.</i> <small>(Photograph by author, 2019)</small>	116	6.15	<i>KZNSFF members hold their fishing permits at Grunter Gully after bing confronted by police authorities.</i> <small>(image available at: <https://southlandssun.co.za/22037/anglerslines-cast-off-grunter-gully/>)</small>	121
6.6	<i>Entrance to one of the pedestrian tunnels that crosses the railway line.</i> <small>(Photograph by author, 2019)</small>	116	6.16	<i>Map indicating transport systems & fish markets in relation to fishing sites.</i> <small>(Image edited by author, sourced from google earth, 2019)</small>	122
6.7	<i>Walking through one of the pedestrian tunnels that crosses the railway line.</i> <small>(Photograph by author, 2019)</small>	116			

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:
Towards the design of a FISHING CENTRE in Durban Harbour

Fig.	Chapter 7	Page
Cover	<i>Bait pumping on the sand banks in Durban harbour.</i> <i>(Photograph by author, 2019)</i>	124
7.1	<i>Diagram of research investigation.</i> <i>(Image by author, 2019)</i>	126

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

REFERENCES

BOOKS

Agnew, J. (2011). 'Space and Place', in Agnew, J & Livingstone, D (eds.). *Handbook of Geographical Knowledge*. London: Sage.

Babbie, E. Mouton, J. (2006). *The Practice of Social Research*. Cape Town: Oxford University Press.

Canter, D. (1977). *The psychology of place*. London : Architectural Press.

Caulfield, J. (1994). *City Form and Everyday Life: Toronto's Gentrification and Critical Social Practice*. Toronto: University of Toronto Press.

Crang, M. (1998). *Cultural Geography*. London: Routledge.

Crawford, M. (2004). 'Everyday Urbanism', in Kelbaugh, D. (ed.). *Michigan Debates on Urbanism, Volume I*. University of Michigan, Taubman College of Architecture and Urban Planning.

de Certeau, M. (1984). *The Practice of Everyday Life*. London: University of California Press.

Govender, N. & Chetty, V. (2014). *Legends of the Tide: The Seine-netters & the roots of the Durban fishing industry*. Durban: Rabble Publishing House.

Harvey, D. (1973). *Social Justice and the City*. Athens: University of Georgia Press.

Heywood, A. (1994). *Political Ideas and Concepts. An Introduction*. New York: St. Martin's Press.

Lefebvre, H. (1991). *The production of Space*. New Jersey: Wiley.

Lefebvre, H. (1996). 'The right to the city, in *Writings on Cities*. Oxford: Blackwell.

Marie, S. (1986). *Divide and Profit: Indian Workers in Natal, Durban*. Worker Resistance and Culture Publications. University of Natal-Durban.

Pryke, M. (1999). 'City rhythms: Neo-liberalism and the developing world', in Allen, J., Massey, D.B. & Pryke, M. (1999). *Unsettling Cities: Movement/Settlement*. London: Routledge, pp. 229-269.

Soja, E. (2009). *The city and spatial justice*. [Online]. Available at: <https://www.jssj.org/wp-content/uploads/2012/12/JSSJ1-1en4.pdf> (Accessed: 20 February 2018)

Soja, E. (2010). *Seeking Spatial Justice*. Minnesota: University of Minnesota Press.

Thrift, N. (1999). 'Cities and economic change: Global governance?', in Allen, J., Massey, D.B. & Pryke, M. (eds.). *Unsettling Cities: Movement/Settlement*. London: Routledge, pp. 271- 289.

Tuan, Y. (1977). *Space and Place, The Perspective of Experience*. London: Edward Arnold (Publishers) Ltd.

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

REPORTS

Chipkin, I. & Meny-Gibert, S. (2013). *Understanding the Social Justice Sector in South Africa*, A Report to the RAITH Foundation and Atlantic Philanthropies.

Cooper, R. (2018). *What is Civil Society, its role and value in 2018?*, A report prepared for the UK Government's Department for International Development (DFID) and its partners in support of pro-poor programmes. [Online]. Available at: https://assets.publishing.service.gov.uk/media/5c6c2e74e5274a72bc45240e/488_What_is_Civil_Society.pdf (Accessed: 1 August 2019)

Demetriades, N. & Forbes, A. (2009). *2008 Estuaries of Durban, KwaZulu-Natal, South Africa*. Report for the Environmental Management Department, eThekweni Municipality. [Online]. Available at: http://www.durban.gov.za/City_Services/development_planning_management/environmental_planning_climate_protection/Publications/Documents/Estuaries%20of%20Durban%20%28technical%20report%29.pdf (Accessed: 1 August 2019)

MARINE LIVING RESOURCES ACT 18 OF 1998. (1998). [Online]. Available at: https://cer.org.za/wp-content/uploads/2010/07/18-OF-1998-MARINE-LIVING-RESOURCES-ACT_8-Mar-2016-to-date.pdf (Accessed: 10 February 2018)

Sauer, W.H.H. Hecht, T. Britz, P.J. & Mather, D. (2003). *An Economic and Sectoral Study of the South African Fishing Industry*. Volume 2: Fishery profiles. Report prepared for Marine and Coastal Management by Rhodes University. [Online]. Available at: https://www.samsa.org.za/sites/samsa.org.za/files/an_economic_and_sectoral_study_of_the_south_african_fishing_industry_fishery_profiles_0.pdf (Accessed: 10 February 2018)

SOUTH AFRICAN YEARBOOK 2013/2014. [Online]. Available at: <https://www.gcis.gov.za/sites/default/files/docs/resourcecentre/yearbook/2013-4Agriculture.pdf> (Accessed: 3 March 2018)

NEWSPAPER ARTICLES

Abdulla, M. (2017). 'What exactly is 'spatial apartheid' and why is it still relevant?', *The Daily Vox*, 18 April 2017. [Online]. Available at: <https://www.thedailyvox.co.za/what-exactly-is-spatial-apartheid-and-why-is-it-still-relevant-in-2017-mohammed-jameel-abdulla/> (Accessed: 10 February 2018)

Carnie, T. (2010). 'It's war as fishermen threaten to ignore ban', *The Mercury*, 17 May 2010. [Online]. Available at: <https://www.pressreader.com/south-africa/the-mercury/20100517/281603826689773> (Accessed: 10 August 2019)

Govender, L. (2011). 'Fishermen up in rods', *IOL News*, 14 July 2011. [Online]. Available at: <https://www.iol.co.za/the-post/news/fishermen-up-in-rods-1099217> (Accessed: 10 August 2019)

Hanekom, E. (2017). 'Fishermen's walk to focus on subsistence anglers' plight', *Southlands Sun*, 4 July 2017. [Online]. Available at: <https://southlandssun.co.za/77186/fishermens-walk-focus-subsistence-anglers-plight/> (Accessed: 10 June 2018)

Lestrade, L. (2018). 'SOUTH AFRICA - Durban - Natal Subsistence Fishing Forum', *The African News Agency*, 6 September 2018. [Online]. Available at: <https://www.africannewsagency.com/photos/news/SOUTH-AFRICA---Durban---Natal-Subsistence-Fishing-Forum-7251461> (Accessed: 11 August 2019)

McCann, D. (2014). 'Durban Fishermen Deprived', *News 24*, 12 August 2014. [Online]. Available at: <https://www.news24.com/MyNews24/Durban-fishermen-deprived-20140812> (Accessed: 19 February 2018)

Moodley, J. (2018). Warning: Shad season off the hook for 2 months, *IOL News*, 29 September 2018. [Online]. Available at: <https://www.iol.co.za/the-post/warning-shad-season-off-the-hook-for-2-months-17256398> (Accessed: 10 August 2019)

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

Myambo, M. (2017). 'In their rush to become global, hipster-friendly cities risk creating spatial apartheid', *The Conversation Africa*, 9 May 2017. [Online]. Available at: <https://qz.com/983312/johannesburgs-maboneng-hipster-neighborhood-is-in-danger-creating-a-new-kind-of-apartheid/> (Accessed: 10 June 2018)

Naidoo, A. (2017). 'Fishermen's livelihoods are being phased out', *PressReader*, 12 July 2017. [Online]. Available at: <https://www.pressreader.com/south-africa/post/20170712/281629600309208> (Accessed: 19 February 2018)

Nair, Y. (2012). 'Beach net loopholes are closed', *IOL News*, 26 April 2012. [Online]. Available at: <https://www.iol.co.za/dailynews/news/beach-net-loopholes-are-closed-1284523> (Accessed: 10 August 2019)

Nkgadima, R. (2017). 'Durban fisherman want access to all traditional fishing grounds', *Berea Mail*, 14 July 2017. [Online]. Available at: <https://bereamail.co.za/113720/durban-fisherman-want-access-to-all-traditional-fishing-grounds/> (Accessed: 19 February 2018)

Rondganger, L. (2013). 'Seine netter feud: I won't go', *IOL News*, 20 February 2013. [Online]. Available at: <https://www.iol.co.za/dailynews/news/seine-netter-feud-i-wont-go-1473614> (Accessed: 10 August 2019)

Thompson, K. (2015). 'The Neoliberal Theory of Economic Development', *ReviseSociology*, 7 December 2015. [Online]. Available at: <https://revisesociology.com/2015/12/07/neoliberalism-economic-development/> (Accessed: 19 February 2018)

Walford, L. (2015). 'Fisherfolk shocked at new fishing policy', *Berea Mail*, 25 February. [Online]. Available at: <https://bereamail.co.za/51319/fisherfolk-shocked-at-new-fishing-policy/> (Accessed: 19 February 2018)

Walford, L. (2015). 'Fishermen told to keep to designated fishing areas', *Berea Mail*, 9 October 2015. [Online]. Available at: <https://bereamail.co.za/65001/fishermen-told-to-keep-to-designated-fishing-areas/> (Accessed: 10 August 2019)

JOURNAL ARTICLES

Curtis, S. (2016). 'Cities and Global Governance: State Failure or a New Global Order?', *Millennium - Journal of International Studies*, 44:3, p455-477.

Guastella, L. (1994). 'A quantitative assessment of recreational angling in Durban Harbour, South Africa'. *South African Journal of Marine Science*, 14:1, p187-203. [Online]. Available at: <https://www.tandfonline.com/doi/pdf/10.2989/025776194784287120> (Accessed: 19 February 2018)

Hart, G. (2006). 'Denaturalizing dispossession: Critical ethnography in the age of resurgent imperialism', *Antipode*, 38:5, p977-1004.

Harvey, D. (2006). 'Neo-liberalism as creative destruction', *Geografiska Annaler: Series B, Human Geography*, 88:2, p145-158.

Kalina, M. Mbereko, A. Maharaj, B. & Botes, A. (2019). 'Subsistence marine fishing in a neoliberal city: a political ecology analysis of securitization and exclusion in Durban, South Africa'. Durban University of Technology, South Africa; The Women's University of Africa, Zimbabwe; University of Kwa-Zulu Natal, South Africa, Durban South Africa. Second article in John Childs and Christina Hicks (eds.). 2019 'Political ecologies of the blue economy in Africa', Special Edition of the *Journal of Political Ecology* 26: p323-465

Knight, J. & Gharipour, M. (2016). 'URBAN DISPLACEMENT AND LOW-INCOME COMMUNITIES: THE CASE OF THE AMERICAN CITY FROM THE LATE TWENTIETH CENTURY', *International Journal of Architectural Research*, 10:2, p6-28. [Online]. Available at: <https://pdfs.semanticscholar.org/cf92/218bb7cb8e6347cb684bb954394f5b09d819.pdf>

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

[_ga=2.59771301.94284541.1574664076-1057069046.1574664076](#) (Accessed: 10 February 2018)

Lewicka, M. (2008). 'Place attachment, place identity, and place memory: Restoring the forgotten city past', *Journal of Environmental Psychology*, 28 (2008), p209-231. [Online]. Available at: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.485.8877&rep=rep1&type=pdf> (Accessed: 10 June 2018)

Manzo, L. & Perkins, D. (2006). 'Finding Common Ground: The Importance of Place Attachment to Community Participation and Planning', *Journal of Planning Literature*, 20:4, p335-350. [Online]. Available at: <https://my.vanderbilt.edu/perkins/files/2011/09/ManzoPerkins.2006.Neighborhoods-as-common-ground.JPL.pdf> (Accessed: 10 June 2018)

Michel, D. & Scott, D. (2005). 'The La Lucia-Umhlanga Ridge as an emerging "Edge City"', *The South African geographical journal, being a record of the proceedings of the South African Geographical Society*, 87:2, p104-114. [Online]. Available at: <https://www.tandfonline.com/doi/abs/10.1080/03736245.2005.9713833> (Accessed: 16 March 2018)

Percell, M. (2014). 'POSSIBLE WORLDS: HENRI LEFEBVRE AND THE RIGHT TO THE CITY', *JOURNAL OF URBAN AFFAIRS*, 36:1, p141-154. [Online]. Available at: http://faculty.washington.edu/mpurcell/jua_rtc.pdf (Accessed: 20 February 2018)

Thompson, M. (2005). 'A Brief History of Neoliberalism', *Democratija*, Winter 2005, p22-27. [Online]. Available at: https://www.dissentmagazine.org/wp-content/files_mf/1390342754d3Thompson1.pdf (Accessed: 16 February 2018)

Warsewa, G. (2017). 'THE TRANSFORMATION OF PORT CITIES: LOCAL CULTURE AND THE POST-INDUSTRIAL MARITIME CITY', *WIT Transactions on The Built Environment*, vol 170. [Online]. Available at: <https://www.witpress.com/Secure/elibrary/papers/CC17/CC17015FU1.pdf> (Accessed: 23 June 2019)

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', *Pochefstroom Electronic Law Journal*, 16:5. [Online]. Available at: <http://www.saflii.org/za/journals/PER/2013/75.html> (Accessed: 19 February 2018)

CONFERENCE PAPERS

Clos, J. (2017). *The New Urban Agenda*. United Nations Conference on Housing and Sustainable Urban Development (Habitat III). Quito, Ecuador, October 2016. [Online]. Available at: <http://habitat3.org/wp-content/uploads/NUA-English.pdf> (Accessed: 20 November 2017)

de la Paz, G. (2004). *Citizenship Identity and Social Inequality*. Instituto Federal Electoral San Diego: Center for Civic Education, California, 2004. [Online]. Available at: <https://www.civiced.org/pdfs/delaPazGabriel.pdf> (Accessed: 20 June 2018)

INTERNET SOURCES

Bailey, K. Lobenstine, L. Themba, M. & Nagel, K. (2011). 'Spatial Justice: a frame for reclaiming our rights to be, thrive, express and connect', *Design studio for social intervention*. [Online]. Available at: https://www.thepraxisproject.org/sites/default/files/Miles/201201/SpatialJustice_ds4si.pdf (Accessed: 20 February 2018)

Civics Academy. (2018). *What is Justice?*. [Online]. Available at: <http://www.civicsacademy.co.za/video/justice/> (Accessed: 11 July 2018)

Dray, A. & Scott, D. (n/d). *THE EXCLUSION OF SUBSISTENCE FISHERS FROM PUBLIC SPACES IN DURBAN*. [Online]. Available at: <https://sancor.nrf.ac.za/SitePages/The%20Exclusion%20of%20Subsistence%20Fishers%20from%20Public%20Spaces%20in%20Durban.aspx> (Accessed: 3 March 2018)

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

Encyclopaedia Britannica. (2019). *Durban, South Africa*. [Online]. Available at: <https://www.britannica.com/place/Durban> (Accessed: 15 July 2019)

Farooq, U. (2013). *What are the Causes of Urbanization*. [Online]. Available at: <http://www.studylecturenates.com/basics-of-sociology/what-are-the-causes-of-urbanization> (Accessed: 16 June 2018)

SaferSpaces. (2018). *Public spaces: More than 'just space'*. [Online]. Available at: <https://www.saferpaces.org.za/understand/entry/public-spaces> (Accessed: 11 July 2018)

SDCA. (2017). *Events of KZN Fisherfolk*. [Online]. Available at: <https://sdcea.co.za/2017/06/30/events-of-kzn-fisherfolk/> (Accessed: 10 July 2019)

SME South Africa. (2017). *How SA's Government Can Help Small Businesses*, 29 September 2017. [Online]. Available at: <https://www.smesouthafrica.co.za/17591/Government-SME-Business/> (Accessed: 10 July 2019)

South African Government, Fisheries. (n/d). [Online]. Available at: <https://www.gov.za/about-SA/fisheries> (Accessed: 3 March 2018)

TRANSNET, Media Statement. (2013). *DURBAN HARBOUR ISSUES FIRST HUNDRED FISHING PERMITS*. [Online]. Available at: <https://www.transnetnationalportsauthority.net/Corporate%20Affairs/Press%20Releases/Archives/Durban%20harbour%20issues%20first%20100%20fishing%20permits.pdf> (Accessed: 12 February 2018)

Treanor, P. (2005). *Neoliberalism: origins, theory, definition*. [Online]. Available at: <http://web.inter.nl.net/users/Paul.Treanor/neoliberalism.html> (Accessed: 10 May 2018)

UNESCO. *Inclusion Through Access to Public Space*. [Online]. Available at: <http://www.unesco.org/new/en/social-and-human-sciences/themes/urban-development/>

migrants-inclusion-in-cities/good-practices/inclusion-through-access-to-public-space/ (Accessed: 3 March 2018)

University of Southern California. (2018). *Organizing Your Social Sciences Research Paper: Limitations of the Study*. [Online]. Available at: <http://libguides.usc.edu/writingguide/limitations> (Accessed: 18 April 2018)

Verhaar, H. (2012). *Urban Identity: Citizens and their Cities*. [Online]. Available at: <http://thisbigcity.net/urban-identity-citizens-cities/> (Accessed: 11 July 2018)

World Port Source. (2019). *Port of Durban*. [Online]. Available at: http://www.worldportsource.com/ports/review/ZAF_Port_of_Durban_50.php (Accessed: 15 July 2019)

UNPUBLISHED

Adhya, A. (2008). *THE PUBLIC REALM AS A PLACE OF EVERYDAY URBANISM: LEARNING FROM FOUR COLLEGE TOWNS*. Doctor of Philosophy (Architecture) in the University of Michigan.

Bassett, S.M. (2013). *The role of spatial justice in the regeneration of urban spaces*. Submitted May 2013 In fulfilment of the requirements of the Network of European-United States Regional and Urban Studies (NEURUS) Program And Master of Urban Planning Capstone Project. University of Illinois, Illinois, USA.

D'ahl, J-P. (2017). *THE ROLE OF THE BUILT ENVIRONMENT IN THE CONSERVATION OF NATURAL ECO-SYSTEMS: a CENTRE FOR BIODIVERSITY PRESERVATION on the banks of uMgeni river, Molwei*. Master of Architecture (Professional) in the School of Built Environment and Development Studies. University of Kwazulu-Natal, Howard College, Durban, South Africa.

FINDING SPACE FOR DURBAN'S SUBSISTENCE FISHING COMMUNITY:

Towards the design of a FISHING CENTRE in Durban Harbour

Dray, A. (2009). *THE POLITICS OF THE PRIVATISATION OF PUBLIC SPACE: THE SUBSISTENCE FISHERS OF DURBAN, KWAZULU-NATAL*. Master of Social Science in the School of Environmental Science. University of Kwazulu-Natal, Howard College, Durban, South Africa.

Ruhomah, H. (2012). *A CRITICAL ANALYSIS OF THE LACK OF CONSIDERATION OF SMALL- SCALE FISHERIES IN THE ALLOCATION OF FISHING RIGHTS*. Master of Laws in the College of Law and Management Studies, School of Law. University of Kwazulu-Natal, Pietermaritzburg, South Africa.

Tayob, I. (2016). *Seeking Spatial Justice: Empowering the everyday through an architecture that integrates the spatial and social realms*. Master of Architecture (Professional) in the School of Architecture. University of Pretoria, Pretoria, South Africa.

APPENDICES