

https://dspace.org/

The deterioration of the life support base: the perceptions of people in informal settlements towards limiting pollution in their environment

Mporetji, Simon

2008-08-28T12:07:31Z
http://hdl.handle.net/10539/5573

Downloaded from a DSpace repository. https://dspace.org/

DECLARATION

I declare that the dissertation is my own unaided work. It is being submitted to the Degree of Master of Science in Development Planning to the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination to any other University.

……
Signature of Candidate

……day of**……**year**……..**

Abstract

Diepsloot, a township in Johannesburg, South Africa, was used as a case study to explore the perceptions of people in informal settlements towards their role in limiting pollution in their environment. The method followed was qualitative, and primary data were collected through the use of key informants (Ward Councillor and Environmental Health Officer), and three focus groups. Diepsloot is a marginalised residential area located in the Northern perimeter of the City of Johannesburg. The settlement is spatially fragmented, reflects a high residential density and is plagued with high levels of unemployment and poverty. Compounded by poor municipal service delivery, these challenges lead to a range of environmental problems such as overflowing solid waste on the streets, water pollution, and high levels of indoor air pollution. The study found that there were varying levels of commitment to limiting pollution by people in the informal settlement. This (commitment to limiting pollution) was largely dependent on community action through the formation of street committees. In streets where there was community cohesion, street committees were stronger and environmental conditions were better. In contrast, environmental problems were worse where street committees were weak or not operating. Regarding the role of government, the major constraints leading to unresponsive interventions were the limited scale of municipal operation and their poor communication with residents. Suggested corrective measures include recycling, education on pollution and the need for institutional strengthening. Further research aimed at identifying a set of appropriate partnerships and institutions needed for responsive interventions in informal settlements is required.

Key words: South Africa, pollution, community perceptions, informal settlements, ward councillor, Environmental Health Officer, institutions, solid waste, air pollution, water pollution, local government, street committees.

Dedication

To my late brother Sonti Mporetji and my parents, Mushayathama Mburedzhi, Makwarela Mburedzhi and Njoni Mporetji, who encouraged me and my siblings to go to school and cared for us

Acknowledgements

Above all, I thank God, who blessed me with an opportunity to enroll for this Degree. I also express my genuine gratitude and appreciation to my esteemed supervisor Dr Liz Thomas for her insight, guidance, and assistance throughout the study. May God Bless you.

To my mother, Mushayathama Mburedzhi, I say thank you for your prayers, constant support and encouragement throughout my years at University. Particular thanks go to my brothers and sisters Thomas Mporetji, Moraka Mporetji, the late Sonti Mporetji (May your soul rest in peace), Sewela Mporetji, Benjamin Mashavhela, and Mavhu Mashavhela for their social and financial support throughout the study. Without your support I would never have made it. Sincere gratitude goes to my younger sister Leshata Mporetji for her assistance in organizing focus groups for the study. Special thanks to the one person who loved and cared for me during my studies, Evina Tlhapa. I will never forget you.

To my elder brother Thaba Mporetji, your support throughout my time as a student is immense. It would take me a life time to return what you have done for me. What I have, I ascribe to you. You can smile because I am done with this stage, yet still more to go…! To my brother, "Warra!" Simon Mporetji, who supported me during tough times and provided financial support, insight and study material, I wish to express my deepest gratitude and appreciation to you. May you live a long prosperous life.

I am indebted to the Department of Environmental Affairs and Tourism (DEAT) for partially funding my Studies.

Many thanks to all the academics who taught me in the School of Architecture and Planning. May God add more blessings to your lives.

List of Figures

Figure 1: Perceptions as to which are the major environmental problems in Diepsloot….....60
Figure 2: Two of the pollution hotspots in Diepsloot……...62
Figure 3: Stagnant water containing solid waste in Diepsloot……..63
Fig 4: An illegal dump located very close to dwellings in Diepsloot……84

List of Tables

Table 1: Research questions and the alternative approaches of answering them……..47
Table 2: Summery of people's perceptions regarding their role in limiting pollution in their environment……...67
Table 3: People's perceptions towards limiting pollution: Ward Councillor's perspective…….68
Table 4: People's perceptions towards limiting pollution: EHO's perspective……68
Table5: The role of local government: Residents' perspective…….71
Table 6: The role of local government: Ward Councillor's perspective……...73
Table 7: The role of local government: EHO's perspective…….75
Table 8: Differences regarding the role of local government……...77

List of Maps

Map 1: Map of Johannesburg City showing the 2004 administrative regions, and the…12
location of Diepsloot in relation to other administrative regions in the city
Map 2: The Diepsloot transit camp (2007)……...13

List of acronyms

CAF	Community Advisory Forum
CBO	Community Based Organisation
CFCs	Chloro-flouro-carbons
DANCED	Danish Co-operation for the Environment and Development
DEAT	Department of Environmental Affairs and Tourism
DWAF	Department of Water Affairs and Forestry
EHO	Environmental Health Officer
GDEA	Gauteng Department of Environment and Agriculture
GJMC	Greater Johannesburg Metropolitan Council
HFCs	Hydro-flouro-carbons
IDP	Integrated Development Plan
Joburg GDS	Johannesburg Growth and Development Strategy
MDG	Millennium Development Goals
MEC	Member of Executive Committee
NASA	National Aeronautics and Space Administration
NEMA	National Environmental Management Act
RDP	Reconstruction and Development Programme
RSDF	Regional Spatial Development Framework
SDF	Spatial Development Framework
UK	United Kingdom
UMAP	Upgrading of Marginalised Areas Programme
UN	United Nations
UNCED	United Nation Commission on Environment and Development
UNEP	United Nations Environmental Program
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WSSD	World Summit on Sustainable Development

The world we created today, has problems which cannot be solved by thinking the way we did when we created them**-** ***Albert Einstein***

TABLE OF CONTENTS

Declaration……..i

Dedication……...ii

Abstract…….iii

Acknowledgements……...iv

List of Figures……v

List of Tables…….vi

List of Maps……..vii

List of Acronyms…….....viii

CHAPTER ONE

1. **INTRODUCTION ……..1**

1.1. Background …….1

1.2. Local challenges……4

1.3. Aim of the study……4

1.4. Rationale and problem statement……...5

1.5. Research questions……6

1.6. Conceptual framework……6

1.6.1. Advocacy and the ontological philosophy……7

1.6.2. Postmodernism and multiculturalism……..8

1.6.3. Ideological perspectives……9

1.6.4. Legislation and policy directives in South Africa…….10

1.7. The study area: Diepsloot……..11

1.7.1. Geographic location and historical background……...11

1.7.2. Administrative region of Diepsloot…….12

1.7.3. Physical characteristics and demographic information……...14

1.7.4. Infrastructure in Diepsloot……14

1.7.5. Economic activities in Diepsloot……15

1.7.6. Conclusion……15

CHAPTER TWO

2. LITERATURE REVIEW…… 16

2.1. Introduction……16

2.1.1. Theoretical sensitivity……..16

2.2. Environmental pollution: a global perspective.....16

2.2.1. Air pollution……17

2.2.2. Land Pollution……..21

2.2.2.1.Community involvement in solid waste management……24

2.2.2.2.Case studies of effective community practice……..24

2.2.2.3.The role of education on pollution……26

2.2.2.4. Recycling……29

2.2.3. Water pollution……30

2.2.4. A global vision on the prevention of environmental harm……...31

2.3. The South African context……34

2.3.1. Institutions for environmental management in South Africa……..34

2.3.2. South African policies and key legislation for pollution management……35

2.3.3. Environmental management and pollution initiatives in South Africa……37

2.3.4. The context and role of local government……..38

2.3.5. The role played by the community in exacerbating pollution…….39

2.3.6. Peoples responsibility to find solution to pollution problems……..39

2.3.7. Why is there is a need for an integrated pollution and waste management policy in South Africa?.....40

2.4. The Johannesburg context……41

2.4.1. Geographic location of Johannesburg……...41

2.4.2. The state of the environment in Johannesburg……41

2.4.3. Johannesburg city policies and strategies for pollution management……43

2.5. The Diepsloot context……44

2.6. Conclusion……...45

CHAPTER THREE

3. RESEARCH METHODOLOGY……46

3.1. Methodology for data collection ……..46

3.2. Case study……48

3.3. Description of data collection procedure ……49

3.4. Focus groups interviews……50

3.4.1. Recruitment of participants in focus groups……51

3.4.2. Dealing with conflicts in focus groups……52

3.4.3. Challenges during focus group discussions……...52

3.4.4. Advantages of focus groups……53

3.4.5. Disadvantages……...53

3.5. One-on-one interviews……53

3.6. Interviews with EHO and the Ward Councillors…….....54

3.7. Limitations of the study……..55

3.8. Ethical considerations……55

3.8.1. Researcher's identity……...56

3.8.2. Voluntary participation……...56

3.8.3. Informed consent……56

3.8.4. Physical and psychological harm……57

3.8.5. Self determination……57

3.8.6. Anonymity……57

3.8.7. Confidentiality……..58

3.8.8. Reporting research results……..58

CHAPTER FOUR

4. FINDINGS)…….....59

4.1. Introduction ……59

4.2. Perceptions of people towards limiting pollution.……...59

4.3. Responses by local government: perceptions of the EHO and Ward Councillor regarding the environmental health problems…….61

4.4. People's perceptions regarding waste disposal……63

4.4.1. Informal waste collection……64

4.4.2. Setting up a reporting system ……65

4.4.3. Recycling……...65

4.4.4. Evaluation of Tables 2, 3 and 4……..69

4.5. Perceptions regarding the role of local government in refuse removal…….71

4.5.1. Evaluation of Tables 5, 6 and 7……...77

4.6. Reflecting on the findings……..79

4.6.1. Motivating behavioural changes……79

4.6.2. Physical activities…….80

4.7. Conclusion……...80

CHAPTER FIVE

5. ANALYSIS OF FINDINGS: REFLECTING ON CASE STUDIES…….81

5.1. Introduction…….81

5.2. Conceptualisation of people's perceptions……...81

5.3. Institutional arrangements of pollution management in informal settlements….....81

5.4. People's perceptions towards solid waste ……83

5.4.1. People's perceptions on illegal dumping……83

5.4.2. The health approach……85

5.4.3. The importance of informal waste collection……86

5.4.4. Recycling in informal settlements……..87

5.5. People's perceptions regarding smoke and air pollution……88
5.5.1. Alternative forms of energy for domestic cooking……89
5.5.2. People's perceptions on burning coal and refuse……89
5.5.3. Health impacts of air pollution ……..90
5.5.4. People's perceptions on reducing air pollution……91
5.6. People's perceptions regarding their role in limiting water pollution ….....93
5.7. Residents' perceptions regarding the role of government on limiting pollution……...93
5.8. What can be done?.....95
5.8.1. The role of planner……...95
5.8.2. Changing the way people think……..97
5.9. Conclusion……...98

CHAPTER SIX

6. RECOMMENDATIONS AND SUGGESTIONS FOR POLICY MAKING…...99
6.1. Introduction ……99
6.2. Summary of answers to research questions……....99
6.2.1. What measures has local government taken to limit pollution in the study area?.....100
6.2.2. What can be done to limit pollution?.....100
6.3. How has study the contributed to planning knowledge?.....101
6.4. Suggestions for policy making……103
6.5. Areas for further research……...104

Reference list……..105

APPENDIX A……118
APPENDIX B……119
APPENDIX C……122