

**GOVERNANCE AND SERVICE
DELIVERY:
A CASE-STUDY OF SANITATION IN
INANDA, DURBAN**

by

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As the candidate's supervisor I have/ have not approved this thesis for submission.

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PREFACE

The experimental work described in this thesis was carried out in the School of Built Environment and Development Studies, University of KwaZulu-Natal, Howard College Campus, Durban, under the supervision of Professor Brij Maharaj.

These studies represent original work by the author and have not otherwise been submitted in any form for any degree or diploma to any tertiary institution. Where use has been made of the work of others it is duly acknowledged in the text.

Signature

DEDICATION

This work is dedicated to my parents:

Pt S.D Maharaj & the late Mrs K.D Maharaj

For instilling in me values that resonate with the wisdom of a great scholar,
Swami Vivekananda:

“Awake, arise and stop not till your goal is achieved”

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ABSTRACT

The sanitation crisis is a growing pandemic in most developing countries, globally, including in South Africa. It is exacerbated by increasing urbanization, poverty, lack of political will, poor institutional response and limited financial resources to address the increasing demands. The sanitation situation in Inanda in Durban is no different. This study examines a ‘trialogue’ of governance, sanitation and service delivery in Inanda. It investigates the approach to sanitation delivery, capturing the impact of policy implementation through the real experiences of communities in Inanda.

The theorisation for this study is built on debates relating to governance as an analytical lens. It also draws on Foucault’s theory of governmentality to understand how government functions in an environment internal and external to itself to manage and distribute public resources as a service to the governed. Government employs the ‘art of governing’ through regulation and the rule of law to achieve its service delivery goals. In the delivery of sanitation in South Africa the government adopts a multi-stakeholder governance approach, requiring inter-spherical and inter-department synergy, together with cooperation from the local communities and other sectors.

The predominant qualitative account of sanitation governance is achieved through utilising a case-study design as a methodological approach. The case-study design allowed the researcher to delve deeper into smaller cases employing multi-method data gathering techniques. Triangulation increased the reliability and credibility of the findings presented. The empirical investigation of this research concentrates on the experiences of local communities in Inanda, exploring the impact of policy choices for sanitation delivery. In addition, it captures the application of governance principles by practitioners to meet sanitation demands in the varying geo-spatial formations, different housing typologies and absence of bulk infrastructure in the peri-urban and rural settings in the study area. The study paid special attention to imperatives such as local governance and participation; access to basic services as a Constitutional right; access to sanitation to advance a better quality of life through adequate facilities, improved hygiene education and access to water to complement sanitation goals.

The study revealed that sanitation delivery in Inanda was fraught with developmental challenges. The eThekweni Municipality's Water and Sanitation Unit, responsible for the provision of sanitation to the communities of Inanda is challenged with increasing populations, unplanned settlements, weak institutional response to operations and maintenance, limited financial resources, inadequate integrated and spatial planning, and moving targets due to increasing demands for sanitation services in Inanda. Poor sludge management threatens environmental integrity and community health. The Municipality's interim response to the sanitation needs of informal/unplanned settlements had little impact on user satisfaction as the high cost of infrastructure limits the quantity and quality of facilities provided. Communities find it difficult to utilise governments' choice of sanitation facilities provided to them due to poor quality infrastructure, inadequate of maintenance and care of facilities, lack of effective sludge evacuation strategies for ventilated improved pit toilets, and inability to use and maintain the eco-san innovations instituted by the eThekweni Water and Sanitation Unit. Inadequate sanitation facilities exposed communities to the hazards of crime, disease, indignity, perpetuation of poverty and discrimination as well as a perception that, approximately 18 years into the democratic era, government has failed the people, as majority of the households in Inanda still do not have their own toilet facility.

Women in Inanda suffered a triple burden because of inadequate sanitation facilities or their absence. They were more susceptible to disease when defecating in the open. They suffered the loss of opportunity to engage in income generating activities because of the burden of maintenance of toilet facilities (assisting the aged, infirm and children), and the risk of crime when accessing shared facilities far from their homes. Shared facilities were deemed inadequate and the lack of facilities forced communities to resort to primitive methods of defecating in the open or in plastic bags and buckets. This study found that the people of Inanda feel that their sanitation situation is no better than it was during the apartheid era, their human rights are violated and their dignity compromised through lack of access to adequate sanitation.

CONTENTS

Preface.....	i
Dedication	ii
Acknowledgements.....	iii
Abstract	v
Acronyms and abbreviations	xix
Chapter One: Introduction.....	1
1.1 Introduction.....	1
1.2 Silent Sanitation Challenge in South Africa	4
1.3 Theoretical Underpinnings.....	9
1.4 Aims and objectives of the Study	10
1.5 Chapter Overview	12
1.5.1 Chapter One: Introducing the study.....	12
1.5.2 Chapter Two: Theoretical Concepts and Literature Review	12
1.5.3 Chapter Three: Governance and the Institutional Approach to Sanitation in South Africa	12
1.5.4 Chapter Four: Research Design and Methodology.....	13
1.5.5 Chapter Five: Sanitation Governance in Inanda, Durban	14
1.5.6 Chapter Six: Sanitation Experiences in Inanda	15
1.5.7 Chapter seven: Conclusion and Recommendations of the Study.....	15
1.6 Conclusion.....	15
Chapter Two: Theoretical Concepts and Literature Review	17
2.1 Introduction	17
2.1.2 Governance: A Definitional Conundrum.....	18
2.1.3 Theoretical and Conceptual Debates	19
2.1.4 Rescaling Governance	20
2.1.5 Regulation Theory	22
2.1.6 Foucault and Governmentality	23
2.1.7 Frameworks of Governance Typologies.....	32

2.1.8	Network Governance Approach	34
2.1.9	Democratic Decentralised Governance.....	41
2.2	Sanitation in Developing Countries.....	46
2.2.1	Sanitation Under Challenge: Millennium Development Goals.....	47
2.2.2	Multi-stakeholder Collaboration and Partnerships for Improved Sanitation	50
2.2.3	Economic Asphyxia due to Sickly Workforce	52
2.2.4	Ecological Sustainability through Recycling Human Waste	52
2.2.5	Sanitation Access, Operations and Infrastructure.....	55
2.2.6	The ‘Other’ Sector Paradigm Shift	61
2.2.7	Community-Led Approach to Improved Sanitation	62
2.2.8	Sanitation Challenge for Women Children and Disabled.....	64
2.2.10	Conclusion.....	66

Chapter Three: Governance and the Institutional Approach to Sanitation in South

Africa.....	68	
3.1	Introduction	68
3.2	Decentralised Architecture of Governance in South Africa	68
3.3	Conceptualising Sanitation Delivery within the Decentralised Governance Framework	70
3.3.1	Challenges with Operationalising Decentralised Governance in South Africa	71
3.4	Inter-governmental Relations and Co-operative Governance	72
3.5	Sanitation Delivery in South Africa	73
3.5.1	An Inclusive Policy Approach for Sustainable Development.....	75
3.5.2	Historical, Legal and Policy framework of Sanitation Provision in South Africa	75
3.5.3	Sanitation Policy and Co-operative Governance.....	79
3.5.4	Water Services Sector-Wide Approach	80
3.5.5	‘Decentralisation’ Transfer Policy (2003)	83
3.5.6	Co-operative Multistakeholder Sanitation Governance.....	84
3.5.7	Inter-governmental Roles and Responsibilities in Sanitation Delivery	85
3.5.8	Participation and Decision-Making	89
3.5.9	Stakeholder Participation in Sanitation Delivery	92
3.5.10	Local Governance and Partnerships in Service Delivery	94

3.6	Water Service Legislation, Policy and Principles (Water, Sanitation, Waste Water Management).....	95
3.6.1	The Relationship between Sanitation Policies	99
3.6.2	Local Government Legislation and Policy guiding Sanitation Delivery	103
3.6.3	Principles of the Sanitation Policy in South Africa	104
3.6.4	Choices of Basic Level of Sanitation Technologies for Environmental, Social and Health Benefit	109
3.7	Insights and Critique of the Sanitation Policy Implementation in South Africa	111
3.7.1	Praises and Pitfalls: Sanitation Policy in South Africa.....	111
3.7.2	Sanitation Policy Implementation Challenges	112
3.7.3	Does Good Policy equal Good Implementation?	114
3.7.4	Need for Pro-Poor Sanitation Policies	115
3.8	Discordant Definitions of Sanitation	116
3.9	Lack of Geo-spatial Planning for Sanitation in the National Sanitation Policy..	120
3.10	EThekweni Municipality puts a Price to “Free Basic Sanitation”	122
3.11	‘Stepping up the Sanitation Ladder’	122
3.12	Neglect of Womens’ Issues in Sanitaiton	123
3.13	Economic Potential of Sanitation for Local Communities (Job Creation)	124
3.14	Impact of Policy Gap on the Indigent.....	125
3.15	Will the ‘Poor’ Person Ever Own his/her Own Toilet?	127
3.16	Too much focus on “Hardware” and too little on “Software”	127
3.17	Weak Guidelines and Enforcements for People with Disabilities (PWDs)	128
3.18	‘Kicking the bucket’ and Dealing with the Consequences	128
3.19	‘One size does not fit all’	129
3.20	The Sludge Revolution	130
3.21	Lack of Appropriate Skills	132
3.22	Political Sludge Slinging.....	133
3.23	Makhaza Vs Maqhaka ‘Open’ Toilet Battles	134
3.24	Conclusion.....	136
Chapter Four: Research Design and Methodology		137
4.1	Introduction to Research Design and Methodology	137
4.1.1	Value of Social Science Research	137

4.1.2	Interpretative Qualitative Research	137
4.1.3	Relevance of the Case Study Protocol for this Study	138
4.1.4	Role of the Researcher	140
4.1.5	Aims and Objectives of the Study	145
4.2	Background to Study Area	146
4.2.1	Inanda: Historical, Socio-economic Context	146
4.2.2	Historical Background and Location of Inanda.....	150
4.2.3	Developmental Context of the Study Area	152
4.2.4	Profiling Inanda (Statistics South Africa, Census, 2001)	155
4.3	A Multi-Method Approach.....	160
4.4	Questionnaire Development and Design.....	167
4.4.1	Respondent Population and Questionnaire Administration	168
4.5	Fieldwork Schedule	172
4.6	Secondary Data Sources.....	177
4.7	Data Analysis and Presentation	177
4.7.1	Methods of Data Analysis and Writing of Research Report.....	179
4.8	Validity, Reliability and Credibility	180
4.9	Research Ethical Considerations	181
4.10	Challenges and Limitations of the Study	182
4.11	Conclusion.....	186
Chapter Five: Sanitation Governance.....		188
5.1	Introduction	188
5.2	Sanitation Governance in Inanda.....	189
5.2.1	Network of Institutions in Sanitation Governance: Roles and Responsibilities .	192
5.3	Inter-governmental Relations: Sanitation Governance	195
5.3.1	Inter-governmental Synergy and Collaboration	196
5.3.2	Aligning Departmental Resources for Effective Sanitation Delivery	197
5.3.3	Harnessing Collective Financial Resources for Sanitation Provision	198
5.3.4	Mobilising Resources for Operations and Maintenance	199
5.4	Effective Co-operative Governance Through Co-ordination and Integration	201
5.4.1	Co-ordinating Departmental Activities Prevents Wastage of Resources	201
5.4.2	Working Towards a Common Goal.....	202

5.4.3	Joint Planning and Alignment of Implementation Plans	203
5.4.4	Reporting and Inter-departmental Communication	203
5.4.5	Addressing Bottlenecks in Sanitation Delivery and Mitigation Measures	204
5.4.6	Meeting the Millennium Development Goals (MDG)	204
5.5	Clear Definition of Roles for Effective Sanitation Governance.....	205
5.5.1	Lack of Supply-Side Demand	207
5.5.2	Contentious Land Tenure Issues Hampers Sanitation Delivery.....	208
5.6	Experiences of the Multi-tier and Multi-departmental Approach to Sanitation Delivery.....	209
5.6.1	Opening Lines of Communication between Government Departments.....	211
5.6.2	Poor Communication: The Absence of ‘One Goal’	212
5.6.3	Power Struggles and Disjuncture in Institutional Governance	214
5.7	Merging Traditional Governance with Municipal Governance	215
5.8	Job Creation and Empowerment through Sanitation Partnerships	216
5.9	Communal Ablution Blocks in Informal Settlements.....	218
5.9.1	Speedy Solutions for Sustainable Community Communal Facilities.....	221
5.10	Investment in Provision of Basic Services or Private Sector Profiteering.....	222
5.11	Impact of Area Based Management (ABM)/Urban Renewal Programme (URP).....	227
5.12	Exceeding Recognised Best Practice: Sanitation as a Learning Area	228
5.13	UDD Sanitation Implementation Process: Education, Training and Waste Management	230
5.13.1	EThekweni Municipality’s Sanitation ‘Best Practice’	230
5.13.2	Sanitation Hygiene Education: How good is ‘Best Practice’?	230
5.13.3	Lack of Integrated Sector Support Hampers Progress.....	233
5.13.4	Political Interference: Local Councillors’ Influence on Community Mindsets ..	234
5.14	Comparing ‘old’ and ‘new’ Sanitation Intervention.....	235
5.14.1	Ecological Integrity and Environmental Impact of the VIP and UDD Technologies	237
5.14.2	Economic benefits of the VIP as compared to the UDD Technology	237
5.14.3	Biological Safety of Communities Exposure to Faeces when Evacuating UDD Chambers.....	239

5.15	Conclusion.....	241
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Chapter Six: Community Experiences and Perceptions of Sanitation Delivery in

Inanda.....	243
6.1	Introduction..... 243
6.2	Socio-Demographic Profile of Respondents in Inanda..... 243
6.2.1	Age of Respondents..... 243
6.2.2	Gender of Respondents..... 245
6.2.3	Educational Qualification of Respondents..... 247
6.2.4	Monthly Incomes of Respondents..... 248
6.3	Occupancy and Types of Dwellings..... 249
6.3.1	Types of Dwellings Occupied by Respondents in Inanda..... 250
6.3.2	Duration of Stay per Dwelling Type..... 251
6.3.3	Number of Occupants per Household in peri-urban and rural areas..... 253
6.3.4	Annual Property Rates Paid by respondents per annum (in Rands)..... 254
6.4	Sanitation Delivery in Inanda..... 255
6.4.1	Type of Sanitation Provision in peri-urban and rural areas..... 261
6.4.2	Maintenance of ventilated improved Pits (VIP)..... 263
6.5	Level of Satisfaction with Sanitation Provision..... 267
6.5.1	Satisfaction Levels in Peri-Urban Areas..... 269
6.5.2	Satisfaction Levels in Rural Areas..... 273
6.5.3	Dissatisfaction with Communal Sanitation Facilities provided by the Municipality..... 275
6.6	Provision of Urine Diversion and Dehydration (UDD) Sanitation Technology . 277
6.6.1	Urine Diversion and Dehydration (UDD) Type of Facility “a nightmare to users”..... 277
6.6.2	Experiences of Rural Communities Regarding the Use and Maintenance of the UDD Toilets..... 278
6.6.3	Vector Control and Disease..... 285
6.7	“Moving up the Ladder”..... 286
6.8	Community Perceptions of the Quality of Sanitation Service since 1994..... 287
6.9	Weak Monitoring of Sanitation Delivery..... 290
6.10	Vulnerability of Women, Children and Aged..... 291

6.11	Sanitation Hygiene Education and Practices: The “Hidden Scandal”	294
6.11.1	Sanitation Hygiene Education and Practices in Inanda	295
6.11.2	Hygiene Practices: Use of Soap and Water.....	298
6.11.3	Use of Water only after using the Toilet.....	299
6.12	Knowledge and Practices regarding Water Purification.....	299
6.13	Communities’ Knowledge of Diseases.....	301
6.14	Water Service Delivery.....	302
6.14.1	Respondents’ Sources of Water.....	303
6.14.2	Presence of Water Meters in Respondents’ Premises.....	304
6.14.3	Satisfaction with Water Supply: Peri-urban and Rural.....	305
6.14.4	Inconsistent Water Supply in Peri-urban and Rural areas	307
6.14.5	Affordability of Water	309
6.15	Participation in Basic Service Delivery in Inanda.....	311
6.15.1	Community Organisation Involvement in the Delivery of Water and Sanitation Services	312
6.15.2	Rights to Representative Democracy Denied.....	313
6.15.3	Community Participation through Ward Committees	314
6.15.4	Engagement in Empowerment Programmes through Constructing Toilets.....	316
6.15.5	Exclusion from Participation due to being Poor.....	317
6.15.6	Communities’ Experiences and Suggestions for Improving Participating in Service Delivery	319
6.15.7	Level of Support from Ward Councillors	319
6.15.8	Communities’ Reaction to Lack of Representation from Councillors	320
6.16	Conclusion.....	320
Chapter Seven: Conclusion, Evaluation and Recommendations		322
7.1	Introduction	322
7.2	Critical Evaluation of Key Findings	323
7.2.1	Governance as a Conceptual Edifice for Sanitation Delivery.....	325
7.2.2	The Role of the Private Sector in Sanitation Delivery.....	333
7.2.3	The Role of Communities in Sanitation Delivery in Inanda.....	335
7.3	Community Perceptions and Experiences with Sanitation in Inanda.....	338

7.3.1	Experiences and Perceptions of Sanitation Delivery of those living in Peri-urban Inanda.....	338
7.3.2	Sanitation Hygiene Education and Practices in Inanda	348
7.5	Recommendations of the study	349
7.6	Further Research.....	357
7.7	Conclusion.....	357
REFERENCES		359
Appendix A.....		393
Appendix B.....		399
Appendix C.....		410
Appendix D.....		412
Appendix E.....		413

LIST OF FIGURES

Figure 2.1: Theoretical Conceptions of Governance.....	20
Figure 2.2: Frameworks of Governance Typologies.....	34
Figure 2.3: Conceptualising Network Governance: A Multi-Actor Governance System.....	36
Figure 2.4: APPS Integrated Market-Related Partnership-Driven Model.....	59
Figure 2.5: Integrated Sanitation Package.....	60
Figure 3.1: Decentralised Governance Model in South Africa.....	69
Figure 3.2: Conceptual Map of Governance and Sanitation Delivery.....	71
Figure 3.3: Water Services Sector-Wide Approach: “Let’s Work Together”.....	81
Figure 3.5: Mapping Stakeholder Relationships in Sanitation Governance.....	93
Figure 3.6: The Relationship between Sanitation Policies.....	100
Figure 4.1: Location of Inanda.....	143
Figure 4.2: Dwelling types in the Inanda, Ntuzuma and KwaMashu townships.....	147
Figure 4.3: Map of eThekweni Municipal Area: Sanitation Waterborne Edge.....	149
Figure 4.4: Map of South Africa Depicting Urban Renewal Nodes.....	154
Figure 4.5: Cohort Mapping: Multi-Method Approach.....	161
Figure 4.6: Inanda and Surrounding Townships Ward Locations.....	172
Figure 4.7: Dominant Themes Emerging from Data Analysis.....	178
Figure 5.1: Roles and Responsibility of Inter-departmental Sanitation Governance Respondents.....	190
Figure 5.2: Inter-governmental Co-operation, Co-ordination and Integration in Sanitation Delivery.....	196
Figure 5.3: Officials’ Perceptions and Experiences with the Delivery of Sanitation Services.....	201
Figure 6.1: Age of Respondents per Area Type.....	244
Figure 6.2: Gender of Respondents.....	245
Figure 6.3: Monthly Income of Respondents in Rand(s).....	248
Figure 6.4: Dwelling Types in Peri-urban and Rural Areas.....	251
Figure 6.5: Number of People Living in a Household.....	253
Figure 6.6: Type of Sanitation Facility present in the Peri-urban and Rural Areas.....	261
Figure 6.7: Frequency of Pit Evacuation per Area Type.....	266

Figure 6.8: Levels of Satisfaction with various Types of Sanitation Facilities per Ward.....	268
Figure 6.9: Reasons for Dissatisfaction with Sanitation Facilities.....	274
Figure 6.10: Perceptions of the Quality of Sanitation Service since 1994.....	287
Figure 6.11: Communities' Suggestions of Actions for Improved Sanitation Services	289
Figure 6.12: Communities' Knowledge and Water Purification Practices	300
Figure 6.13: Sources of Water for Peri-urban and Rural Communities.....	303
Figure 6.14: Reasons for Dissatisfaction with Water Services	306
Figure 6.15: Community Perceptions of Challenges with Water Delivery	310
Figure 6.16: Respondents' Involvement in Water and Sanitation Installation.....	316
Figure 7.1: The 'Sanitation Wheel'	355

LIST OF TABLES

Table 2.1: Pros and Cons of Decentralised Local Governance	44
Table 3.1: Toolbox of Sanitation Technologies.....	109
Table 4.1: Study Area Ward Profiles and Description (Adapted from Statistics South Africa, Census: 2001).....	157
Table 4.2: Schedule of Interviews.....	173
Table 4.3: Focus Group Discussions.....	175
Table 4.4: Surveys Undertaken.....	175
Table 4.5: Conferences, Workshops and Meetings Attended.....	176
Table 5.1: Sanitation Hygiene Education Programme	231
Table 5.2: Preliminary Evaluation and Comparison of the Alternative Sanitation Systems Installed in Peri-urban/Rural Areas in the eThekweni Municipality	238
Table 6.1: Educational Qualification of Respondents.....	247
Table 6.2: Type of Dwelling Occupied by Respondents in Inanda	250
Table 6.3: Respondent's Duration of Stay per Dwelling Type.....	252
Table 6.4: Annual Property Rates Paid Per Household.....	254
Table 6.5: Type of Facility and Satisfaction Level per Ward.....	268
Table 6.6: Information Dissemination on Sanitation Hygiene Practices	297
Table 6.7: Satisfaction with Water Supply: Peri-urban and Rural Areas.....	305
Table 6.8: Respondents' Experience/Opinion of Turn-around Time for Repairs of Leakages	308
Table 6.9: Respondents' Affordability of Water Supply.....	309

LIST OF PLATES

Plate 4.1: Focus Group Discussion at Peri-urban Besters Settlement (Ward 54) in Inanda.....	165
Plate 4.2: Focus Group Discussion at rural Mphaphetheni (KwaGwala, Ward 3).....	167
Plate 5.1: UDD Toilet in Rural Inanda.....	235
Plate 6.1: Poor Positioning of Toilet Facilities Too Close to Dwellings	270
Plate 6.2: Twin vault UDD Vault Latrines	278
Plate 6.3: Rural Toilets Constructed Too Far from House	280
Plate 6.4: Use of UDD Toilets as a Storeroom	285

ACRONYMS AND ABBREVIATIONS

ABM	Area Based Management
ADB	Asian Development Bank
AFD	Agence Française de Développement
AMCOW	African Ministers' Council on Water
ANC	African National Congress
APPS	Alternative Pro-poor Sanitation Solutions
AWF	African Water Facility
AWW	African Water Week
BoTT	Build, Operate, Train, Transfer
CBD	Central Business District
CBO	Community Based Organisation
CDW	Community Development Workers
CLO	Community Liaison Officers
CLTS	Community Lead Total Sanitation
CMIP	Consolidated Municipal Infrastructure Program
CoGTA	Department of Cooperative Governance and Traditional Affairs
CRSP	Central Rural Sanitation Programme
CSIR	Centre for Science and Industrial Research
DA	Democratic Alliance
DEA	Department of Environmental Affairs
DEAT	Department of Environmental Affairs and Tourism
DHS	Department of Human Settlements
DOE	Department of Education
DPLG	Department of Provincial and Local Government
DSD	Department of Social Development
DWA	Department of Water Affairs
EAWAG	Swiss Federal Institute of Aquatic Science and Technology
EC	European Commission
EHD	eThekwini Housing Department
EMA	eThekwini Municipal Area

EPWP	Expanded Public Works Programme
EU	European Union
EWS	eThekwini Water Services
FBS	Free Basic Services
GDP	Gross Domestic Product
GEAR	Growth, Employment and Reconstruction
GIS	Geographic Information Systems
GLAAS	Global Annual Assessment of Sanitation and Drinking-Water
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
HSRC	Human Science Research Council
IDA	International Development Association, World Bank
IDP	Integrated Development Plan
RSA	Republic of South Africa
HDR	Human Development Report
IDT	Independent Development Trust
INK	Inanda, Ntuzuma and KwaMashu
IRC	International Water and Sanitation Centre
ISD	Institutional Social Development
ISRDP	Integrated Sustainable Rural Development Programme
IWA	International Water Alliance
IWA WOP	International Water Agency
IWRM	Integrated Water Resource Management
IYS	International Year of Sanitation (2008)
JGTF	Joint Government Technical Forum
JMP	Joint Monitoring Programme for Water Supply and Sanitation
MDG	Millennium Development Goal
MFMA	Municipal Finance Management Act
MIG	Municipal Infrastructure Grant
MILE	Municipal Institute of Learning
NGO	Non Governmental Organisation
NSTT	National Sanitation Task Team

PFMA	Public Finance Management Act
PIU	Project Implementation Unit
PMU	Project Management Unit
PPP	Public Private Partnerships
PSTT	Provincial Sanitation Task Teams
PWD	People With Disability
RDP	Reconstruction and Development Programme
RHIG	Rural Household Infrastructure Grant
SADC	Southern African Development Community
SAHRC	South African Human Rights Commission
SAIIA	South African Institute of International Affairs
SALGA	South African Local Government Association
SCOWSAS	Standing Committee on Water Supply and Sanitation
SETA	Sector Education Training Authority
UDD	Urine Diversion and Dehydration
UDS	Urban Development Strategy
UN-(HABITAT)	United Nations Human Settlements Programme
UN Water	United Nations Water
UN	United Nations
UNAIDS	United Nations Joint Programme on AIDS/Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UNSGAB	United Nations Secretary-General's Advisory Board on Water and Sanitation
URP	Urban Renewal Programme (SA)
USA	United States of America
USAID	United States Agency for International Development
USDG	Urban Settlements Development Grant
VIP	Ventilated Improved Pit
WASH	Water and Sanitation Hygiene

WATSAN	Water and Sanitation Network
WHO	World Health Organization
WISA	Water Institute of Southern Africa
WISA-WOP	Water Institute of Southern Africa -Water Operators Partnership
WPLG	White Paper on Local Government
WPWS&SP	White Paper on Water Supply and Sanitation Policy
WRC	Water Research Commission
WSA	Water Services Authority
WSD	Water and Sanitation Department
WSP	Water Services Plan or Policy
WSP	Water Services Provider
WWAP	World Water Assessment Programme (UN)

CHAPTER ONE: INTRODUCTION

1.1 INTRODUCTION

Failure to provide dignified sanitation access in South Africa is no secret. The sanitation ‘epidemic’ had topped the list during service delivery protests and forced President Zuma to name sanitation provision as his highest priority (Mpofu, 2012). Citizens, politicians as well as civic activists have exposed government’s inability to provide safe and dignified sanitation to all, especially the poor. Although government reports success with exceeding the Millennium Development Goal target of halving the population living without access to sanitation by 2015, its ability to eliminate backlogs has failed and its ambitious target of universal access to basic sanitation by 2010, remains unachieved (CoGTA, 2009; Tissington, 2011; DWA, 2012). Weak institutional governance, poor infrastructure planning, lack of clear policy and strategy for sustainability and limited financial resources for sanitation services compromises the dignity, health and quality of life of poor communities. People in South Africa are dissatisfied with government’s delivery of sanitation facilities. They resort to open defecation, utilise unenclosed toilets, and are forced to physically remove faecal matter from their overflowing toilet pits, exposing themselves to faecal contamination and disease due to dysfunctional toilet facilities (Rawoot, 2011; DWA, 2012; Mpofu, 2012).

However, the sanitation crisis is not unique to South Africa. Managing human waste is a worldwide crisis which calls for an urgent response by all countries for improved world health and quality of life (Asian Development Bank, 2009; United Nations, 2010; UNICEF and WHO, 2012). Approximately 2.6 billion (40%) of the world’s population still do not have access to a toilet (UN Water, 2008; Cheng *et al.*, 2012). Open defecation is still a common practice worldwide, exposing communities to faecally contaminated environments. Fifteen percent of the world’s population still practice open defecation; 105 million (3% of the population) urban dwellers (UNICEF and WHO, 2012: 23) and estimates of between 11 to 25% of Sub Saharan Africa’s rural population, still defecate in the open (UNICEF and WHO, 2012: 15). People living without sanitation or with inadequate sanitation resort to open defecation and are exposed to unsanitary conditions, increasing health risks, infant fatality, and environmental degradation (WHO, 2004). Furthermore, a sick and unproductive workforce impacts negatively on the economy as productivity dips and often, ailing

employees become a social burden (UNDP, 2008). The tragic death of children due to lack of access to sanitation is alarming and preventable. Shockingly, five thousand children die daily from diarrhoeal disease (UN Water, 2008: 2). Many of the deaths and diseases are caused by unhygienic sanitation practices. Indiscriminate defecation is still the cause of faecal to orally transmitted diseases (United Nations, 2010), as “one gram of faeces can contain 10 million viruses, one million bacteria, one thousand parasite cysts and 100 worm eggs” (UN Water, 2008: 14).

Generally, sanitation has been associated with notions of “dirt, shame and waste” and rarely spoken about until world leaders broke the silence when they realised that improved sanitation is a critical human development factor (Van Vliet *et al.*, 2011: 799). Despite concerted efforts through the global "International Drinking Water and Sanitation Decade" from 1981-1990, the sanitation crises remained unresolved. Increased focus on sustainable development was then launched in the year 2000 through the Millennium Development Goals (MDG) framework.

The MDG pledge for global action was an attempt to improve living conditions and quality of life of the world’s population. The MDG goal 11 identifies sanitation access as one of its key indicators for improved living conditions of slum dwellers throughout the world (United Nations, 2009: 45). The MDG sanitation target is to “halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation” (United Nations, 2009: 45). However, at the current rate of progress, the world will miss the target of halving the proportion of people without access to basic sanitation (Bhagwan *et al.*, 2008; Ako *et al.*, 2010). Unless the pace of delivering improved sanitation catapults, only 67% coverage will be achieved by 2015. Indeed, the MDG targets may not even be achieved by 2026. Asia and Sub Saharan Africa record the greatest lag. The slow progress of sanitation delivery is now endemic in many developing countries, and those without access will increase to 2.7 billion by 2015 (United Nations, 2010: 61).

If the sanitation crisis persists, the poorest people in developing countries will be most affected, as the growth of cities through rampant urbanisation inevitably increases the number of poor living in cities (Cities Alliance Annual Report, 2007; United Nations, 2010). The

population of cities in developing countries is expected to continue growing from “2 billion to 4 billion people by 2030...with slums growing by 120 000 people each day” (Cities Alliance Annual Report, 2007: 3). Rapid and haphazard growth patterns, mushrooming settlements, both planned and unplanned, create enormous demands, exacerbating the slow delivery of sanitation (Collignon & Vezina, 2000; UN Habitat, 2003).

Africa, Asia, Latin America and the Caribbean have half of their populations now living in illegal or informal settlements. According to the United Nations, almost 62% of the population of Sub Saharan Africa live in urban slums (UN Habitat, 2003). Conventional basic service delivery systems fail to meet the needs of the urban poor. The slow pace of sanitation delivery has been attributed to weakness in sanitation governance (Ako *et al.*, 2010). According to the United Nations, the sanitation crisis is compounded when inadequacies in local government deny citizens their right to adequate water and sanitation needs. Limitations such as institutional weakness, poor governance arrangements, high cost of repairing ailing infrastructure and building new ones, eradication of backlogs and limited financial capacity, are cited as reasons (UN Habitat, 2003).

The sanitation problem has also been attributed to weak or non-existent sanitation policy (AfricaSan3 Conference Statement, 2011), and the lack of systematic planning architecture for the devolution of responsibilities for sanitation programme delivery. In some countries, expeditious and adequate sanitation delivery was blighted by policies which were imposed on developing countries due to their reliance on overseas development aid (Folifac, 2007). However, despite financial support, countries could not translate policy into action because of a lack of capacity (Djemetio, 2009; Muller, 2010). The most common shortcoming was the poor interpretation of policy by implementers. In many cases, local pilot programmes were unable to scale-up to regional or national level (AfricaSan3 Conference Statement, 2011). Most countries placed emphasis on water policy or merged both these sectors, to the detriment and neglect of sanitation (Allen & Hofmann, 2008; George, 2009). Lack of political will and resource investment also exacerbated the sanitation crisis (Mjoli, 2010). Bradford (2004) asserts that many countries do not place sanitation high on their human development agenda, resulting in under-investment in sanitation and over-investment in water. Finding a total

sanitation solution is a constant dilemma facing developing countries, and the South African experience has been no different.

1.2 SILENT SANITATION CHALLENGE IN SOUTH AFRICA

Since the advent of democracy in South Africa, local government has assumed a developmental role. According to the White Paper on Local Government in South Africa, municipal councils are the structures responsible for the administration, provision, and maintenance of basic municipal services (Department of Provincial Affairs and Constitutional Development, 1998; Stephen, 2003). The post-apartheid government has embarked on a number of developmental efforts prioritising the provision of basic services (Bhagwan *et al.*, 2008). However, eradicating the apartheid backlog in services as well as infrastructure development has posed a great challenge to local government (Stephen, 2003; CoGTA, 2009).

South Africa has been lauded for giving substance to a rights-based approach to basic services. The provision of water and sanitation together with other basic services is a Constitutional right. Access to sanitation is a basic need that restores human dignity as well as improves living conditions for the millions of previously disenfranchised communities. The delivery of sanitation services to previously unserved citizens pre-democracy, began in earnest when the National Department of Water Affairs (DWA) was tasked with reversing the apartheid segregationist policy approach. Sanitation was identified as one of the key priorities gaining strong policy impetus since 1994. Through strong political support for devolution from national to local government, sanitation delivery received greater focus through the Integrated Development Plans (IDP) and subsequent Water Services Plan of local authorities. Progress in the transitioning of sanitation services to local government brought new hope for free basic level of sanitation services. However, having integrated plans, new tariff structures and a strong private sector capacity did not necessarily guarantee implementation success and sustainability, which was only demonstrable with time (Muller, 2002).

The rapid growth of cities following the genesis of democracy posed new challenges for development planners throughout South Africa. Following the Municipal Demarcation Act (Act 27 of 1998), extended municipal boundaries together with increased population in urban centres and peripheries further expanded the demand for basic services (RSA, 1998b). According to the Human Development Report (HDR) 2003, South Africa is challenged with achieving its sustainable development objectives of economic growth, environmental efficiency and the delivery of proper sanitation, water, energy, and waste removal services to rural and urban settlements (Adelzadeh, 2003).

In his Budget Speech on 10 May 2002, Minister of Water Affairs and Forestry, Ronnie Kasrils, stated that the cholera outbreak in KwaZulu-Natal in 2000-01 signalled a need for accelerating the provision of water, sanitation and hygiene awareness. The outbreak further indicated that not enough has been done to deliver sanitation and promote hygiene and healthy living. He emphasised that the cholera crisis was avoidable (Kastrils, 2002).

According to Statistics South Africa's Census survey in 2001, out of a total population of 44.8 million South Africans, 11% had no access to safe water supply and a further 6.5 million (15%) did not have defined, basic service levels. About 18.1 million people (41%) did not have adequate sanitation services. A further estimated 15% of clinics and 11.7% of schools in South Africa are without sanitation (DWAF, 2003: iii). The preliminary Census 2011 reflects a marginal improvement in sanitation services, however 5.2% of a population of 51.7 million South Africans still live without sanitation (Statistics South Africa, 2011: 14). Local government is the sphere mandated to provide basic services to all constituents with specific emphasis on the poor (CoGTA, 2009: 7). However, local government is challenged with meeting its developmental mandate and a number of people still remain trapped in poverty and living without basic services. The 2009 Report on the State of Local Government highlighted that, of the 283 municipalities:

... there are only 36 municipalities country-wide that do not have a sanitation backlog. There are 1,069,152 out of 12,996,300 households that are receiving below a basic level of service which constitutes a water backlog. This includes households receiving

piped water further than 200m, springs, rain, water tanks, dam/pool/stagnant water and water vendors (CoGTA, 2009: 59).

Although steady progress in sanitation provision has been recorded by the Department of Water Affairs and Forestry (DWA), the delivery rate has to be accelerated if South Africa has to meet the MDG targets (MDG Mid Term Country Report – South Africa, 2007: 44). The Fifteen Year Review stated that the target of eradicating the bucket system in most poor areas in 2007 has been missed (CoGTA, 2009: 21-22). There were several implementation challenges associated with the delivery of water and sanitation services. Policy change from the people-centred Reconstruction and Development Programme (RDP) to the neoliberal Growth, Employment and Reconstruction (GEAR) strategy in South Africa placed greater emphasis on cost recovery rather than basic service provision to the previously disadvantaged (Bond, 1999). This raised questions about government priorities. Furthermore, economic viability and environmental sustainability have both become concerns facing regulators and water authorities.

The sanitation problem in South Africa is undeniably critical and multi-dimensional, but not unique or different from the rest of the world (Bhagwan *et al.*, 2008). The lack of access to adequate sanitation resulted from historical apartheid neglect as well as political, administrative and social inequities (Mjoli, 2010). A number of governance constraints plague the efficient delivery of services by municipalities. Sanitation in South Africa is supply-driven (Bhagwan *et al.*, 2008; Muller, 2002; Muller, 2010). The provision of sustainable sanitation solutions is marred by the incapacity and a shortage of technical and professional skills which translates to weak ‘supply side’ responsiveness of the local government apparatus (Muller, 2010). Wall *et al.* (2006) found that whilst concerted effort was made by government since 1994 to extend basic services to unserved areas countrywide, these efforts fell into crisis as they were not matched with a maintenance, operation or rehabilitation plan.

In addition, the huge backlog caused by the neglect and disenfranchisement of the majority of the population during the apartheid era, placed pressure on all government departments who have a role in sanitation provision to work in a co-ordinated manner to effectively and efficiently meet the increased demands (DWA, 1994). Mjoli (2010) stated that the lack of

cooperative governance was evident as most municipalities were guided by national policies and legislation which are general and not pertinent to their context. Furthermore, they lacked support from national and provincial governments and were therefore unable to provide an improved higher level of service. Weakness in policy implementation, and the incapacity to spend allocated budgets, weak strategies to sustain community (water) projects are among the reasons for the failure of government to deliver promised services to the poverty stricken (Louw, 2003).

According to Mjoli (2010), the urgent need to address the different dimensions contributing to the sanitation crisis was embarked on through a number of projects countrywide. However, the goal of equitable, adequate and sustainable sanitation for all citizens has not been achieved. An evaluation of sanitation projects in South Africa revealed a plethora of weaknesses. Mjoli (2010: 68-69) notes that 28% of national sanitation projects between 1994 and 2003 were not sustainable. One of the key weaknesses in sanitation governance was that most municipalities relied on national legislation and policies. Municipalities were slow in developing their own policy guidelines (Muller, 2002). The absence of context specific policies which were imperative to prevent systemic failure, as no single sanitation system was efficient for different geo-spatial locations, was glaring. Only 48% of the municipalities countrywide developed their own sanitation by-laws (Still *et al.*, 2009). The lack of institutional capacity to manage communities' needs and eradicate backlogs was due to inadequate technical skills to implement large projects (Mjoli, 2010).

Whilst deliberate efforts were made by government to extend services through national and community level programmes, they were unable to create effective systems to respond to household level sanitation (Muller, 2002). Consequently, government's attempts to meet sanitation needs speedily resulted in haphazard choices of sanitation technology. There was lack of proper planning and coordination, duplication and misuse of scarce resources and poor operations and maintenance strategies for sanitation provided to poor communities (Ross-Jordan, 2006; Van Vuuren, 2008; Bhagwan *et al.*, 2008).

Inadequate capacity to manage and operate sanitation infrastructure resulted in 73% of the municipalities providing reactive maintenance services (Mjoli, 2010: 68-69). Mjoli (2010: 68)

asserted that 78% of municipalities have no operations and maintenance plans for VIP toilets which were the primary type of facilities provided to unserved areas post 1994. Still *et al.* (2009) stated that the absence of maintenance plans for the VIP toilets provided by government were disastrous, toilets were full and collapsed after approximately 5 years of operation.

The inability to manage human excreta created severe health risks and unresolved sanitation crisis (Ross-Jordan, 2006; Bhagwan *et al.*, 2008; Van Vuuren, 2008). Local authorities lacked the competency to meet sanitation demands. Communities complained of poor communication resulting in insufficient sanitation education. Communities did not take ownership of sanitation initiatives, displaying low confidence in the local authorities due to their lack of accountability and capacity to deliver competent services (Ross-Jordan, 2006). Failure to include communities in sanitation planning resulted in a poor success rate of rapid delivery endeavours (Roma *et al.*, 2010).

The State of Local Government Report of 2009 reiterated that local governance functionality and sustainability was distressed with negative impact on basic services such as water, housing and sanitation (CoGTA, 2009). The South African Municipal Systems Act (Act 32 of 2000) promotes participatory governance, where local communities have a right to contribute to decision-making processes regarding municipal services. However, a country-wide study indicated that there was inadequate community participation in sanitation planning and implementation, sanitation hygiene education dissemination, including lack of participation in decision-making pertaining to the choice of facility (Still *et al.*, 2009; Mjoli, 2010). Lack of community partnership and participation resulted in dissatisfaction with the type of facility provided, and limited knowledge on the operations and utilisation of facilities led to systemic failure. Communities rejected technologies where they were required to maintain a facility entailing contact with faeces and the recycling of such waste for reuse. Poor quality of VIP top structures and sub-standard material for flushing toilets exacerbated community dissatisfaction with sanitation provision (Mjoli, 2010). These findings were also evident within the eThekweni Municipal Area which was also faced with a plethora of sanitation access and programme implementation challenges (Duncker *et al.*, 2006; Buckley *et al.*, 2007; Foxon *et al.*, 2007; Flores *et al.*, 2008; Still *et al.*, 2009). This study therefore sought to

investigates the real experiences of people living in Inanda to ascertain their level of satisfaction, participation and input in decision-making relating to sanitation provision, and acceptance and usage of facilities provided to them.

1.3 THEORETICAL UNDERPINNINGS

The study draws on international modalities of governance exploring the applicability of regulation theory and theories of governance as a conceptual edifice. The state reorganises to accommodate new modes of governing. Political geographers understand the reorganisation of the state through the regulation theory, where adaptive governance through networks is viewed as a balance between “regimes of accumulation” required for macroeconomic stability and “modes of social regulation” in regulatory systems (Tickell and Peck, 1992: 197). Brenner (2004) highlights that regulatory systems function within a context of diverse socio-cultural and historical contexts. He contends that regulatory systems of governing should also respond to the market systems at national and supra-national scales (Brenner, 2004). In so doing, regulation theory advocates that the mode of social regulation then obviates hegemonic national and supra-national influence on regulatory systems, promoting a more adaptive, flexible and societal focussed mode of governing (Tickell and Peck, 1992).

According to Burchell *et al.* (1991), Foucault refers to government’s art of applying regulation or control as “governmentality”, where the art of exercising power in accordance with the economy of the country and of the people, lies within the competency of the state. Governmentality is therefore internal and external, since it is the tactic of government that decides what is within state competency and what is not, thereby redefining what is public versus what is private. The role of government is to ensure that the greatest possible quantity of wealth is produced where the public benefits through the effective disposal or distribution of public resources (Burchell *et al.*, 1991). This study explores the approaches to governing and managing public resources. It draws on the formations of institutional governance in understanding how tactics are deployed through state regulation and reorganisation. Foucault’s theory of governmentality alerts that government’s art of governing at different scales is ‘janus faced’ to achieve its own objectives through imposing the law on those it governs and by developing tactics as its desired outcomes (Foucault, 1991).

The term 'regulation' may be applied from different perspectives. In service delivery 'regulation' could be applied in the economic, social, environmental dimensions (Tickell & Peck, 1992; Brenner, 2004; Muller, 2010). According to Muller (2010), the South African institutional governance context 'regulation' of service delivery may be applied in a much simpler and broader way, referring to the broader role of government. He draws on the World Bank's perspective on government's role in regulation where "governments can simply use the power of the law to instruct providers to do certain things and can enforce those instructions through penalties and other forms of compulsions" (Muller, 2010: 11). However, Muller (2010) argues that this definition was insufficient to fully understand government's role in regulating service provision. He conceives of two approaches of government intervention. Government's role in regulating service delivery may be formal and statutory or it may be more flexible. According to Muller (2010), a more flexible and adaptive approach allows government to expand its partners through establishing networks to achieve its goals. This approach could potentially improve institutional performance, and dispel assumptions that government's aim in regulation is to exercise full control over the distribution of public resources. Rigid regulation constrains institutions resulting in sub-optimal performance (Muller, 2010). Muller's (2010) arguments draws on the theory of regulation which espouses that new modes of governance advance a more collaborative and adaptive role of government in governing, where government is more an enabler rather than a controller (Kooiman, 2003; Hubbard *et al.*, 2002).

1.4 AIMS AND OBJECTIVES OF THE STUDY

The aim of this study is to investigate the 'trialogue' of governance, service delivery and sanitation provision in the Inanda Township within the eThekweni Municipal Area.

The study evaluates the approaches to sanitation delivery in a mix of urban, peri-urban and rural Inanda. An assessment of governance processes and their influence on how basic services such as sanitation were delivered in Inanda, is presented. A case-study of policy formulation and regulation by national government with implementation strategies and delivery at local level was embarked upon. Further insight into the role of stakeholders in

sanitation governance and the value of multi-stakeholder engagement was investigated, using the case-study approach.

The definitional emphasis of sanitation services for this study referred purely to the collection, removal and disposal of human excreta by the responsible authority or end users, which resonates in the international literature. The key focus is on how human excretions are safely managed without jeopardising the health of people and their living environment (UNICEF and WHO, 2012). Water delivery referred to the provision of potable water services to users by the mandated local authority.

The objectives of the study are to:

- i) Explore the application of governance as an organising analytical framework for sanitation delivery.
- ii) Assess policy interpretation and application regarding sanitation delivery in Inanda.
- iii) Examine the extent of community participation in sanitation delivery in Inanda.
- iv) Assess the experiences and perceptions of the residents of Inanda regarding sanitation.
- v) Identify sanitation challenges and successes in Inanda.

The following key exploratory questions present a flow of the inquiry into governance, service delivery and sanitation, aligned to the objectives of the study:

- i) What are the theoretical and conceptual debates relating to governance as an analytical framework?
- ii) What is the approach to governance in South Africa?
- iii) Are the approaches, systems and mechanisms for sanitation delivery responsive to the needs of peri-urban and rural communities in Inanda?
- iv) What are the challenges, experiences, perceptions and level of engagement of the communities in sanitation delivery in Inanda?

1.5 CHAPTER OVERVIEW

1.5.1 CHAPTER ONE: INTRODUCING THE STUDY

This chapter defines the scope of the study, presents the background, research approach, theoretical underpinning, aims, objectives and motivation for the study. It draws on the international and national dilemma facing sanitation delivery and its impact on communities living without adequate sanitation. The chapter also makes brief reference to the legislative and policy context of service delivery with specific reference to sanitation and its governance mechanisms and delivery systems, which is explained in further detail in Chapter 3. The aims and objectives of the study are defined and the research approach and methodology employed for the study are outlined.

1.5.2 CHAPTER TWO: THEORETICAL CONCEPTS AND LITERATURE REVIEW

This chapter explores the theoretical and conceptual pillars of the study. It surveys the dominant theoretical arguments, applying the logic of governance as a framework for understanding the empirical applications of the state in the regulation and distribution of resources.

Chapter Two also reviews global concerns, challenges, approaches, innovations and mitigation measures adopted by governments in addressing context specific sanitation problems. Lessons learnt from developing countries worldwide provide a framework to compare the case of sanitation governance in Inanda.

1.5.3 CHAPTER THREE: GOVERNANCE AND THE INSTITUTIONAL APPROACH TO SANITATION IN SOUTH AFRICA

Different states adopt different models of governance. In South Africa, the decentralised model of governance has been instituted, amidst a neoliberal shift. Chapter Three investigates the recalibration of the South African governance machinery in the democratic era. It explores

the approaches to governance in a decentralised system seeking to advance the social and economic ideals of the state. The state has been reorganised into national, regional and local spheres of government. The delivery of sanitation had been devolved to local government following the reorganisation of this sector in 2000. However, the regulatory function is still executed by national government (Muller, 2002).

This chapter further delves into the ontological interpretations of the key variables of the study. Cooperative and participatory governance is enshrined in the Constitution and forms the indicator to assess equitable service delivery. The focus of the research is to identify gaps and mismatches, if any, in policy formulated at national level and implementation at local level of sanitation delivery. The national and international perspectives of such arguments and approaches are assessed in order to better understand the context of the study. This chapter examines the relationship between governance, service delivery and the implications for sanitation provision. The conceptual context of governance and government in South Africa is explained with a view to mapping the policy-implementation continuum within a system of cooperative decentralised governance.

Chapter Three also discusses the modalities of sanitation services and the associated operational entities. A schematic account of national, provincial and local partners in sanitation provision is assessed. Together with delving into the local sanitation challenge, this chapter presents the South African approach to the delivery of sanitation to citizens. Particular focus is placed on history of sanitation in South Africa, legislation, policy, and institutional arrangements. The chapter also reviews the various sanitation ‘technologies’ available for differentiated contexts and communities. It further defines relevant terminologies used in this study. Chapter Three presents insights gained from a critical assessment of policy implications and government’s choices for sanitation delivery to previously disadvantaged communities like Inanda.

1.5.4 CHAPTER FOUR: RESEARCH DESIGN AND METHODOLOGY

Chapter Four presents the research design and methodology employed for the study. It details the data collection methodology utilised, together with challenges and limitations faced

during the investigation. A description of the socio-political and geographical location of the selected study area is offered.

A case-study design has been selected for the study of sanitation governance, which allows the researcher to present an in-depth account of governance processes leading to a contextual analysis in sanitation services in the Inanda area. The case-study design facilitates detailed engagement with the objectives of study. This method also allows for accentuating “a small number of cases, an openness to multiple sources of data (multi-method approach) and flexible design features that permits the researcher to adapt and make changes to the study where and when necessary” (Babbie & Mouton, 2002: 279).

This study is predominantly a qualitative assessment with quantitative methods complementing the findings. This enabled the assessment of interactions and relationships between institutions and various stakeholders involved in the delivery of sanitation services in Inanda. The qualitative analysis presents the nuanced lived experiences of communities with sanitation services in the Inanda township. Quantitative extrapolations supported the critical arguments on the socio-political, policy and legislative context of sanitation governance. Against this backdrop, a multi-method approach was adopted for the gathering of primary data. An in-depth insight into practices and processes of management and the interaction between the stakeholders involved in sanitation governance was derived, using a variety of methods, including document sources, archival records, participant observation and physical artefacts (Yin, 1984).

1.5.5 CHAPTER FIVE: SANITATION GOVERNANCE IN INANDA, DURBAN

This chapter presents the findings emanating from the analysis of the empirical study. It is an exposition of sanitation delivery in the eThekweni Municipality, focusing on the institutional approach and governance challenges within Inanda. It captures how practitioners address their sanitation delivery mandate as well as their perceptions based on tenets of cooperative governance. It also explores practitioners’ perceptions and experiences when delivering sanitation to communities in Inanda.

1.5.6 CHAPTER SIX: SANITATION EXPERIENCES IN INANDA

This chapter investigates the real-life experiences and challenges communities face with sanitation access in the study area. It also briefly explores the impact of water provision as it relates to improved sanitation and sanitation hygiene practices amongst the people of Inanda. This chapter focuses on the following themes, namely: the socio-demographic profile; sanitation delivery/non-delivery; sanitation hygiene education and practices; experiences regarding water services and service delivery in general.

1.5.7 CHAPTER SEVEN: CONCLUSION AND RECOMMENDATIONS OF THE STUDY

Chapter Eight is the sequential conclusion of the study, advancing recommendations arising from the research. It synthesises the findings of the study in relation to the governance and regulatory frameworks, illuminating mismatches and successes in policy and implementation, which impact on the efficient and effective delivery of sanitation in Inanda. Recommendations based on the empirical findings are forwarded for policy review and implementation. Suggestions for future research are also advanced.

1.6 CONCLUSION

Amongst the suite of basic services such as water, electricity, health care, etc, sanitation is given the least attention and therefore called the “Cinderella” of basic services (WRC, 2008: 8). Yet, the world over is challenged with the endemic crisis of managing human waste effectively with the least impact on personal health, the environment and the economy. The spiralling growth of unplanned settlements through population growth and migratory trends further increases the need for adequate sanitation for all. Poor communities living in unplanned settlements suffer the impact of inadequate sanitation, exacerbating their struggle for survival. This chapter presents a snapshot of the sanitation crises nationally and internationally. It outlines the theoretical lenses of governance and regulation which situates the role of the state as well as other stakeholders in the distribution of public resources. It

defines the need for the study and listed the aims and objectives. A summary of the chapter sequence for this research report is presented.

CHAPTER TWO: THEORETICAL CONCEPTS AND LITERATURE REVIEW

2.1 INTRODUCTION

New prisms of governance as a conceptual edifice have challenged the meaning and role of government in public service provision. Governance has been used to describe the order of rule, new methods of governing and the participation of the governed in the distribution of public resources. Governance as a central organising framework provides for explorations into the “logic of governance” through empirical application, dispelling the illusiveness of the single definition of governance which keep scholars debating (Robichau, 2011: 113). Scholars’ attempts at theorising governance as a framework remain a “methodological anarchy and definitional chaos” (Hubbard *et al.*, 2002: 192). Yet, in practice, there appears to be some logic or common understanding of conceptualisation along the governance spectrum, how scholars are studying it and how practitioners around the world apply governance principles (Hubbard *et al.*, 2002). Governance is a useful lens to examine the delivery of public services and understand the choices states make. Assessing the applicability of governance in service delivery remains complex, and therefore requires both old and new theories in attempts to interpret the divesting and merging of functions into a broad spectrum of actors (Hubbard, *et al.*, 2002).

In this chapter, the theoretical concepts and literature review which inform the study are presented. Section 2.1 underpins the theoretical concepts which explore the application of the logic of governance and its empirical applications. Section 2.2 examines the international literature on the state of sanitation globally and how countries select and apply their governance strategies to alleviate the endemic sanitation challenge.

This chapter explores the theories and modalities of governance. It provides an evaluation of the dominant discourses in governance, including neo-liberalism, network and decentralised governance, which, in varying degrees, have influenced the South African governance landscape. It also sheds light on the modalities of governance employed for service delivery.

2.1.2 GOVERNANCE: A DEFINITIONAL CONUNDRUM

Conceptualising the elusiveness of the governance paradigm in diverse social science disciplines is complex (Robinson and Keating, 2005), requiring a constellation of contrasting assumptions and commonalities (Robichau, 2011). As a central organising framework it reflects on a ‘totality’ which finds relevance in the disciplines of geography, anthropology, public policy and administration, political science, social science and business administration (Hubbard *et al.*, 2002; Kooiman, 2003; Robinson and Keating, 2005; Robichau, 2011). Governance as a lens is therefore interdisciplinary, generating multiple definitions:

- Political Geographers understand governance as the relationship between the state, market and civil society and the role of the state in regulation and control of a country’s resources (Hubbard *et al.*, 2002).
- In Political Science, governance refers to the manner in which the state adopts strategies for policy implementation (Stoker, 1998; Hysing, 1995).
- In Social Science discourse, governance refers to the style adopted to translate policy decisions into action, shifting from centralised government to inclusivity (Stoker, 1998; Hubbard *et al.*, 2002, Robichau, 2011).
- In the Businesses Sector, the use of governance as a paradigm has a strategic focus on control management actions in order to satisfy relationships and interests beyond corporate boundaries based on defined principles. Critics believe it is a strategy to sustain top-down mode of governance (Rhodes, 1997), removing the power of decision-making from shareholders (Jouve, 2009).

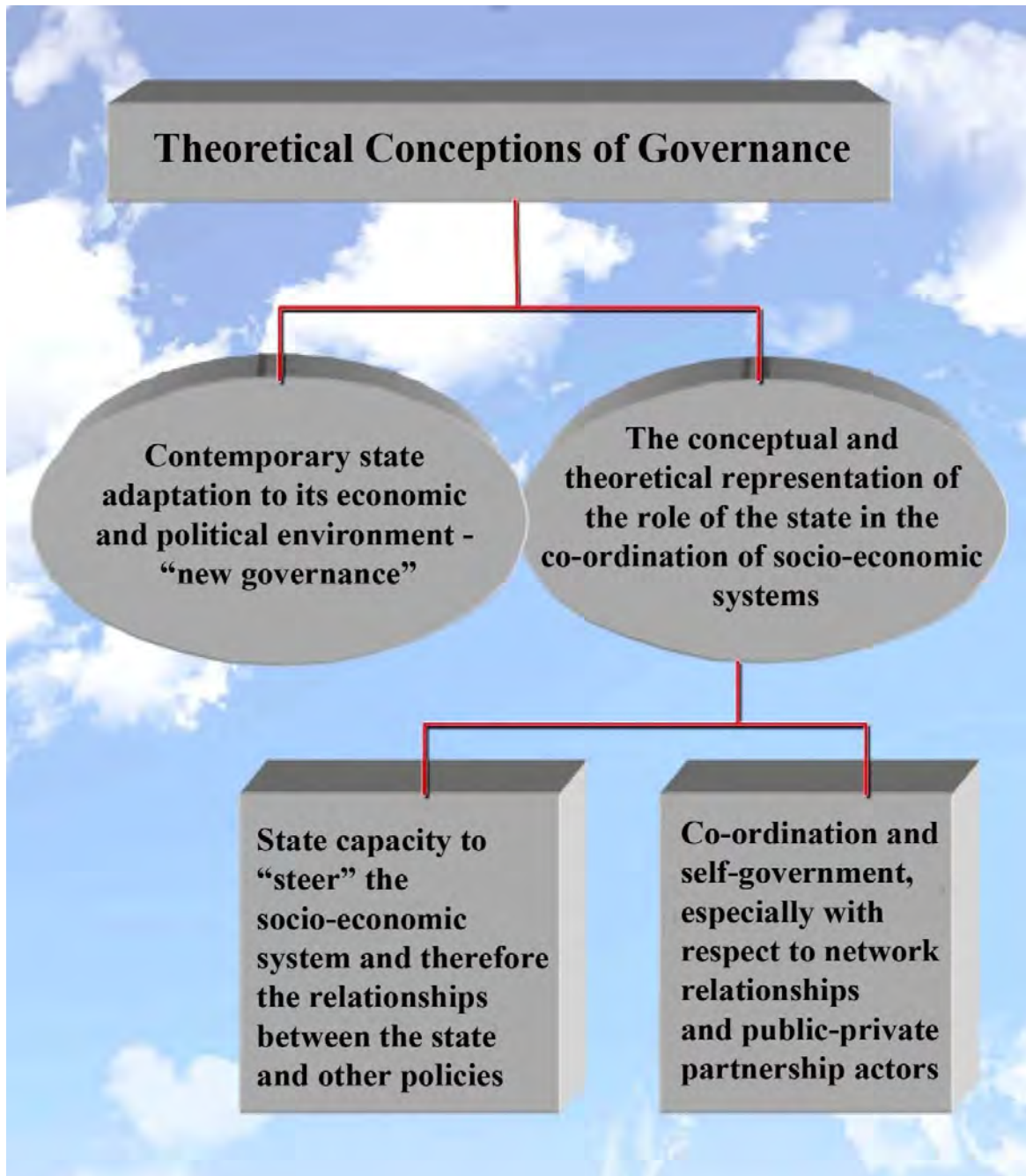
The United Nations Development Programme (UNDP, 1997: 5) defines governance as the “exercise of political, economic and administrative authority in the management of a country’s affairs at all levels”. The UNDP definition leans towards the Public Management approach where the system of governance is based on values, principles and policies seeking new partnerships with the private sector and civil society, thereby identifying tools for efficient public resource management. Interaction within such partnerships is the bases on which the state organises itself to make and implement decisions that promote human enterprise, legal rights and obligations of citizens in governing arrangements (UNDP, 1997).

The managerialist approach of the corporate sector has influenced practices in the public sector. This is particularly relevant in discussions of the entrepreneurialist New Public Management (NPM) mode of good governance in Britain. The entrepreneurial government model transforms the public sector, bringing in “less government but more governance”, where market mechanisms are the preferred options for steering policy decisions and service delivery (Rhodes, 1997: 49). NPM as a model of governance stresses a shift away from bureaucracy, with greater competition between private providers of public goods and services, drawing on the public, private and voluntary sectors to resolve local issues.

2.1.3 THEORETICAL AND CONCEPTUAL DEBATES

The model of “Totality of Theoretical Conceptions of Governance” (Figure 2.1) as conceived by Hall (2011: 439-440), was prompted in light of the absence of consensus on a single meaning of governance and the global and local scales within which it operates. It also alludes to the change of political practice of the contemporary state and how it adapts its governing policies to changing economic and political environments. It further highlights that this contemporary or “new” approach to governing has evolved from a single system approach to a network form which is inclusive of other societal actors and not government alone.

Figure 2.1: Theoretical Conceptions of Governance



Source: Adapted from Hall (2011: 440)

2.1.4 RESCALING GOVERNANCE

Changes in the architecture and role of the state are most often influenced by globalisation, where the state is required to "think global, act local". The centrality of state power is recalibrated to accommodate new regulatory adaptations to align to such global governance

influences (Hubbard *et al.*, 2002: 187). Brenner (2004) states that situating the role of the state in its regulatory functions finds spatial expression at supra-national, national, regional and local scales.

The central thrust in understanding the different scales in the ‘new forms of governance’ is the transformation in global, national and local politics, enacted most significantly at the urban or city level (Kooiman, 2003; Brenner, 2004). Decision-making was influenced by difficult spatial scales, boundaries between the state, civil society and markets which began to collapse, introducing a plurality of networks with relative autonomy from the state (Hubbard *et al.*, 2002). Increased autonomy of organisations outside the state in decision-making, management and delivery of public resources reduced the traditional mode of state control introducing ‘new forms of governance’. Scholars proffer that new modes of governance gave rise to eclecticism, in recognising the transition from bureaucratic control to the varied modes of governance (Hubbard *et al.*, 2002).

Brenner’s (2004) conceptualisation of the transformational contemporary state views urban regions as the key sites of political, economic and social activities. The urban scale is significantly influenced by supra-national and national arrangements, with cities experiencing vast institutional change and policy realignment to enhance economic growth through new forms of governance:

“For this reason, processes of state downscaling - the devolution or decentralisation of regulatory tasks to subnational institutional configurations - are fundamental to the contemporary remaking of political space as the forms of state upscaling that have been examined at length by international political economists” (Brenner, 2004: 3).

New forms of governance and transformation changed the role of the state. Scholars argue variously about the role of the state in governing being either minimalist (Rhodes, 1997), equal agent or actor (Latour, 2005), strategic enabler (Hubbard *et al.*, 2002); or even as facilitator (Kooiman, 2003). According to Foucault (1991), the state has a responsibility to maintain a balance in the social and economic order of governing, even if it has to utilise different tactics of governmentality through regulation.

2.1.5 REGULATION THEORY

Political geographers draw on Regulation Theory to understand the reorganisation of power and social order in the new forms of government (Hubbard, *et al.*, 2002). It explores the response of the state to the crisis of capitalism. To avert the crisis of capitalism, state scalar configuration should therefore be regulated and attuned to its specific history, political background, institutional organisation and regulatory activities in maintaining order in its governing architecture and social spectrum (Brenner, 2004).

The principles of Regulation Theory are based on the assumption that social, economic and political systems are not necessarily stable and systematic in their functioning, and therefore need to be regulated (Hubbard, *et al.*, 2002). An important facet of Regulation Theory is the reorganising of governing interactions and integrating the role of political and social relations, which influence the relationship between the state and its larger governing 'network' of state relations (Tickell and Peck, 1992).

The integration of socio-economic relations in network governing is termed "mode of social regulation" (Tickell and Peck, 1992: 192). Regulation theorists merge the "regime of accumulation" required for macroeconomic stability during the post-Fordist crisis of the state capitalist accumulation, with the "mode of social regulation" (Tickell and Peck, 1992: 192). Modes of social regulation have been neglected in understanding the capitalist mode of accumulation (Tickell and Peck, 1992). The regulation approach therefore espouses that in order to derive some balance in capitalist accumulation, it is important to realise the value of production and consumption which are influenced by social, cultural and legal provisions through regulatory systems (Tickell and Peck, 1992). Regulatory systems provide for a systematic and orderly response of the state to market systems and social actions through regulation. In so doing, the need for spatial and scalar modes of regulation is recognised. The state is challenged with regulating regions with a diverse socio-cultural and historical context, requiring different processes or modes of governing (Tickell and Peck, 1992; Brenner, 2004).

Regulation theory also espouses that society is an important component of the emerging new modes of governance, and therefore regulation should have a leaning toward a more societal

governance focus (Hubbard *et al.*, 2002). According to Tickell and Peck (1992), regulation theory argues for a more localised mode of social regulation, reducing national and supra-national hegemonic modes of domination. In so doing, a new mode of governing emerges which redefines the role of the state in managing regulatory systems influenced by international and national market mechanisms. However, any reorganisation and transition of the state from one mode of governance to another is accompanied by “creative destruction and reconstitution of space” (Tickell and Peck, 1992: 197). The need for new ways to balance the social, political and economic dimensions of reconstitution and restructuring of governing, is imperative.

2.1.6 FOUCAULT AND GOVERNMENTALITY

Balancing the social, political and economic dimensions in governing has increasingly captured the interests of theorists from different schools of thought. Before exploring the new forms of governing through networks, equitable knowledge and power sharing in network governance, the focus on scales and the influence of supra-national governance forces is important. Foucault’s theory of governmentality has gained importance in the study of international governance relations, especially amongst those who are looking for new ways of challenging state power and understanding the role of the state in maintaining socio-economic and political order.

In his lecture at the College de France in 1978, Foucault conceptualised the problematique of the state or government as how to govern oneself, how to govern others and how to ensure the equitable distribution or disposition of ‘things’ (‘things’ which include society, societal relationships, wealth or resources, societal culture and knowledge). Foucault (1991) defines government as the mechanism for the rightful disposition of ‘things’, with the desired end for all dimensions to be governed. Government employs ‘janus’ tactics to accomplish a convenient end. In achieving its end, government functions within a particular environment, internal and external to itself. It is characterised by the general management of public resources for common good or convenience, which means that the governed need to obey the law, so that government is able to achieve maximum benefit for those it governs. It sometimes uses the law as its instrument to achieve its objectives. In Foucault’s view, government is

meant to maintain the act of governing as though its primary purpose is to be of service to those it governs (Foucault, 1991).

Foucault's conception of 'governmentality' espouses the theory of the "art of government" which emerges as the knowledge and science of the state. Its ensemble comprises an administrative governmental apparatus with its connectedness to different dimensions and factors of power, knowledge, territory and the purpose of the state. Its active environment includes the economy and space, and the society to be governed. Humanity, principles of law, equity and rationality were the ideals conceived in the notion or theory of the 'art of government'. Foucault (Burchell *et al.*, 1991: 94) also views security and "mercantilism" as components when theorising around the 'art of government'. He explains that mercantilism is the first attempt at rationalising the reality of the state. In rationalising the reality of the state, government traditionally has as its main purpose the welfare of the 'population' or society. Society becomes an object of government function and a subject which understands needs, but is unaware of government's manipulative governance tactics to achieve such societal ends in a manner it chooses. Foucault (Burchell *et al.*, 1991) conceives the many needs and aspirations of society as what he terms the 'economy', thereby deriving the concept of political economy to explain the relationship between the population, territory and wealth. He draws on Rousseau's understanding of 'political economy' as the economy, where ways of managing societal elements of wealth and space characterise the art of government. He sees the state as tactically exerting its power to achieve its ends through a perceived 'social contract' with those it governs (Burchell *et al.*, 1991).

In his lecture, Foucault advances the paradoxical position of the state which he explains by the term "governmentality". Governmentality refers to how well the state manages the space external and internal to itself, and its competency in responding to the private and public spheres with different tactics (Burchell *et al.*, 1991). A discursive analysis of governmentality explains how subjects and objects within the governance paradigm are created. 'Governmentality' then is the rationality of government that makes governing possible where society is the object of governing (Joseph, 2010: 223). In Foucault's theoretical stance, the art of governing cannot be separated from the governed, as government and civil society function in a shared domain (Lemke, 2001).

While Foucault conceives the Theory of Governmentality as a framework to understand the relations between the governor and the governed, scholars argue that the theory re-enforces the centrality of state power in governance (Joseph, 2010). Societies and/or the state produce subtle methods of power and discipline through network practices, processes and techniques which act to regulate social power. From a Foucauldian perspective of governmentality, the state is indispensable and governmentality extends beyond state power. The art of governing within different governance systems and different contexts varies (Joseph, 2010).

Joseph (2010: 236-239) opines that the application of governmentality as an analytical governance tool is useful. However, he also cautions that its aptness has currency in advanced liberal states like the EU member countries, and not necessarily in other states. He identifies two distinct limitations of governmentality. The first limitation is when it is applied as a social theory, and the second when it is applied in actuality. These therefore limit the general application of governmentality across global governance processes, as different countries experience different social and political environments. Joseph (2010: 236-239) states that such thinking aligns to Foucauldian “disciplinary power” rather than “liberal governmentality”. He (Joseph, 2010) argues that there is a tendency for the strategies of governmentality to fail in the absence of a strong liberalist capital system, where populations are able to self regulate and participate through market mechanisms

The African dilemma of structural adjustment and privatisation are the influence of International Monetary Fund and World Bank policies that contradict Foucault’s intent of encouraging individual self regulation and responsabilisation. Joseph (2010) points out that neoliberal governmentality coming from outside influences, as experienced in some African countries, is quite different from neoliberal governmentality in the western liberal societies. He opines therefore that in Sub Saharan Africa the theory of governmentality is least applicable because the power of transnational governmentality is imposed on weak African states. Joseph (2010) is of the view that the applicability and the success of governmentality is dependent on the conduct of the state and its ability to generate a more indigenous governmentality, where the techniques serve to build cohesion under varying social, technical and managerial environments of the state. The EU countries have the more appropriate socio-economic conditions for the application of techniques of governmentality. In countries where

the neo-liberal techniques cannot be applied, more disciplinary practices are necessary for steering and governing (Joseph, 2010).

Joseph (2010) concludes that the concept of governmentality in global governance fails to analyse the cause of such failure because its ontology and associated analytical tool is not equipped to analyse the content of the process of governing. Therefore, international or global application of governmentality must be supplemented with combined developmental objectives. Joseph (2010) suggests that the concept may be more useful if viewed from a broad Marxist social ontological lens as it will capture a more social, historical and geopolitical actuality as opposed to Foucault's approach, where the state is essential for steering governing processes and management of social conduct. Therefore, the application of governmentality as an analytical concept needs to take cognisance of what it actually means in Western and non-Western contexts for it to be useful.

i) Neo-liberal Governance: A 'Trapdoor' for Communities

The neo-liberal form of governmentality inverts the liberal model of the absolute power of the state, which resulted in Europe and the US when the failure of Keynesianism and shrinking of the welfare state led to lesser power of regulation and control by the state. A key principle of neo-liberalism is that government should allow the market to rule through increased private sector participation. This is based on the notion that the markets are more efficient and should therefore decide on the production of goods and distribution of public resources, with minimal intervention by the state. This framework promotes the neoliberal principle of "privatisation and political conservatism" (Hubbard *et al.*, 2002: 175).

One of the tenets of neo-liberal governance is the devolution of state authority to local level tactically espoused as a tool for empowerment. Herbert (2005: 850) argues that devolution is a means to reduce the state's obligation to its citizens' welfare and service provision, transferring increased responsibility to citizens to take care of their own societal needs. He further questions the logic and legitimacy of neo-liberalism where governance has increasingly moved to individuals and groups and away from state responsibility. Local authorities transfer their mandatory obligations to local communities who have to pay more

for services. Herbert (2005) contends that it is a misnomer to suggest that communities desire greater responsibility in local community governance. He identifies the applicability of Foucault's concept of governmentality in the analysis of community driven neoliberal projects such as community policing forums. He opines that governmentality provides an understanding of how projects are conceptualised, rationalised and implemented. However, this strategy is a move away from welfare to workfare, where "individual citizens are seen not as subjects of governmental benefit but as self-seeking, responsible economic agents, now expected to ensure their own survival through job training or other means of betterment" (Herbert, 2005: 851). He raises the question of a "governmentalised citizenry" where the voices of citizens are rarely heard but the neoliberal operations legitimise such devolution in the guise of transfer of authority to citizens.

According to Herbert (2005), the logic of neo-liberal community projects is founded on the basis that communities know and understand their local environment best. Communities can mobilise collective action without being coerced, thereby promoting consensus and deliberation which are founding ideals of democratic citizenship. They can craft creative consensual policies to resolve their community problems. Hence, devolved authority to citizens is conceived of as illegitimate, as it perpetuates inequality because less affluent communities are unable to give off as much as their affluent counterparts (Herbert, 2005).

ii) Foucault's Concept of Governmentality and Neo-liberal Expression

According to Swygendouw (2005), political governance is an aspect of social innovation and a terrain for advancing inclusive developmental processes. Policy makers have engineered innovative methods of promoting inclusivity through participatory mechanisms. These mechanisms denote a move away from state-centric policy delivery. It generates new institutional arrangements which include the state but also go beyond the state. However, such new technologies framed in Foucault's 'governmentality' creates a network of governance actors which brings to bear the question of a new relationship between the state and civil society, throwing light on political citizenship and democratic rights. Swygendouw concedes that the repositioning of governance actors in the new state-civil society nexus presents what he calls the "Janus Face of Governance", highlighting the paradox of empowerment and

disempowerment of actors within the governing domain. The janus face of governance is fostered through the imposition of the market on political governance resulting in a neo-liberalist policy agenda (Swygendouw, 2005: 2002).

The neo-liberal policy agenda maybe tactfully imposed through the concept of partnerships with the various actors in governing. The concept of partnership finds currency in Foucault's governmentality as it combines the words 'govern' and 'mentality', indicating a more complex governing within the social and economic domain that transcends the 'mentality' of 'government'. Foucault's conceptualisation rejects government or the state as the central power that controls and determines the actions of the governed or people, but rather allows partnerships to dispel hierarchy or superiority amongst partners who exercise their mentality to make conscious choices producing various institutional forms of governance (Dahlstedt, 2009: 19).

The Foucauldian analyses offer two perspectives on neo-liberalism. The first is from a contemporary critical political understanding and the second focuses on the theoretical and methodological principles of governability. Foucault emphasises the 'genealogy of the modern state' from historical post war liberalism to modern neoliberalism, deploying the semantics of government or governmentality as a guideline for his reconstructions (Foucault, 1991; Lemke, 2001). He criticises the liberalist viewpoint and draws on the *Ordo*-liberal social market economy principles that present the logic that market competition is not naturalistic; it is reliant on political intervention, a legal bases and the practice of government (Lemke, 2001; Gordon, 1991). For Foucault, 'government' or governmentality offers a lens through which a neoliberal paradigm may be analysed by illuminating the rationale for understanding the 'technologies of power' in governing (Foucault, 1991; Lemke, 2001).

The Foucauldian thought espouses the *Ordo*-liberal viewpoint which presents two dominant arguments. Firstly, it stresses that capitalism cannot introduce innovation nor can it assert monopolism and the second that monopolism is not an economic phenomenon but rather a social phenomenon resulting from "failed political strategy and inadequate forms of institutionalisation" (Lemke, 2001: 194). It can therefore be revoked by strong social intervention and commensurate institutional rigour.

According to Lemke (2001: 197), Foucault's argument demonstrates that the neo-liberal agenda cannot be an autarky in its own right. He points to the relevance and need for the state to intervene and regulate public services. However, this requires efficient state machinery in partnership with civil society (Foucault, 1991). Foucault finds that the functionality of the neo-liberal approach is largely dependent on political-legal and social interventionist contexts, where the state and civil society are important components of the governing environment.

iii) Neo-liberalism, the State and Technologies of the Self

Lemke (2001: 201) points out two dominant theoretical understandings of Foucault's concept of governmentality. Foucault conceived political leadership as one form of government and the domain of the state and civil society as the other unit of analysis. Lemke (2001) adds that such distinction is inappropriate as governing is not about the power exercised upon the subject but rather a "continuum" of relationships from political governance to the individual or civil society, which Foucault regards as the "technologies of the self" (Lemke, 2001: 201). Therefore, Foucault's neo-liberal thought rejects the minimalist role of the state and suggests that the state retains its functions of directing with increased emphasis on creating space for individuals and organisations to develop an autonomous decision making mode of operation.

The key purpose of neo-liberalist government is to allow the individual to operate as an economic-rational actor with an entrepreneurial mode of production, moving away from state dependency towards a cost-benefit rationale. It views the state's role as the creator of mechanisms and strategies, enabling individuals to take actions for their social needs by acting within an economic domain. This means the conversion of social needs to associate with "self care" through human capital investment and market competition.

According to Harvey (2007: 23), states all over the world have embraced neo-liberalism as its political economic mode of discourse. Countries like Britain, United States, New Zealand, Sweden, China and South Africa, have undergone institutional change and discursive adjustment after adopting this frame either voluntarily or through coercive pressure from global neo-liberal forces. Brenner (2004: 175) argues that "neoliberal political-economic forces promote the deregulation, liberalisation, and privatization of global, supra-national,

national and local economic space”. Harvey (2007) finds that neo-liberalism is “creative destruction in disguise”. His analysis of neoliberal ideology indicates that its intent is rhetorical. Its claim of ‘benefit for all’ is contradictory and is in actuality a benefit for a few, perpetuating uneven geographical development and individual gain. He believes that neoliberalism negates fair market competition and promotes “centralisation, extraordinary monopoly, and internationalisation on the part of corporate and financial powers” (Harvey, 2007: 42).

vi) Neo-liberalism and the Local Space

Neo-liberal influences have resulted in the recalibration of national, regional and local (urban) governance. Urban policies promoted development through “competitiveness-driven” or market driven state organised growth strategy. Cities were then forced to “compete or die”. A rise in aggressive competitiveness and institutional transformation engendered different scales in governance referred to as “*new scalar gestalt of governance*” (Brenner, 2004: 215). This was characterised by the entrepreneurialist development vision in the local economic space, advancing private sector participation at local level and multi-national intervention at a global scale with the aim of improving the economy of the city and citizens (Brenner, 2004).

v) Neo-liberal Governance and Service Provision

The entrepreneurial neoliberal agenda and globalisation ideals bring with it the adoption of structural adjustment strategies within the urban machinery and the privatisation of municipal services. While international case-studies indicated that privatisation is an important aspect of structural adjustment programs and a pre-condition for loans from the World Bank and the IMF, the extent or effectiveness within different contexts prove to be different. Developing countries like Africa, Latin America, and Asia noted worsening conditions of the poor due to the retreat by the state and the yielding of power to control and regulate basic services provision (Rakodi, 1999).

Privatisation measures exacerbated inequality and failed to contribute to macro-economic efficiency. Despite advocating management efficiency, privatisation, decentralisation reforms,

partnerships with private sector and civil society did not alleviate problems at local level. Structural adjustment programmes impose centralised decisions about local needs and became a barrier to public participation, increasing human capacity, transparency and accountability of government to the people. Government had little or no influence on the distribution of resources (Cook *et al.*, 2003), as the scope for government intervention especially on behalf of the poor became even more indirect (Rakodi, 1999).

Structural adjustment programmes dominated by multinational monopolies have failed in countries like Brazil and Argentina, as attempts to convert services from a public to private goods met with challenges of affordability. Poor people cannot consume services that they cannot afford from the private providers. Yet, access to water and sanitation services are a universal human right and should be accessible to even those who cannot pay. Castro (2008) points out that multi-national monopolies are reluctant to invest in the poorest countries. In countries where multi-national monopolies infiltrated, greater social inequalities and the reinforcement of structural inequalities were observed.

Castro (2008: 76) states that the strategy of private sector participation in the provision of public goods does not focus on individual capital investment, or Foucault's 'technologies of the self'. As premised by neo-liberalists, it has no impact on growing local capital, but rather the provision of a product for profit. The commodification of water and sanitation is already experiencing resistance. Some countries have engaged home grown ways of rejecting capital dominance and the marketisation of services. Castro (2008) further argues that with greater focus on human rights and democratic governance, water and sanitation services should resume its place as a universal social right and not an economic good. From a political ecology perspective, water and sanitation services should therefore become a political priority with radical development policy change.

vi) Contesting Neo-liberal Local Governance

Geddes (2010) identified an alternate type of neo-liberal local governance orientation that promoted a bottom up locally driven, people-centred agenda, where citizens' rights and needs and the focus on emancipatory social redistribution objectives, dominated in local

governance. However, even this terrain is contested by grassroots social interests and local leadership, which believed that it promoted class interests and capital accumulation for the affluent few. Harvey (2007) refers to such a phenomenon as ‘negative redistribution’ of neoliberal local governance. It perpetuates class based governance and increased focus on the macro-governance rather than local governance. Geddes (2010) found that even in South Africa, spending choices on local participatory initiatives were relegated in light of the neo-liberal macro-economic vision.

Scholars assert that neoliberal governance perpetuates power at different levels of governing. Harvey (2007) observes that exploitative nature of neoliberalism and the permeation of class dominance are characterised by principles that are undemocratic, with centralised power or internationalised power dominance. In Britain and France, civic groups were subject to repressive strategies by the state. In South Africa, labour movements opposed the neoliberal ideology. They chose to support the democratic state but remained independent so that they could preserve their socialist ideals and civic culture of activism (Harvey, 2007). Scholars caution that civic dependence on government could mutate the ‘voices of the local people’ (Guarneros-Meza & Geddes, 2010). Participatory governance approaches instituted through innovative mechanisms prove to be just tactics utilised to soften the blow of neo-liberalism, strengthening the governing power of international agents (Bebbington, 2004).

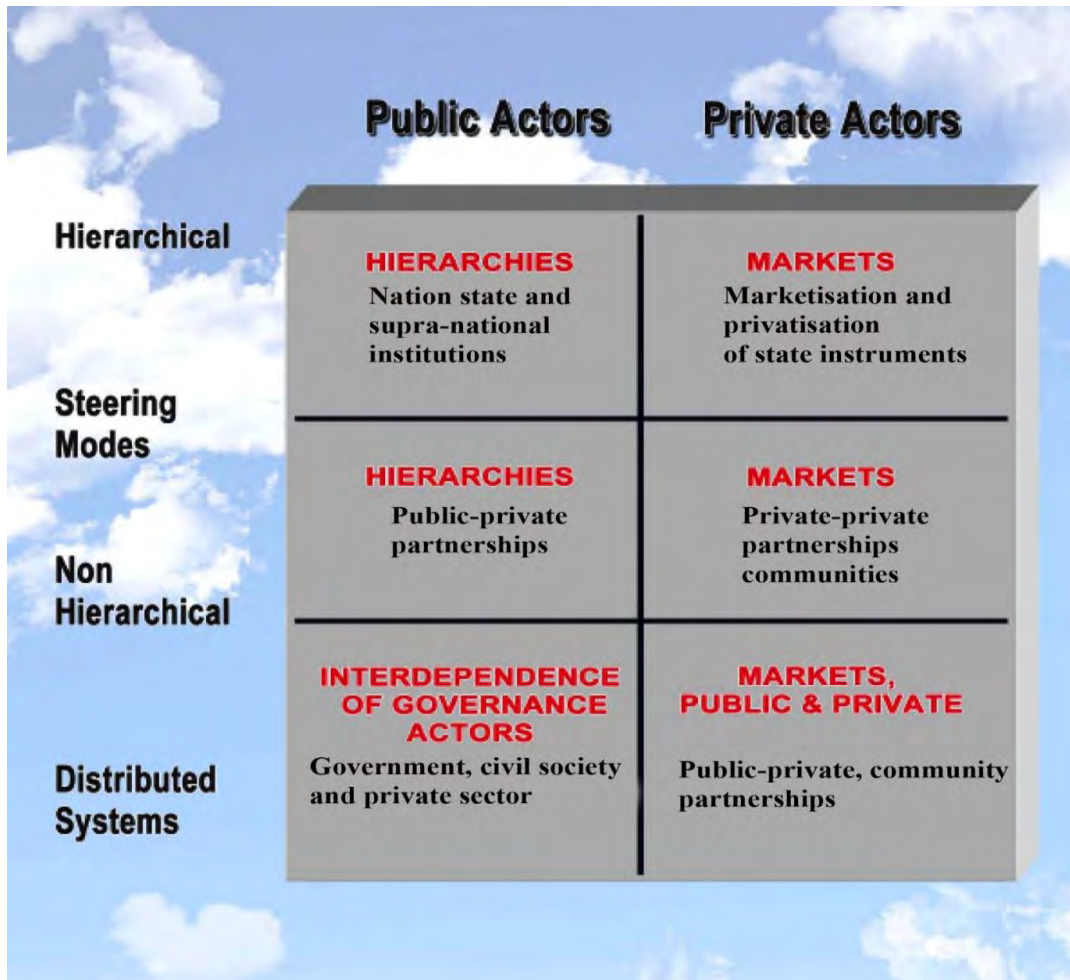
Engaging citizens and adopting a more society focussed governing style requires what Foucault calls the ‘art of governing’, where an array of governing actors may be drawn together as a tactic for a more inclusive governing style. This lends itself to the network governance approach, a move away from state centrality to a self-organising network of governance actors, where network governance constitutes ‘technologies of governance’ (Swygendouw, 2005) or ‘typologies of governance’ (Hall, 2011).

2.1.7 FRAMEWORKS OF GOVERNANCE TYPOLOGIES

In Hall’s (2011) analyses of governance, three principal types of governance systems are identified: hierarchical governance systems, market-led governance systems and network governance systems. However, he also offers other conceptions of voluntary systems which

advocate sharing and creating a balance between state, civil society and markets. Hall's perspective of communitarian governing technologies builds on the traditions of direct and deliberative democracy. Figure 2.2 merges a toolbox of conceptions to illustrate the level of functionality and the actors involved in the different systems.

Figure 2.2: Frameworks of Governance Typologies



Source: Adapted from Hall (2011: 443)

2.1.8 NETWORK GOVERNANCE APPROACH

The new approach to governing advocates the merging of governance forces represented in Hall's (2011) framework of governance typologies into a non-hierarchical networked formation. Proponents of the Network Governance Approach define governance as "self organising, inter-organisational networks characterised by interdependence, resource exchange, rule of the game and significant autonomy from the state" (Rhodes, 1997: 15).

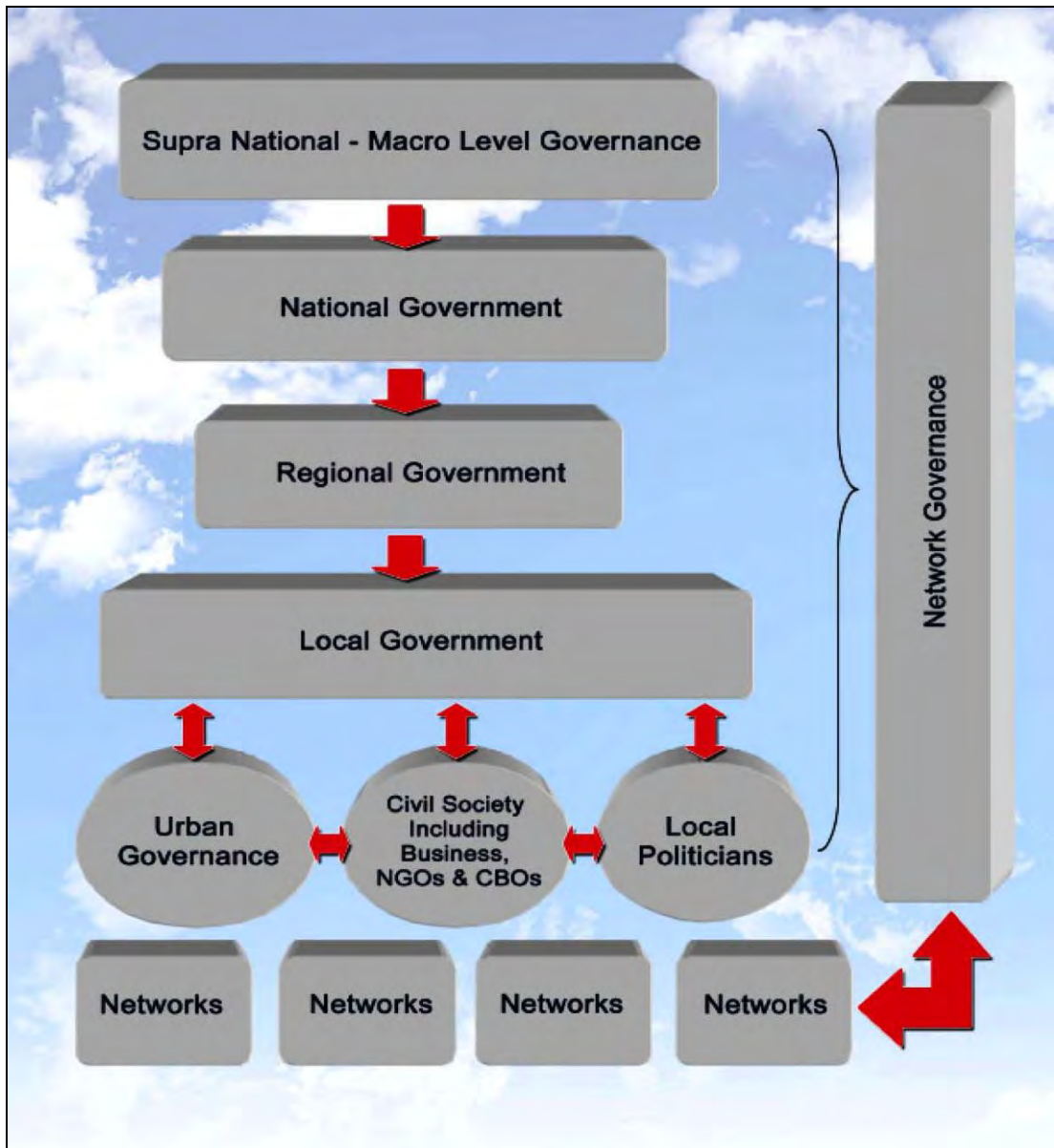
However, the complexity of understanding networks is that they operate at different scales of analysis and influence, with different power relations. At a macro-level, networks could refer to the relationship between state and civil society; at a meso-level, they could refer to the

relationship between interest groups and government, and at a micro-level, between individuals, actors or members. Networks may include elements of technology which enable the varied scalar interaction of actors. However, the main purpose of such relationships is to change the way public goods are defined and distributed through open communication, advocacy and support in achieving a desired outcome (Robinson and Keating, 2005).

Robinson and Keating (2005) view the role of the state through two different forms and scales of governance arrangements. They explain that the 'old' traditional form of governance focuses on a state-centric politics and government, while the 'new' (or newer) approach to governance is more society-centric with government facilitating relationships between the various actors. The concept of networks emerged when the relationship between the state and its external environment and actors (global and local) became either an informal or formal governance arrangement for steering society in the engagement of public policy and the management and distribution of public resources.

The conceptualisation of network governance system brings together actors from different scales as well as different sectors from both inside and outside government. Figure 2.3 reflects the different actors in the governance spectrum who self-organise into policy networks rather than scalar governance formations. Policy networks emerge from the merger of actors from upward, downward and outward agencies, often influenced by globalisation advancing governing without government. In the British reorganisation of the state, different levels of government diminished in a process referred to as the "hollowing out of the state", a move from government to network forms of governance (Rhodes, 1997).

Figure 2.3: Conceptualising Network Governance: A Multi-Actor Governance System



Source: Developed by the Author

Robinson and Keating (2005: 6) note that in political science, the evolution of network governance from the 1980s and 1990s refined the definition to either an interactive policy network or inter-organisational networks, referred to in Britain and Europe as sub-governments, and in the US as policy sub-systems.

The concept of networks has become an important focus of academic theoretical debate in different research disciplines. In political science and its sub fields of public administration, urban politics and comparative politics, the concept of networks has evolved and is popularly used to analyse the process of policy formulation and implementation. Its focus on policy networks represents a new form of alternate governance which is differentiated from a purely market-driven governance and hierarchical governance systems (Robinson and Keating, 2005).

Geographers conceive the Actor Network Theory (ANT) as an analytical tool to understand the tangled network of increasingly blurred governance relations between the state, the market and civil society (Hubbard *et al.*, 2002; Latour, 2005). The relationships between the three sectors overlap, creating more institutions and relationships that generate the capacity for power in partnership alliances. Power in this context is viewed as the ability to mobilise capacity to do work within the agency of networks. Actor Network Theory explains how new networked practices in governance arrangements can empower some and disempower others at a local level (Hubbard *et al.*, 2002). Hubbard *et al.* (2002) observe that the new emerging technologies required old rigid governing styles and mindsets to re-engineer their approach and seize opportunities presented by the new networked practices of governance. ANT ushers new interpretations of how actors should redefine their site and actions so that locals may benefit from being merged into the global, fitting into a more flexible inclusive network of actors (Latour, 2005).

The Actor Network Theory espoused by Bruno Latour conceptualises the concept of ‘agents’ in governing when transitioning from one mode of regulation to another. According to the Actor Network Theory, the state is an equal agent in the governance continuum (Hubbard *et al.*, 2002) and is required to respond as a global player, interacting in a local site (Latour, 2005). An agent is defined as a doer, always part of an account of action, “not from ‘above’ or

‘below’ but from weaving and pleating”. An agent cannot be endowed with anonymity as it has to act to make a difference or transform a relationship or a state of affairs (Latour, 2005). An agent could comprise an individual or group connected by association with other individuals or groups. In accordance with Actor Network Theory, an agent is sometimes referred to an ‘actant’ which is similar to an ‘actor’ who may be associated or disassociated with other agents through influence or action. The state is then assumed to be an ‘actant’, an equal partner in governing. Its relationship with other actants or actors within a governing network is horizontal, shared and cooperative (Latour, 2005).

Robinson and Keating (2005) identify the shared domain and various characteristics of networks which include private and public members, business associations, trade unions, non-governmental bodies, and government agencies. Theoretically, network activity is based on a web of relationships without hierarchy. Networks interact with an understanding of a common goal for common good. There are reciprocal interactions where policy decisions are influenced by members’ perceptions, intentions as well as capacity to mobilise and to distribute resources. Policy decisions are also influenced by rules within networks. The common goal and function of networks is to pool resources, expertise, and exchange of learning through sharing experiences, develop structures to promote transparency and consensus, and develop a working ethos of compromise and trust, with stable networks for agreement on problem solving approaches. The network governance approach confirms that the separation of public and private actors is no more sustainable. Segmentation and fragmentation are detrimental to efficient service delivery. Inter-organisational capacity of network members could repair service delivery problems.

According to Haikio (2007), network governance arrangements work well to promote sustainable development in the urban context where local authorities become cooperative facilitators, with indistinguishable boundaries in network relationships. Their representation is legitimated by the resources and expertise they are able to offer, similar to traditional types of justification that local government officials offer (Haikio, 2007). However, while networks are characterised as autonomous from the state, they can be at risk of indirect steering by the state, if leadership within networks is weak (Stoker, 1998; Robinson & Keating, 2005). On the contrary, Rhodes (1997) cautions that network governance introduces increased

independence of networks from the state, at risk of lack of accountability and compliance in the absence of the state's authoritative traditional ways of governing.

Scholars are divided on the effectiveness of networks to attain the goals of empowerment, participation and bottom-up development. Haikio (2007) argues that networks increase authority to a portion of society in the guise of a bottom-up development process. In governance network arrangements, there is a collision of interests and roles of traditional local governance actors with the emerging positions of actors engaged in policy-making at a local level: "City managers and local politicians are protecting their own sphere of operations, citizen participants in turn are challenging their traditional boundaries", while resourceful business élites claim power over the less resourceful. While it is intended as an empowerment tool, governance networks can pose a threat to those who are in high positions, for example government officials (Haikio, 2007: 2157).

Swygendouw (2005) viewed network formations as technologies of governance. While the innovative reorganisation of the governing technologies should promise greater democracy and grassroots empowerment, it also takes care of the economic well-being of the state through neoliberal governmentality. This is done through a network of relationships between the market, state and civil society. Such social innovation of network relationships promises better delivery of services to the impoverished, but the tactical rules of the game protect the political and economic agendas of the state (Swygendouw, 2005). The strategies and mechanisms deployed through rule setting, rule-making and rule-implementing, which Foucault refers to as the 'conduct of conduct', encroach on the character of the democratic state (Lemke, 2002; Swygendouw, 2005).

Swygendouw (2005) further argues that state-based arrangements are hierarchical and in contrast to the normative ideology of governance. Ideally, the network relationship with the state, private sector and civil society should have permeable boundaries and consensus on addressing a particular social issue through negotiation and ways in which to serve the needs of society. These should reflect a common, distinctive set of features with horizontal interaction without distinguishing which of the actors belong to the private or public sphere. Actors should act independently, but also interact regularly through iterative exchanges of

knowledge and skills. Network arrangements allow for iterative interaction and organised participatory mechanisms and joint decision-making (Swygendouw, 2005).

However, new forms of network governance are often formed and controlled by the state regulation with unclear systems of accountability and representation. Political power is either multilayered or spread beyond distinction and not very transparent. So the only actors beyond-the-state are the meta-governance global actors driven by the market economy, which the state finds it is compelled to respond to, often without consultation or interaction with civil society institutions. Participation and democratic governance innovation are compromised. This results in increased state regulation and market-driven policies, with an institutional approach influenced and by meta-governance actors (Swygendouw, 2005).

According to Geddes (2006), in contrast to the ideology that perceives network governance as potentially hierarchical and resisting participatory local governance, some scholars argue that network governance has a neutralising effect in the ‘new’ governance approach that facilitates a move from government to governance. A growing body of literature (Rhodes, 1997; Geddes, 2006; Haikio, 2007) suggests that network governance is the new ideal for an effective and legitimate form of societal governance. Geddes (2006) asserts that its increasing positive outcomes include an enhanced link between top-down representative democracy and bottom-up participatory democracy. It enhances political empowerment and trust while improving governance efficiency. He adds that there are also inherent complexities and risks aligned to network governance approaches. Network governance could limit transparency in policy and political processes. It could also undermine an array of key components, including political autonomy and competition, elected officials and community participation (Geddes, 2006).

Two dominant debates in the governance literature continue its focus on ‘state-centric’ hierarchical governance and ‘society-centric’ shared responsibility. Bell *et al.* (2010: 860) suggest that “society-centred account of governance consists of two arguments, the first relates to the involvement of a larger range of non-state actors in governance processes and, the second relates to the marginalization of government”. They argue that whilst a state-centric approach may be hierarchical, it provides an opportunity for the state as regulator to

build strategic relationships with non-state actors and strengthen its capacity to govern. Society or community focussed governing need not always weaken or marginalise the state, but could be an effective mechanism to enhance its capacity and ability to deliver the services mandate to its citizens (Bell *et al.*, 2010).

The perceived potential marginalisation of the state opens another avenue of governance arguments regarding strategies of steering. Bell *et al.* (2010: 852) argue that amongst the many debates about the relationship between government and governance, governing by persuasion has been neglected. Persuasion is a social process and is implicit in the dominant governance arguments about markets, hierarchies and networks. Persuasion is an incidental strategy of governing to keep citizens compliant and disciplined. Persuasion is used as a means to keep a state-centric governance approach to maintain state power and hierarchy. According to Bell *et al.* (2010), it keeps citizens on the periphery, perpetuating relationships of domination and subordination, where citizen's autonomy of action is constrained by participation in choices that are provided to them by government (Gibson, 2008; Bell *et al.*, 2010).

Bell *et al.* (2010) resolve that network governance provides an institutional setting for actors within the network to influence the choice of decision. In contrast, persuasion can work just as well for networks as it can persuade governments and influence policy processes through engagement. Persuasion still has a pivotal role in managing meta-governance relational aspects of society. It can also force government to respond to societal demands and maintain relations with its non-state partners through finding and preserving the "middleground" (Bell *et al.*, 2010: 866).

2.1.9 DEMOCRATIC DECENTRALISED GOVERNANCE

The relationship between neoliberalism, democratisation and decentralisation is complex, whether assessed in more developed countries or developing countries (Guarneros-Meza & Geddes, 2010). An overhaul of the conceptual understanding of decentralisation and its application in varying contexts is imperative. In order to disentangle such complexities in

understanding governance arrangements (United Nations Development Programme or UNDP, 1999; Dickovick, 2005).

Decentralisation takes different forms with its definitions linking to decentralised governance and local governance. It pertains mainly to administrative management and distribution of public resources through transfer of either authority, decision-making, planning or administrative authority to sub-national governments, non-governmental organisations or the private sector, depending on the selected form and purpose (UNDP, 1999).

There is a view that decentralising governance from central government to regional or provincial, local or community levels enhances government responses to the service needs of its citizens. Citizens are able to participate in decisions regarding their needs and improved living conditions, which is viewed as being key to sustainable human development. People are able to enjoy a better quality of life through improved service delivery (UNDP, 1999).

Similarly, Cheema and Rondellini (2007) advocate that decentralised governance could accelerate economic growth, increase political accountability, and enhance public participation in governance. It could also reduce the complexities of hierarchical processes and procedures, thereby expediting delivery and affording services to a larger number of people. Furthermore, decentralisation provides for innovation and empowerment of communities, mobilising private resources for investment in infrastructure and facilities.

According to the UNDP (1999), decentralisation strengthens local capacity through the active participation of civil society in governing. Civil society participation in decentralised governance is facilitated by local government, as it is the governing sphere closest to the people. Structures and spaces are legitimated by legislation, policy or practice. The decentralised approach provides for the state-driven urban policy, which gives the local people a field of choices in finding the best solution to their socio-economic problems by themselves (Dahlstedt, 2009).

According to Cheema and Rondellini (2007: 6-7), decentralised governance may be delineated further into administrative, political, fiscal, and economic sectors:

- Administrative decentralisation refers to the deconcentration of central structures, bureaucracies, delegating responsibility and semi-autonomy to agents of the state through ‘twinning’ arrangements.
- Political decentralisation refers to structures and procedures for citizens to engage in selecting political representatives and influencing public policy-making, devolution of power and authority to local units of government, providing services which will most benefit societies or communities and mobilising financial resources to influence political decision-making.
- Fiscal decentralisation refers to the means of sharing fiscal resources and delegation of authority to raise and allocate public expenditure.
- Economic decentralisation includes market liberalism, deregulation, privatisation of state enterprises, and public-private partnerships.

Steinich (2000) contends that the decentralised approach to local governance could disperse corruption to smaller units. Decentralised units have the potential to overspend. They could also exercise greater control over local people thereby stifling independence and innovation in the economic and social functions of the state. This may create room for passing such responsibilities of the state to locals. Poor people may be marginalised, growth of local élites perpetuated, and politicians may be selective about which constituencies they serve, as opposed to working for a collective outcome. Accountability may be attenuated if there is apathy at local level, thereby resulting in low voter turnout. Furthermore, decentralised governance has the propensity to create institutional factions and propagate a ruling party’s dominance (Steinich, 2000).

Table 2.1: Pros and Cons of Decentralised Local Governance

PROs	CONs
<p>Better service delivery:</p> <ul style="list-style-type: none"> • more adequate to local needs • more flexible • more innovative • cheaper • mobilising the comparative advantages of local enterprises and the local non-profit sector 	<p>Dangers for service delivery:</p> <ul style="list-style-type: none"> • decentralisation of corruption • untamed spending • rolling-back of many of the economic and particularly social functions of the state • local cadre will not be independent enough and motivated enough to take responsibility for risky undertakings
<p>Local democratisation:</p> <ul style="list-style-type: none"> • integrating people's needs and interests • giving third-sector organisations and local enterprises the freedom to act and to articulate their views and needs • training ground for a participatory/democratic culture, negotiation capacity and conflict settlement • granting a certain autonomy and political integration to minorities 	<p>Local politics is still politics:</p> <ul style="list-style-type: none"> • reproduction/re-labelling of local elites • poor people may refrain from promoting their interests • local politicians may be responsive to the local needs of their defined constituency • accountability may be attenuated if local elections are not viewed as important and produce low turnouts
<p>National integration:</p> <ul style="list-style-type: none"> • can reach a more equal distribution of national resources • dispersion of political power in a vertical way • common decision or planning bodies or the common execution of tasks • national diversity can thus be realised in national unity 	<p>Moves for separation:</p> <ul style="list-style-type: none"> • institutionalising factions along ethnical lines • reproducing discriminatory policies of the ruling party

Adapted from Steinich (2000: 4)

The decentralisation approach places interest on the analysis of markets and networks of organisations attempting to correlate “diverse forms of devolution and participation and central control and formal accountability” (Bevir & Rhodes, 2001: 35). Bevir & Rhodes (2001) argue that representative democracy allows limited direct influence on decision-

making processes. Only those who are in authority and can compete with market forces and demands will have an opportunity to participate in decision-making. Those in poor urban peripheries will be excluded due to their inaccessibility and inability to participate directly in decision-making. Furthermore, there is no guarantee that those representing them will serve the interest of the public entirely when making decisions for the poor (Bevir & Rhodes, 2001).

The principle of governance advocates democratic decision-making yet little or limited participation of the public in such processes is noticed, as lack of information, incapacity of the general public to engage, as well as blurred channels of communication pose as barriers for effective public participation in decision-making in local governance and delivery of basic services. Conyers (2007) argues that there is a hypothetical link between decentralisation and service delivery and that evidence in Sub-Saharan Africa reveals that it has had limited impact on the quality, quantity and equity in service delivery, and has failed to spur democratic development management.

To summarise, this section explored the theoretical conceptions of governance. It demonstrated that the commonalities in the definitions of governance provide the logic to tests its applicability empirically. Theorists agree that the withdrawal of the state from the governance continuum could result in crises in governing. However, while the facilitative and strategic role of the state is recommended, employing market led tactics in governing could lead to the destruction of democracies and enfeeblement or weakening of the governed. Creating mechanisms for inclusivity is pivotal to achieving balance when the transition from government to governance is enacted. Partnerships and citizen's participation are recommended as the mechanisms for enabling a more democratic governing approach. However, scholars argue that the 'janused' tactics of government could allow the state to covertly exercise control through partnership arrangements influenced by supra-national coercive pressures of globalisation and neoliberal governance practices. To avert such power and control, the network governance approach is recommended as an alternative to hierarchical governance. A shared and integrated governance approach is the panacea to sustainability in the management and delivery of public resources. However, the influence of neoliberal policy approach sees many countries adopt macro-economic policies and

decentralised governance approaches to find a balance between economic advancement and social obligations in governing.

The next section pertains to the empirical and pragmatic applicability of the logic of governance when the state selects an approach in delivering services such as sanitation and the associated challenges. It further highlights the world-wide sanitation crises and how citizens and governments attempt to innovate and craft strategies to deal with the endemic sanitation dilemma in developing countries.

2.2 SANITATION IN DEVELOPING COUNTRIES

This section presents a review of literature related to the endemic sanitation governance challenge experienced by developing countries worldwide. It captures the challenges and coping measures people engage in, in meeting their daily sanitation needs. The section begins with an outline of the global sanitation crisis and measures to improve human living conditions through access to adequate sanitation. It underscores the context and its specific case regarding sanitation practices, innovation and sustainability.

According to the World Health Organisation (WHO), the progress indicator for sanitation in accordance with the MDGs is defined as “the proportion of the population that uses improved sanitation facilities, in both urban and rural areas” (WHO, 2008: 2). Emphasis is placed by the WHO (2008: 2) on the access to improved facilities, while defining unimproved facilities as:

“...buckets, flush or pour-flush to elsewhere (like rivers or drains), pit latrine without slab or open pit, bucket, hanging toilet or hanging latrine, no facilities or bush or field (open defecation)”.

The use of improved facilities may include the following types of sanitation technology: “flush or pour-flush to-piped sewer system, septic tank, pit latrine, ventilated improved pit latrine (VIP), pit latrine with slab, composting toilet” (WHO, 2008: 2).

The improved sanitation facilities should therefore prevent human contact with waste and ensure that methods of disposal are controlled and environmentally friendly, ensuring maximum protection of human health and well-being. The WHO underscores the health and economic impact of inadequate water, sanitation and hygiene education on the health and mortality of infants, especially in developing countries:

“...children suffer a disproportionate share of the disease burden related to water, sanitation and hygiene. Diarrhoea and malnutrition alone account for about 2,3 million preventable child deaths per year. Up to 88% of cases of diarrhoea worldwide are attributable to unsafe water, inadequate sanitation or insufficient hygiene. These cases result in 1,5 million deaths a year, mostly of children. In turn, malnutrition causes about 35% of all deaths of children under the age of five years. An estimated 50% of this malnutrition is associated with repeated diarrhoea or intestinal nematode infections as a result of unsafe water, inadequate sanitation or insufficient hygiene” (http://whqlibdoc.who.int/publications/2008/9789241596435_eng.pdf).

According to Ramachandraiah (2001: 620), of the 37 most fatal ailments in developing countries, 21 are caused by water and sanitation-related diseases, with 1.5 million children under the age of 5 years dying annually. Similarly, Cheng *et al.*'s. (2012) study found a statistical significant relationship between maternal, infant and child mortality due to the lack of access to water and sanitation. United Nations Secretary General, Ban Ki Moon, reiterates that “...every 20 seconds a child dies worldwide due to sub-standard sanitation and this plight faced by 2, 6 billion people, is preventable” (*The Water Wheel*, 2008: 13). Sanitation remains a challenge to countries across the globe with most developing countries struggling to meet the MDG targets of halving the population without access to improved sanitation by 2015 (United Nations, 2010; Mara *et al.*, 2010; Van Vliet *et al.*, 2011).

2.2.1 SANITATION UNDER CHALLENGE: MILLENNIUM DEVELOPMENT GOALS

The MDGs is the universal framework advanced by the global community to improve the quality of life of people around the world. The MDGs gained impetus through pledges made

at the 2000 Millennium Summit in Johannesburg following a series of multi-sectoral dialogues on economic, social and environmental development of people worldwide (UNDP, 2003). The United Nations sealed the pledge of all countries to meet specific targets aimed at addressing critical human development problems and eradicating extreme poverty by 2015.

Sanitation was placed as a development target in its own right alongside water, which is pivotal in achieving eight of the MDGs. It has intrinsic value in improving sanitation, health and poverty reduction and was formally recognised in MDG goal 7, targets 10 and 11, which call on countries to reduce the gap of inadequate and unsustainable access to safe drinking water and basic sanitation by half (UNDP, 2003). A keen focus by states on water and sanitation systems in supporting public health was necessary (Cheng *et al.*, 2012), failing which three of the eight MDGs focused on improving public health will not be met (Bradford, 2004).

However, meeting the MDG targets does not mean that countries are on a path to resolving their nationwide sanitation crisis nor does it necessarily mean that safe, environmentally friendly infrastructure or behaviour change will be achieved and sustained (Asian Development Bank, 2009). Countries throughout the world, more especially Africa, are battling to meet the self-set targets of halving the number of people with unimproved access to sanitation (Folifac, 2007). Sub Saharan Africa records the slowest rate of progress and open defecation still remains high (United Nations, 2010). The world challenge of sanitation was still prevalent in rural and urban areas:

“Only about half of the developing world’s population are using improved sanitation, and addressing this inequality will have a major impact on several of the MDGs. Disparities between rural and urban areas remain daunting, with only 40 per cent of rural populations covered. While 77% of the population in the richest 20% of households use improved sanitation facilities, the share is only 16% of those in the poorest households” (United Nations, 2010: 5).

The slow pace of sanitation delivery globally is of great concern. Population growth increases the demand and concomitantly the need for government to address a critical human need. Cities around the world are still battling to meet the sanitation demands due to urbanisation, in migration, planned and unplanned informal settlements (Ako *et al.*, 2010; Kumar *et al.*, 2011). In India, 55% or an estimated 600 million people still do not have access to sanitation. India's progress with sanitation is even lower than countries like Bangladesh, Mauritania, Mongolia, Nigeria, Pakistan, and Vietnam, who have lower GDP per capita income. Seventy-four percent of rural people still defecate in the open with 13 million people still using unsanitary bucket systems. In urban areas where sanitation services exist, the disposal systems have no environmental integrity, and waste water management systems are extremely inadequate (Asian Development Bank, 2009: 12).

A number of systemic challenges have been identified by developing countries which impede their progress towards achieving their MDG targets. There is insufficient investment in water and sanitation programmes towards achieving MDG targets by 2015 (Bradford, 2004; The Water Wheel, 2008). Assertions by G-20 and L20 countries reflect a need for increased multi-sectoral approach to global health (Bradford, 2004). Improved governance through better coordination between national and district levels, greater commitment and clear strategies to meet sanitation needs, will enhance the possibility of attaining the MDG targets (Mwebaza, 2010; Ako *et al.*, 2010).

Significant policy support to the Water Supply and Sanitation (WSS) sector is also required to enhance the ability of countries to translate policy into action and increase the momentum towards achieving MDG targets (Djemetio, 2009). According to Djemetio (2009), commitment to the international consensus of leading institutions which provide the framework for addressing African-led initiatives is pivotal in changing the plight of poor sanitation, namely:

African Ministers' Council on Water (AMCOW)

African Water Week (AWW)

African Water Facility (AWF)

Water and Sanitation Department (WSD)

The eThekweni Declaration on Sanitation (2008)

Furthermore, attention needs to be given to water and sanitation governance, stakeholder management, institutional capacity, and further research to improve quality of services, enabling successful implementation (Djemetio, 2009). The need for new monitoring tools to improve the achievement of performance targets is imperative (Mwebaza, 2010; Cheng *et al.*, 2012). In South Africa, the slow pace of eradicating infrastructure backlog could thwart its efforts in halving access to water and sanitation by 2015 (MDG, Mid Term Country Report, 2007). Government delivery of basic services has only met the increase in demand for services while failing to reduce backlogs (Thompson and Nleya, 2008).

The WHO (2008) found that African countries are not on track with meeting their MDGs health target. Attempts at reducing the burden of sanitation-related diseases is doomed to fail unless action is taken to utilise the available sector resources efficiently and effectively. A substantial increase in national budget allocations to sanitation and enhanced political will amongst most local government institutions, together with the need for an overhaul in governance mechanisms (The Water Wheel, 2008; Mwebaza, 2010), are critical success factors for improving global access to sanitation by 2015.

2.2.2 MULTI-STAKEHOLDER COLLABORATION AND PARTNERSHIPS FOR IMPROVED SANITATION

According to Van Vliet *et al.* (2011), the approach to governance in the sanitation sector has been increasingly evolving to accommodate an array of stakeholders. This governance approach has become a worldwide phenomenon with responses at different scales, where private sector multinational companies, small scale utility companies as well as local organisations, initiate differentiated ways of provisioning. This approach dissolves the purely government-led sanitation provision, becoming more inclusive and responsive (Van Vliet *et al.*, 2011).

The Director General of UNESCO, Koichiro Matsuura in 2008, reaffirmed the benefit of an inclusive approach. He emphasised that the collaboration of all stakeholders was pivotal in

addressing the sanitation challenge worldwide. He viewed local government, communities, and investors as key to providing a sustainable sanitation solution. He further asserted that policies and strategies to address the sanitation challenge were inadequate and should be mainstreamed or included in all sustainable development objectives. Strengthening international partnerships for increased investment and build capacity was central to improved global sanitation (The Water Wheel, 2008: 13). The International Water Alliance (IWA) associated countries, including Africa, Eastern and Southern Asia, Middle East, Latin America and the Caribbean Region, Europe, and China, found that networks of knowledge sharing increases good practice and momentum in the delivery of water and sanitation programmes (IWA WOP Strategy, 2008).

Partnerships between the private sector, non-governmental sector, communities and the state are recommended for resource mobilisation and sustainable sanitation provision (Tukahirwa *et al.*, 2010). Tukahirwa *et al.* (2010: 12) observe the emergence of a “modernised mixture model”, where various sectors work in tandem to meet pro-poor sanitation needs. He also notes the limited success of private sector market-related model due to unaffordability. Partnership networks are a conduit for scaling up of pro-poor sanitation as well as exploring effective options for sustainable systems (Asian Development Bank, 2009; Van Vliet *et al.*, 2011).

The Abidjan Accord (1990) affirms that a partnership approach to sanitation delivery promises sustainability. In Uganda, the cooperative governance structure is similar to the South African three spheres of governance (Mwebaza, 2010). The study by Tukahirwa *et al.*, (2010) observed greater success when civic organisations drive sanitation programmes. This raises the question of the effectiveness of national government remaining regulators with all other stakeholders jointly responsible for the delivery of sanitation. Emphasis was placed on the need for districts and communities to participate in decision-making to resolve problems, and reduce corrupt practices (Mwebaza, 2010).

2.2.3 ECONOMIC ASPHYXIA DUE TO SICKLY WORKFORCE

The importance of clean water and adequate sanitation on productivity cannot be overemphasised (Ramachandraiah, 2001; Du Toit and Van Tonder, 2009). For every dollar spent on the provision of adequate water and sanitation, nine dollars' worth of productive activity is yielded (Tissington, 2011: 13). The impact of inadequate water and sanitation services burdens the economy through low productivity exacerbated by absenteeism and a sickly workforce that are living in unhygienic and diseased conditions (Ramachandraiah, 2001). Studies find that the economic toll of poor waste water management resulted in loss of productivity in fisheries production and a negative impact on tourism (Asian Development Bank, 2009: 11).

Water cannot be substituted; it is at the forefront of sustainable development and a key factor for socio-economic development and food production. The unavailability of water impacts negatively on personal and sanitation hygiene practices. The absence of water for hand washing promotes ill health. In Sub-Saharan Africa, at least 12% of the national health budget is spent on sanitation-related diseases (Mwebaza, 2010: 8). The absence of adequate sanitation threatens water sources contributing to the rise in waterborne diseases which inevitably impacts on the economy.

2.2.4 ECOLOGICAL SUSTAINABILITY THROUGH RECYCLING HUMAN WASTE

Access to improved sanitation has a positive impact on the environment, health, social and economic status of people in developing countries (Mara *et al.*, Kumar *et al.*, 2011). In India, poor sanitation systems, poor sludge management and unhygienic sanitation practices undoubtedly have grave environmental impacts. Sewage effluence deposited in rivers and streams are the main source of water contamination (Ramachandraiah, 2001). Only 30% of the waste water is being treated, with the balance deposited into rivers, streams and open fields, exacerbating the challenge of clean water provision and the risk of disease from faecally contaminated water. Innovative human waste management could avert environmental and health impact on poor communities (Asian Development Bank, 2009). The experiences of

developing countries such as Uganda indicate that innovations around water and sanitation systems failed due to ineffective sludge management and inadequate maintenance of facilities.

In Kibera (located in Nairobi, Kenya), the silent sanitation crises have dogged urban slums. In Bangladesh, the geographic vulnerability of the land rendered sanitation an emergency in urban slums. The impact of climate change with seasonal flooding in the area comprising 94 slum settlements, exposed communities to unhygienic swampy living conditions contaminated by untreated stagnant sewer. In these desperate conditions, communities resorted to “hanging toilets” which emptied into the drains and rivers which are main source of water for washing and drinking, thereby exacerbating the crisis of human health and environmental integrity (Munch *et al.*, 2009).

Munch *et al.* (2009: 3) found that the most common means of human waste disposal practised in Kibera was the defecation in polythene bags which were subsequently flung into the open fields and hence dubbed “flying toilets”. This was a primary method of excreta disposal, as more than 60% of people in Kibera engaged in this practice, which posed immense environmental and human health risks, as plastic bags blocked drains promoting flooding and exposure of the contents caused disease and illness.

The Asian Development Bank asserts that there is significant potential for ecological sustainable practices of energy and nutrient production through the recycling of human waste. Biogas and nutrients for agricultural use could be derived from processing human waste (Asian Development Bank, 2009). However, common human habits are difficult to break. Introducing innovation therefore meant that users needed to embrace new technology and use them correctly to improve environmental integrity and their personal health. In the slums of Kenya and Bangladesh, the use of a biodegradable sanitation “peepoo” bag was piloted. The technology is simply a packet which allowed the user privacy, minimal contact with the faeces and safe disposal. This sanitation technology is a scientifically developed ammonia based bag which reacts to urea, and in turn acts as a catalyst for destroying dangerous pathogens and decomposing the content for use as fertilizer.

Apart from being a sustainable ecological solution to human waste management, Munch *et al.* (2009) found that the use of the “peepoo” bag has an array of benefits:

- It is a safe method of disposal that affords privacy to the user.
- It is readily available and relieves the distress of poor people who may need to walk many metres away from home to either utilise any type of toilet if available, or to find a place to defecate in the field at risk of being attacked or raped.
- It offers women a dignified and safer option for sanitation needs. Women can quickly and easily access the bag while reducing the potential health problems through constipation and restraining the urge to urinate, causing susceptibility to urinary tract infection. It also reduces women’s exposure to risk to physical and sexual abuse because of waiting for dark to visit a nearby field for sanitation needs.
- The bag also isolates human and animal contact with faeces.
- The bag also obviates the use of water for disposal as it is a dry sanitation system.
- It offers a solution for areas where there is political unwillingness to provide temporary sanitation infrastructure to meet the needs of growing settlements.

This technology can be disposed into the ground after a single use. However, as common with all innovation, it ran the risk of rejection as it goes against the traditional practice of defecation in the study areas where “flying” and “hanging” toilet phenomena were common practices (Munch *et al.*, 2009: 4). According to Fatura *et al.* (2010), scientific methods of converting faecal matter into bio-waste for agricultural use could also solve societal food security and faecal management challenges. Their studies have shown that faecal waste may be converted to highly fertile material hygienically and sustainably. The application of anaerobic vermi-composting and lacto-fermentation through the “tera petra sanitation” solution yields an odourless product suitable for urban agriculture. This application was tested in Brazil and shown to be ideal in areas where upgrades of pit latrines, urine diversion and even bucket toilets are utilized. Fatura *et al.* (2010) stressed that the success of the on-site application, however, lies in effective participatory planning, well-guided fermentation of the end product and well-organised professional operations and maintenance for optimal, hygienic and pollution free recycling of faecal matter.

2.2.5 SANITATION ACCESS, OPERATIONS AND INFRASTRUCTURE

i) 'Supply Driven' Sanitation Solutions

Sanitation is about people. The need for dignity is inherent in all human beings. Therefore successful sanitation interventions hinge on user's acceptability of inventions to better manage human waste. Any innovation which compromises human dignity is bound to be met by rejection and failure. People in developing countries like India, Brazil, Vietnam, Kenya and others living in squalid conditions exercise restraint when needing to relieve themselves in the absence of any facility (Ganguly, no date; Munch *et al.*, 2009; Mehta & Movik, 2011).

Government-led or 'supply-driven' sanitation projects have arguably had limited success amidst scarce resources, in meeting the varied and enormous demands for sanitation worldwide (Lindell, 2008; De Albuquerque & Winkler, 2010). Community-led sanitation, non-governmental or civil society led programmes have yielded a greater degree of coverage and behaviour change in developing countries, endorsing a more inclusive governance approach (Ganguly, no date; Mehta & Movik, 2011; Reddy & Batchelor, 2012). However, both the government and civil society driven programmes meet equal challenges of user acceptance of the type of facility, maintenance and operations, and sludge management amongst other demanding and cost intensive implementation. The third sector in the governance chain yields varied but interesting results in sanitation delivery. This section looks at how market-driven sanitation solutions respond to user needs and how it opens up opportunities for small scale entrepreneurs as a preferred alternate delivery model (Solo, 1999; De Albuquerque & Winkler, 2010).

According to Ganguly (no date), India's Total Sanitation Campaign aimed at providing sustainable sanitation to rural communities has shown some degree of success regarding its local governance and self-funding model. During the International Sanitation Decade 1980-1990, India launched the subsidised Central Rural Sanitation Programme (CRSP) aimed at improving the lives of people and saving the dignity of women. Open defecation was an accepted practice as rural India has vast open fields and no sanitation systems. Hygiene and environmental issues were insignificant to poor communities; faeces decomposed and odours

dissipated in scorching hot weather conditions. The programme was supply-driven with sanitation facilities provided to ‘below the poverty line’ or the poorest of rural communities. However, almost two decades into implementation, neither funding aid nor good policy has enabled expeditious delivery or the expected success rate.

Ganguly (no date) adds that despite technical assistance and advice from WHO, UNICEF, and the UNDP, the six year review of the CRSP revealed that cultural practices and perceptions have impacted on people’s use of the facilities. Many people did not use the toilet. They also “perceived the need for sanitation toilet as low”. Behaviour change and acceptance of a formal structure for toilet needs were new and strange requirements. Toilets were actually being used for storage of household and agricultural implements (Ganguly, no date: 129).

A similar situational comparison of sanitation demands and delivery in countries like South Africa and Peru has a stark resemblance. While government noted large scale success in providing sanitation facilities, a significant portion of the population still lacked access to water and sanitation. Government’s attempt to provide innovative sustainable sanitation solutions was met with user rejection of the type of technology in South Africa (Buckley, 2007). In Peru, those who did receive government services were not satisfied. An impact study undertaken in 2000, revealed the following:

“... residents (64%) declared they did not use the facility (latrines) provided because a) latrines were not operating anymore (18%); b) foul smelling (16%); c) they prefer the open countryside for the disposal of excreta (11%); d) latrines attract insects (4%); e) the drop hole was already full (4%); e) other reasons. Whilst the remaining 36% of residents stated that they still didn’t have access to any type of sanitation facility” (Baskovich, 2008: 2).

Reasons cited for the apparent apathy of beneficiaries was that the type of facility provided created a feeling of being “second class citizens”, that the poor were not worthy of improved living conditions. Yet communities paid the bulk of the construction cost with no after care or maintenance services. While most of the study areas were not connected to main water or

sanitation networks, both the urban and rural poor citizens stated a preference to pay for run-off water systems rather than improved latrines supplied to them (Baskovich, 2008: 2).

Innovation around sanitation technology to meet the needs of communities living without access or poor sanitation facilities is often met with rejection (Ganguly, no date). In India, the Community-led Rural Sanitation Programme embarked on a change of strategy to include health care and sanitation hygiene education as an integrated approach. Despite an investment of US\$370 million, the overall rural coverage only increased by 1% annually between 1981 and 2001. Only 21% of rural households had access to sanitation facilities and combined rural and urban households with a total of 36.4%. It was apparent that user rejection was due to the lack of information and education on the use of the facility. Community participation was minimum or non-existent. The review confirms that the subsidised supply-driven, top-down model managed and guided by government clearly did not work. Subsidised toilet facilities did not ensure behaviour change or increased usage of the facility (Ganguly, no date: 129). It is therefore clear that improving access to sanitation is not merely a matter of improving the physical facilities, but also requires intensive community education and sensitisation (Padawangi, 2010; Reddy & Batchelor, 2012).

ii) Demand-responsive inclusive sanitation solutions

Some scholars are of the opinion that unlocking the potential for productive entrepreneurship is the key driver for economic growth and job creation, thereby improving the lives of people in developing countries (Baskovich 2008; Lindell, 2008; Brixiova, 2010). Government's failure to meet the growing needs of basic service provision has multiplied the opportunity and initiatives of the poor in developing countries to create livelihoods by offering services (Lindell, 2008). Manual disposal of human waste provides a livelihood for more than 700 000 locals in India, for example, where almost 13 million unhygienic bucket toilets are still used (Asian Development Bank, 2009: 11). The same entrepreneurial potential holds true for African countries where weak local government services and the lack of formal jobs have forced people to create their own employment (Solo, 1999; Baskovich, 2008; Lindell, 2008).

iii) Innovation and Market Competitiveness in Sanitation

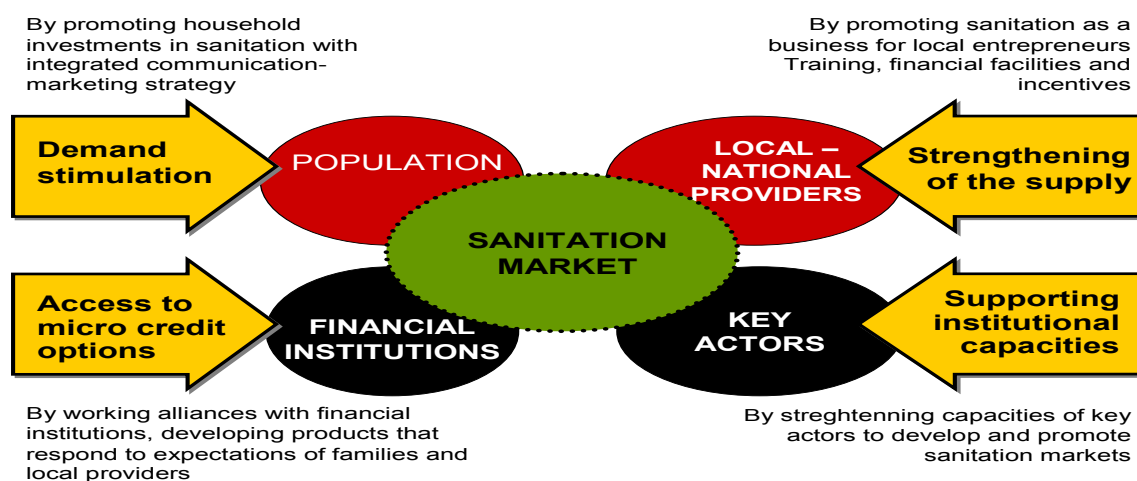
In certain developing countries, the market-driven model proved to be ‘demand responsive’, yielding greater success and customer satisfaction (Solo, 1999; De Albuquerque & Winkler, 2010). In certain countries, even the poor preferred a market-driven approach which gives them options with the choice of facilities they could access (De Albuquerque & Winkler, 2010). A study conducted in ten African countries by the UNDP-World Bank Water and Sanitation Programme between 1998 and 1999, recorded that peri-urban sanitation systems in African cities did not have water borne bulk infrastructure. Sanitation services were unregulated and informal, with reliance on public toilets as the only facilities in certain areas. Being outside the mandate of government, the cleaning of latrine systems were largely done by small scale entrepreneurs who also worked in an unregulated and untaxed non-formal sector, which employed up to 90% of the urban workers. These entrepreneurs worked in a highly competitive market as their services were unsubsidised and customer satisfaction was the only criterion to keep them in business. They were independent and therefore able to innovate around the type of service and facility they supported and maintained. Government-hired concessionaires discontinued services upon non-payment, increasing the need for small enterprises (Baskovich, 2008: 2).

iv) Alternative Pro-poor Sanitation Solution

The Peruvian government in partnership with the World Bank and other donor agencies’ baseline research indicated that poor communities felt marginalised by the approach to sanitation provision. They subsequently embarked on introducing a paradigm shift in provision of sanitation services. In localities which are representative of the diversity of cultural, geographical and social conditions of Peru, an alternative pro-poor sanitation solution was piloted. Geographically selected localities included urban areas, rural areas, small coastal towns, the highlands and the jungle regions. The pilot study was mindful of the objectives of social inclusion, equality and solidarity, which have a bearing on societal behaviour and practices (Baskovich, 2008: 1-13).

The Alternative Pro-poor Sanitation Solutions (APSS) pilot project offered an inclusive market-related solution for poor communities, with opportunities for the poor to enter the informal sector market through private sector driven sanitation solutions. The APSS integrated market-related, partnership-driven model introduced behaviour change in local communities seeking a local response to a local problem. Figure 2.4 illustrates the processes in introducing and marketing the APSS market approach.

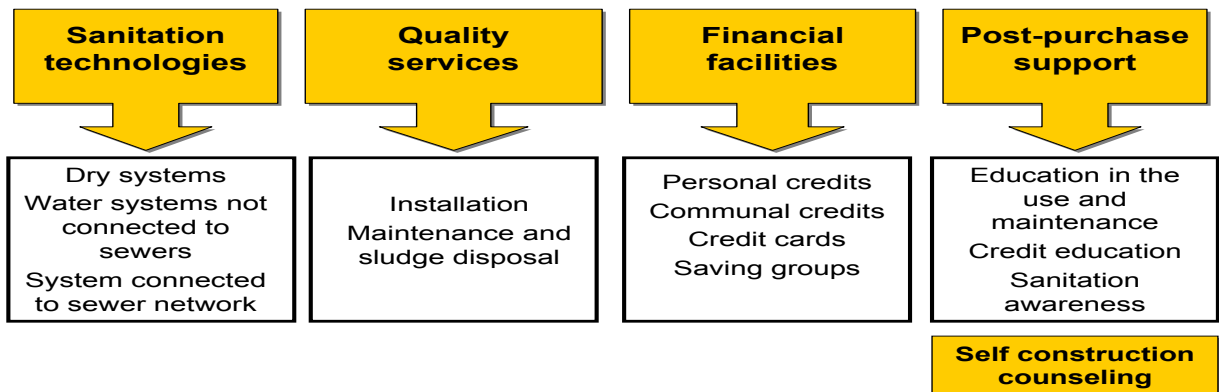
Figure 2.4: APSS Integrated Market-Related Partnership-Driven Model



Source: Adapted from Baskovich (2008: 4)

Communication, social marketing, promoting behavioural change and the offer of financing options encouraged poor communities to see business initiatives in sanitation provision. It was viewed as an opportunity to improve their living standards, well-being and environmental conditions, and restoring a sense of dignity. Sanitation options gave users a choice of a desired affordable system through an integrated sanitation package illustrated in the Figure 2.5.

Figure 2.5: Integrated Sanitation Package



Source: Adapted from Baskovich (2008: 8)

v) *Lessons learnt from the Peruvian APSS Model*

The APSS noted a number of lessons, challenges and successes:

- Commitment to activities of lower income groups or smaller enterprises increased through engagement in the larger economy.
- Larger private sector companies increased their interests in social corporate responsibility.
- The initiative shed new perspectives on restoring macro-economic stability, peace and democracy in Peru.

The challenges which remain include the following:

- Meeting people’s demands require ongoing innovation at low cost.
- Endorsing behavioural change as a medium to long term task requiring financial support.
- Sustained private sector involvement required optimal public sector support regarding regulation and promotion of market-related services.

The APSS model offers a new approach for market-related provision and increased choice for ‘customers’ providing an opportunity for growing a business-like mindset for the sanitation market. However, these come with a series of challenges, namely:

- Impact of international financial sector on the micro-financiers.
- A recommended government subsidised model does not augur well for the sanitation market and could disintegrate the APSS purpose of market-related sanitation provision.
- The market-related APSS approach calls for a change in paradigm, roles and functions of the different actors in sanitation governance.

The APSS market approach focused on quality sustainable sanitation services. It responded to people's expectations, creating a sense of social inclusion and satisfaction of the user, and promising improved basic services for the poor. The private sector engagement also provided an opportunity for skills transfers and knowledge building of local communities and emerging entrepreneurs, with emphasis on customer satisfaction. Improved product quality, branding and marketing, including research on innovation and environmental sustainability, were brought to the fore when local communities engaged as partners.

2.2.6 THE 'OTHER' SECTOR PARADIGM SHIFT

Solo (1999) noted similar success with the small scale entrepreneurship and NGO driven services sector, which he coined 'other' sector. The 'other' sector initiatives introduced a paradigm shift in countries like India, China, Tanzania, and Brazil. Its proven success lies in its ability to "produce appropriate models and fill every circumstance and need" (Solo, 1999: 121). Such models evolved to suit user needs. They have become a preferred choice of service providers due to their good customer relations and service quality, their ability to respond and grow with the demands, their capacity to reach the poor with flexibility in choice of technology and pricing of services. Scholars have iterated that the flexible and affordable sanitation solutions yield greatest satisfaction through improved services (Solo, 1999; De Albuquerque & Winkler, Gupta, 2010; Reddy & Batchelor, 2012).

The non-reliance of the 'other' sector on donor funding allows financial flexibility and market responsiveness (Solo, 1999). Their ability to build customer relationships through market mechanisms yet adjusting to customer needs, simultaneously introduced a new paradigm for

high, medium and low income earners, as service quality and customer satisfaction were paramount (Solo, 1999; Baskovich, 2008).

2.2.7 COMMUNITY-LED APPROACH TO IMPROVED SANITATION

Local knowledge is critical for effective planning. The Decade Declaration also gave impetus to policy review and improved systems in cities such as Abidjan, Delhi and Dublin:

“...for sustainable progress, particularly in rural development projects, there was a need for involvement of communities in the planning, design, financing, construction and maintenance of improved water supplies, with women’s groups taking the leading role; use of public and private sector resources to provide initial training and long-term support, so as to create an environment in which community management can function successfully; and choice of affordable, sustainable technology” (Abidjan Accord cited in DWAF, 1994: 7).

According to Michelutti (2008: 1-3), community-driven projects are aimed at empowering local communities while delivering water and sanitation projects. In Tanzania, the success of projects was dependent on the communities’ ability to develop efficient projects together with an effective governance plan. Most often, community freedom in prioritising project intervention focused largely on water and neglected the need for proper sanitation. The institutional systems in sanitation (and water) governance in Tanzania operate within a formal, informal and intermediate mechanism, as follows:

- The Formal Sector comprises the policy-makers, regulator and private companies hired by the services authority to provide the services to all areas, including the informal settlements. Co-operative organisations formed partnerships with the formal sector and provided support with local intervention in terms of finance and consultation of local actors.
- The Informal System served as a means for service acquisition by low income settlements that are not reached by formal means of distribution.

- The Intermediate System refers to the negotiators or facilitators between the formal and informal systems. They may be legal or illegal actors. They may include the NGO sector (Michelutti, 2008: 1-3).

The case of Dar es Salam presented conditions which by analogy, resonate with Sub-Saharan cities. Numerous systems and different blurry roles assumed by actors in the provision of sanitation contributed to the institutional fragmentation. Informal systems provided services in areas where formal distribution was not available. An increasing number of diverse actors from the non-governmental sector begin to work with local authorities as partners, advancing a more networked and complicated system with less control by the state (Michelutti, 2008).

In most countries, the extension of public participation to a diverse range of actors promised more successful interventions. From the political, social and economic spheres, in Uganda for example, arose the recognition that people cannot realise their economic and social rights if they cannot exercise their right to participate in decision-making. Accordingly, through participation, economic and social rights can be seen as positive freedom. Public participation in water and sanitation in Uganda is extended to district level, where NGO and CBO representatives are encouraged to participate. Local committees have an important role of overseeing the implementation of water and sanitation programmes, as well as ensuring co-ordination among the providers of services. NGOs also play an active role in monitoring of performance and ensuring accountability of service providers (Mwebaza, 2010).

A change in institutional approach with an endorsed multi-stakeholder, decentralised, more inclusive approach (Reddy & Batchelor, 2012), saw a resurgence of the sanitation sector programmes in many parts of India (Ganguly, no date; Mehta & Movik, 2011). An increased decentralised Gram Panchayat model in India noted success with more local participation. Information dissemination, involvement of NGO, CBO and Faith Based Organisations gave impetus to India's drive to address the sanitation crisis. However, only 10 of the 30 states were actively making progress towards achieving the MDGs, with Maharashtra and West Bengal excelling. The highly state subsidised toilet facility showed lesser success than the self-help minimum subsidy facility used in West Bengal, which created a sense of ownership and choice of facility. In Maharashtra, the community-led approach showed promise. The

eradication of open defecation was promoted through education and the offer of government subsidised materials (hardware) to communities to build their own facilities. This helped states move closer to their own planned targets which were still very distant from the total sanitation coverage for India (Ganguly, no date; Mehta & Movik, 2011). Institutional arrangements, information, hygiene education, social acceptance and behaviour change, cyclical inclement weather, and environmentally non-compliant types of facilities still remain a hurdle to India's sanitation challenge (Ganguly, no date).

2.2.8 SANITATION CHALLENGE FOR WOMEN CHILDREN AND DISABLED

Access to sanitation is also recognised as a fundamental human right in most African countries, including South Africa (Gupta, *et al.*, 2010). According to Mwebaza (2010: 10) “Basic sanitation can thus be said to have four key features, namely accessibility on a sustainable basis; the ability to meet the basic human needs of safety, hygiene and convenience; a service provision for both excreta and sullage disposal; and culmination in a clean and healthy living environment”. While the right is afforded to all citizens, women, children, people with disabilities and the aged require special infrastructure provision especially with regard to basic services such as sanitation. Non-provision of facilities for vulnerable groups contravenes human rights in most countries (Gupta *et al.*, 2010; Mwebaza, 2010; Mara *et al.*, 2010; Mehta & Movik, 2011; Reddy & Batchelor, 2012).

Copious literature alludes to the triple discrimination of women in terms of sanitation (e.g. Mara *et al.*, 2010; Mehta & Movik, 2011; Reddy & Batchelor, 2012). Women are more susceptible to infection in the absence of proper sanitation (Mara *et al.*, 2010). In the majority of the poor households, women are burdened with the maintenance of sanitation facilities and provision of water consuming many hours of their day (Solo, 1999). Due to increased responsibility of family and household sanitation demands, women are restricted from engaging in productive income-generating activities, thereby perpetuating poverty and hardship (De Albuquerque & Winkler, 2010; Gupta, 2010; Padawangi, 2010). Women fall victim to cultural and religious beliefs and practices, exacerbating easy access to proper sanitation (Mwebaza, 2010). They are also constrained by cultural and community practices which reverse efforts to eradicate unsanitary practices, perpetuating diseases and illness, and

counteracting the objectives of behaviour change and improved access to sanitation (Mwebaza, 2010; Padawangi, 2010; Groce *et al.*, 2011).

Special attention and effort will need to be concentrated on certain community practices that may run counter to the objective of ensuring access to sanitation (Padawangi, 2010; Mwebaza, 2010; Groce *et al.*, 2011). In rural Uganda, certain cultures permit open defecation. Therefore, low toilet coverage in some districts was prevalent. In certain cultural settings, women only defecate and urinate in the dark, exposing them to immense risk factors (Gupta *et al.*, 2010; Mara *et al.*, 2010; Reddy & Batchelor, 2012). Respondents stated that men are permitted to defecate in the open as they went about their daily duties of tending to their animals, and that women believed that they would become barren if they used a pit latrine (Mwebaza, 2010). Hence, the sanitation crisis arises not only because of the lack of infrastructure or availability of facilities, it is exacerbated by discrimination on the basis of religion, caste and tribal based, education-based differentials, weak economic status of states and the inability of poverty stricken communities to provide self help for their sanitation needs (Asian Development Bank, 2009; Padawangi, 2010). There are wider social repercussions, including “reduced school attendance, inconvenience, wasted time, and lack of privacy and security for women” (Asian Development Bank, 2009: 11).

The study by Mara *et al.* (2010) found that poor sanitation is responsible for a number of illnesses and potential death suffered by children. Faeco-oral diseases cause approximately 1.6-2.5 million deaths annually in children under five years old. Poor sanitation also causes tropical diseases which result in disability. Blindness causing Trachoma is most prevalent amongst the poorest. Helminth infections transmitted mainly through exposure to faeces are exacerbated by open defecation, which impacts negatively on the nutritional status of children. Schistosomiasis resulting in debilitated growth and impairment is contracted through exposure to contaminated faeces and urine. Although these diseases occur in adults as well, children are most susceptible to these fatal illnesses. The study identifies that the shortfall with mitigating these hazards is that treatment is given through medication, yet improved sanitation shows greater promise of prevention and mitigation (Mara *et al.*, 2010: 1).

The World Bank Convention on the Rights of People with disabilities identifies the universal rights of persons with disabilities, emphasising that their needs should be mainstreamed in all developmental outcomes to ensure that they benefit equally. Particular attention is raised around the vulnerability of women and children with disabilities, who are at great risk inside and out of their home. This escalates the need for access to infrastructure to ensure an adequate standard of living (Guernsey *et al.*, 2007). Dube (2005) states that the rights of persons with disabilities within all sectors of society in South Africa gained impetus in the democratic era. However, Matsebe (2006) bemoans the fact that sanitation legislation and policy has failed to meet the practical requirements of the disabled person's sanitation access. The inability to integrate the needs of disabled is not only discriminating in terms of the human rights of the individual, but also encroaches on family members or caregivers. Family members are constrained by the lack of adequately designed facilities at household level, restricting their human and economic engagements.

2.2.10 CONCLUSION

This section reflected on the copious review of the endemic sanitation challenge throughout the developing world. It draws on the global benchmark towards poverty alleviation and improved living conditions which was set out in the Millennium Development Goals (MDGs). According to the MDG declaration, sanitation is one of the key indicators of improved quality of life. Access to improved sanitation also determines the success of three other MDG goals related to health and quality living environment. The literature revealed that a concerted effort is being made to alleviate the sanitation crises and meet the target of halving the population without adequate sanitation by 2015. However, for many countries in Africa and Asia, this is a distant reality.

The literature survey also demonstrated that the dominant problem is the lack of access to sanitation coupled with ineffective physical infrastructure provided by government. Numerous strategies to deliver sanitation to the poorest communities prove ineffective without an integrated multi-stakeholder governance approach to sanitation. Innovation regarding sanitation technology bears no fruit if too much emphasis is placed on

infrastructural issues, neglecting the softer issues of education, social acceptability and behaviour change.

The literature demonstrates that there are stark weaknesses in sanitation governance. Supply side challenges include institutional incapacity, lack of resources, lack of political will, and tokenistic participatory governance in the sanitation sector. The chapter also underscores the economic potential of sanitation for poor communities through entrepreneurial initiatives regarding human waste management. The literature illustrates that the crisis of environmental degradation through poor waste management could be mitigated through innovative recycling of human waste.

While women suffer most in the absence of proper sanitation, they have proven to be catalysts for change in improving sanitation governance. It is imperative for sanitation governance to be a multi-stakeholder, inclusive approach. Solo (1999) recommends that an alternate, more flexible regulatory mechanism be derived at to allow the 'other' sector, comprising community organisations and private small enterprises, to continue to deliver efficient services to consumers.

CHAPTER THREE: GOVERNANCE AND THE INSTITUTIONAL APPROACH TO SANITATION IN SOUTH AFRICA

3.1 INTRODUCTION

This section conceptualises the South African governance approach, policy choices, systems and processes that facilitate service delivery. It unpacks South Africa's decentralised governance structure and the related legislation, policies and strategies adopted to deliver services to citizens. It outlines the history of sanitation policy development, strategies and alternative service delivery mechanisms adopted to address the sanitation crisis, in the delivery of sanitation to previously unserved communities. Various arguments relating to weakness in sanitation policy in South Africa are also presented.

3.2 DECENTRALISED ARCHITECTURE OF GOVERNANCE IN SOUTH AFRICA

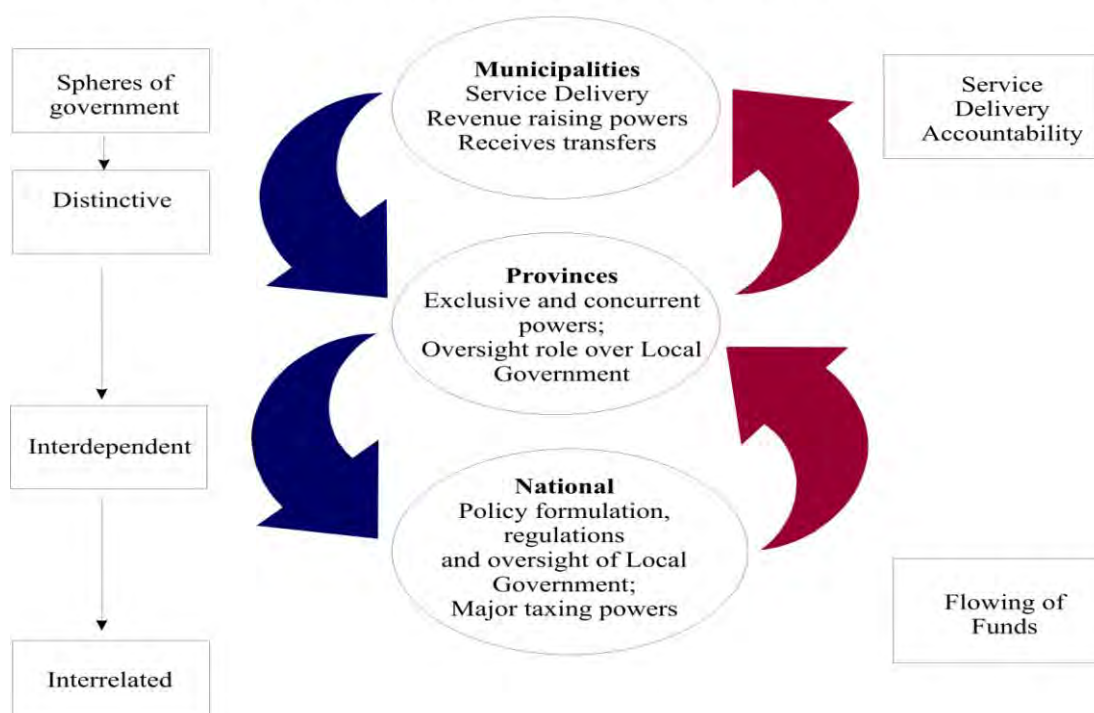
Post-authoritarian states and cities differ in the degree of supra-national influence on level of political decentralisation required to meet social, democratic and economic requirements in different countries. Strategies to achieve socio-economic and democratic ideals often succumb to multi-scalar governance pressure due to the lack of resources (Guarneros-Meza & Geddes, 2010).

In most post-authoritarian regimes, dependence on supra-national intervention brings out the complexity of the relationship between neoliberalism, democratisation and decentralisation. Governance mechanisms and level of neoliberal influence on local regimes are dictated by the availability of financial resources, capacity, and the degree of political autonomy devolved to sub levels of governance (Guarneros-Meza & Geddes, 2010). Globally and more especially in developing countries, decentralisation has been an experimental model to improve governance, better manage public resources, deepen democracy through increased participatory governance, and enhance the capacity of sub-national governments (Galvin & Habib, 2003; Conyers, 2007; Salazar, 2007; Hampwaye, 2008).

According to Sabela & Reddy (1996: 8), democracy and decentralisation are not necessarily always paired: decentralisation implies that power should be shared and not centralised and is thus best described by the adjective “democratic”. The added value of democratic decentralisation for African countries is two-fold, where decentralisation refers to the organising of power sharing as its political ideal and local self-government as its institutional ideal.

The decentralised architecture of governance in South Africa following the democratic dispensation in 1994, has resulted in the reorganisation of tiers of government into national, provincial, and local spheres. The new system of government may be described as political decentralisation through the devolution of powers and authority from a centralist national state to sub-national spheres of provincial and local government (Reddy, 2006; Mattes, 2008). According to Mattes (2008), South Africa exemplifies the African vision for decentralised governance, instilling democratic governance and severance from an Apartheid-like centralist governance mechanism (Mattes, 2008).

Figure 3.1: Decentralised Governance Model in South Africa
Current Governance Model



Source: Adapted from Department of Provincial and Local Government (2007: 11)

The decentralised governance model adopted by South Africa comprised National, Provincial and Local Government spheres. The three spheres in the political governance system in South Africa as illustrated in Figure 3.1, are legislated to be distinctive, inter-related and independent, while functioning as a synergistic institutional ‘technology’ (Constitution, Act 108 of 1996, ss40-42).

According to Dickovick (2005: 184), in the first wave of decentralisation South Africa was the division of four provinces to nine. The demarcation of nine provinces came with the decentralisation of national resources in the form of ‘equitable share’, which gave Provincial and Local Governments the policy directive to plan and implement government services within their jurisdiction. The approach, strategy, institutional, legislative and policy environments underwent decentralised reforms as a constitutional imperative. Chapter 3 of the Constitution of South Africa (Act 108 of 1996: Chapter 3) embodies the principles of co-operative governance which envisage a synergistic and co-ordinated response to the delivery of services by all spheres of government. Its efficiency and effectiveness pivot on sound inter-governmental relations, with all three spheres working as one government. According to Dickovick (2005), South Africa is viewed as a forerunner in legislating Inter-governmental Relations laws.

3.3 CONCEPTUALISING SANITATION DELIVERY WITHIN THE DECENTRALISED GOVERNANCE FRAMEWORK

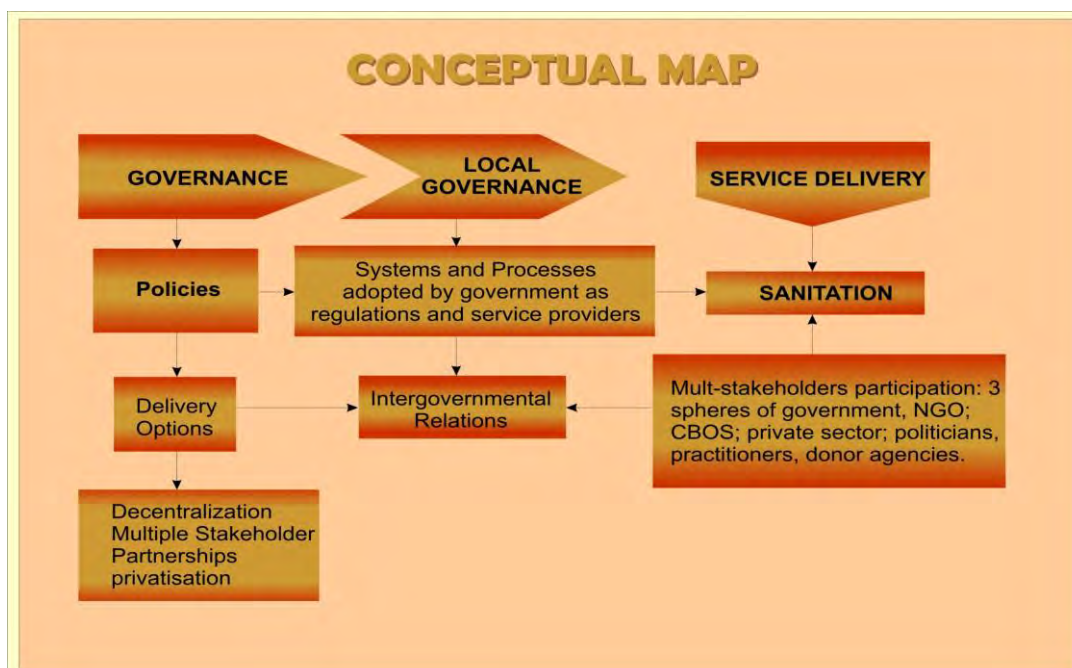
The delivery of sanitation services in South Africa exemplifies the decentralised model due to the role of multiple stakeholders from all three spheres of the governance model and beyond. Decentralised systems were seen as a pragmatic solution to service backlogs created by the disenfranchisement of the majority of the population in the country (Heller, 2001).

In the South African system, the general tenets of decentralisation are, political (legislative functions devolved to regional or local levels), administrative (bureaucratic functions devolved) and fiscal (devolution of responsibilities for expenditure or revenue rising or both, to other levels) (Wittenberg, 2003). Although decentralised local governance is constitutional,

its legitimacy is contested due to lack of resources to achieve the goals of poverty eradication, improved services and better life for its citizens (Guarneros-Meza & Geddes, 2010).

Figure 3.2 presents a diagrammatic flow of the various concepts which relate to sanitation governance/delivery within a decentralised governance paradigm. It illustrates relationships between the governance, service delivery and a number of concomitant policies, regulatory systems and processes which enable the delivery of services within a decentralised system of governance. Specific reference to sanitation delivery is mapped. It links the broader governance paradigm to the local governance framework which facilitates the multi-stakeholder approach adopted for sanitation delivery in South Africa.

Figure 3.2: Conceptual Map of Governance and Sanitation Delivery



Source: Developed by the Author

3.3.1 CHALLENGES WITH OPERATIONALISING DECENTRALISED GOVERNANCE IN SOUTH AFRICA

Decentralisation in South Africa is still evolving politically and institutionally. Critics assert that the decision to decentralise governance in South Africa was symbolic and a merely a strategy to prevent political hegemony (Heller, 2001; Burger, 2005). Institutions of the state

are challenged with operationalising decentralised governance systems through its cooperative governance model (Tapscott, 2000). The decentralised system is highly centralised, questioning the workability of the 'new' system (Simeon & Murray: 65). According to Tapscott (2000: 122), despite conscious labelling of the three levels of government as "spheres" and not "tiers" is to decommission any forms of hierarchy between the spheres of government is still prevalent. Confusion and discontent with devolution of autonomy to sub-levels of government has potential for political and social instability because the ANC fears that:

“...the devolution of too much authority to the provinces could lead to a situation where the national government's efforts to overcome the legacy of apartheid and to build a new national identity would be thwarted by political intransigence at lower levels” (Tapscott, 2000: 122).

3.4 INTER-GOVERNMENTAL RELATIONS AND CO-OPERATIVE GOVERNANCE

The enactment of the Inter-governmental Relations Framework Act, 2005 (Act 13 of 2005), coupled with other legislation, forms the structural foundations and institutional expression for cooperative and collaborative governance between the organs of government. The Act provides the legal bases for conflict resolution between organs of the state to ensure that government achieves positive policy outcomes through its co-operative governance model. The definition of functions, responsibilities and relationships between the national and sub-national levels vary within decentralised systems. According to Wittenberg (2003), decentralised systems have been in flux with fragmentation in regional and local spheres, impacting on the overall intended purpose. The devolution of powers and related policies was slow to translate to action. This was due to the unenthusiastic response of central government to yield power to sub-national levels and poorly designed policy to implement change (Burger, 2005). Consequently, decentralisation policies have failed in various sectors producing the sub-optimal results (Burger, 2005; Ile, 2010).

Ile (2010: 51) asserts that inter-governmental interactions are the “glue” to sustaining democratic practices and improving government’s response to its constituencies. Yet, there is a lack of synergistic inter-governmental relations within different contexts and decentralised models of governance (Wittenberg, 2003). Edwards (2008) concludes that conflict, lack of compliance, misinterpretation of the requirements of the Inter-governmental Framework Act, 2005 are some of the identified incoherencies.

According to Ile (2010), despite 15 years of democracy and legislated inter-governmental outcomes-oriented governance systems, service delivery goals remain unattained. Ile (2010) argues that weak leadership and the competition rather than co-operation between administrative and political governance systems thwarts complementary outcomes-oriented service delivery. He points to cracks in the system: firstly, leadership does not promote strong cooperative governance and inter-governmental relations, by moving beyond the cosmetic compliance mode of governance to more service oriented outcomes. Secondly, the President’s political vision is delayed and inefficient because the three spheres of government battle to sustain a shared focus (Ile, 2010).

Dickovick (2005: 184) is of the opinion that despite the devolution of responsibilities, “decentralisation was partial as the fiscal autonomy did not change”. He asserts that whilst the devolution of policy-making and the authority to implement occurred in the different spheres of government, the question of the degree of legal, political and fiscal autonomy remains a debate (Dickovick, 2005). According to Niksic (2004), administrative and fiscal decentralised systems are the key components of the South African macro-economic neoliberal policy, and were seen as a way to include greater civil society participation in service delivery to enhance sub-level or local governments’ capacity to deliver basic services. He also argues that fiscal decentralisation was also the ANC government’s strategy to implement their neoliberal policies (Niksic, 2004).

3.5 SANITATION DELIVERY IN SOUTH AFRICA

This section focuses on how sanitation governance is operationalised within the decentralised governance system of South Africa, as the responsibility to deliver sanitation lies with the

three spheres of government. All three spheres share the responsibility of either policy formulation, implementation or monitoring and evaluation of sanitation services.

Despite concerted efforts to improve basic service delivery globally, approximately 780 million people still do not have access to clean potable water and approximately 2.5 billion are without adequate access to basic sanitation (UNICEF and WHO, 2012: 2). A similar situation mirrored the racially divided South African population at the advent of democracy in 1994, when an estimated 12 million people were deprived of adequate water services and 21 million were without adequate sanitation. Notable progress has been made post-democracy, where almost 9 million unserved citizens have been provided with water supplies. However, sanitation delivery is still fraught with challenges and progress has been much slower than required (DWA, 2003). In South Africa, by 2008, approximately 3.3 million people still needed to be serviced to meet government's target of providing a basic level of sanitation for all by 2014 (Van Vuuren, 2008). The Quality of Sanitation in South Africa Report (DWA, 2012) reveals that sanitation service delivery is still in a parlous state despite concerted government efforts to develop policies and strategies to address the predicament:

“...while access to sanitation is increasing (albeit at less than an optimal pace) from a functionality and adequacy point of view, as many as 26% (or about 3.2 million households), apart from the 9% (or 1.4 million households in formal areas) that have no services and 64% of households making use of interim services in informal areas (584 378 households), are at risk of service failure and/or are experiencing service delivery breakdowns” (DWA, 2012: 16).

South Africa is clearly in a quandary with resolving its sanitation crisis as bulk and household level infrastructure failure, neglect of sewer treatment infrastructure, unsustainable maintenance and operations, and rural-urban in-migration still leaves 11% of the national population unserved (DWA, 2012: 17).

Following tough lessons of death and disease, the South African government stepped up its policy and guidelines which veered towards defining how sustainable water services (i.e. water and sanitation provision) are achievable within an environment of co-operation and

development. In order to find workable solutions, government saw the need to regulate services in a way that is consistent with national policies and targets. A need for outcomes-based regulation allows that service authorities do not provide services solely to paying consumers but that the poorest communities throughout the land are prioritised (DWAF, 2005).

3.5.1 AN INCLUSIVE POLICY APPROACH FOR SUSTAINABLE DEVELOPMENT

For South Africa, the years of policy construction from 1994-2001 were difficult, as the country was undergoing an overhaul of governance systems and processes in all sectors of economic, social and political redesigning. This period was, however, seen as an opportunity to effect fundamental change and redress (De Coning & Sherwill, 2004; De Coning, 2006). The designing of policy and legislation was embarked on with a vision of an inclusive policy approach to change the lives of the people previously trapped in racial discrimination and subjugation (DWAF, 1994; De Coning, 2006).

3.5.2 HISTORICAL, LEGAL AND POLICY FRAMEWORK OF SANITATION PROVISION IN SOUTH AFRICA

This analysis of sanitation governance in South Africa delves into the historical background, and the legislative and policy implementation imperatives, together with an inspection of the roles and responsibilities of the respective stakeholders in the provision of sanitation to citizens. It provides insight into the rationale behind the tenets of the sanitation policy by tracing the history of disenfranchisement to a period of basic services for all.

The next section delves deeper into understanding the history of sanitation governance and its current institutional arrangements, challenges, innovations and successes in South Africa. It provides the chronological history of sanitation policy development in post-Apartheid South Africa

i) Period pre-1994

Pre-1994, an estimated 21 million people did not have access to basic sanitation which was then described as a ventilated improved pit (VIP) toilet. In the same period, the South African governance mechanism was fragmented and divided into different administrative and political machinations. The country comprised eleven compartments constituting six independent 'homelands' with mainly rural tribal authorities, and four TBVC (Transkei, Bophuthatswana, Venda and Ciskei) states. The dominant tri-cameral Republic of South Africa was divided into three tiers with racially determined, varied powers and resources (DWAF, 2002: 2).

This era was marred with incohesive delivery mechanisms and absence of guidelines for sanitation provision. Rural and urban areas had no sanitation infrastructure and the existent infrastructure was in a state of disrepair. Black urban and rural authorities lacked support and capacity to address the needs of the people. Furthermore, black authorities lacked the political will and the voice to demand change as the boundaries of authorities sometimes overlapped complicating administrative processes. The absence of policy guidelines and resources constrained their ability to serve the needs of the black people. This resulted in the use of bucket systems or very basic pit toilets. Little or no consideration was given to design, operation and maintenance, community health and hygiene or environmental integrity in relation to sanitation (DWAF, 2002).

ii) Period 1994-2001

During this period, sanitation delivery was identified as a priority by the newly-elected democratic government. A new department of water and sanitation was created, merging all previous departments into one unified mechanism which was mandated to serve all the people of the country. As custodian of policy, the Department of Water Affairs and Forestry (DWAF) prioritised policy development, resource mobilisation and implementation support to local government, which was identified as the service authority for sanitation delivery. Increased focus was placed on strategy integration for basic services with particular emphasis on rural water and sanitation provision. The Department then embarked on a country-wide Community Water Supply and Sanitation Programme (DWAF, 2002).

During this phase, the Constitution of South Africa (Act 108 of 1996) was adopted and local government was identified as the main supplier of water and sanitation. Subsequently, a series of legislation defining the role and structure of local government was promulgated, including the Local Government Demarcation Act 27 of 1998, the Municipal Systems Act 117 of 1998, the Municipal Structures Amendment Act 33 of 2000, and the Municipal Systems Act 32 of 2000 (DWAF, 2002).

The Department of Water Affairs and Forestry took responsibility for sanitation delivery where local authorities were not ready to roll out services. The key aim of government was for basic services to reach all people as soon as possible. In terms of the Free Basic Services Policy, households were entitled to 25 litres free water per day within 200 metres from their dwelling as well as a basic VIP latrine. The main targets were peri-urban, rural and informal settlements, where the need was huge and critical to the general well-being of citizens (DWAF, 1998).

Strategy development began by establishing a National Sanitation Task Team (NSTT) comprising all national departments responsible for the provision of sanitation together with the NGO sector, Mvula Trust, which was established to facilitate an integrated inter-departmental approach to sanitation delivery. Following consultative processes, a framework for a national sanitation programme was devised culminating in the Draft White Paper on Basic Household Sanitation (1998). Subsequent to implementation of programmes and learning from implementation experience, the White Paper on Basic Household Sanitation was revised and endorsed by parliament in 2001 (DWAF, 2002).

iii) Period 2001-2002

This period saw significant progress with addressing the inadequacies of the past through backlog eradication and coherent policy frameworks to guide sanitation provision. However, simultaneous challenges were experienced which slowed delivery in certain areas. Water supply and sanitation services were a designated competence of local government, while policy formulation was that of national government (De Coning & Sherwill, 2004; De Coning, 2006). Despite the re-engineering of local government structures and mechanisms to

better fulfil its developmental mandate and bring basic services to the people, government was still battling to meet the demands of sanitation which exceeded supply (DWAF, 2002).

The focus was to provide a basic level of service and health and hygiene awareness to communities. The community-based approach identified the most vulnerable as the highest priority, affording them an opportunity for skills development through engagement in local sanitation programmes aligned to the Integrated Rural Development Plan (DWAF, 2002).

The critical implementation phase of the national sanitation programme progressively met fixed targets. However, the cholera outbreak in KwaZulu-Natal in 2001 called for a review of governance mechanisms. The relationship between poor sanitation practices, inadequate access to sanitation and water facilities became an urgent concern (DWAF, 2003; Hemson, 2006). This initiated close examination of interdepartmental collaboration and leadership in the Water Services Sector. The effectiveness of improved access to sanitation and the impact thereof depended on the availability of resources such as water and knowledge on how to maintain hygienic practices. A policy review resulted in the National Cholera Strategy (2002). The link between water, sanitation and health was increasingly becoming evident and joint planning and implementation was imperative so that sanitation services could improve the lives of people (DWAF, 2002).

In the policy arena, increased efforts by government to develop outcomes based policy instruments were outlined in the Strategic Framework for Water Services (2003) to improve the sanitation situation in South Africa. Ongoing policy review processes intended to close gaps in sanitation policy as well as accommodate changes in local government reform spawned a White Paper on Water Services, including sanitation (De Coning, 2004). A host of policy gaps were identified and the need for clear policy guidelines in areas of free basic sanitation, on how to embark upon ways to address sanitation in informal settlements, setting norms and standards for farm dweller sanitation and emergency sanitation was identified (DWAF, 2002; De Coning, 2004).

iv) Period 2005-2007

The Department of Water Affairs (DWA) established a bucket eradication programme for the removal of bucket toilets existing prior to 1994. The target of complete eradication of this type of facility was 2007. The backlog was approximately 252 254 in 2005. A recorded 133 953 buckets were removed between the years 2005-2006. However, the target to wipe out the bucket system was not achieved (DWA, 2008; Sanitation, 2008; Water and Sanitation, 2008). In early 2007, backlogs of 118 301 remained; at the end of 2008, there was 23 083 still remaining (DWA, 2008).

v) Period 2009-current

The National Department of Housing (DoH) now referred to as the Department of Human Settlements (DHS) became the home for sanitation infrastructure planning and development. In terms of the White Paper for Basic Household Sanitation (2001), sanitation forms part of an integrated housing plan (DWA, 2001). Since 2009, the delivery of sanitation was transferred to the Department of Human Settlement's inclusive housing delivery function. The DHS is therefore responsible for the national sanitation programme which is overseen by the National Sanitation Programme Unit within the Department. DHS administers the new Rural Household Infrastructure Grant (RHIG), as well as the new Urban Settlements Development Grant (USDG), which includes sanitation as a basic service which cannot be precluded from its housing development initiatives to meet the Presidential Outcomes 8 pertaining to "sustainable human settlements and improved quality of household life" (Tissington, 2011: 54).

3.5.3 SANITATION POLICY AND CO-OPERATIVE GOVERNANCE

According to Plaatjies (2008: 136), "depending on the policy context, content, design location, and obligation, implementation of policy in South Africa is potentially imposed or becomes a voluntary co-ordinated response which undermined the intentions of co-operative governance". The decentralised policy implementation responsibility and accountability has to be clearly defined to avert different interpretations of policies.

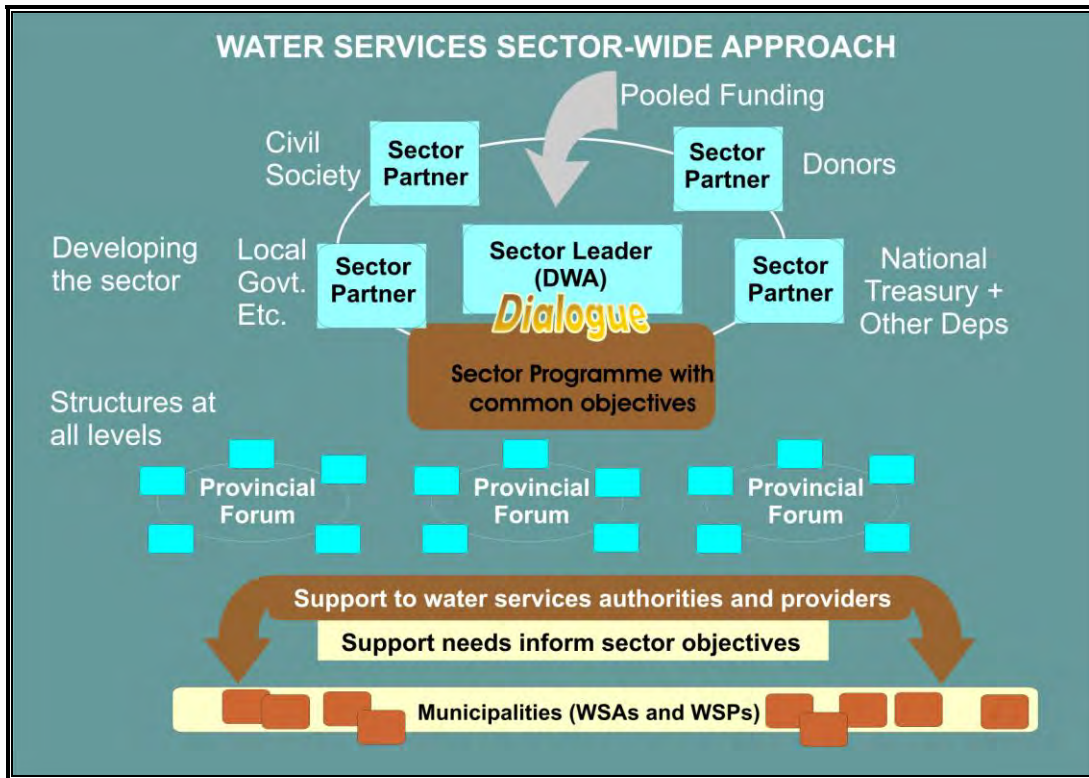
The Division of Revenue Act (promulgated annually) gave impetus to the devolution of responsibility to local government for sanitation delivery in South Africa. The decentralisation of sanitation policy implementation from national to local government was mainly through devolution of responsibility and accountability, while regulation was still centralised (Lane, 2004). The National Department of Water Affairs only contributes to sanitation delivery through a primary redistributive grant funding for essential sanitation infrastructure. The local government equitable share grant and the capacity building grant are the contributions by national government for the operational aspects of sanitation. Municipal authorities are to complement such grants and meet operational costs of sanitation. Municipalities assumed responsibility for policy, strategy and delivery of sanitation (DWAF, 2003).

The grants by national government are discharged to the Water Services Sector and comprise funding for water supply. Only a share of such grants is allocated to sanitation at the discretion of the local authority. The debate about such fiscal decentralisation is that water delivery often comprises the larger share compared to waste water and sanitation services. Sanitation delivery remains inadequate if the local authority is unable to raise sufficient revenue to deliver high level sanitation infrastructure and services.

3.5.4 WATER SERVICES SECTOR-WIDE APPROACH

The Sector Wide Approach to Water Services is a model of decentralisation and co-operative governance as promoted in Chapter 3 of the Constitution of South Africa (Act 108 of 1996) (RSA, 1996). The water and sanitation sector distinctly reflects the three sphere strata defined in the Constitution as a co-operative governance approach to policy implementation. The national, provincial and local government role in this sector is independent and interdependent yet distinct from each other.

Figure 3.3: Water Services Sector-Wide Approach: “Let’s Work Together”



Source: Adapted from De la Harpe, 2008

According to the International Research Commission, South Africa is a water scarce country with disparate levels of services in metropolitan urban and rural areas (De la Harpe, 2008). The conventional historically privileged areas have higher service levels while the rural and poorer areas lack services. The current (post-democracy) population growth in more developed areas indicate that the population is in flux, as migration is rampant. The high water and sanitation backlogs are dogged by institutional incapacity and weakness in operations and maintenance of services to support growing populations (De la Harpe, 2008; Tissington, 2011; DWA, 2012).

DWAF had undertaken to provide policy guidelines for implementation of sanitation by developing sector specific regulatory frameworks and guidelines. As per the Water Service Act (1997), regulatory frameworks and guidelines prepared by national government for water services should include operational guides for “a basic water supply service and/or a basic sanitation service or any part thereof” (Water Service Act, 108 of 1997). Against this backdrop, policy and implementation guidelines were

developed to improve services regulation and the approach to implementation. In this regard, water and sanitation are distinctly different services. Sanitation efficiency is largely but not solely dependent on availability of water supplies.

Policy-makers and scholars proffer that joint collaborative effort amongst the different actors within the sector is the panacea to address institutional fragmentation, incapacity and improved governance and thereby implementation reform (De la Harpe, 2008; Still *et al.*, 2009). The water services sector strategy called “Masibambane”, meaning *let’s work together*, was established for joint decision-making and support. Masibambane is aimed at promoting sector-wide collaboration which comprises water, sanitation and waste water management services implemented by departments across the three spheres of government. Partners within the water services sector include various government departments, the South African Local Government Association (SALGA), donors, NGOs, municipalities, training institutions, civil society, water services institutions, the private sector, parastatals, professional bodies, etc. (De la Harpe, 2008).

According to De la Harpe (2008), the Masibambane mechanism comprised policy implementation strategies and guidelines to improve water and sanitation services. The first phase of Masibambane developed the following:

- The National Sanitation Policy (1996) was finalised and approved by cabinet.
- Strategic Framework for Water Services approved by Cabinet in September 2003.
- Joint Policy Position - Transfer of water service schemes finalised in January 2003 was an agreement between DWAF, DPLG, National Treasury and SALGA to jointly support the sector with the delivery of water supply and sanitation services. It explained how transfer of functions for the provision of water sector services will be given effect guided by the principles set out in the Strategic Framework for Water Services (DWAF, 2003: 19).
- The National Water Services leadership group was thereafter established to advise and support sector departments.
- Provincial Sector Committees were established in each region, providing geographic specific information to ascertain support and guidance.

According to De la Harpe (2008), the suite of policy and guidelines did not mean that the sector was insulated from challenges. However, it was envisaged that partnerships and sector-wide support would develop capacity and guide sector stakeholders serving almost 3 million people with water infrastructure and 1 million people with sanitation infrastructure (De la Harpe, 2008).

3.5.5 ‘DECENTRALISATION’ TRANSFER POLICY (2003)

The Water Sector Services decentralised co-operative governance model had been lauded for its post-apartheid policy commitment towards ‘a better life for all’. The devolution of water and sanitation gave authority to local government to provide services with support from the national departments (Lane, 2004).

Devolution of power, gave authority to local government to determine the most suitable approach to addressing sanitation delivery. However, prescribed guidelines and targets were set nationally. The decentralisation of implementation with strong control from the national sphere was contentious. The decentralisation of the water and sanitation services to local government was regulated through a Transfer Policy. According to De la Harpe (2008), the redefinition of roles and governing styles despite intense consultative processes were highly turbulent. These processes were instituted post-2003, where the transfer of staff, assets and operational subsidies were given effect through a Transfer Policy. Many municipalities refused to accept the responsibility of poor infrastructure and inadequately skilled staff. Local government felt that the operational cost of water and sanitation services was high and that the grant offered by national government was insufficient. The transfer was constitutionally binding and obligatory forming part of a decentralisation strategy (De la Harpe, 2008). However, despite guidelines to understand and interpret the implementation of the National Sanitation Policy, municipalities could not deliver sustainable sanitation to the historically deprived poor, living without improved infrastructure.

A review of the National Sanitation Policy and Practice found that even though the policy framework provided enabling support for municipalities to deliver sustainable sanitation services, there was poor interpretation of the policy by practitioners. This resulted in

insufficient focus on “hygiene awareness, behavioural change, operation and maintenance, community involvement, solid waste disposal and grey water management” which are pivotal to holistic sanitation for improved living conditions (Mjoli, 2010: vii). A call was made for a review of the National Sanitation Policy and clarity on the contradictions identified in the White Paper on Basic Household Sanitation (2001) and the Strategic Framework for Water Services (2003).

3.5.6 CO-OPERATIVE MULTI-STAKEHOLDER SANITATION GOVERNANCE

The South African governance systems requires that all spheres of government work in an inter-related, interdependent and independent manner in meeting its services mandate to its citizens. According to Gumede (2008), South Africa’s institutional strength and integrated governance approach indicates that the principle of ‘one government’ working towards developmental goals in partnership with the citizenry towards a common good has been applied.

The integrated inter-governmental approach to sanitation delivery maps out the operations which need to be effected in order to afford citizens their constitutional right of basic sanitation provision for improved living conditions, environmental sensitivity, human dignity, healthier living and provision of services. Sanitation provision is an integrated operation. It requires the effort and co-operation of many sectors to achieve the goal and purpose of improved sanitation (DWAF, 1994). Such integration and co-operation emanates from the intentions and actions of actors within the governance arena of sanitation. A multi-level intervention requires clear legislative, policy and implementation guidelines in order to ensure synergistic and encompassing approach to sustainable sanitation provision.

Simeon & Murray (2001) state that the benefit of a multi-level system lies in the capacity of the different levels to execute its roles and responsibility. They define the parameters of capacity as administrative, political, fiscal and inter-governmental. However, critics observe that there are a number of fault-lines in intergovernmental relations due to government’s inability to manage the delegation of responsibility (Ile, 2010). Organs of government are

incompetent and unable to co-ordinate, integrate, monitor and evaluate delivery of their own mandates:

“Weak coordination has exacerbated the problems of non-compliance, non-adherence to the existing sectoral framework, weaknesses in the oversight function, lack of monitoring and evaluating of progress as well as poor communication” (Ile, 2010: 56).

Despite a suite of supporting legislation and policy to guide inter-governmental relations and thereby co-operative governance, a number of inconsistencies still question the effectiveness of structures and policy frameworks in South Africa. Departments do not have the capacity to deliver on their mandates and worse still, to manage the agencies deployed to undertake their responsibility to deliver services. Incapacity is exacerbated by poor monitoring, evaluation and remedial guidelines, resulting in sub-optimal delivery. It is therefore vital for departments who choose to delegate, to have a fool-proof plan to access quality services and manage government agencies (Simeon & Murray, 2001).

3.5.7 INTER-GOVERNMENTAL ROLES AND RESPONSIBILITIES IN SANITATION DELIVERY

There are a number of departments across the three spheres of government that are jointly responsible for the delivery of sanitation. The DEAT is the regulatory body for sanitation (and water) services. The line function departments e.g. Department of Health, DoE, DoH, DPLG, Department of Public Works (DPW), DEAT and SALGA are represented on the task teams at national and provincial levels (DWAF, 2005).

Department of Water Affairs and Forestry (DWAF)

The DWA, previously called DWAF, was the direct provider of water and sanitation services during the policy and legislative transition to a democratic state between 1994 and 2000. DWAF is the custodian sector supporter, responsible for policy formulation, including the development of regulation and information dissemination pertaining to water and sanitation services. DWAF also serves as the facilitator of co-operative governance relations providing

clarity on the *modus operandi* of partner departments, enabling citizen participation through effective communication (DWAF, 2003).

As a custodian of water and sanitation services, DWAF founded principles based on the vision for good regulatory practice and policy (DWAF, 2003: 72-73):

- a. Separation of regulatory practice for water services (i.e. water supply and sanitation services) and operational responsibilities of local government and other institutions to be instituted and defined.
- b. Integration and alignment with local government regulatory framework for both water and sanitation to be clearly stated.
- c. Incremental regulation with a move away from ‘one size fits all’ approach to urban, peri-urban and rural context matching the capabilities of the water services authority to be adjusted accordingly. It is recognised as different contexts posing different challenges to service providers.
- d. Strategic regulation, focusing initially on priority areas, and thereafter guiding the utilisation of limited resources and capacity for maximum impact.
- e. Pre-implementation status quo needs to be ascertained to ensure that the appropriate implementation strategies are employed. Regulatory impact assessments would be undertaken prior to adoption and implementation in the form of a full cost and benefit analysis of meeting standards, and cost and benefits of new policy objectives such as a free basic services policy.
- f. South Africa has adopted an outcome-based approach. Flexibility will be allowed with emphasis on regulating outcomes rather than absolute compliance with the stated regulations. Services authority will therefore be able to innovate and respond to local needs within a broad regulatory framework.
- g. Dispute resolution regarding contractual water service providers so that such can be resolved through arbitration rather than costly litigation.

Other National Government Partners

Within the national sphere of government, other departments, for example, National Treasury has a responsibility to support DWAF with fiscal and economic policies:

- Treasury's engagement is legislated by the Public Finance Management Act (PFMA) of 1999, and the Municipal Finance Management Act (MFMA) (Act 56 of 2003), which regulates municipal finance arrangements.
- The role of the CoGTA, previously known as Department of Local Government and Traditional Affairs (DPLG) is the overall caretaker of local government. Their locus of operations encompasses an array of governance and policy directives. In terms of the White Paper on Municipal Partnerships (draft April 2000) and Municipal Systems Act 32 of 2000, local government partnerships with external services providers are regulated by CoGTA. The institutional structure for policy guidance and co-ordination is the National Sanitation Task Team (NSTT) in collaboration with Provincial Sanitation Task Teams (PSTT) in each province.
- The Department of Human Settlements (DHS), previously called the DoH, sets national and provincial policies to recognise the constitutional right of water and sanitation services to be integrated in new housing developments. Housing policy must promote efficient water use and align to local government's service level policy, namely, free basic services concessions.
- The DPW is the implementing agent on behalf of national departments for construction of facilities. Moreover, its responsibility is to coordinate community based public works programme, aligning priorities and approaches which support the participation and capacity building of local communities through engagement in sanitation facilities construction and maintenance. This objective is realised through the national Extended Public Works Programme (EPWP). The national department of Public Works is also responsible for ensuring that adequate and appropriate sanitation facilities are installed in schools and public facilities such as clinics.

- The DoE develops the education curricula regarding the health, hygiene and use of water and sanitation services, it also shares the responsibility of ensuring adequate sanitation infrastructure at schools.
- Department of Environmental Affairs (DEA) previously known as Department of Environmental Affairs and Tourism (DEAT) crafts national policies promoting environmental sustainability, assessing the impact of water and sanitation provision on the environment, engaging in joint venture projects that promote conservation, cleaner technologies and waste minimisation (DWAF, 2003).

Provincial Government Departments

- The Provincial arm of CoGTA is responsible for support to municipalities and monitoring and evaluating of water and sanitation services implementation.
- COGTA allocates funds for infrastructure development through the Municipal Infrastructure Grant (MIG) funding as well as a grant for capacity building. It also monitors municipal performance providing institutional support where required. Its intervention in the matters of municipal affairs is undertaken together with its provincial arm (DWAF, 2003: 34).

Local Government Departments

The White Paper on Local Government (WPLG) (RSA, 1998: v) in South Africa states that “Local Government is a sphere of government in its own right and no longer a function of National or Provincial government, its distinctive role is in building democracy and promoting socio-economic development”, as enshrined in the Constitution of South Africa (RSA, 1996: v). The Constitution has given authority and responsibility to municipalities to ensure the provision of services to communities in a sustainable manner.

The White Paper emphasises the role and responsibilities of Local Government as a developmental local government committed to working with citizens (RSA, 1998: 17).

Furthermore, while Local Government is separate from national and provincial government, “where municipalities do not develop their own strategies ... national government may have to adopt a more prescriptive role” (RSA, 1998: 17). This implies that local government is not a totally independent sphere, separate from the national state machinery. It is “increasingly being seen as a point of integration and coordination for the delivery of national programmes” (RSA, 1998: 17). This places local government in a critical position in pursuit of realising the vision of the Constitution of South Africa (RSA, 1996) and ensuring that national objectives are met.

The following departments within municipalities which are entities of local government are responsible for water and sanitation delivery either directly or as supporting departments:

- Water and Sanitation Department
- Housing Department
- Health and Environmental Health Departments
- Treasury

3.5.8 PARTICIPATION AND DECISION-MAKING

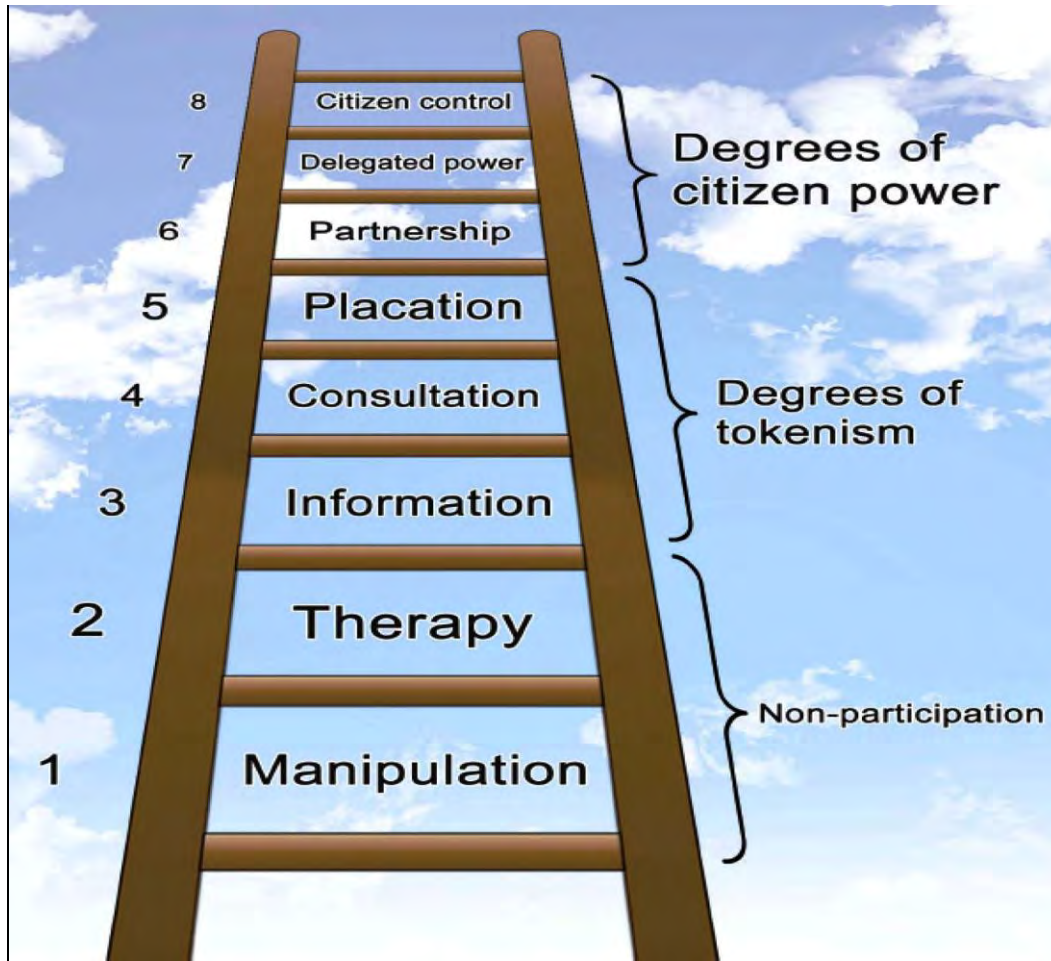
Participation and inclusivity provides the enabling mechanism for democratic governance through multi-stakeholder engagement and decision-making. The South African governance system has created new spaces for public participation through mechanisms which go beyond legislative requirements to more practical and enabling means of participation. According to Govender (2008), mechanisms such as ward committees provide an opportunity for community engagement and empowerment as partners in developmental processes. He adds that partnerships will only realise their desired outcome if they adhere to the principles of participation. Furthermore, who participates and at what level will determine the value and the impact of participation (Govender, 2008). Reddy & Nzimakwe (2008) find that the translation of national legislation and participation into practice at local level is problematic. There is a need for innovative local policies and legislation to overcome the disparities in the translation of policy to practice. However, Guarneros-Meza & Geddes (2010: 126) caution that:

“...a devolution of state functions and responsibilities, upwards, downwards and across to a wide variety of agents, does not necessarily signify a loss of state power; secondly, that an increase in citizen participation does not necessarily produce an increase in citizen empowerment”.

Yet, public participation in local governance is the cornerstone to democratic governance, empowerment of citizens, a platform for citizens to exercise their human rights, and integral to effective and accountable local government (Reddy & Nzimakwe, 2008). Scholars caution that within neoliberal systems, citizens’ subordination and social exclusion continues to be perpetuated by the market and specific state policy irrespective of the local governance mechanisms (Bebbington, 2004; Fuller & Geddes, 2008).

Scholars continue to question the true value of citizen’s engagement. Arnstein’s (1971 cited in Burns *et al.*, 1994: 155) ladder of participation conceptualises eight categories and each rung corresponded with the extent of participation and the power in decisions around what government delivers. Figure 3.4 illustrates the intensity of citizens’ meaningful participation progressing from non-participation at the bottom of the ladder, to participation that represents degrees of tokenism, and participation that contributes to citizens exercising power in processes of governing.

Figure 3.4: Arnstein's Ladder of Citizen Participation



Source: Burns *et al.* (1994: 155)

i) Critique of Arnstein's Model of Citizen's Participation

Burns *et al.* (1994: 155) acknowledge that the applicability of Arnstein's model to the analysis of "maximum feasible participation". They further refine the model and adapt it to the context of local government by stating that in Arnstein's calibration of citizens' participation the missing dimension is the "number of spheres of influence", where citizens have varying degrees of power within one sphere and minimum or no control in another. Citizens' participation within different contexts varies as their role and entry level differ.

Thus citizens may have the ability to engage more meaningfully and vigorously in some spheres and not in others. The intensity and purpose of their participation is often determined by external factors like other actors in the ambit of governance, the mechanisms or platforms

created for engagement or their willingness to be part of governance processes (Burns *et al.*, 1994: 155). Buccus *et al.* (2007), observe that the South African government has committed itself to responsiveness, accountability and transparency in the overall system of decentralised governance, however, public participation is predominantly in the form of consultation rather than empowerment of citizens. Citizens, especially the poor are far from the centre and are never seen or heard by parliament (Buccus *et al.*, 2007). Participatory governance is not a natural response of government, citizens need to resort to extreme measures of protest or violent means of expression to activate a response. Institutionalised channels are simply not working (Benit-Gbaffou, 2007).

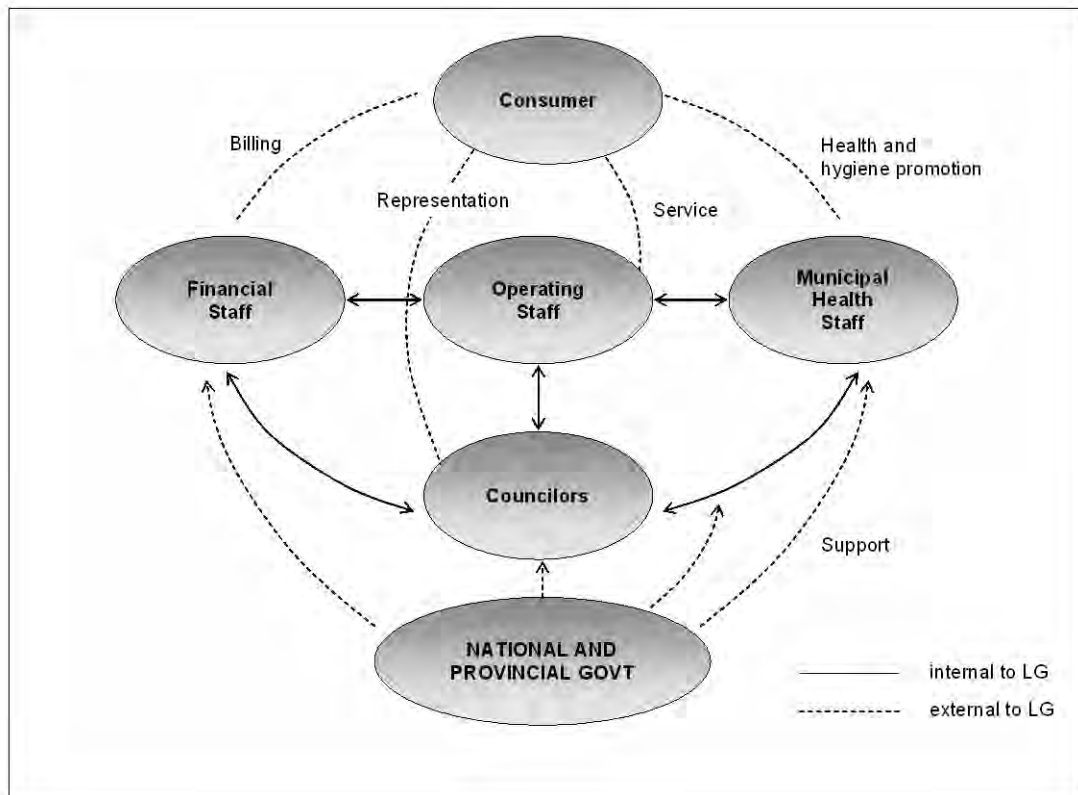
Referring directly to the topic of this research, Hemson & Buccus (2009) found that government initiatives to empower members of civil society, politicians and members of traditional authorities in rural KwaZulu-Natal was successful in training participants to engage in water and sanitation projects. However, assessment of the ranking on the scorecards of projects reflected no improvement in the actual sanitation and water conditions even though locals participated in projects.

Advocates of decentralised local governance proffer that decentralisation empowers, introduces innovation, activates local communities and enables self-explored solutions through participation in service delivery (Cheema & Rondellini, 2007; Dahlstedt, 2009). However, empirical evidence negates such claims if attempts to institutionalised participation are not meaningful with measurable impact (Reddy & Nzimakwe, 2008).

3.5.9 STAKEHOLDER PARTICIPATION IN SANITATION DELIVERY

The international experience of sanitation services (water services) is based on the premise that poor people are a resource-less base and are unable to pay for services. This view perpetuates poor people as an “object” rather than “subjects” of development, thereby rendering them powerless in the process. Treating poor people as beneficiaries rather than customers creates a perception that they are entitled to free services from government resulting in services for a few, due to limited resources (DWAF, 1994).

Figure 3.5: Mapping Stakeholder Relationships in Sanitation Governance



Source: Adapted from the Draft National Free Basic Sanitation Policy (2008)

Figure 3.5 illustrates stakeholders internal and external to local government, who partner in sanitation delivery. A significant feature of the inter-governmental framework is fiscal decentralisation and the role of the various actors in the utilisation of fiscal resources in realising policy objects for sanitation delivery. Systems for sanitation delivery lie both internal as well as external to local government functionality. However, all systems need to work synergistically to further the objectives and the demand for sanitation services.

Systems internal to local government pertain mainly to the provision, administration, operations and maintenance of sanitation facilities. External relations refer to roleplayers outside of the functions prescribed for local government but within government and civil society essential for overall sanitation delivery (DWAf, 1994).

The external systems or stakeholders provide support in policy and regulation, financial resources, health and hygiene promotion, monitoring and evaluation through participatory mechanisms or sub-contracting services. Central to efficient sanitation provision is civil society. Operations and maintenance of facilities provided to poor communities is dependent on the willingness of beneficiaries (user) to accept, and actively engage in operations and the maintenance of the facility guided by municipal regulation and the locality specific context. Communities are required to work with local authorities in ensuring that the toilets systems provided are used correctly and maintained by themselves (DWAF, 1994).

The idea is to engage communities in planning and operation of services with governments becoming suppliers, providing technical and managerial support and an enabling environment for community ownership (DWAF, 1994). Clarity on the role and functions of civil society and government explains the need for multi-actor operational model for sanitation provision.

3.5.10 LOCAL GOVERNANCE AND PARTNERSHIPS IN SERVICE DELIVERY

The partnership institutionalised in the co-operative governance expression in the Constitution, is intended to ensure that policies are implemented in a co-ordinated manner for effective service delivery to all citizens (Ile, 2010). The new regulatory framework for local government cites the municipality as the fulcrum for change, enabling democratic, participatory, and developmental objectives to be realised. The Municipal Systems Act (MSA) (Act 32 of 2000) and the White Paper on Local Government (1998) gives effect to new developmental ways of service delivery options (RSA, 1998; RSA, 2000). Municipalities can operationalise developmental local government by integrating, co-ordinating and planning the delivery of municipal services to achieve the greatest possible resources and investment from public and private sources. The municipality's engagement with local businesses, by outsourcing or privatising the provision of basic services, allows cost-effective ways of service delivery, creating jobs and encouraging investment. The ability to co-ordinate activities allows the municipality to refine and revise their methods and approaches seeking partnerships in the delivery of basic services to the citizens (RSA, 1998). The White Paper further identifies that the partnership with local citizens will not only encourage

transformation within the municipality but will determine the best use for public resources as citizens' input or opinions are encouraged when planning and preparing the IDP.

This signals a new approach to urban governance and service provision which advocates partnerships with the goal of drawing on the expertise and resources of the private sector, non-governmental organisations, community-based organisations, donors and other interest groups. This encourages a partnership with civil society and government which will create “meaningful, vibrant, democratic and decentralised governance” (Mhone & Edigheji, 2003: 217). Re-engineering the local sphere of government to increase citizen partnerships in service delivery is apt, as the local government is the interface between government and civil society and the administration level for basic services. Active participation of citizens through alternate service delivery mechanisms poses different obstacles and benefits for communities through partnership projects, outsourcing, public-private partnerships and privatisation.

3.6 WATER SERVICE LEGISLATION, POLICY AND PRINCIPLES (WATER, SANITATION, WASTE WATER MANAGEMENT)

The implementing regulatory frameworks which provide clarity on how sanitation demands are to be met in South Africa were examined as presented below.

i) Reconstruction and Development Programme, 1994

The Reconstruction and Development Programme (RDP) adopted by the Government of National Unity was crafted with the aim of improving the quality of life of the majority of South Africans, through integrated efforts of all sectors and stakeholders. The RDP principles serve to free citizens from poverty and misery through the provision of services for all. The lack of basic services such as water supply and sanitation is a key symptom of poverty and underdevelopment (DWAF, 1994).

During the 1990s, the ANC's developmental policy, the Reconstruction and Development Programme (RDP) amplified the need for spatially focussed development through the Rural Development Strategy (RDS) and the Urban Development Strategy (UDS). The primary

purpose of the RDP was to enable integrated and synergistic governance in rural and urban areas. It sought to connect these areas to enable vibrant economic activity and improved living in rural areas through access to services. In light of the rapid growth of cities through urbanisation, the UDS aimed at creating sustainable long-term urban development through efficient and effective functional urban governance and management. The UDS, which later became the Urban Development Framework (UDF) under the custodianship of the Department of Housing, argued for “more efficient and productive cities and towns, through growing the local economies” (Atkinson & Marais, 2006: 23).

Critics are of the opinion that the spatially focussed development lost its impetus when the UDF and RDS were housed with government departments, following which sectoral policies took precedence. However, increased efforts to advance development of urban and rural development through improved inter-sectoral and inter-sphere co-ordinated and integrated service delivery was launched in the form of the Urban Renewal Programme (URP) and Integrated Sustainable Rural Development Programme (ISRDP) (Atkinson & Marais, 2006: 23). These decentralised nodal development policies were a way of innovating around local governance with the view to deepen democracy through citizens’ participation in service delivery (Atkinson & Marais, 2006; Smith & Everatt, 2006).

ii) Growth, Employment and Reconstruction (1996)

The Growth, Employment and Reconstruction (GEAR) policy was aimed at accelerating economic growth, arguably in keeping with the Reconstruction and Development Programme. GEAR categorically states a move to a redistributive thrust and a cut back on service delivery operational costs with greater emphasis on self-payment by users. A preference for a market-related approach to services to encourage competition and avert monopolistic delivery of services meant that users need to pay prices determined by the market forces for basic services (Department of Finance, 1996). Against this backdrop, the devolution of power to quasi-governmental or non-governmental organisations creates a shift in terms of the role and functions of local government, as a development agent rather than a provider.

The increased engagement of ordinary citizens for economic gains aligns to the policy move from RDP to GEAR, where government moved from a welfarist “progressive social policy” to a more market related governance strategy of “privatisation, liberalisation and debt reduction to stimulate economic growth and create jobs” (Cheru, 2001: 505). It is therefore, envisioned that improved fiscal decentralisation will “reduce ‘red tape’, achieve greater performance efficiency, foster innovations in administration, improve economies of scale, and enhance local government and private sector administrative capacity” (Niksic, 2004: 354). Heller (2001), however, states that entrepreneurial neoliberal approach does not present opportunities for equitable participation or active citizenry as it creates spaces only for those who are able to actively engage and excludes those who do not have the ability to engage in new democracies.

iii) Co-operative Governance Legislative Framework

The Inter-governmental Framework Act (Act 13 of 2005) relates to the Constitutional imperative of distinctive, interdependent and inter-related spheres of National, Provincial and Local Government (Section 40 (1)) and that all spheres of government should operate harmoniously in promoting sound co-operative governance and inter-governmental principles (Section 41 (1)). The institutionalisation of the inter-governmental relations systems is delineated in the Inter-governmental Relations Framework Act (2005). The ambit of sanitation delivery provided a testing ground to explore machinations of all three spheres of government in joint efforts towards a common developmental outcome.

The Division of Revenue Act guides the revenue distribution from the national grant funding. The Act gives effect to Section 214(1) of the Constitution and is enacted annually. The revenue is raised among the three spheres of government and is distributed equitably based on the needs of the municipality. In 2002, the Act made provision for the Community Water Supply and Sanitation Programme as an “Indirect Conditional Grant” to fund basic level of water services (sanitation included) and to provide implementation support mainly to municipalities that are challenged with capacity problems (DWAF, 2002).

vi) Partnerships as an Alternate Service Delivery Approach

In accordance with Section 12 of the Municipal Structures Act, Water Services Authority can be any of the following:

Category A (Metropolitan), Category B (Local Municipality) or Category C (District Municipality) authorised by the Minister of Provincial and Local Government. Municipalities are responsible for ensuring that all citizens within its jurisdiction have access to (water and) sanitation services. However, water services authority may choose to outsource or enter into contractual agreements with another water services provider who could be a public or private body which opens up opportunities for quasi-government bodies like the water boards. Participation of non-governmental organisations, community-based organisations or private sector to be contracted through a service delivery agreement between the Municipality and the service provider. The Municipality is the legal entity whose authority to engage contractors lies with itself as it is ultimately accountable for service provision to its consumers.

Chapter 8 of the Municipal Systems, 2000 (Act 32 of 2000) provides flexibility to municipalities to adopt an alternate approach to provision of services by means of municipal service partnership. The White Paper on Water Supply and Sanitation of 1994 recognises the role of the private sector as broadening the delivery options for service but not abdicating government from its responsibility to regulate and monitor equity, innovation and standards provision (DWAF, 1994).

Scholars contend that decentralised governance allows (government) municipalities flexibility through alternate service delivery mechanisms to broaden options, for increased participation of ordinary people in the provision of basic services (Rathore *et al.*, 1994; Farlam, 2005). Farlam (2005) contends that Privatisation, Public Private Partnerships (PPP) as well as the Build, Operate, Train and Transfer (BoTT) are the common alternate service delivery mechanisms aimed at introducing market mechanisms as well as increasing participation and partnerships. While PPPs seem to be touted as a preferred option by many states in Africa, including South Africa, the problems and risks are similar to privatisation and public procurement (Cavill & Sohail, 2004; Farlam, 2005). According to Farlam (2005),

governments lacked the capacity to manage contracts, lack of clarity and change of policy does not bode well for long-term contracts. There is a need for political buy in. Managing the transition of pricing from a state-subsidised model to a market-driven private sector model is necessary. Ensuring that there is viable market for the services being rendered through PPPs is critical. Corruption destroys PPPs, as officials find a way to direct contracts to preferred service providers. Government should project and manage risks which may arise to both the concessionaire as well as the partnering public sector, ensuring contingent plans to mitigate risks and to ensure success and sustainability of services. PPPs should offer a greater range of service level options to satisfy consumers' needs and affordability. Participation and empowerment of local communities should be stipulated in all contracts. Governments find it difficult to set the rules and monitor progress; hence government's ability to regulate and monitor PPPs should be stepped up. A value-for-money assessment model should be crafted to test all phases of projects during the entire project/ contract duration (Farlam, 2005).

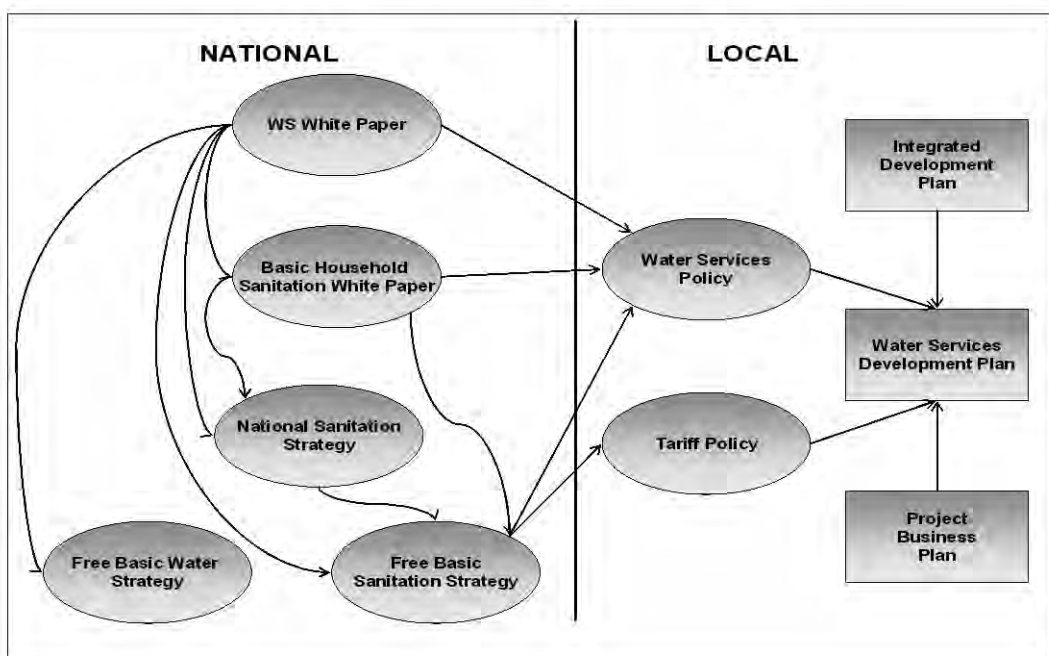
The alternate approach to deliver services was through the build, operate, train and transfer (BoTT) model. This model provided the flexibility to speed up delivery as compared to the conventional bureaucratic government delivered programmes. The BoTT model reduced red tape, expedited service delivery and utilised the resources of the private sector to achieve government's vision. The envisaged operations and maintenance costs were to be met by users. Private sector investments in construction were faced with cost recovery and sustainability challenges. BoTT contractors were challenged with unexpected demands. Little success was noted with the community based management models as Project Steering Committees rejected the BoTT mechanism. Cost recovery meant that the poor could not exercise their right to water and adequate sanitation. A resultant quagmire in reconstruction and development in South Africa meant that most of the previously unserved citizens remained without services (Muller, 2002).

3.6.1 THE RELATIONSHIP BETWEEN SANITATION POLICIES

Figure 3.6 illustrates the relationship between the policy and legislation pertaining to sanitation relevant to national and local government.

Figure 3.6: The Relationship between Sanitation Policies

i) White Paper on Water and Supply and Sanitation Policy (1994)



Source: Adapted from the Draft National Free Basic Sanitation Policy (2008)

The White Paper on Water and Sanitation Policy initiated assessments and policy recommendations on the institutional structures and mechanisms required to address backlogs on both sanitation and water services. It also provides standards and guidelines for basic service delivery, setting out policy for the financing of water and sanitation services. It supports a locally framed agenda for delivery specific to local needs. It stipulates the strategic focus for the development of the national sanitation strategy. The White Paper, however, was lean on sanitation specific policy and practical guidelines. While water was important, sanitation was in crisis. The need for a national sanitation policy independent and separate from the water policies and guidelines was communicated.

ii) National Sanitation Policy (1996)

Subsequently, the first draft National Sanitation Policy was published in South Africa in 1996. The draft Sanitation White Paper set the foundation for the National Sanitation Policy

which then superseded the draft Sanitation White Paper. One of the key requirements in the National Sanitation Policy was the need for government commitment to improve the *status quo* of sanitation through the formulation of a series of policy and guidelines for effective sanitation delivery in South Africa. The National Sanitation Task Team (NSTT) was purposefully established to focus on addressing the dire need for sanitation countrywide. The NSTT facilitated collaborative efforts of six government departments in the development of aforementioned national policy and corresponding implementation strategy for sanitation provision.

iii) White Paper on Basic Household Sanitation (2001)

The national White Paper on Basic Household Sanitation (2001) was spurred by the government's identification of the seriousness of the impact of lack of sanitation facilities to millions of people and the unhygienic sanitary practices which were hazardous to the health of the nation. The White Paper places emphasis on sanitation delivery to households with the most urgent need. It emphasises that the provision of basic household sanitation should be demand-driven, participatory and thereby providing households with the liberty to choose the type of facility. Recommended systems and processes for the safe disposal of human waste and guidelines for appropriate health and hygiene practices are detailed. Emphasis is placed on demand-driven sanitation services with a community-based focus, encouraging greater community participation and household choice (DWAF, 2001).

One of the key founding principles of the White Paper on Basic Household Sanitation is the promotion of a community development approach rather than a contractor-driven approach to sanitation delivery. The focus is on developing the capacity of local communities in the implementation or delivery of sanitation facilities. Training and skills development in construction and project management was recommended. While sanitation provision is the task of local government, the participation of local communities is essential for sustainable practices. Folifac (2007: 12) recommends that the "resources of the private sector as well as the NGO sector can be harnessed to support policy objectives". The White Paper proposes that communities should choose and install systems which are affordable, easy to use and maintain, environmental protection, ability of community-based contractors to implement

systems, and with an objective to improve health. User education is recommended for proper use of facility, in the absence of which users will be faced with odours and insects and germs (DWAF, 2002).

iv) Free Basic Sanitation Implementation Strategy (2009)

The Free Basic Sanitation Implementation Strategy implies that the poor household does not contribute towards the initial construction or capital cost and the cost of the operations in the long term (DWAF, 2009). The Free Basic Sanitation Strategy drafted in 2004, was developed in response to the Constitutional obligation and the right of each citizen to enjoy living in an environment that does not place their health or well-being at risk of harm or hazard (RSA, 1996). Sanitation and water are basic services which constitute a human right and the provision thereof restores dignity, a good quality of life and well-being (DWAF, 1994).

The drafting of the strategy began in 2004 but the review and recommendation for the development of the strategy was only completed in 2009 (Mjoli *et al.*, 2009). The delay was due to the multifarious approaches adopted by the water service authorities in municipalities across South Africa. The complexity was compounded by migratory trends of people seeking employment in and around large cities.

The key finding of the exploratory report towards the development of the Free Basic Sanitation Strategy was that sanitation projects undertaken from 2001-2008 by water services authorities (municipalities) were unsustainable. The targeted 2010 backlog eradication was unachievable because municipalities found it difficult to balance the provision of free basic sanitation services and eradication of backlogs. Municipalities examined during the study were in the Eastern Cape, KwaZulu-Natal and Limpopo (a total of 17 districts), which found that the implementation of free basic sanitation within an environment of limited resources and technical expertise was a challenging endeavour (Mjoli *et al.*, 2009).

3.6.2 LOCAL GOVERNMENT LEGISLATION AND POLICY GUIDING SANITATION DELIVERY

i) Integrated Development Plan (IDP)

The IDP is the strategic planning tool for each municipality. In terms of the MSA (Section 5.2.1), the Water Services Development Plan (WSDP) needs to be integrated and embedded in the municipality's Integrated Development Plan as a planning instrument for services provision.

ii) Municipal: Water and Sanitation Development Plan or Policy

The WSDP contains the planning detail for the provision of water and sanitation services. The plan should be integrated and consistent with the Housing Policy.

iii) Local Government Municipal Demarcation Act

Local Government Municipal Demarcation Act, 1998 (Act 27 of 1998) defines the establishment of the Municipal Demarcation Board, and determination of Municipal boundaries with a view to realise a developmental role of local government through integrated, participatory governance resulting in effective service delivery. The rationality behind demarcation is to ensure that previously excluded areas have equal advantage of economic, financial and social benefit and sustainability, including smaller more deprived areas within municipal boundaries enables access to more services through cross-subsidisation.

The Local Government Municipal Structures Act (Act 33 of 2000, drafted in 1998 with amendments in 2000, 2002, and 2003), governs the appropriate division of functions and powers for water services to metropolitan municipalities, the district municipality or the local municipality if authorised by the Minister of Provincial and Local Government. The Act defines the types of structures of municipalities. The Structures Act also authorises municipalities as the primary service provider. It also maps out the local governance systems

prescribing the structural formations from executive level to community participatory structures. In relation to sanitation (and water), municipalities are required to perform the function of the Water Services Authority and provide services to all citizens within its boundaries.

The Act also makes provision for local government with different models of delivery systems. The first is the amalgamation of urban, peri-urban and some rural areas into a single tier large urban metropolitan area and the model is the two-tiered district and local municipalities throughout the country. District councils are tasked with the function of ensuring access to services is devolved at district level unless the municipality is authorised to perform this function.

The Local Government Municipal Systems Act (Act 32 of 2000) defines local government as fundamentally developmental in orientation setting out the core principles, internal systems and mechanisms and processes that empowers municipalities to move progressively towards the social and economic upliftment of communities and the provision of basic services to all citizens, specifically the poor and the disadvantaged. Its principles hinge on transparent, effective and efficient municipal administration. The Systems Act sets out guidelines for integrated planning at municipal level.

Introduction to the role and functions of municipalities with emphasis on leverage for local government to “ensure service delivery and not necessarily to provide it” (DWAF, 2005: 5). This is particularly relevant to sanitation provision as the clarity on the role and functions of a number of stakeholders, differentiating between the services authority and service provider. The Act further identifies the importance of alternate service delivery mechanisms, which is essential in ensuring sustainable delivery, stipulating requirements for partnership arrangements.

3.6.3 PRINCIPLES OF THE SANITATION POLICY IN SOUTH AFRICA

The White Paper on Water Supply and Sanitation Policy (WPWS&SP, 1994) was crafted against the backdrop of the Reconstruction and Development Programme (RDP, 1994) of

South Africa promoting equity of services to all of its citizens. In repair of a history of fragmented services during the apartheid era, the WPWS&SP outlines a coherent institutional framework for water supply and sanitation services. The policy principles detailed government's approach to addressing the policy and implementation vision for sanitation services for all (DWAF, 1994).

i) Adequate Basic Level of Sanitation

Against the backdrop of primitive and inadequate means of human waste disposal in most parts of South Africa, historically, there is an urgent need to prioritise a level of service which meets the human need. The causes of death and disease through sanitation is attributed to two elemental problems of poor hygiene, lack of hand washing after defecating and lack of sanitation and water infrastructure to practise safe sanitation. Therefore the basic level of sanitation should promote health benefits. Adequate sanitation refers to the availability of a toilet facility for each household. The facility must be affordable to the user, easy to maintain and protect the environment. A progression to a higher level of sanitation service is recommended only when poor communities are able to afford such technologies (DWAF, 2002).

The principle of household and individual responsibility was important for sanitation services as it was perceived as a private matter. Local government was responsible for the implementation and management of services. In areas where the local authority's capacity was deficient or non-existent, DWAF was assigned to implement water programmes through local community water committees and the delivery of basic sanitation services during the early transition phases (DWAF, 1994).

ii) Household and Individual Responsibility

Sanitation is a very private matter. Unless the individual and the household are committed to the success of a health and sanitation programme, little will be achieved. Communities seeking public subsidies for the capital costs of household sanitation need to demonstrate widespread individual household support which will have to include a contribution to the cost

of service provision (DWAF, 1994). However, international experience noted greater success with sanitation programme if they are community focussed rather than focussed on individual households (Mehta & Movik, 2011).

iii) Labour Based Approach - Outsourcing Pit Evacuation

Creating decent jobs through sanitation improvements or sanitation delivery has potential through adopting a labour based or labour intensive approach. Engaging local skills in the provision of on-site systems, use of local materials and products, local contractors and suppliers are a means to support the labour based approach. The EPWP has been established to promote labour intensive practices in service provision. Sanitation delivery has huge potential in this regard because construction, operations and maintenance of sanitation facilities is an appropriate ambit for labour intensive practices (DWAF, 1994).

iv) Sanitation Hygiene and Health Education

Knowledge on hygienic living practices and its impact on health form an important component in improving the human condition through sanitary behavioural practices. As part of a national drive, capacity building, education and training to develop and disseminate appropriate programmes for health and hygiene education has been mandated.

To achieve this outcome, the collaborative efforts of the Health Sector and Sanitation Sector were important. Second tier agencies have been utilised to develop capacity, train personnel and support the local agenda (DWAF, 1994).

v) Integration and Alignment of Sanitation and Housing Policies

Housing policy, standards and strategies for implementation are determinants of the most appropriate type of sanitation for different housing typologies. Water and sanitation services relate to households, therefore the choice of services needs to be consistent with urban and rural housing policy. This alignment serves to ensure consensus on standards and strategies and efficient use of resources as well as avoiding double subsidies. The Strategic Framework

for Water Services (DWAF, 2003: 43) makes provision for unauthorised or informal settlements' basic service provision. The onus is on municipalities to secure land tenure for such areas, but in so doing it should provide an interim basic water and sanitation service. Permission to provide such interim services on privately owned land should be accessed by the municipality so that expeditiously, basic service delivery to informal settlements is not hampered. The national regulators are responsible for devising clear best practice guidelines to realise this end (DWAF, 1994).

vi) Environmental Policy and Sanitation Systems

Ineffective waste water and faecal management is detrimental to environmental integrity. Sanitation systems, both waterborne and on site systems, need to be environmentally friendly. Negligent disposal of waste water and faecal matter results in ground water contamination and hence environmental degradation. In accordance with the White Paper on Water Supply and Sanitation Policy, care should be taken to ensure that the environment is protected during all developmental practices. Therefore, the impact of different sanitation options must be weighed against the impact of unimproved sanitation practices to prevent pollution. The choice of appropriate sanitation should prevent any potential risk to ground water and surface water pollution, the cost and feasibility of alternate water sources or water treatment should also be considered (DWAF, 1994).

vii) Pillars of the Sanitation Policy

Improving the quality of life of all citizens is enshrined in the Constitution. Access to sanitation is a human right restoring dignity, health and improved living conditions. It should be afforded to all citizens without any discrimination of race, gender, creed or culture. The national sanitation policy construction details the following principles (DWAF, 1994):

- a) ***Development should be demand-driven and community-based.*** The decision on sanitation should be based on the needs, decided by the local community. Local structures should be instrumental in such decisions. Communities also

have a reciprocal obligation to accept responsibility for their own development and governance while being supported by the government.

- b) ***Basic services are a human right.*** The right to basic services emanate from provisions in the Constitution. Adequate services should be afforded to the people for healthy living conditions. No right is given for any individual or community to demand such services at the expense of another person.
- c) ***“Some for All”, rather than “All for Some”.*** Priority basic sanitation services should be provided as a Constitutional right to those who are inadequately served. Planning, prioritisation and resource allocation should be directed accordingly.
- d) ***Equitable regional allocation of development resources.*** The allocation of resources for development should be equitable, the criteria for resource allocation should include size of population, their needs and the level of development in the region. Lesser developed areas or areas of previous gross neglect should be prioritised.
- e) ***Water has economic value.*** South Africa is fast becoming a water scarce country. The approach to sanitation provision and choices of facility should promote conservation and preservation of the quality of water. Sanitation and water delivery should be sustainable in the long term without compromising economic growth.
- f) ***The user pays.*** Contributions by users institutes better controls and management efficiency. It also increases user accountability to care, operation and maintenance of the facility. Services will be valued.
- g) ***Integrated development.*** Water and sanitation services require the co-operation of all related sectors. It cannot be separated from other sectors as it pertains to households. Effective co-ordination with all developmental sectors and spheres of government is necessary. Water and sanitation services sector responds to the policy objectives of education and training and job creation together with promoting local democracy.

h) *Environmental integrity.* It is necessary to ensure that the environment is considered and protected in all development activities. The contradiction in principle 1, 2 and 3 are alluded to in the White Paper on Water Services and Sanitation Provision. The first implies a “demand driven development philosophy whereas the second and third imply a supply driven, centralized approach”. The purpose was to see “how government prioritizes its approach to community development” (DWAF, 1994: 8).

3.6.4 CHOICES OF BASIC LEVEL OF SANITATION TECHNOLOGIES FOR ENVIRONMENTAL, SOCIAL AND HEALTH BENEFIT

The basic level of sanitation provided to citizens should be financially sustainable and maintainable by the user. Policy prescribes that the choice of technology should always suit the user and provides maximum health, social (privacy and comfort) and environmental benefits. The guideline promotes sanitation for optimal healthy living and lists a range of technology choices as basic units. A stipulation of recommended type of structure and that which is not recommended with estimated cost of each is presented (DWAF, 2002):

i) Toolbox of Sanitation Technologies:

According to the White Paper on Water Services and Sanitation Policy (1994), the various types of facilities and their viability as an improved sanitation solution is detailed as follows:

Table 3.1: Toolbox of Sanitation Technologies

Ventilated improved pit (VIP)	A VIP toilet is a structure built over a pit which may be lined to protect the soil/environment. It is ventilated by a pipe with a fly screen to reduce odours and infestation of flies. Pit contents are sealed once full, superstructure may be moved to another newly-dug pit.
Ventilated Improved Double Pit (VIDP) toilet	The toilet structure is built over two shallow pits side-by-side, one pit at a time is utilised. When one is full, a structure is then constructed over the next pit. Aimed at protecting seepage and contamination of the water table as pits are generally lined and the central wall between the two pits are sealed. This system is recommended for areas where full waterborne sanitation is not realistic, viable or achievable due to cost.

Unimproved pit toilet	This type of facility simply a deep pit with a structure built over it. When the pit fills up, another is dug and the structure is moved over. It is unhygienic and environmentally unfriendly and therefore not recommended.
Composting toilets, including urine diversion and desiccating systems	This system is designed to recycle waste collected in a sealed container with access for emptying of contents. A top structure is built over the container. Urine may be diverted and a vent pipe helps dry the waste, especially for desiccating systems.
Pour-flush latrine or aqua-privy	This type of system is used internationally. The structure is used in a squatting position where waste is flushed through a short pipe into a soak away disposal system. The system fails if it is misused by disposal of unauthorised objects in to the toilet. It has to be regularly emptied.
Septic tank and soak away	An in-house full flush toilet connected via plumbing to a watertight underground digester (settling chamber) with liquids allowed to soak into the ground.
Flush toilets with conservancy tanks	Human waste is collected in a tank which is impermeable into the surrounding environment. The tank needs to be frequently cleared out. The cost of maintaining the system is dependent on the size of the tank.
Small bore solids-free sewer	An in-house flush toilet discharging into a septic tank with separation of solid and liquid human waste. The solids sink and settle while the liquids go through a small sewer into a central collection sump or existing sewer. The operation and maintenance costs are dependent on the size of the tank and the frequency of evacuation.
Full waterborne sewerage	The toilet is the most desired type and perceived to be the most hygienic and easy to maintain. It is constructed as part of the main dwelling. The flush toilet connects to a bulk sewer network which deposits sludge into a waste water treatment plant. Therefore, it is the most common type of facility in built urban areas. As at 2002, the cost to install was R6 000 and operating costs are about R400 per year.
Shallow sewerage	An in-house toilet flushed with less water than usual and through smaller pipes at shallower levels with on-site inspection chambers. Internationally, this saves up to 50% on water use but is still being tested in South Africa.

Chemical toilets	The toilet is a stand-alone unit. Generally it is used as a temporary measure. Chemicals are poured onto the excreta to render it harmless and odourless. Maintenance and operation is expensive and discouraged by municipalities. Use of chemicals compromises environmental integrity.
Bucket toilet	The toilet has been widely used. However, it is unhygienic and not recommended as it poses health risks to cleaning operators. It comprises a top structure with a seat over a bucket, which is periodically removed for disposal of contents while replaced with an empty bucket. There is a conscious drive to eradicate the bucket system in most areas in South Africa as it is unhealthy and expensive to maintain and operate.
Communal toilets	These toilets are often in a block structure or a container type structure. The facility may comprise wet or dry systems which requires regular cleaning and maintenance. These are not recommended for household use. Often it is utilised in dense unplanned or informal settlements where construction of individual or household sanitation is not feasible.

Source: Adapted from DWAF, 1994

3.7 INSIGHTS AND CRITIQUE OF THE SANITATION POLICY IMPLEMENTATION IN SOUTH AFRICA

3.7.1 PRAISES AND PITFALLS: SANITATION POLICY IN SOUTH AFRICA

Folifac (2007) contends that African countries may learn from successes of the South African Water Services Sector which has overcome numerous development challenges and are making steady progress with achieving MDG targets. This is attributed to the political will and the legal and policy frameworks for water and sanitation delivery. Gumede (2008) concurs that the South African institutional engineering provides an enabling platform for policy-making processes therefore fosters the democratic developmental state agenda. He adds that the policy-making process provides for significant participation of 'quasi' or non-state actors, which augurs well for the policy implementation process (Gumede, 2008).

However, despite the ingenuity of South African Water Sector Policies (including sanitation) as identified by Folifac (2007), weaknesses, ambiguity and austere omissions are evident in the policy and strategic approach to sanitation provision. Furthermore, the poor interpretation and practice of policy widens the chasm between policy provisions and implementation practices (Mjoli, 2010).

3.7.2 SANITATION POLICY IMPLEMENTATION CHALLENGES

The Constitution was the band-aid to heal and correct the invidious lives imposed on people. A myriad of legislation and policy following the engineering of a new system of governance and government provided a beacon of hope for millions. Yet, the contradiction in access to basic services and a successfully growing economy called for clear policies. The role of citizens in determining their evolution through action in choosing and maintaining the desired service level, was foremost. Access and use of water for personal and industrial development was crucial. Ensuring sustained availability and clean water resources was the central function of the water services sector (DWAF, 1994).

South African policy development is lauded internationally, yet despite 'good' sanitation policy and political will, sanitation backlogs still remain. South Africa's ambitious target in response to the MDGs was to eradicate sanitation backlogs by 2010, was not achieved. The WRC reported that despite concerted efforts by all spheres of government, millions of households were still without basic sanitation and therefore the target to eradicate backlog has been revised and moved to 2014 (Bhagwan *et al.*, 2007).

In 2001 there was an estimated backlog of 18 million persons or 3 million households living without access to adequate sanitation in SA. However, the national sanitation programme noted considerable progress with eradication of the bucket system and backlogs by 76% of targeted rural, peri-urban and informal areas. According to Bhagwan *et al.* (2007: 2), between the period 2001 to 2007 the estimated backlog was reduced from 4 759 709 to 3 439 544 households. According to Mjoli (2010), a review of the sanitation policy also found that in spite of increased efforts, sanitation projects were unsustainable. This may be attributed to the possible misinterpretation and lack of understanding of the National Sanitation Policy by the

administering municipalities and implementing agents. The national policy adaptability to specific contexts challenged implementation in local authorities. Municipalities were unable to translate the national policy principles to suit the variable contexts of urban, dense peri-urban and rural settlements (Mjoli, 2010).

Concerted policy and legislative efforts were not sufficient to wipe out the sanitation crises in South Africa. Knowledge sharing for better informed sanitation governance was essential to meet government's set targets for eradicating backlogs. The definition of sanitation backlogs refers to instances where households are still utilising "chemical toilets, pit latrine without ventilation, bucket latrine or had no sanitation facility". This describes what government views as below a basic level or inadequate sanitation (Basic Services Publication, 2009: 21).

In support of efficient policy implementation, the WRC in South Africa adopted a knowledge sharing strategy to assist municipalities in making strategic and informed decisions against the myriad of challenges faced in sanitation delivery. The problems in service delivery including sanitation are centred mainly on social, cultural, gender, training, institutional and financial issues, with technological concerns being of minor importance. Research by WRC explored sustainable and cost effective ways of accelerating the provision of safe and hygienic sanitation, to alleviate sanitation problems mainly in urban informal settlements dogged with delivery problems (Mjoli, 2010).

Mjoli (2010) also found that there was a need to investigate the feasibility of free basic sanitation and explore cost effective approaches to subsidising sanitation infrastructure in order to achieve the government's 2014 sanitation targets. More knowledge on improved technologies to better prepare the sector on how to deal with on-site sanitation systems, especially the management of pit desludging is required in South Africa. This implies that almost two decades into the sanitation policy development and implementation, the needs of citizens and government's objectives of speedily eradicating backlogs and providing an improved level of services remains unmet (Mjoli, 2010).

3.7.3 DOES GOOD POLICY EQUAL GOOD IMPLEMENTATION?

Despite ‘good’ policy and legislation in South Africa, translating policy into practice to deliver services still show fault-lines. The Markinor Government Performance Barometer recorded a 2% decline in public perception of government’s performance regarding the delivery of basic services (The Presidency, 2008). Government’s performance in the sanitation sector was tarnished by reports of government’s unacceptable approach to meeting sanitation demands. Institutional accountability was further endorsed when the 2011 local government pre-election agenda was dominated by controversy and poor performance regarding the provision of sanitation countrywide. Communities staged protest marches country wide to lament about poor service delivery. In the Western Cape, the “Open Toilet Saga” exposed government’s inefficiencies regarding stakeholder management and resource allocation. Community members were provided with infrastructure for the waterborne flush toilet system and were asked to enclose the facility, which was by choice a preferred level of service by the community. Prior to elections, the community rejected the facility giving rise to accusations of non-delivery by the Municipality. This controversial episode gained further publicity when the Municipality defended its position. It stated that a mutual agreement was reached and communities had accepted the arrangement in light of the available resources and the preferred higher level of service, being waterborne flush toilets (Rudin, 2011). The Municipality viewed this as an opportunity to allow users to ‘move up the sanitation ladder’. However, such policy ambitions do not translate to successful delivery without beneficiaries’ acceptability and affordability.

The interpretation of the sanitation policy and the approach to implementation remains a difficult task for government. Resources for sanitation delivery are often relegated with water gaining priority. Joint planning and implementation within a multi-stakeholder environment, amidst political influence requires clear communication and well thought out implementation strategies. Commitment of all stakeholders to consensus-driven decisions is critical for smooth progress with delivery. The “open toilet saga” indicates that ambiguous guidelines for implementation provide loopholes for agitators and ineffective delivery systems. The aforementioned example contradicts the principle of bottom-up design. The Strategic Framework stipulates that the bottom-up approach should be adopted for monitoring and

information systems, which refer to locally collected information for local solutions and that public participation in monitoring should be encouraged (DWAF, 2003). However, the bottom-up design approach failed to commit to providing user with the choice of sanitation design desired.

3.7.4 NEED FOR PRO-POOR SANITATION POLICIES

Mjoli *et al.* (2009) state that the implementation of sanitation projects since 1994 and inefficient delivery of sanitation services throughout the country resulted from poor policy interpretations and implementation by Municipalities. Changes to the National Sanitation Policy statements and implementation approaches are recommended accordingly. Free basic sanitation is not benefiting the poorest, as the major beneficiaries of free sanitation are only those connected to the sanitation bulk network. Municipalities are prioritising those connected to networks with gross neglect of the poor living on the peripheries. Policies should focus on pro-poor basic sanitation rather than “free basic sanitation services”, and hence a pro-poor basic sanitation subsidy statement is recommended. Sanitation policies place emphasis on the technical and physical structure where there is a need to integrate intense hygiene education practice guidelines and healthy living through good sanitation into the sanitation policy (Mjoli *et al.*, 2009). The lack of education and hygiene related to communities’ sanitation practices lead to contamination of natural water sources and hence the perpetuation of disease. Implementation experience has shown that the approach to sanitation delivery was not sustainable as it demanded a high capital cost of infrastructure provision, since most of the country did not have bulk infrastructure reticulated to households. The need for more hygiene related education was essential while government provided the hardware or facility, and people’s lack of consciousness around cleanliness and proper hygiene practices intensified the need for government intervention to promote behaviour change and healthy living. The absence of a clear strategy to achieve an overall sanitation solution, rendered delivery slow and without much impact (Mjoli *et al.*, 2009).

Limited financial resources and capacity to address sanitation needs were identified in the sanitation sector early in 2003. Municipalities across South Africa lacked the technical, financial and managerial capacity to fulfil their citizens’ sanitation needs (Elledge, 2003).

Many years later, strategies to resource sanitation provision through cross-subsidisation are inadequate. Mjoli *et al.* (2009) found that cross-subsidisation of sanitation services by higher income areas clearly does not work. Smaller municipalities have a meagre revenue base and hence insufficient resources for their largely poor population. A bigger equitable share is recommended. Sustainable funding for operations and maintenance should be built into all subsidies provided (Mjoli *et al.*, 2009).

Mjoli *et al.*'s (2009) assessment of sanitation policy implementation details an array of shortcomings in project implementation since 1994. Municipalities need to invest in building stronger relationships with community partners for sustainable development practices at local level. Sustainable development is a gradual process, it was observed that commitment and consistent engagement of partners in sanitation programmes were absent. Managing stakeholders and the extent of their engagement toward sustainable sanitation delivery through community involvement was not detailed. Improved communication with ward committee and tribal authorities are recommended channels for systematic and broader engagement of beneficiaries and partners.

Lessons from other parts of the province indicate that implementing agencies such as the Independent Development Trust (IDT) hired by government, has failed to deliver sanitation to poor communities in KwaZulu-Natal. Of the targeted 2 532 toilets, only 853 were built. Project start dates were delayed by a year. The Minister Gwen Mahlangu-Nkabinde of Public Works cited communication breakdown between municipalities, and the potentially contentious commissioning of the project to a government agency as reasons for non-delivery (De Lange, 2011: 2).

3.8 DISCORDANT DEFINITIONS OF SANITATION

The definition of sanitation services refers to the “physical infrastructure, hygiene-related behaviour, disposal of wastewater, excreta and other solid wastes, in the context of household and institutional activities” (DWAF, 1996: 3). This definition broadly refers to the provision of public services required to ensure that all aspects of sanitary living conditions prevail in an individual’s life as well as the protection of those providing the service. However,

interpretation and implementation as per policy requirements raised concerns about achieving any of the above efficiently, as each water services authority or municipality interprets and delivers sanitation that is pertinent to the local needs, context and resources available aligned to its internal Water Service Development Plan.

Adjustment in definitions became evident when in 2003, the Strategic Framework for Water Services defined sanitation services to include a deliberate reference to infrastructure or facility, sustainability and the communication of health and hygiene (DWAF, 2003). The realisation that change was imperative dawned upon regulators when the cholera epidemic claimed many lives in KwaZulu-Natal and other provinces in 2001.

The changing definitions are an indication that the challenge with sanitation provision is growing. Mjoli *et al.* (2009) argue that guidelines provided by government regulators are not flexible for municipalities to adjust their response as service providers. They also argue that the many definitions in government guidelines further complicate the understanding how and what type of sanitation should be delivered:

“Basic level of service for a household means a Ventilated Improved Pit (VIP) toilet in a variety of forms, or its equivalent, as long as it meets minimum requirements in terms of cost, sturdiness, health benefits and environmental impact. In addition, provision should be made for an ongoing programme of ‘easy to understand information’ about correct hygiene practices” (National Sanitation Policy, 1996: 3).

The Department of Co-operative Governance and Traditional Affairs undertook to establish the *status quo* of access to basic services countrywide for the purposes of improving strategies and approaches to provide universal access by 2014. In the Basic Services Publication Report (2009), the basic sanitation service delivery indicator raises the bar when defining sanitation delivery:

“Basic level of service includes flush toilet with septic tank and pit latrine with ventilation. Higher level of service includes, flush toilet connected to sewerage system” (Basic Service Publication, 2009: 19).

The report acknowledges technical, financial, and capacity constraints yet infers that basic level of service should include flush toilets which have direct implication and the need for large volumes of water usage and increased costs and wastewater management.

The Strategic Framework for Water Services of 2003 provide a revised definition of a basic sanitation facility following national policy implementation experience and interpretations:

“The infrastructure necessary to provide a sanitation facility which is safe, reliable, private, protected from the weather and ventilated, keeps smells to the minimum, is easy to keep clean, minimises the risk of the spread of sanitation-related diseases by facilitating the appropriate control of disease carrying flies and pests, and enables safe and appropriate treatment and/or removal of human waste and wastewater in an environmentally sound manner (DWAF, 2003: 46).

Despite a more comprehensive operational friendly definition, sanitation facilities provided by the municipalities are unsustainable. This holds true especially for the poor communities despite the type of facility provided. A marginal user cost is required for maintenance and operations even for the most basic VIP facility deemed ‘improved’ even after revision of the basic sanitation facility definitions (DWAF, 2003). The user cost then clashes with the national free basic service to all. If the poorest of the poor are expected to pay for operations and maintenance, then policies should clearly define the role and responsibility of users to obviate confusion and ensure sustainability.

The perception of free of all cost is perpetuated despite the National Sanitation Policy alluding to costs to be paid by the user, especially when improving or stepping up his sanitation facility when and where feasible and affordable. The Policy clarifies that:

“The hierarchy of adequate sanitation options can be viewed in different ways. From the point of view of the user, it is generally associated with progressively higher costs (initial and ongoing), greater use of water for flushing and improved convenience and status. For the organisation responsible for managing the system, it is associated with

both higher costs to be recovered from users, and increasing operations and maintenance complexity” (DWAF, 1996: 20).

Ambiguity and changing definitions in legislation and policy resulted in chaotic policy interpretation and programme implementation. Still *et al.* (2009) point out that according to the Free Basic Sanitation Implementation Strategy (DWAF, 2009), the initial capital cost is subsidised for users and not necessarily the ongoing maintenance cost. Only a basic structure of the facility will be provided. Ongoing repairs to the on-site structure are the responsibility of the household. Local authorities are only obliged to fulfil capital infrastructure rehabilitation costs and long term maintenance cost (Still *et al.*, 2009). However, confusion further sets in when the meaning of infrastructure is qualified to include tanks and pits replacement or relocation when maintenance is not feasible and yet it does not include the external toilet walls, pipes, pedestal and repairs to pits which are deemed to be capital infrastructure in layman’s understanding.

The report from Mjoli *et al.* (2009), ‘Towards The Realisation of Free Basic Sanitation: Evaluation, Review and Recommendations’, advocates greater flexibility for municipalities to decide on the level of free basic sanitation or the charges to be levied to beneficiaries of basic sanitation facilities. Municipalities with consistent inflow of revenue have the ability to implement cross-subsidisation policies, whereas poorer municipalities who do not have paying user base or resources are unable to deliver free basic sanitation or eradicate backlogs to meet national targets. Therefore, resourcing for sanitation should be reviewed by national government so that poorer municipalities are offered greater support (Mjoli *et al.*, 2009).

The “one municipality, one policy” approach should recognise the needs of all residents not only those listed on their rates base or indigent list, as in doing so, rural households tend to get neglected. The indigent register in most municipalities are not a correct reflection of indigent population. The verification processes are tedious. Statuses of families change ongoingly through employment and unemployment variables (Mjoli *et al.*, 2009: v).

The World Bank (Slack, 2007: 2) confirms that the co-ordination of service delivery in large metropolitan areas in developed and developing countries requires a model of governance that

changes relative to the context of the city: there is no “one size fits all”. However, the governance model adopted should assimilate key elements such as equitable cost-sharing, a match between resources and expenditure, and strong regional co-ordination for effective service delivery. It is also critical that governance structures are accessible, responsive and accountable to its citizens (Slack, 2007).

The National policy on “free basic services” provides an allocated quota of consumption, which the recipient does not pay for; for example, citizens are entitled to 6 kiloliters (kl) free water per household per month. Consumption of water beyond 6kl is charged to the user. While Department of Provincial and Local Government (2003) places emphasis on Free Basic Services (FBS), there is severe lack of infrastructure, resources and capacity of municipalities to provide and sustain service delivery. It is also unclear whether the policies and strategies adopted by government benefit the poor targeted for these services. Although basic services are offered free to the citizens, immense cost is outlaid by government. This suggests that other avenues of funding need to be explored in order to sustain FBS to citizens and alternate methods need to be deployed in order to sustain free basic service provision. Lack of capacity and resources have resulted in local government opting for partnerships or outsourcing of service delivery to the private sector in many areas around South Africa (DPLG, 2003).

3.9 LACK OF GEO-SPATIAL PLANNING FOR SANITATION IN THE NATIONAL SANITATION POLICY

Following the municipal demarcation process in South Africa, urban settings comprise urban suburbs, peri-urban townships or settlements, as well as vast rural areas. Most urban suburbs are serviced by existing or improved bulk water and sanitation networks. In most cities, peri-urban areas lack planning schemes, policy guidelines and city strategy on how to deal with volatility of such areas. However, the areas posing the most difficulties are the peri-urban areas which are generally outside formal land tenures that are most often environmental sinks, with rocky, steep or very low lying flood prone areas (Gadd & Holden, 2003; Allen *et al.*, 2006).

Sanitation reticulation is problematic in difficult terrains. Municipalities lack geo-spatial and geo-technical specific policies, resulting in increased problems with sanitation delivery. There is a lack of municipal policies which deal with specific area types. Therefore, municipal councils are finding it difficult to manage new areas included in their jurisdiction after new boundaries had been demarcated and hence the challenge of sanitation provision may be insurmountable. Increased resources are required to service these generally poor peri-urban settlements, population increases and densified areas leave little option for sanitation technologies which require land space. This is coupled with the difficulty of meeting expectations of communities that believe that any type of sanitation besides waterborne flush toilets, are inferior; they are then marginalised if provided with any other option (Gadd & Holden, 2003).

There is policy deficiency regarding the sustainable eco-friendly sanitation options for peri-urban or peripheral areas. Munch & Mayembelo's (2007) study in African cities examines methodologies for cost effective sanitation for peri-urban areas. The study found that there was inadequate information for the delivery of a total sanitation solution for specific areas. In peri-urban areas, information on the total sanitation system prior to implementation was essential as clarity on capital costs, operating costs, treatment and sale or usage of human waste needed to be well established for urban peripheries. In South Africa, sanitation guidelines for rural settlements are more developed than peri-urban, yet most of the city's poor live in informal settlements or rented shacks in backyards (Gadd & Holden, 2003).

The eThekweni Municipality's Water Services Development Plan (2004) categorises its localities as rural, non-rural formal, and non-rural informal. Its backlog eradication programme for rural settlements focuses on households which do not have access to a VIP or a UDD sanitation facility on its property. Non-rural formal includes urban and peri-urban formal homes. A formal dwelling is part of the backlog if it is without sewer reticulation within 100 metres of the property or is without adequate sanitation in the form of a "septic tank, conservancy tank, package plant or similar". The non-rural informal backlog constitutes "a number of households which cannot easily access a communal toilet block" (eThekweni Municipality's Water Services Development Plan, 2004: 27).

3.10 ETHEKWINI MUNICIPALITY PUTS A PRICE TO “FREE BASIC SANITATION”

The eThekwini Municipality’s Water Services Development Plan (2004) estimated the existence of 150 000 pits or VIP in the jurisdiction of the eThekwini Municipal Area. If the unimproved pits are not replaced by VIP, the Municipality would be faced with the workload of large scale pit evacuation services. Many technical solutions to pit evacuation have been tested. Difficult access to the pit as well as the distance travelled to service communities, increased total sanitation costs. According to Macloed (2005), the capital cost of pit clearance was high. The eThekwini Municipality decided that a franchised model for outsourcing evacuation would be most suitable. Small businesses could develop capacity through training. Private sector service providers are contracted directly by the Municipality. The average cost for the emptying of a VIP pit was R550 and the evacuation of dry sanitation technology for as little as R25 per vault (Macloed, 2005). The Water Services Development Plan stipulates that the cost of emptying pits is heavily cross-subsidised by users of the sewer systems.

3.11 ‘STEPPING UP THE SANITATION LADDER’

The Strategic Framework for Water Services recommends that a higher level of service should be provided to households following the initial basic services. The higher level of service should be practical, viable, subsidised by government and financially sustainable (DWAF, 2003). The promise of waterborne sanitation perpetuated perceptions that it is the highest level of sanitation and that every household in urban areas, whether informal or formal, will in the future be serviced with full waterborne sewer system.

Community perception of higher level of service is waterborne flush toilet systems. However, further contradiction in the eThekwini approach perpetuates the community’s perception that waterborne sewer was superior and the ultimate sanitation solution. Policy-makers and administrators cautioned around how policy is interpreted and marketed to communities, especially regarding sanitation services. ‘Moving up the sanitation ladder’ was conceived as elevation to the water borne sewer; Macloed (2005: 5) stated that “in time the single pits in informal settlements in urban areas will be replaced by waterborne, piped systems”. The

impact of poor interpretation then translates into promise to users. Macloed also admitted that the many unused dry sanitation systems were as a result of “unmet desire for a flushing toilet” (Kockott, 2009: 26). Despite alluding to water scarcity and the need to innovate around dry sanitation systems, the Municipality’s promises of waterborne sewer systems to urban dwellers have been contradicting its own recommendations.

Teddy Gounden, Hygiene and Education Manager eThekweni Water and Sanitation, emphasises that South Africa is a water scarce country and therefore innovative methods to conserve water through sustainable dry sanitation was advised (Veith, 2010). The Municipality confirmed that it was water stressed, alluding to the high volumes of potable water usage, and the fact that it treats 450 million litres of wastewater daily. In its efforts to reduce the consumption of potable water the Municipality has embarked on effluent recycling for industrial use so that an additional 300 000 people may enjoy drinking water. (http://www.durban.gov.za/durban/services/water_and_sanitation/services/np_water). The Municipality is also battling to curb its water loss (eThekweni Water and Sanitation Non-Revenue Water Branch, 2010). Attempts to arrest illegal connections and repair and replace old infrastructure was underway.

3.12 NEGLECT OF WOMENS’ ISSUES IN SANITAITON

According to the National Water Act 36 of 1997, institutions rendering basic services are legally required to ensure that there is community, racial and gender representation in its formations (RSA, 1997). The National Sanitation Policy is lean on specification to mainstream customised and privileged sanitation for women. According to Elledge (2003), both men and women should be equitably involved for sustainable sanitation delivery as each has different understandings, needs and capacity to offer to community-driven programmes (Elledge, 2003). This indicates that the national interpretation of gender equity lies within the realm of equitable representation as opposed to a critical missing factor of women as change agents learnt from international community lead sanitation programmes (Mehta & Movik, 2011). Therefore, a more rational approach is to plug the gap in sanitation policy principles by placing women at the centre as change agents in development.

Gadd & Holden (2003) assert that the safety of women using communal facilities was not considered. The Strategic Framework for Water Services (DWAF, 2003) is incognisant about the safety of women in the delivery of sanitation facilities; women and men are treated as homogenous and assumed to be equally resilient to external factors. Communal facilities placed far from residences pose a security risk to women and children. In 2009, the eThekweni Municipality embarked on a large scale water and sanitation project for informal settlements, to provide speedy temporary facilities.

The need to deliver rapid services to informal settlements ignored the plight of women regarding access to sanitation facilities 250 metres from their dwelling. Women continue to utilise unacceptable means of defecation inside their homes for disposal the next day (Gadd & Holden, 2003). Women's privacy and safety is compromised when they are expected to access facilities 250 metres away from their dwelling. Despite there being no deliberate focus on the convenience of women, the provisions of the rapid roll out of temporary ablution for informal settlement initiative contradict the eThekweni Municipality's Water Services Development Plan: the latter stipulates that as a minimum level of service, on site sanitation for rural and urban formal dwelling will be provided, that the informal settlement dwellers will be afforded "easy" access to sanitation facilities and that the minimum distance for water facilities will be "200 metres" from the dwelling (eThekweni Municipality's Water Services Development Plan, 2004: 22).

3.13 ECONOMIC POTENTIAL OF SANITATION FOR LOCAL COMMUNITIES (JOB CREATION)

Sanitation delivery (and water) is a significant factor in poverty alleviation and improved living conditions, health and environment (DWAF, 1996). Local communities can engage significantly in activities as infrastructure in unserved or informal settlements are insufficient for adequate sanitation health and hygiene (DWAF, 2005). A community development approach to sanitation delivery as opposed to a contractor driven approach is recommended where local people are skilled and empowered through on-site training (DWAF, 1994). This presents an opportunity for communities to create livelihoods following the need that exists for alternate service provision support through community participation.

Local small and medium enterprises may be contracted to supply and construct sanitation facilities in the area through contractual agreements with the Municipality. Delivery to the people is protected by the stipulation of the Municipal Systems Act, which states that Municipalities or Services Authorities are legal entities accountable for basic services. Quality assurance therefore remains the task of the contracting Municipal authority.

3.14 IMPACT OF POLICY GAP ON THE INDIGENT

Defining who is legible for free services is guided by the indigent policy which arguably perpetuates a sense of entitlement and a stigma of inclusion or exclusion. The eThekweni Municipality's Indigence Policy (no date) defines a poor or indigent person as one who is in "extreme need of basic necessities in life". According to the Department of Provincial and Local Government (2005) aligned to the Constitution an indigent is anyone who does not have access to basic necessities and therefore goods and services such as:

- Sufficient water.
- Basic sanitation.
- Refuse removal in denser settlements.
- Environmental health.
- Basic energy.
- Health care.
- Housing.
- Food and clothing.

The words 'indigent' and 'poor' are used interchangeably. Currently, water services authorities or municipalities are providing "free sanitation" to poor communities. Municipalities with a lower revenue base are battling to service large populations with "free sanitation" due to the exorbitant costs (Mjoli *et al.*, 2009).

The poor policy interpretation and strategies by local authorities countrywide, impact on the effectiveness and efficiency of sanitation delivery to the most needy. The policy and legislation guiding sanitation delivery emphasise the benefit of basic service delivery,

especially to the less privileged communities in South Africa. Against this backdrop, government targets to provide all indigent households with access to free basic services by 2014. The success indicator of government's intention for sanitation provision is therefore the number of indigent beneficiary households. At the end of June 2007, the assessment of number of indigent households benefiting from indigent support policy objectives indicates that:

“Of the 3.1 million indigent households, 1.6 million (52.1%) indigent households benefited from indigent support of sewerage and sanitation services” (Basic Services Publication, 2009: 21).

Since the inception of sanitation policy formulation in 1994, and subsequent implementation and review, just over half (52.1%) of the targeted poor people have benefitted from basic sanitation services. Approximately 18 years of attempts to meet government's mandate of sanitation services to its citizens is still inadequate. Does this therefore imply that another two decades of practice are required to deliver sanitation services to the poor people of South Africa? The “open toilet saga” (Rawoot, 2011: 14) exposes many avenues to question government's policy and ability to deliver sanitation needs. Mothae (2008) states that efficient and effective policy implementation was dependent on the capacity and integrated efforts of the state and multiple stakeholders. Gumede (2008) affirms that policies failed because the participatory strategy for decision-making and implementation were weak, resulting in unsustainable services. Citizens' decisions on type of service required or desired are not recognised during the sanitation delivery processes. Communication and citizen participation during the policy-making processes and implementation remained questionable.

The Water Services Act (108 of 1997) stipulates that a Water Services Plan should be developed as part of the Integrated Development Plan (IDP) of each municipality or service authority. The IDP is the strategic plan of the municipality and should be crafted in a participatory manner giving voice to the people being serviced within its jurisdiction (Municipal Systems Act, Act 32 of 2000). This forms the basis of the inclusion of citizens or the end-users' platform to make informed decision and choices around their options for optimising good household sanitation. Miscommunication appears to be a shortfall in

affording rights to citizens to make informed choices for basic services, giving rise to related protestation and service demands.

3.15 WILL THE ‘POOR’ PERSON EVER OWN HIS/HER OWN TOILET?

In South Africa, the National Sanitation Policy provides for subsidisation of sanitation through the Housing Act (No. 107 of 1997). The Housing Act indicates that all citizens of SA should have access to permanent residence and secure tenure. However, the majority of the poor are unable to secure land tenure or housing due to persistent poverty or unemployment. Although government was committed to houses for all, delivery is slow; provision of communal sanitation facilities as an interim policy for dense informal settlements could mean that an individual may never enjoy the dignity of his or her own toilet. A toilet is a facility that is indistinguishable from a right to privacy and that which is required by every individual every day. Sanitation policy blurs the user’s right to a private facility and dignity as a Constitutional right.

3.16 TOO MUCH FOCUS ON “HARDWARE” AND TOO LITTLE ON “SOFTWARE”

A review of the South African Sanitation Policy implementation from 1994-2003 revealed that sanitation provision was plagued with weak institutional governance. Policy weakness that threatened sustainability was identified as poor stakeholder engagement, obsession with supply-driven technical solutions, and the neglect of softer issues such as health and hygiene (Mjoli, 2010). Sanitation ‘software’ refers to softer issues such as user acceptability and involvement in planning and implementation of basic services and sanitation hygiene practices. There was too much focus on the physical infrastructure or toilet structure and little attention to softer aspects of sanitation hygiene and education on operations and maintenance. Limiting technical choices were availed to users, with negative consequences for user acceptability, and rejection of responsibility to operate and maintain their facilities. Sanitation hygiene awareness and its impact on health was lacking in policy guidelines. Environmental integrity was compromised by

lack of policy guidelines on awareness and conservation. In light of this, meeting the MDG targets was a distant reality (Mjoli, 2010).

3.17 WEAK GUIDELINES AND ENFORCEMENTS FOR PEOPLE WITH DISABILITIES (PWDS)

The White Paper on Basic Household Sanitation punts sanitation access as a basic right to promote human dignity. Matsebe (2006) argues that despite the Constitution of South Africa being one of the most progressive legislations, which outlaws any and all forms of discrimination, the White Paper on Basic Household Sanitation (2001) clearly omits the needs of People With Disability (PWDs). The most basic level of service in the form of VIP toilets provided to the masses post-democracy, neglects the needs of PWDs. Location and structural specifications of facilities are inaccessible by those with special needs, and its potential for hazardous and accidental injury is high. New policy instruments and innovation for effective sanitation needs still leave a gap in addressing needs of PWDs in rural and peri-urban settlements. Policy revisions and inclusion of PWD needs contain shortcomings regarding proper sanitation for differently able people. Matsebe (2006) acknowledges that while technical guidelines have been developed by DWAF for PWDs with greater attention, adequately safe facilities for PWDs are still not available in the public domain. Severely marginalised individuals are therefore forced to resort to open defecation, compromising human dignity (Mjoli *et al.*, 2009).

3.18 ‘KICKING THE BUCKET’ AND DEALING WITH THE CONSEQUENCES

According to the DWAF, in 1996, 21 million people in South Africa lived with unimproved facilities or defecated in open fields (DWAF, 1996: 1). The Sanitation Policy (DWAF, 1996: 20) declared the use of bucket toilet systems inadequate, unhealthy, and difficult to maintain. Government committed to eradicate all buckets from formal areas and prohibit the use of such systems for any future new housing development. A countrywide bucket eradication programme ensued. Bucket toilets were replaced by waterborne sewer systems in formal areas and where bulk waste removal systems were not available, buckets were replaced by VIP toilets or other improved systems (Moolman *et al.*, 2006). However, haphazard delivery and

the absence of planning for maintenance and operations left users and government with dire consequences. For one thing, pit evacuation was expensive and unsustainable (Buckley *et al.*, 2007).

3.19 ‘ONE SIZE DOES NOT FIT ALL’

The provision of urban and rural sanitation provision differ in that it is not always that large-scale engineering solutions alleviate and expedite delivery. Geographical location, topography of the land, water beds and environmental systems in different areas present a need for a differentiated context-specific approach to sanitation provision. The ideal facilities as perceived by communities are the waterborne sewerage systems; however, if these are not managed and maintained properly, they become sources of disease (The Water Wheel, 2008: 6).

Given such challenges, manual clearance of ventilated improved pits is recommended for rural, informal and undulating land topographies, increasing the engagement of local community contractors in the construction, operation and maintenance of facilities. Large engineering consultants and development agencies were commissioned to deliver either VIP for rural and unplanned settlements and waterborne flush toilets to formal areas countrywide. The implementation of the bucket eradication programme was met with challenges of technical capacity, high capital costs, institutional capacity and the costs of maintenance and operation of sanitation systems. Community acceptance and expectations created more difficulties during delivery. Communities in the Eastern Cape rejected the basic VIP facility initially, demanding a higher level of service (Moolman *et al.*, 2006).

The delivery of bucket eradication programme was slow. In 2007, a partnership was established between the United States Agency for International Development (USAID) and the Department of Provincial and Local Government (DPLG) to implement the bucket removal programme in 56 municipalities across the country. USAID provided technical support and funding amounting to R9. 5 million, replacing a total of 103 000 buckets with VIP or flush toilets where feasible. The success of the project was attributed to increased communication between stakeholders and community hygiene education and local community

training participation in maintenance of projects (Moolman *et al.*, 2006). Similarly, extensive education and information dissemination as well as local political intervention and a promise of future higher level of service, led to community acceptance in the Eastern Cape (Moolman *et al.*, 2006).

As early as 2006, engineers Argus Gibbs remained sceptical about total improved sanitation delivery by 2010, as funding resources were the main challenge (Moolman *et al.*, 2006). The provision of VIP toilets countrywide as an improved option was later met with a further challenge of operational costs when pits get full. The desludging of VIP pits became a crisis when some constructed as early as 1994 were full and needed to be evacuated and disposed economically, ecologically and in a socially acceptable manner (The Water Wheel, 2009).

3.20 THE SLUDGE REVOLUTION

The VIP toilet system was a preferred choice by government for on-site sanitation in South Africa as it was perceived as a low cost, non-mechanical, low maintenance and non-sophisticated solution to delivering sanitation to the millions of historically unserved communities (Foxon, 2007; The Water Wheel, 2009; Labuschagne, 2010). Prior to government's drive to eradicate unimproved sanitation systems with the VIP systems considered as the minimum level of sanitation, the VIP was mainly constructed and maintained by the owners.

The intention with the utilisation of the VIP was to move the superstructure to a newly dug pit once the pit is full. However, in problem terrains and densely populated areas especially in peri-urban informal settlements where most poor communities live, limited land space makes such methods of sustained use difficult. The VIP option may work better in rural areas where use of multiple pits over a period of time may still be feasible (Gadd & Holden, 2003).

Mjoli *et al.* (2009) criticise government's haphazard planning as VIP pit toilets provided to mainly poor communities during the bucket eradication programmes were unsustainable and an ecological threat. Government's lack of foresight was due to inadequate policies, guidelines and financial planning for pit clearing. The basic VIP facility defined as

“improved” sanitation was then relegated to ‘unimproved’ as it contradicted its purpose and function of being a hygienic, safe and environmentally sound method when it filled up. It reverted to the overflowing inadequate sanitation which was as good as having no access to sanitation facilities because it was unusable (The Water Wheel, 2008).

The VIP desludging maintenance dilemma was exacerbated by costs which are equivalent to replacement costs. Relocating the superstructure was unfeasible as structures became weak and fragile over time. Foxon’s (2008) study found that human contact with pit content was deemed extremely hazardous and therefore the manual clearing options required health and safety considerations. Pits filled up faster than expected (Bhagwan *et al.*, 2008). They are also subject to misuse as users deposited household and other solid waste in their pits (Foxon, 2008). Users also neglected repairs to the superstructure. The lack of thought regarding maintenance of the VIP facility was evident when the structural aspects were examined, revealing that the desludging operations through the pedestal were difficult and unfeasible (The Water Wheel, 2009). Re-engineering the design of the VIP was required to enable desludging operational activity. The management and disposal of waste following the evacuation of pits was also a critical problem. Sustainability planning and budgeting by local authorities was required to resolve the looming crisis of pit evacuation. Failure to develop strategies for operations and maintenance resulted in unmet national targets, and growing backlogs with moving targets rendered the MDG unachievable (The Water Wheel, 2008).

According to Mjoli *et al.* (2009), municipalities were challenged with maintaining facilities as forward planning was weak and in most cases, absent. Municipalities were required to raise revenue for the operations of sanitation through cross-subsidisations. Failure to do so resulted in neglect of existing facilities. Although user contribution towards cost has been included in the national draft Free Basic Sanitation Strategy, no clear guidelines have been provided with regard to how and which parts of the operations should be undertaken by the user and are hence unenforceable (Mjoli *et al.*, 2009). Lack of clarity in policy statements coupled with municipalities’ inability to generate sufficient revenue, perpetuated the sludge revolution. Recycling of pit contents was imperative as municipalities struggled to deal with human waste and raise revenue for operations with little or no user payment (The Water Wheel, 2009).

3.21 LACK OF APPROPRIATE SKILLS

South Africa is challenged with lack of job specific technical skills (Lawless, 2008). Lack of skills in the sanitation sector thwarts efficient and expeditious delivery of sanitation services (Muller, 2010).

Capacity building and job creation through skills transfer in the sanitation sector are institutional requirements (DWAF, 2003). Employing local labour to meet the speedy delivery required for the bucket eradication programme was aimed mainly at skills development through on-site training. Large scale bucket eradication projects were funded by the Expanded Public Works Programme to develop skills at local community level (Water and Sanitation Advertorial, 2008, www.ssi-dhv.com). However, the objective of skills acquisition and exposure to technical expertise is questionable. Bucket eradication programmes were largely outsourced to large engineering companies. Local communities engaged predominantly in physical labour, digging trenches and laying pipes where transportation of materials was difficult due to lack of access roads. The Eastern Cape project (Moolman *et al.*, 2006) the USAID and DPLG partnership project (Civil Engineering, 2008), as well as the Gauteng bucket replacement project, drew on unskilled local labour for labour intensive phases of projects with no retention or staff absorption strategy into the large engineering companies. The duration of skilling and exposure to training was aligned to the limited lifespan of the project. Technical engineering or scarce skills development in the sector has been neglected, with negative impact on sustaining multi-billion rand investment initiatives such as waste management plants (Labuschagne, 2010).

Furthermore, the dysfunctional state of sewer management in the country was attributed to incompetent management and neglect of infrastructure. Inefficient waste management escalated problems downstream where rivers in small towns and cities became the dumping ground for sewage. An indicator of the waste management efficiency is the Green Drop status which revealed that only 403 of 852 waste treatment plants were legible for assessment in South Africa. The remaining 449 were either dysfunctional or non-operational, resulting in sewer effluence draining into small rivers countrywide. Of the 449, only 203 score more than 50% in the assessment. The impact thereof was recorded by the South African Medical

Journal, which stated that more than 80 deaths in the small town of Ukhahlambo were caused from diarrheal disease contracted from polluted rivers with decaying sewer effluence (South African Medical Journal, 2010). The Green Drop Report on provinces countrywide raises concerns about the high risk of waste water treatments which impact severely on the health of people, the environment as well as the economy crisis (DWA, 2012).

Engineering company Aurecon's assessment of waste water treatment plants commissioned by Minister Scelo Schiceka, found that 85% of sewer treatment plants in South Africa were dysfunctional. The Minister of Department of Water Affairs (DWA previously DWAF) estimated that a R100 billion investment is required to restore operations in neglected and dilapidated plants. The reasons for the crises was multifarious with institutional incapacity, poor financial management, unqualified technical staff, poor planning and lack of commitment of local authorities to address the problem of ailing infrastructure listed as a few key issues (South African Medical Journal, 2010). Further research in 2012 indicates that the incapacity of Water Services Authorities (WSA) to manage waste water infrastructure efficiently, with 80% of WSA's being classified as "very high vulnerability" in the medium to long term, persists. The human resource capacity problems loom, as poor skills development and retention echo a future crisis (DWA, 2012: 19).

3.22 POLITICAL SLUDGE SLINGING

While sanitation is often the least talked about human need, yet the most important daily and urgent need of every human being, it is given little importance. Most affected by the absence of sanitation facilities are those people entrapped in poverty and living without basic services for decades. However, sanitation became the focal point of the May 2011 Local Government Elections in South Africa, dominating all other publicity and outcries regarding service delivery (Rawoot, 2011; Tissington, 2011). A number of contentious issues challenging municipalities and the political parties' approach to providing sanitation services to the previously unserved areas around the country were raised (Rawoot, 2011; Tissington, 2011).

South Africa is struggling to provide a dignified basic service to its people. Toilet debacles countrywide preceding the 2011 local government elections reflected little relief for the poor

masses. People still defecate in the open fields and nearby streams or into shopping bags, which they toss into skips. Many still use buckets and empty them in the surrounding open fields. The quality of toilets provided by government is not durable, and “seats cannot take the full weight of an adult”. In the Eastern Cape, “10 chemical toilets are used by 70 000 residents. They often remain unemptied for two to three weeks” (Rawoot, 2011: 3). Poor planning, lack of technical expertise in government, poor monitoring, corruption and insufficient public engagement are key gaps in service delivery systems and the cause of an avalanche of public protests in South Africa during the past 3 years. Statistics South Africa’s release of the preliminary Census 2011 results confirm that bucket systems are still being utilised in many parts of the country and sanitation delivery is ailing (Statistics South Africa, 2011).

3.23 MAKHAZA VS MAQHAKA ‘OPEN’ TOILET BATTLES

According to Rawoot (2011: 14) the unenclosed toilet saga in Makhaza in Khayelitsha, gave the African National Congress (ANC) an opportunity to challenge the Democratic Alliance’s (DA) slogan “we deliver for all”. It contained undertones of racial discrimination, inefficient governance and dominance of the élite, against the DA. The DA faced court battles when, not long before 10 days into the investigation of the neglect of sanitation provision, the ANC-led Moqhaka’s areas toilet stories began to unravel. The ANC’s previous accusation of unenclosed toilets was reopened. A quick fix response further exposed corrupt practices when immediate enclosure of the ‘open’ toilets was executed by a company owned by a local councillor who then became Mayor. Poor quality infrastructure and irregularities of tender processes emerged.

The sludge slinging and service delivery animated the 2011 municipal election agenda. While party politics opened up unabated debates and denial, service delivery protests continued the questions of participatory governance, budgeting, tender fraud and corruption and ineffective governance systems; also, human dignity and human rights reared fault-lines in local governance countrywide. However, residents initiated human rights violation charges against the City of Cape Town and other responsible departments. The Western Cape High Court

ruled that the City Council and the Mayor were in violation of human rights (Erasmus, 2011; Tissington, 2011).

The pre-election controversy surrounding sanitation spurred the Department of Water Affairs, together with the Department of Monitoring and Evaluation, from the Presidency and the Department of Human Settlements, to commission a study on the state of sanitation in South Africa. The study found that sanitation here is in disarray due to a suite of governance challenges (Tissington, 2011: 24-29):

- Inadequate in-project quality assurance and monitoring.
- Lack of acceptable minimum standards for sanitation facilities.
- Incoherent policy guidelines.
- Unclear roles and responsibilities across government departments responsible for joint delivery of sanitation, leading to fragmentation and lack of coordination.
- Lack of a single department or 'home' for sanitation services.
- Gaps in monitoring systems.
- Failure to plan for bulk infrastructure.
- Inadequate technical capacity at municipal level.
- Lack of operations and monitoring strategies.
- Inadequate community involvement in planning and implementation.
- Insufficient hygiene education dissemination.
- Low community acceptance of government delivery.
- Quality of toilet infrastructure does not comply with minimum adequate sanitation requirements.
- Ineffective sludge and waste water management.
- Insufficient financial investment in bulk sanitation infrastructure. However, it is also noted that the incapacity of municipalities to spend allocations of national government is also a contributing factor to poor sanitation service delivery.
- Government's inability to fulfil the growing demands for sanitation in unplanned settlements.

The report indicated that the state of sanitation in South Africa is regressive, as 1.4 million households do not have access to any sanitation service. Approximately 3.8 million households have been afforded access to sanitation but most of the infrastructure/facilities are inadequate and at risk of service failure (Tissington, 2011: 25-29).

3.24 CONCLUSION

This chapter outlined the South African governance system, elaborating on the regulatory and legislative history of sanitation services. It maps the relationship between the role-players and the positioning of sanitation as a sub-sector of water services, yet a multi-stakeholder with a multi-sectoral function.

This chapter drew on the critiques of sanitation policy and implementation practices, highlighting the impact thereof on poor communities. The literature points to weakness and ambiguity of sanitation policies, lack of capacity of water services authorities to deliver quality services, insufficient financial investment in sanitation, lack of operations and management plans and absence of community participation in planning and implementation, and resulting in state-led sanitation solutions which are clearly not serving the needs of the people, especially the poor.

CHAPTER FOUR: RESEARCH DESIGN AND METHODOLOGY

4.1 INTRODUCTION TO RESEARCH DESIGN AND METHODOLOGY

The research design is a structural plan and the articulation of the desired results for the scientific enquiry to be undertaken, while the research methodology focuses on the scientific procedures followed and the tools employed in answering the research question (Babbie & Mouton, 2002). This chapter presents the case study protocol design and methodology adopted in the execution of the study. A multi-method approach was employed for this study. Research instruments for data collection and the data analysis techniques are highlighted. This chapter also contextualises the study area detailing its historical, socio-economic and locational background.

4.1.1 VALUE OF SOCIAL SCIENCE RESEARCH

According to Babbie & Mouton (2002), the value of social science research and social scientists lies in their intrinsic link to their socio-historical context. Such enquiry is value based for the purposes of exploration, description and explanation. This study is a search for empirical evidence with nuanced, context-specific knowledge in social inquiry situated within the lives of ordinary people, rather than finding what Creswell (2007) refers to as the cause-and-effect relationships of variables in research. Therefore in the ‘trialogue’ of governance, service delivery and sanitation delivery in Inanda, a case-study design facilitated detailed engagement with sanitation as the subject or unit of analysis (Babbie & Mouton, 2002), within a socio-political and historical context of governance in South Africa. Case study research is increasingly gaining credibility and has become “scientifically respectable” as rigorous multi-method data collection yields valuable scientific information (Babbie & Mouton, 2002: 280).

4.1.2 INTERPRETATIVE QUALITATIVE RESEARCH

Scholars agree on a few main characteristics of qualitative research. They agree that the focus of qualitative research concerns itself with real events, real contexts, and real time in a natural setting. The main idea is to understand the social action and perspective of the insider and that

the “research process is inductive” (Babbie & Mouton, 2002: 270). The researcher’s position as a practitioner engaged in strategy for service delivery in the study area enabled intense engagement with the community and their issues which cannot be separated from the context (Creswell, 2007). It further provided the researcher with an opportunity to observe, evaluate and interpret the wider social processes, analysing meanings of events, and behaviour of people in their places of habitation (Creswell, 2007). The researcher was exposed to the action field of local government policy implementation which served as a testing ground for innovation and interventions to best deliver the constitutional mandate of government. The researcher engaged as a practitioner within the ambit of development intervention thereby obviating a “purely outsiders stance which could mask certain routines, as well as complex or obscured relations” (Millar, 1983: 117). Given such exposure, the researcher’s observation and conceptualisation gives personal meaning to the socio-political context of the study area and relations with stakeholders within the processes of governance.

4.1.3 RELEVANCE OF THE CASE STUDY PROTOCOL FOR THIS STUDY

In a case study design, the researcher’s experience is a “key instrument” (Creswell, 2007: 37-38; Babbie & Mouton, 2002: 270), as the researcher gathers data personally in a natural setting where the research problem is located (Creswell, 2007: 37-38). The researcher provides a rich description of the context and location and the people of the study area and other aspects of the enquiry through observation (Babbie & Mouton, 2002). The case study design facilitates qualitative research and complementary quantitative research (Faegin *et al.*, 1991). Therefore, the final presentation includes a descriptive account of the observations, interpretation, reflexivity, perceptions and the voices of the participants (Creswell, 2007).

In Habermas’s philosophy, the human agents are truly social beings that intersect with organizations in their social reality which cannot rely on statistical analysis in understanding the complex relationships, structures and the social reality of bureaucratic structures (in Faegin *et al.*, 1991). Faegin *et al.* (1991: 38-9) add that the case study approach permits the researcher to “examine relationships and deal with the reality behind appearances, with contradictions and the dialectical nature of social life as well as with the whole that is more than the sum of parts”.

According to Creswell, (2007: 73), a case study protocol involves the study of a subject matter through “one or more cases within a bounded system”. He adds that case studies may be viewed as a methodology or a product of inquiry using multiple sources of information. The subject or issue of sanitation delivery may be described as a “single instrumental case study” where the researcher focused on an issue or concern, namely, sanitation delivery within Inanda as a single site or bounded system. Sanitation research and enquiry has a multi-sectoral focus, with its efficiency and effectiveness hinging on the interaction between the various actors within the identified sectors. In order to understand the dynamics and complexities of each ambit of policy and implementation, a case study method has purpose as it allows for a “multi-perspectival analysis” and account of the research problem (Feagin *et al.*, 1991: 154). The case study design allows the researcher to examine not just the voice and perspective of the actors, but also the interaction between them (Creswell, 2007).

The case-study design is apt for this study as it provides for an exploratory and descriptive analysis of a social situation with in-depth qualitative methods utilised for the intense examination of the phenomenon for deeper meaning (Fouche, 2002). This study assessed the provision of sanitation in Inanda, one of the most impoverished areas in the country (Department of Social Development, 2007: iv). The design therefore best captured the perspective of the voiceless, powerless or silenced voices (Creswell, 2007), together with an understanding of the impact of the actions and decisions of those in power positions.

A variety of methods including document sources, archival records, “indirect observation methods like questionnaires and interviews” (Mouton, 1996: 144) and physical artefacts as postulated by Yin (1984), are examined as primary data sources. The overall conceptual understanding was gleaned from primary and secondary data sources. The examination of minutes of meetings, reports on case clinics, departmental business plans, reports on community engagement meetings, local area planning documentation, and research reports formed a significant primary source of context and subject specific data.

This study presents an analysis of a social situation and actions of the relevant actors tasked with the delivery of sanitation services to communities in Inanda. The case-study design facilitated detailed engagement with the object of study, it also allowed for accentuating “a

small number of cases, an openness to multiple sources of data (multi-method approach) and flexible design features which the researcher may adapt and make changes to, where and when necessary” (Babbie & Mouton, 2002: 279). An in-depth insight into practices and processes of management and the interaction between the stakeholders involved in sanitation governance was derived using a variety of methods.

4.1.4 ROLE OF THE RESEARCHER

i) The Role of the Researcher in Qualitative Research

When undertaking the investigation into sanitation governance the researcher took cognisance of her role as interpreter of data, and producer of information. As cautioned by Creswell (2007: 111), the researcher consciously suspended personal prejudices and biases and made a conscious effort to capture data accurately. She established a good rapport and trust with the interviewees and was also aware of the “potential exercise of power and authority and domination” (De Vos *et al.*, 2002: 25) throughout the research enquiry, as participants within the local communities who were bereft of basic needs were in some cases angry with government, and in some cases vulnerable and hopeful that government will help change their lives.

The researcher ensured that her position was clarified before undertaking interviews. Participants were reminded that this study was separate from the researcher’s position as a civil servant or a person with potential authority. All engagements were undertaken with informed consent of all participants throughout the data gathering process. The researcher ensured that the participants completely understood the purpose of the investigation so that participation was voluntary and uncoerced (De Vos *et al.*, 2002). To obviate any misunderstanding or suspicion, all community research interviews were undertaken outside working hours, which provided comfort as well as instilled a degree of trust and ease during conversations.

Being a civil servant and an employee within the eThekweni Municipality, the researcher also paid particular attention to Creswell’s (2007) cautionary note on researching one’s own

organisation or place of work. He warns that there are risks of power imbalances between the researcher and respondents when collecting data and accusations of disclosure of confidential information that one could access in “one’s own backyard”. The researcher clarified that while she was part of the larger organisation, she did not serve in any department whose key or subsidiary function was sanitation delivery. She also obviated the risks of disclosure of confidential information as all data sources generated by public service organisations is public information defined in different categories according to the degree of confidentiality (Promotion of Access to Information Act, No.2 of 2000). Furthermore, the researcher acquired ethical clearance from the Deputy City Manager–Treasury, for permission to conduct research and utilise information generated by the Municipality (Refer to Appendix E). However, the research design provides further protection from bias as the study reports “multiple perspectives that range over the entire spectrum of perspectives” of multiple and varying organizations both public, private and civil society which matches the characteristics of qualitative case study research (Creswell, 2007: 122).

ii) Role of the Researcher: Scientist – Practitioner Approach

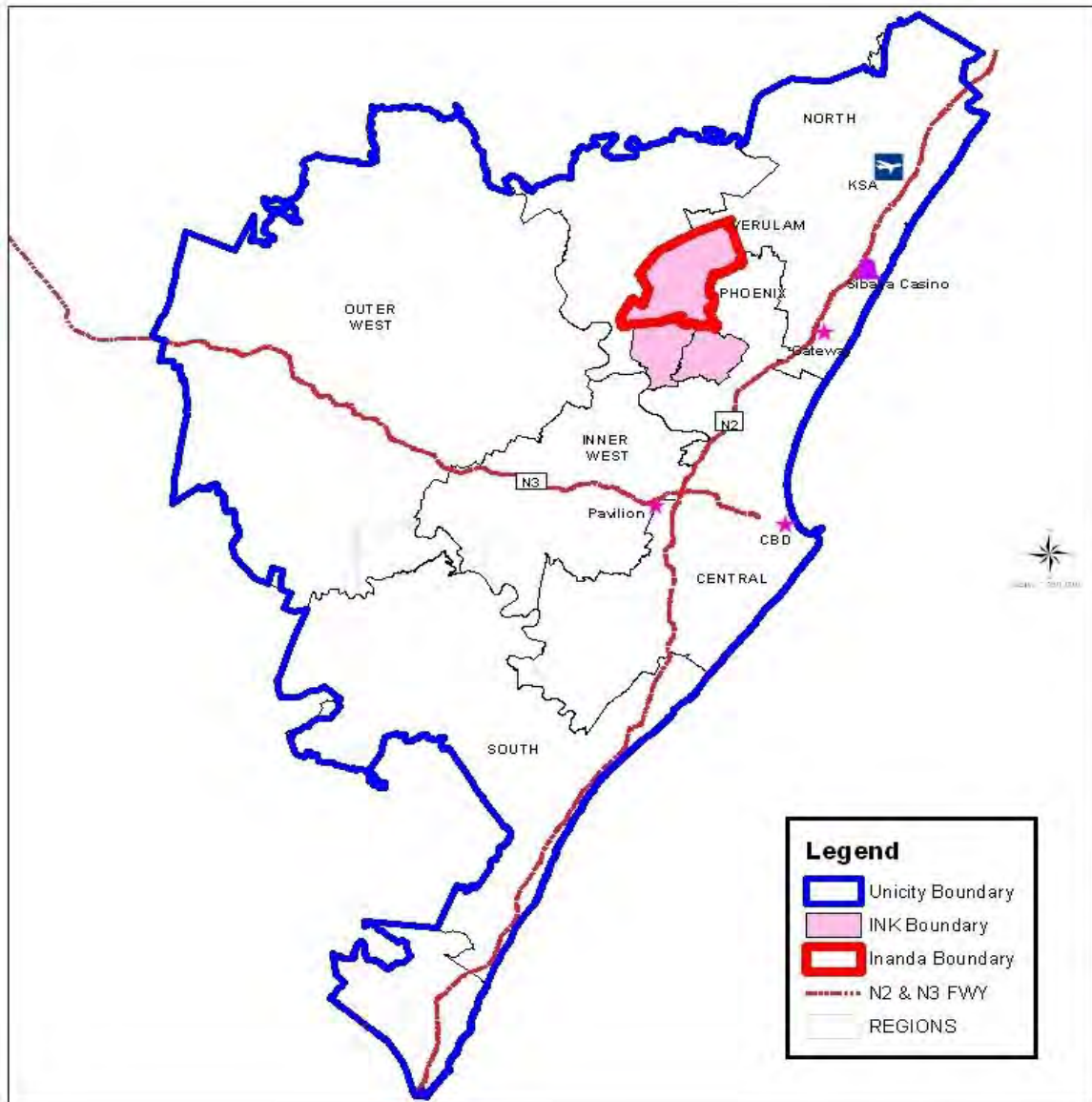
Drawing from the experiences of the caring or health professions, De Vos *et al.* (2002) state that research and practice should be merged and that the scientist-practitioner approach should be encouraged to strengthen the basis of scientific knowledge of the discipline. The integration of practice and research could stimulate critical thinking, encourage the evaluation of professional practice interventions, strengthen practice and instil research-oriented implementation solutions, promote and encourage dissemination of findings of results of research (De Vos *et al.*, 2002). Being a planner of strategy for a developmental intervention with the Area Based Management Programme in the study area, observation and interaction in constructing the implementation process gave the researcher an opportunity to “develop critical thinking” as well as “active learning” in the service delivery environment (Tellis, 1997: 5). According to De Vos *et al.* (2002: 59), there is value in the integration of practitioner-researcher identities as new knowledge, from which “integration of a new set of schemas could emerge to nourish relativistic thinking”. The idea of the scientist-practitioner or researcher-practitioner is further advanced by the eThekweni Municipality through its knowledge management initiative called the Municipal Institute of Learning (MILE;

<http://www.mile.org.za/>). Subsequently, the Municipality has entered into a Memorandum of Agreement (19-01-2011) with tertiary institutions locally in a quest to generate research and knowledge-based practices through collaborative research outputs and knowledge sharing. In light of this, the Municipality aims to enhance its approach and strategic purpose and therefore encourages practitioners within the organisation to undertake purposeful research. The study of sanitation delivery in Inanda is viewed by the researcher as meeting the strategic, policy and knowledge management objectives of the organisation.

iii) Role of the Researcher as a 'Researcher-Observer'

According to Creswell (2007: 46), good qualitative research reflects the “history, culture and personal experiences of the researcher”. The researcher’s intention when embarking on the preliminary investigation began with a series of visits to Inanda to determine methodological rigour and the integrity of an investigative case-study protocol. Inanda is flanked by the suburb called KwaMashu which is part of the Urban Renewal Programme node, and Ntuzuma, most of which were created and crafted in the apartheid era.

Figure 4.1: Location of Inanda



Source: eThekweni Municipality

Inanda is characterised by undulating topography. It displays rich heritage which is often described by local people as the ‘cradle of democracy’. However, signs of historic underdevelopment and neglect are still prevalent. There is also an incongruous perception of residents regarding governments’ efforts to meet service needs which urged the researcher to engage in exploratory and investigative research pertaining to service delivery.

According to Faegin *et al.* (1991: 154), contextualising social science research goes beyond a description of the area or context. This has been referred to as “multi-perspectival or

polyphonic” modes of case study research, where the researcher not only articulated the linkage between the phenomena being studied but also the voices and experience of a range of actors and the interaction between them (Faegin *et al.*, 1991: 154). The qualitative approach to data capturing presented experiential evidence through observation and engagements with a plethora of actors linked to sanitation delivery in the Inanda area.

Being positioned as an employee in close proximity to the study area as well as regular visits to Inanda increased the researcher’s access to local people, enhancing her knowledge on the characteristics of township communities, their economic conditions, social interactions, cultural and traditional beliefs, as well as their responsiveness to government and the services provided.

Furthermore, as a Strategic Planner at the eThekweni Municipality’s Inanda, Ntuzuma and KwaMashu Area Based Management/Urban Renewal Programme (INK ABM/URP) from 2004-2011, a key function of the researcher’s role was planning for implementation to expand services in the social, economic, infrastructure and governance sectors. This required regular conversations with community members and organised civil society to ascertain their immediate needs. This was followed by interactive and consultative planning of strategies to implement programmes together with local people in a quest to improve their lives and the built environment. In addition to locale specific interaction, ongoing conversations with peers improved the researcher’s understanding of the interpretation of policy by practitioners responsible for translating policy into action to meet the objectives of integrated and co-ordinated service delivery. The researcher interacted regularly with implementers from National, Provincial and Local Government departments that implemented programmes in the study area. Planning for the local needs also exposed the researcher further to the institutional governance approach.

4.1.6 AIMS AND OBJECTIVES OF THE STUDY

This research explored the approach to sanitation governance in the Inanda township within the eThekweni Municipal Area, against the backdrop of a participatory multi-stakeholder governance approach to sanitation delivery.

The objectives of the study were to:

- i. Explore the application of governance as an organising analytical framework for sanitation delivery.
- ii. Assess policy interpretation and application regarding sanitation delivery in Inanda.
- iii. Examine the extent of community participation in sanitation delivery in Inanda.
- iv. Assess the experiences and perceptions of the residents of Inanda regarding sanitation.
- v. Identify sanitation successes and challenges in Inanda.

The key exploratory questions present a flow of the inquiry into governance, service delivery and sanitation, aligned to the objectives of the study are as follows:

- i. What are the theoretical and conceptual debates relating to governance as an analytical framework?
- ii. What is the approach to governance in SA?
- iii. Are the approaches, systems and mechanisms for sanitation delivery responsive to the needs of peri-urban and rural communities in Inanda?
- iv. What are the challenges, experiences, perceptions and level of engagement of the communities in sanitation delivery in Inanda?

4.2 BACKGROUND TO STUDY AREA

4.2.1 INANDA: HISTORICAL, SOCIO-ECONOMIC CONTEXT

The sanitation chain includes a plethora of multi-level links. Inasmuch as good sanitation is dependent on technical devices, it is rarely addressed from a social perspective (Van Vliet *et al.*, 2011). This study places specific emphasis on social issues pertaining to sanitation delivery in Inanda.

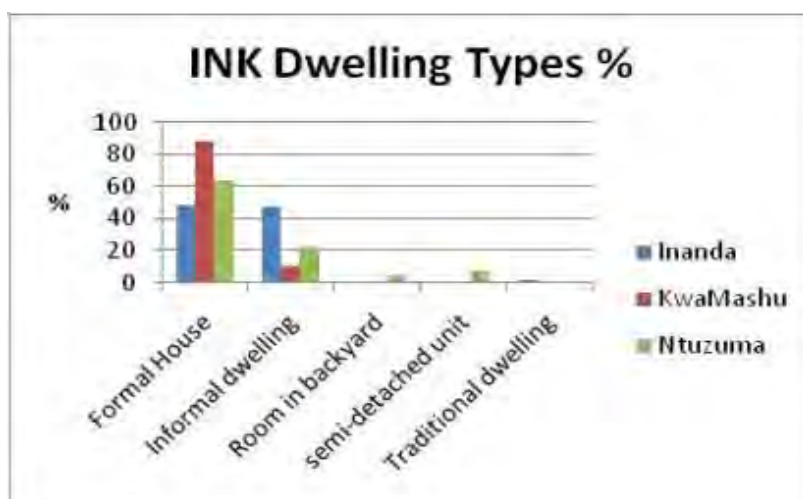
While an overall countrywide increase was noted in the water services sector, in KwaZulu-Natal the sewage and free basic sanitation delivery was the slowest at 23.9%. Municipalities in the Western Cape, in contrast, provided 79.6% of its people with access to free basic sanitation (National Treasury, 2006: 49-50). Similarly, CoGTA noted in the State of Local Government Report that Limpopo, KwaZulu-Natal and the Eastern Cape are the poorest provinces with the highest service backlog, constituting 75% of the national share of water backlogs. It also noted that "...eThekweni, a large urban metro, has the highest percentage share of the national water backlog at 3.9%, and of sanitation, at 5.2% (CoGTA, 2009: 59).

In the last decade, the urban population has grown phenomenally within the eThekweni Municipality with majority of the migrants settling on the periphery of the city in unplanned or informal settlements (Gibson, 2008). The Inanda, Ntuzuma and KwaMashu (INK) Economic Sector survey indicates that the population of Inanda has grown substantially over past 10 years at 115%, and has experienced annual growth of 7.2% between 2001 and 2007 (INK Economic Sector Report, 2008: 4). In light of the growing peri-urban and rural population in Inanda, the demand for basic services has axiomatically increased. This study explores the eThekweni Municipality's sanitation programme delivery approach in meeting the growing demand for sanitation services.

Figure 4.2 indicates that the percentage of people living in informal/shack settlement dwellings types in Inanda is almost equivalent to those living in formal dwellings. Despite concerted efforts and investment in social, infrastructural and basic service needs, poverty and squalor prevailed. There is high unemployment: 42.1% are unemployed with 32.7% of the

population are economically inactive and only 25.2% are employed. The employable age is decreasing constantly due to HIV/Aids related deaths. The INK Economic Sector Report indicates that 82.8% of the population of Inanda survive on a monthly income of between R1000-1600 (INK Economic Sector Report, 2008: 10-11).

Figure 4.2: Dwelling types in the Inanda, Ntuzuma and KwaMashu townships



Source: INK Economic Sector Report (2008: 13)

The area lacked integrated and coordinated service delivery due to poor collaboration between government departments. Service delivery in Inanda remains a huge challenge (Lumsden & Loftus, 2003; DPLG, 2006; Everatt & Smith, 2008). Despite Inanda receiving increased development privilege, because of its historical exclusion, “Inanda remained the least well served urban node; over half (57%) of respondents have inadequate sanitation” (Everatt & Smith, 2008: 13).

The provision of water and sanitation services to previously unserved settlements is a national priority (Foxon *et al.*, 2004). Inanda is one of the most under-served areas in the eThekweni Municipal Area (Everatt & Smith, 2008). Funds allocated for the rehabilitation of neglected infrastructure citywide covers only 35% of the required amount, which leads to further deterioration and spiralling costs of replacement and maintenance (Integrated Development Plan, 2002). Institutional problems such as lack of communication and co-ordination, *ad hoc* initiatives, fragmentation of authority, divergent agendas, lack of capacity

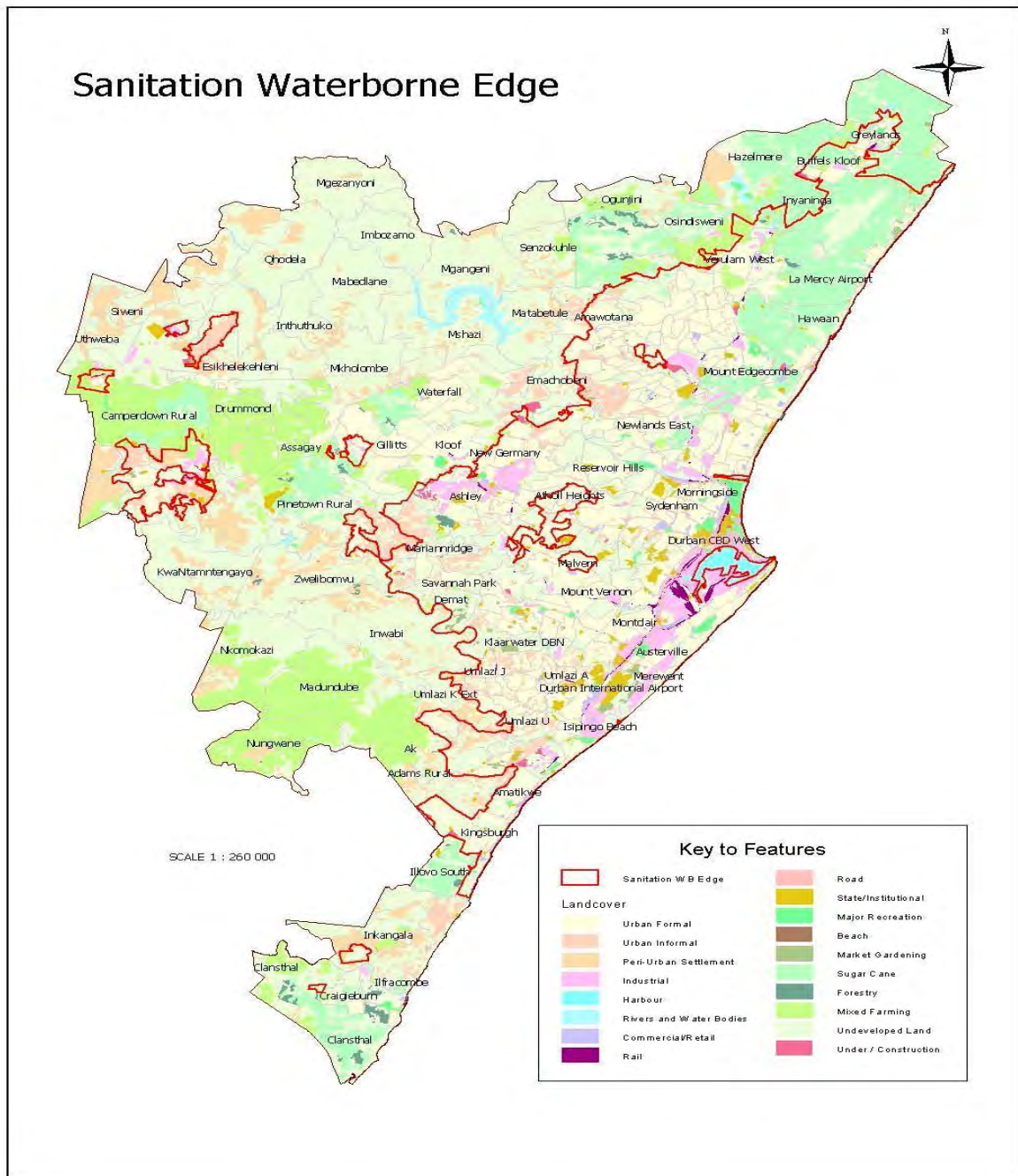
and expertise, and a history of “administrative incoherence and neglect” plague service delivery in Inanda (Lumsden & Loftus, 2003: 4).

The provision of water and sanitation citywide, including informal settlements, is the responsibility of the Durban Metro Water Services, now called eThekweni Water Services (EWS). EWS is a corporate entity (eThekweni Municipality’s Integrated Development Plan, 2005-06) responsible for the building and maintenance of infrastructure, the reticulation of water services to all areas within the Municipality, and the collection of tariffs. Bulk water is purchased by the municipality from Umgeni Water and then piped to the citizens. The challenge of delivering water efficiently to all areas within the Municipality, while generating sufficient revenue is constrained by huge costs caused by waterloss, as well as the user’s inability to pay. According to the Muller (2002), Durban has been the forerunner in prioritising societal needs through implementing the free basic water policy. Through cross-subsidisation and tariff differentiation, the eThekweni Municipality has tested the concept of reconstruction and development through the subsidisation of poor communities, by raising revenue from the rich. Its intervention preceded the adoption of the national Free Basic Services (FBS) policy.

However, there have been dire shortcomings in sanitation delivery. According to Macloed (no date), in the year 2000, the Municipality was facing a sanitation crises in peri-urban and rural communities. Two hundred thousand families within the EMA did not have access to basic sanitation. In instances where ventilated improved pit (VIP) toilets were being utilised, almost 100 000 pits were full and unusable. A free basic pit evacuation service was offered once in five years. The health of communities was deteriorating and there were no policy guidelines to alleviate such crises (Macloed, no date).

Furthermore, the Municipality was still struggling with speedy delivery of improved sanitation to its areas outside the urban edge. These areas lack waterborne sanitation which is only accessible in areas within the urban edge with centralised waste management systems (Macloed, no date). This study assessed the impact of eThekweni Municipality’s people centred water and sanitation delivery through examining the level of satisfaction, affordability and experiences of poor communities in peri-urban and rural Inanda with regard to sanitation.

Figure 4.3: Map of eThekweni Municipal Area: Sanitation Waterborne Edge



Source: Macloed (no date)

The Inanda area is serviced by EWS and is situated largely outside the sanitation waterborne Edge, as illustrated in Figure 4.3. According to Lumsden & Loftus (2003), most areas in Inanda have piped water provided through pressured tank systems, yet communities on the

outskirts still need to source water elsewhere such as rivers and boreholes. Most residents in the more developed areas, who have exceeded their consumption of the daily allocated 200 litres free water, sought other sources to avoid the cost of the set tariffs which they could not afford. Accessing water from community standpipes remains a labour intensive task for the people of Inanda (Lumsden & Loftus, 2003).

Scholars opine that there are “some stark contradictions of ANC policy intentions” and, there was “no decentralisation of the budget and core governance ideas have been taken away” and therefore basic service needs of communities, especially in areas like Inanda were unmet (Lumsden & Loftus, 2003: 32). Lumsden & Loftus’s (2003) study amplified the challenge of decentralised governance in water service delivery. This study examined whether the devolution of responsibility through the decentralised local governance model realises the goal of sustainable sanitation delivery to poor communities of Inanda and whether the constitutional cooperative governance policy ideal was being realised (DPLG, 2006).

The DPLG study on ‘Documenting Emerging Best Practices’ lauded the Inanda Ntuzuma and KwaMashu ABM/URP’s human development bias as an “emerging best practice”. Its merit lies in the philosophy of “putting the individual first” through people centred development (DPLG, 2006: 18). The community focussed objectives of this study examines sanitation at an ‘individual’ level of development. It captures the impact and effectiveness of sanitation programmes on the lives of individuals through extensive interaction with communities within Inanda. The dominant qualitative approach examined household level coping strategies and acceptance of government’s approach to sanitation delivery in Inanda.

4.2.2 HISTORICAL BACKGROUND AND LOCATION OF INANDA

The first townships were built between the two World Wars to house the working class some distance away from the city, nearer to industrial zones. Due to colonial and apartheid planning, townships in Africa and in South Africa experience varied and diverse developmental challenges due to segregated town planning based on race, class and other bureaucratic practices. Most townships are therefore socially, culturally and economically

diverse. Almost 20% of the population in Africa live in townships, in informal settlements or low cost housing in abject poverty. South African townships were racially engineered through the Group Areas Act of 1950, and designed to perpetuate exclusion by containment and control of mainly non-white labourers (CoGTA, 2009: 4).

Due to their exclusion and lack of planning, townships were neglected and characterised by underdevelopment, poor access and limited transport links, poverty and hardship. Post-1994, the democratic government devised numerous strategies to address underdevelopment and alleviate poverty which plagued the majority in South Africa. Inanda was identified as an area of neglect and underdevelopment, with the highest concentration of poor as compared to other townships (Mbeki, 2001) in the Durban Metropolitan Area.

Since the 1980s, Inanda has been an area of great political contestation and land tenure impasse, which had impeded expeditious delivery of services in the area. The sparsely populated area was void of government services during the 1980s. Inanda was the home of the proponent of passive resistance and non violence, Mahatma Gandhi, as well as the founder of the African National Congress (ANC), Dr John L. Dube. It is also the sanctuary of the Shembe Church of South Africa and the chosen destination for the first democratic vote cast by the legendary icon Nelson Mandela. The picturesque lap of tranquillity transformed into a politically charged and contested developmental terrain during the 1980s (Inanda Development Framework, 1995).

Inanda, was developed as a satellite of Durban during the apartheid period. Its development was funded by national government but administration was a mandate of the Natal Provincial Authority (NPA). The area was inhabited by predominantly black people between 1846 and 1910, followed by an influx of Indian indentured labourers. The Native Amendment Act of 1952 introduced influx control through establishing townships to house Africans who were forcibly removed from suburbs flanking the City (Inanda Development Forum, 1995). The population of Inanda grew tremendously, increasing the demand for land and reducing the control of legitimate landownership. This phase was viewed by government as temporary, hence removed from development planning efforts (Inanda Development Forum Report, 1995).

Inanda is situated 25 kilometres from the Durban CBD. The location of Inanda presents a very interesting yet complex geographical and historical setting. It constitutes a mix of urban, peri-urban and rural formations. The urban periphery is densely populated with largely informal settlements (INK Economic Sector Report, 2008) and formal housing in a few areas. The rural component comprises formal housing, informal settlements and traditional huts. Despite being adjacent to the well built-up area of Phoenix, sanitation infrastructure is absent in most of Inanda. Historic and geographic factors impacted on service delivery, sanitation being a difficult case due to the differing housing types, the availability and tenure of land, the influx of migrant workers, high water tables, undulating topography, far-flung rural regions, and availability of funding to meet the needs of a growing population are developmental challenges (Everatt & Smith, 2008).

During and post-apartheid, Inanda was known to have active civil society organisations. Given the history of gross underdevelopment, poverty-stricken communities spent their days engaging in livelihood strategies for survival (Lumsden & Loftus 2003). The absence of development during apartheid made Inanda a key area of redress due to being cut off from the “white South Africa”. This means that Inanda was excluded from development planning budget because of its peculiar political problems and its remote rural location almost 30km away from the city. Inanda is part of Durban’s largest residential agglomeration and is characterised by inadequate infrastructure and services in both extent and quality. The population of Inanda constitutes a majority of ‘blacks’ with a small proportion of Indians. The population of the area is approximately 300 000. Inhabitants flooded the area after fleeing political violence, and seeking refuge from apartheid removals from areas like Cato Manor, leading to severe overcrowding (Lumsden & Loftus, 2003).

4.2.3 DEVELOPMENTAL CONTEXT OF THE STUDY AREA

In South Africa and like other cities globally, there is increased dialogue on strategies to address governments challenge regarding the massive urban growth (Cities Alliance Annual Report, 2007). This section focuses on government’s response to underdevelopment and redress through developmental initiatives in the study area, Inanda.

In South Africa's young democracy, attempts at urban rejuvenation were launched through a ten-year Presidential lead Urban Renewal Programme (URP), identifying eight priority nodes within major cities across the country. Given the vast rural contingent, a sister programme called the Integrated Sustainable Rural Development Programme (ISRDP) was also launched in 2001 to address underdevelopment and poverty due to apartheid neglect and disenfranchisement (Lumsden & Loftus, 2003). The urban and rural development programmes reflected renewed prioritisation of decentralisation to strengthen local administration. Such changes are conceived as rigorous steps in forward planning for cities (Cities Alliance Annual Report, 2007).

i) Urban Renewal Nodes

The urban renewal programme implementation was a strategy of decentralised local governance. Its institutional approach was aimed at operationalising the ideal of co-operative governance as all three spheres of government are mandated to respond to calls for intervention through targeted programme implementation. The Urban Renewal Programme (URP) and Integrated Sustainable Rural Development Programme (ISRDP) were initially ten year programmes aimed at addressing underdevelopment and improving the lives of citizens in the 21 nodes identified as development priorities (Mbeki, 2001). These comprised 13 Integrated Sustainable Rural Development Programme (ISRDP), and 8 Urban Renewal Programmes. The declaration of these nodes at the turn of the century responded to the global call for poverty eradication through the Millennium Development Goals and the South African government's 'war on poverty' programmes. Yet, poverty in Inanda was higher than the average for the URP nodes in 2006. Lack of sanitation and overcrowding were critical issues causing unpleasant living conditions (Everatt & Smith, 2008).

Figure 4.4 depicts the areas identified as URP programmes countrywide. Inanda was one of the priority areas located within the Inanda, Ntuzuma and KwaMashu (INK) node.

Figure 4.4: Map of South Africa Depicting Urban Renewal Nodes



Source: Department of Social Development (2008)

The criteria for the selection of nodes for fast-tracked development included high levels of poverty, large population size, high unemployment and satisfactory or lack of government capacity. The strategy of government in addressing these developmental pitfalls was to focus on “economically vibrant and socially cohesive areas initially through anchor projects to kick-start the programmes, and then through better co-ordination between departments” (Smith & Everatt, 2006: 1). The approach was to utilise existing resources and capacity within government but encourage integrated delivery through co-ordinated planning across all three spheres, inclusive of the private and community sector.

ii) Inanda as part of an Urban Renewal Programme (URP) and Area Based Management Programme (ABM)

Inanda and KwaMashu were the townships identified within the eThekweni Municipal area with enormous inequality and neglect stemming from the apartheid era. Further to the URP initiative, the eThekweni Municipality supported by the European Union embarked on piloting the Area Based Management model in five areas in the city. The purpose was to target development geographically in response to the need and developmental potential of each of the selected pilot areas. Inanda, by virtue of being the poorest township within the EMA, was

selected together with KwaMashu and Ntuzuma as the area based management pilot coined as 'INK'. The INK ABM/URP is therefore a strategic planning and co-ordinating intervention programme of government aimed at realising the goals of urban renewal and a learning area for development. As an urban renewal programme, "local governance remains a critical performance indicator" (Smith & Everatt, 2006: 13). Similarly, the ABM model is intent on localised decentralised planning, implementation and monitoring of government intervention in the node.

After five years of focussed development, Smith & Everatt's (2006) study found that there was scepticism amongst respondents regarding improved service delivery in Inanda. The goal of increased co-ordination and amongst and between the spheres of government was still unachieved in the Presidential Lead Urban Renewal Programmes.

iii) Population Growth in Inanda

According to the INK Economic Sector Report (2008: 9), the population of Inanda has grown substantially compared to other townships in the INK area. Inanda has grown at 115% in the past 10 years, with 7.2% growth between 2001-2007 exceeding the national growth rate of 2% and the eThekweni Municipal Area (EMA) growth rate of 2.2%. The Report also stated that despite trends of increased commuting from the City to rural homes to and from work, there is a persistent migrant movement to the informal settlements in the INK areas with sustained population growth projected for future years (INK Economic Sector Report, 2008).

4.2.4 PROFILING INANDA (STATISTICS SOUTH AFRICA, CENSUS, 2001)

The purpose of profiling Inanda was to provide the *status quo* of the study area as published in the Census 2001 report. The data in Table 4.1 details a list of wards which were selected for the study. These include Wards, 3, 54, 56, 57 and 59, which cover 5 out of 8 wards in the Inanda area, and the focus of the study. Ward names and description of area types are presented on Table 4.1. Each ward comprises pockets of areas with specific names as listed. The peri-urban and rural categorisation was done to understand what the study area constitutes spatially.

The number of households and housing types per ward is presented. Detailed statistics on the number of households with waterborne flush toilets and availability of water in the dwelling is presented. Census survey results published in 2001¹, provided the historical timeline when comparing access to sanitation and experiences of residents or respondents regarding sanitation and water services in this research. It was useful in assessing the impact of the measures taken by the Municipality to respond to the needs and improve the lives of people in Inanda, which is within its jurisdiction.

¹ *(Note: The update of the information presented in Table 4.1 was not yet available in the preliminary Census 2011 release).*

Table 4.1: Study Area Ward Profiles and Description (Adapted from Statistics South Africa, Census: 2001)

Ward	Dwelling Type-Number of Households					Peri-urban		Rural		No. of Flush toilets	Water in Dwelling
	Number	Total no. of households	Formal	Informal	Traditional	Other	Formal	Informal	Formal & Traditional		
54	6507	4824	1158	510	15	Emzomusha, Inhlungwane, Newtown C, and Nhlungwane.	Besters, Bhambayi, Emzomusha, Ezimangweni, Inhlungwane, Mafukuzela, Ntuzuma-H Extension, Section G & and G extension.			387 (6%)	459 (7%)
56	11 562	3735	6243	1467	117	Afrika, Amatikwe, Congo, Goqokazi, Haffejees Priv, Inanda Congo, Inanda	Goqokazi,, Namibia, Ohlange, Stop 8 Africa, Amaoti, Amatikwe, Congo, and Etafuleni.		Langalibalele	381 (3%)	207 (2%)

						Mission, Inanda Namibia, Inanda No Name 4, Phola Mission, Stop 8, Stop 8 and Section 12.					
57	9708	3855	4869	918	66	Bhambayi, Bhambayi, Langalibalele, Mafukuzela, New Farm and Redfern.	Amaoti, Bhambayi, Langalibalele (1), Langalibalele (2), Ohlange, White City, White City 2/ Ernzomusha.			2175 (22%)	180 (19%)
59	13272	7344	3996	1851	81	Amaotana, Buffelsdraai, Etafuleni, Inanda No Name 2, Inanda No Name 3, Ogunjini,	Amaotana, Amaoti, Buffelsdraai, Etafuleni, Redcliffe, and Zwelisha.			4251 (32%)	3300 (25%)

						Roode Krans, Tea Estate 1, Tea Estate 2, Tea Estate Buffelsdraai, Tea Estate Informal, and Trenance Park.					
3 (and 2)	7641	3378	1419	2811	33		Lindelani, Ntuzuma E1, Ntuzuma Ea, and Richmond Farm A.	Emachobeni, Inanda, Lower Ukamanaza, Ngonweni, Shembe Village, and Upper Ukumanaza	Qadi Inanda, Mphapatheni, and Gwala Area.	288 (4%)	306 (4%)

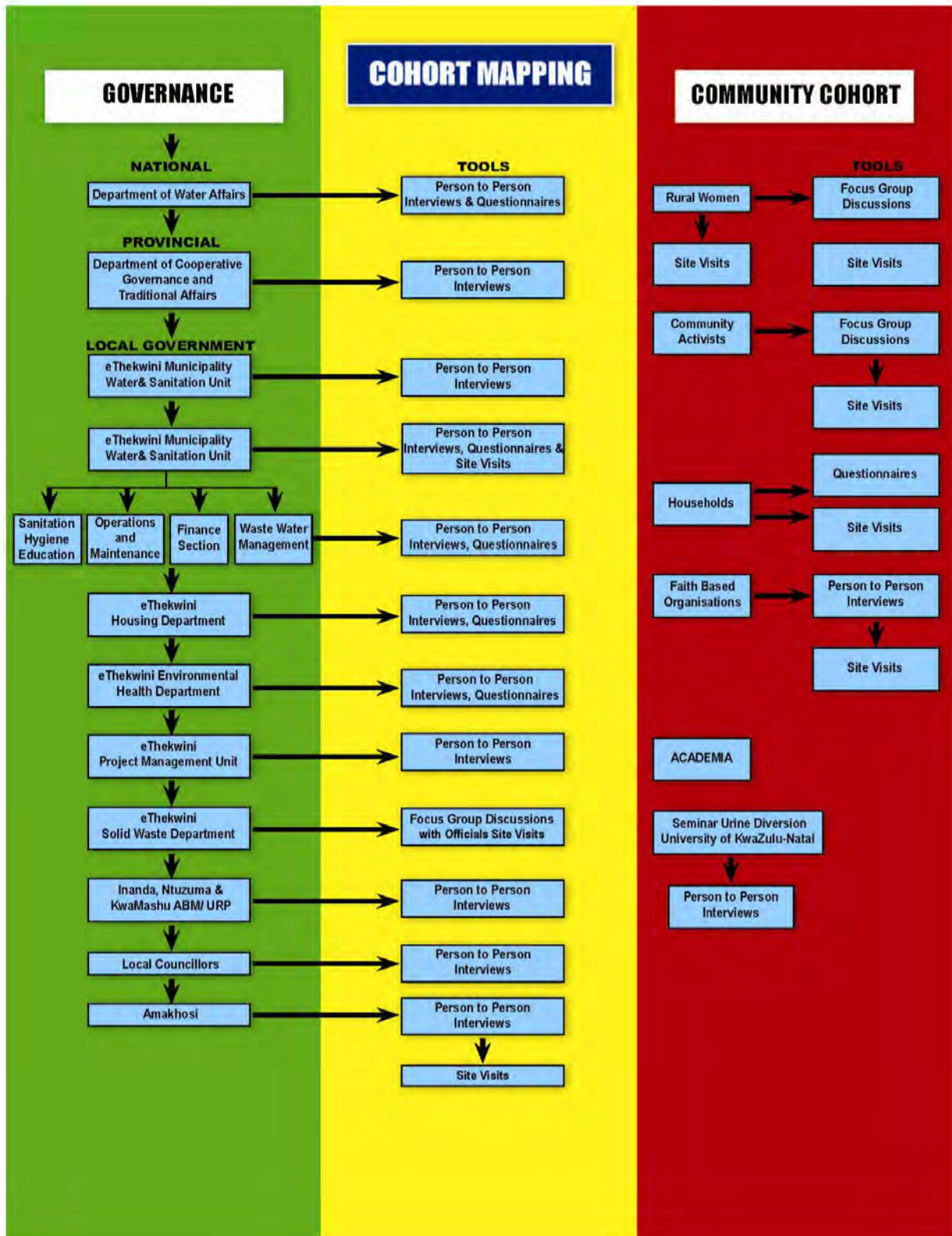
4.3 A MULTI-METHOD APPROACH

This study of sanitation provision in Inanda is predominantly qualitative in approach with quantitative methods utilised to generate data pertaining to the socio-demographic profile and the perceptions of the sample population. The central thesis of Faegin *et al.* (1991: 28) is that a case study methodology using both qualitative and quantitative methods not only serves as a “strategic supplement to the natural science model but is an essential feature of sociological inquiry in its own right”. According to Mouton (1996: 38), supporting qualitative data with “basic descriptive statistics” while using multi-methods and techniques, may contribute to improving the quality of research. Furthermore, scholars argue that while quantitative methods cannot exist without qualitative knowledge of theoretical underpinnings and creative ways of analysis, the converse is also applicable. Similarly, qualitative data should be amenable to even partial counting or patterns for a richer presentation of findings, and conclusions. For this study, qualitative and quantitative methods are “inseparable and intertwined” (De Vos *et al.*, 2002: 370).

The qualitative instruments utilised fits with what Hall & Hall (1996: 45) refer to as “complementarity” rather than an integration of qualitative and quantitative assessment, where different research methods are used to support, explain or set the scene for quantitative results. In the study of sanitation delivery, a degree of complementarity was exercised to assess governance interactions and relationships between institutions and various stakeholders involved in the delivery of sanitation services in Inanda. The qualitative analysis presents the nuanced real experiences of communities with sanitation services in the Inanda township. The quantitative methods provide the socio-demographic data and the degree of intensity of perceptions of respondents gleaned from survey questionnaires.

Figure 4.5 maps the respondents identified in each cohort of the study to gather the primary data required to meet the overall aim of the study. It also illustrates instruments that were employed in a multi-method approach.

Figure 4.5 Cohort Mapping: Multi-Method Approach



Source: Developed by the Author

i) Qualitative Research Techniques and Instruments

The following methods were employed to investigate the approach to sanitation delivery in Inanda:

- ***Literature review:*** An account of literature pertaining to service delivery internationally and locally is presented. The intention was to assess the modes and approaches to governance and service delivery with a specific focus on sanitation provision. Comparisons of international practices are made in the South African context, in order to discover the most suitable approaches to service delivery in similar contexts.
- ***Document analyses:*** This formed an important part of data collection as policy documents, financial records, research reports, minutes of meetings, contractual documents and agreements which recorded processes and procedures that were used to ascertain the level of participation in the processes of sanitation governance. These include contractual agreements pertaining to service delivery in Inanda, reports of donor agencies, minutes of community and council meetings, contractual and other types of arrangements. This enabled the researcher to ascertain the level of engagement of all stakeholders in strategic decision-making pertaining to service delivery.
- ***Key Person Interviews:*** Key persons were identified based on the information required to sufficiently understand the relationship between institutions and various stakeholders regarding delivery of the sanitation services selected for this study. In-depth Interviews with municipal practitioners, councillors, community members as well as community based organisations, faith based organisations and non-governmental organisations working on sanitation delivery in the Inanda area were undertaken. Interviewees were selected using the purposive sampling strategy in order to provide a clearer understanding of the challenges (Creswell, 2007) as they relate to sanitation delivery.

A semi-structured interview schedule was utilised to interview a sample of experts in the governance cohort. Selection of this sample was based on the researcher's judgement and knowledge of the population that will provide data that answer the aims,

objectives and purpose of the study (Babbie & Mouton, 2002). Interviews were undertaken with Heads of Departments, Project Executives, Engineers, Project Managers and Middle Management-Operational staff. The purpose was to explore the strategy and *modus operandi* of the various departments pertinent to sanitation delivery.

- ***Face to Face Interviews:*** Interviews with local politicians, Amakhosi or clan leaders were the first point of entry when undertaking research in the area, who Creswell (2007: 71) refers to as “gatekeepers”. Interviews were guided by a semi-structured interview schedule. Accessibility to councillors varied. Some councillors were approachable and supported the researcher with gaining access to the area and its people, while others did not keep appointments set by the researcher.
- ***Discussions with Bureaucrats:*** Discussions with bureaucrats (referred to as officials or practitioners of the Municipality) at meetings and seminars provided an indication of the challenges as well as the institutional capacity or incapacity to regulate, manage, and facilitate the provision of services in Inanda, as different approaches and partnership agreements characterize the delivery of sanitation in the City of Durban. This revealed the responsiveness of the Municipality to the needs of the people in the area.
- ***Community Organisations:*** Face-to-Face interviews with community organisations which served as conduits for engagement with ordinary people provided a better understanding of the socio-political dynamics in the area. Attendance at community meetings, discussions, observation of how communities go about accessing their daily service requirements presented an opportunity to interpret the actions, strategies and mindsets of residents as to how they coped with sanitation challenges in Inanda.
- ***Participant Observation:*** The researcher assumed a “middleground position” which can be described as midway between a participant and non-participant (Creswell, 2007: 139), through employing methods of observation and analysis that stay close to the research subject (Babbie & Mouton, 2002: 53). This method enables the researcher to go “beyond the information given” in analysis as a subtle source of error in case-study material due to the absence of information and ideas (Bromley, 1986: 238), which

masks critical latent data which could be uncovered and understood through observation. Interaction with and observation of activities of the selected communities within Inanda enabled the researcher to extract much more data than that which is tangible. The researcher was familiar with most communities which gave her the opportunity to interact with subjects in an “unobtrusive and non-threatening manner” (Creswell, 2007: 144).

- **Academic Seminars:** The researcher also participated at seminars convened by the University of KwaZulu-Natal which hosted international scholars on topics relating to sanitation delivery.
- **Attendance at Meetings:** Attending inter-governmental bilateral meetings as well as local community meetings (during the years 2007-2010) enabled the researcher to learn about the culture and attitude towards sanitation and service delivery. Inference and extrapolations of community perceptions of the governance approaches and arrangements towards the effective provision of sanitation was made. Multi-stakeholder steering committee meetings were attended by the researcher.
- **Site Visits:** Throughout the study, the researcher visited areas in all 5 wards enlisted for this study. The observations focussed on the physical and human challenges with sanitation in the number of areas visited enriched the data gathered. Photographs were taken and informal conversations with community members were recorded as field notes.

ii) Focus Groups

A total of 5 Focus groups meetings were held in 3 wards. Community members/activists were invited to participate during an announcement at a community meeting in Inanda. Participants engaged willingly; however, anonymity of respondents was ensured through the use of a ‘*nom de plume*’ in the research report.

Plate 4.1: Focus Group Discussion at peri-urban Besters Settlement (Ward 54) in Inanda



Source: The Author

Focus group discussions served two purposes for this study. The focus group discussions were undertaken early in the study, and provided insight into perceptions and local participation in sanitation delivery. It also assisted in determining the thematic areas for the construction of both the structured and semi-structured questionnaires. For the main study, focus group sessions were planned and held in participants' local environments with between 8-12 people in each of the 5 sessions. Semi-structured questionnaire schedules were used by the researcher to guide discussions using common themes and similar experience derived from the literature survey. Questionnaires were administered by fieldworkers who were bilingual. Focus group discussions were guided by the researcher who is able to communicate fluently in *isiZulu*. Most participants were comfortable using English.

The selection of sites was based on two categories: Firstly, a mix of peri-urban and rural types of settings as defined in the Census 2001, Ward Profiles (Statistics South Africa, 2001). The second criterion was based on the type of housing in the area, including formal, informal and traditional housing typologies. Participants comprised residents of different areas within the selected wards. Five focus group discussions were held in Ohlange, Amaoti and Newtown A,

Besters, and Mphaphetheni (KwaGwala). Plates 4.1 and 4.2 illustrate focus group discussions in Besters and Mphaphetheni respectively.

Focus group discussions is a useful tool for drawing on experiences, opinions, vulnerabilities, and insecurities of stakeholders (such as the consumers, service providers, officials, other interest groups, politicians, officials) engaging in municipal service delivery, as “implementation of policies can be a highly conflictual process that may work out quite differently in practice from the planned result” (Nuijten *et al.*, 2002: 18). This was an important means to elicit community dynamics and civil society participation in service delivery, as the beneficiaries of services are best suited to appraise systems and approaches. Focus group discussions further revealed whether policy formulated for this highly diverse and disadvantaged area is appropriate and relevant to the needs of the population.

The focus group discussion provides more information and allows the researcher to understand how people feel and think about the topic (Phaswana-Matuya & Shukla, 2005). Focus group discussions also provide greater insight into the issue as it “triggers a chain reaction from other participants, bringing about original ideas compared to individual interviews” (Phaswana-Matuya & Shukla, 2005: 22). A relaxed environment was created by the researcher who facilitated discussions without pressurising participants to reach consensus on any of the matters discussed (De Vos *et al.*, 2002: 305-6). Conversations flowed with dynamic group interactions where participants shared their experiences, concerns and diverse points of view regarding sanitation in Inanda.

Focus group discussions allowed the researcher to engage with, and observe a large number of people within a limited time period (Babbie & Mouton, 2002: 292). According to Fern (2001), seating arrangements in focus group discussions is central to achieving desired responses from participants. Fern (2001) recommends square tables to obviate the interpretation of the researcher’s position as invasive, if she is seated opposite participants. He also discourages round tables which will encourage side by side conversations if the person leading the discussion lacks the capacity to deal with the difficult conversational dynamics. However, given the cultural background of residents of Inanda, the researcher allowed participants to guide the formation of group meetings. The rapport and comfort introduced with such an

approach allowed the desired communication patterns to flow and meet the objectives of the discussion. In the rural settings, women gathered on the floor and were cautious in expressing their experiences regarding sanitation. They merely agreed and disagreed with the male participants. However, sufficient data were gathered regarding their experiences from the questionnaires administered by the female fieldworkers in *isiZulu*, on a separate day. A conscious effort was therefore made to probe responses to open-ended questions when administering the questionnaires.

Plate 4.2: Focus Group Discussion at rural Mphaphetheni (KwaGwala, Ward 3)



Source: The Author

4.4 QUESTIONNAIRE DEVELOPMENT AND DESIGN

Questionnaires were generated following exploration of concepts and institutional arrangements pertaining to sanitation delivery through key person face-to-face interviews, focus group discussions as well as the literature survey.

Two structured questionnaires were developed. The first targeted respondents from within the governance cohort. The second structured questionnaire was a socio-demographic perception survey targeting the local communities. Questionnaire pre-testing was undertaken to correct deficiencies or ambiguity in the instrument (Babbie & Mouton, 2002).

4.4.1 RESPONDENT POPULATION AND QUESTIONNAIRE ADMINISTRATION

i) Technical Roleplayers or Governance Cohort:

One of the objectives of the study was to explore the multi-stakeholder governance approach to sanitation. Amongst the identified stakeholders, understanding the role and experiences of implementing technical roleplayers from the three spheres of government, policy-makers, service providers, and the councillors (as the political arm), was pertinent. A spectrum of views was attained through observation and interaction with the various roleplayers. However, to assess commonalities, differences and challenges in their experiences and implementation practice, a structured questionnaire was administered to practitioners who were engaged in sanitation delivery across Inanda.

ii) Questionnaire Design and Data Gathering: Governance Cohort

According to Babbie & Mouton (2002), there are three main ways in which a questionnaire survey may be undertaken. The first is when the questionnaire is administered by the interviewer face-to-face, by telephone, or self-administered when respondents are asked to complete the questionnaires themselves. The instrument used to assess the approach to sanitation governance and delivery was a self-administered questionnaire for managers from the identified departments responsible for sanitation delivery. Self-administered questionnaires were appropriate as the purposive sampling method used and the researcher's judgement ensured that the respondents were sufficiently literate (Babbie & Mouton, 2002). They were computer literate and had access to email. Twenty-five questionnaires in the governance cohort were emailed to the selected respondents explaining the purpose of the survey. Respondents were asked to respond via return email. Eighteen responses were received.

The governance cohort questionnaire explored a number of concepts and principles of cooperative governance and multi-sector approach to sanitation delivery. It examined interdepartmental co-operation and collaboration within a decentralised governance model as

the delivery of sanitation is devolved to local authorities and regulated by national government.

The questionnaire was designed to explore the following themes:

- Inter-governmental/inter-departmental roles in sanitation delivery.
- Inter-governmental co-operation amongst and between departments in all spheres.
- Participatory governance in sanitation provision.
- Governance partnership in sanitation provision.
- Role of local government (eThekweni Municipality) in sanitation delivery.
- Community participation in sanitation roll-out.
- Qualitative Responses to multi-tier/multi-departmental in mixed typologies of peri-urban and rural communities.
- Service Delivery and access to clean water enabling sanitation hygiene practices.
- Community awareness and practices of personal sanitation hygiene.

iii) Questionnaire Design: Household Socio-demographic Surveys

The socio-demographic surveys were aimed at assessing the demographic profile and evaluating community perceptions and experiences related to sanitation in five wards of Inanda selected for this study. The selection of wards (or areas) for the surveys was guided by a purposive sampling technique. According to De Vos *et al.* (2002), the purposive sampling technique is a tool for the selection of the research sample entirely by the judgment of the researcher, and is most representative or typical of the population of the area.

The stratified sampling method functions as an organising system which allowed the researcher to organise the sample population into homogeneous subsets, permitting heterogeneity between subsets (Babbie & Mouton, 2002). This method was appropriate as the sample comprised peri-urban households (both formal and informal) and rural households (both formal and informal), each homogenous within its own typology but different from other geographical subset. The stratified sampling design ensures a greater degree of representativeness, reducing sampling error in quantification (Babbie & Mouton, 2002). The

researcher applied two criteria for the stratification of households. The first criterion for selection was Ward-based peri-urban and rural Inanda, and the second was based on the housing typology. The rationale behind the choices of a mix of peri-urban and rural Wards was to understand the experiences of residents and the choice of ‘technology’ (type of sanitation facility) provided or constructed for sanitation services. The description of the wards and *status quo* of sanitation service was ascertained through a review of the Census 2001 (see Table 4.1). A sample of 170 households was selected in 5 of the 8 wards in Inanda. The five wards selected also provided a representative sample of the area as four were on the urban periphery, hence peri-urban (Wards 54, 56, 57, 59) and one in rural Inanda (Ward 3 overlapping into Ward 2).

vi) *Questionnaire Layout: Household Survey*

The questionnaire was divided into 6 sections guided by the literature study and the initial focus group discussions. This instrument was used to ascertain the demographic profile of communities living in the selected wards. In subsequent sections the questionnaire assessed the respondents’ views and experiences of service delivery with specific focus on sanitation as well as water. This was because water was inextricably linked to hygienic sanitation practices (DWAF, 1994: 1). The questionnaire also explored the respondents’ perception of the political and administrative governance aspects of services, as citizens’ engagement via statutory local committees or through community consultation is advanced in the White Paper for Water Supply and Sanitation Policy of 1996 (DWAF, 1996). The community survey questionnaire was tested to ensure that the questions were clear and focused.

Multiple choice questions were employed to assess profile of respondents as well as the type of service or facility accessible by them. The main units of enquiry explored in the Household Survey comprised:

- Socio-demographic profile of Respondents
- Municipal Services
 - Sanitation Services
 - Water Supplies

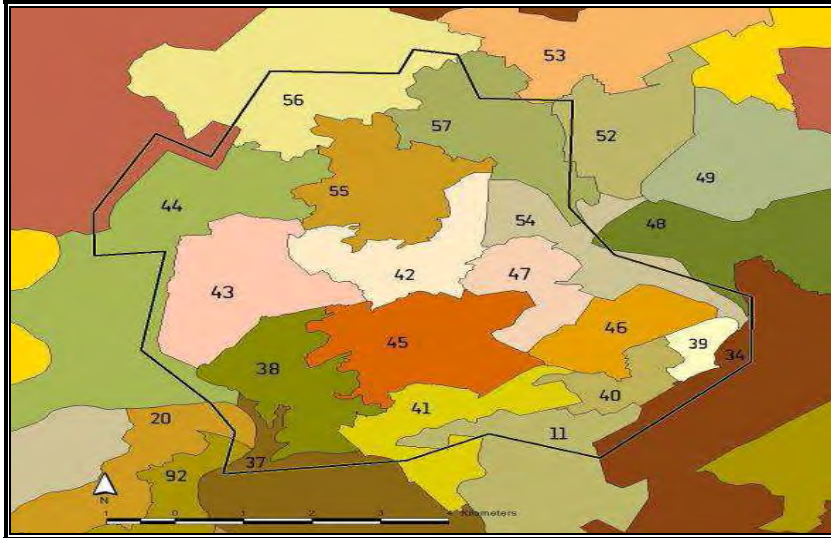
- Payment of Services
- Community Participation in Sanitation
- Governance and Service Delivery
- Sanitation Hygiene Education and Practices

v) ***Delineation of the Field and Planning the Fieldwork***

The researcher's departure from a pure rural-urban dichotomy resonates with the need identified by scholars who encourage scientific exploration in the peri-urban 'buffers' (Allen *et al.*, 2006; Carolini, 2012). Carolini (2012: 256-8) recommends that studies move away from the urban-rural distinctions, as geographies of "intra-urban" or "peri-urban" or "semi-urban" share subtle but tangible vulnerabilities due to their diverse physical space and dwelling typologies. She also cautions that the assumption of urban areas being well-serviced is incorrect as the variegated housing, access, adequacy and quality of services changes due to the types of settlements and geo-physical location. This study therefore placed particular emphasis on the dichotomy of urban-rural and peri-urban physical spaces that Inanda represented.

Figure 4.6 illustrates the wards in Inanda, with the numerical labels as designated through the municipal demarcation process. Respondents were selected across 5 of the 8 Wards in Inanda where a socio-demographic and perception survey was undertaken.

Figure 4.6: Inanda and Surrounding Townships Ward Locations



Source: eThekweni Municipality: INK ABM/URP

4.5 FIELDWORK SCHEDULE

Tables 4.2 to 4.5 detail the multi-method fieldwork schedule as planned and undertaken by the researcher. It lists the participants, focus of discussion and instrument engaged to execute the fieldwork. Purposive Sampling technique was employed to identify key respondents who were engaged in the delivery of sanitation services.

Table 4.2: Schedule of Interviews

Interviews	Respondents	Related Field of Expertise	Instrument
National Department of Water Affairs	Regional Director KwaZulu-National, Senior Manager, Consultant Regional Deputy Director, Department of Environmental Affairs (Inanda, Ntuzuma and KwaMashu)	National Policy Imperative, Regulation, Implementation of sanitation	Person-to-person interviews
Provincial Department of Co-operative Governance and Traditional Affairs	Deputy Director Co-operative Governance and Traditional Affairs.	Resource planning, allocation and monitoring.	Person-to-person interviews
Local Government: eThekweni Water and Sanitation	Head of Department, Project Executive, 2 Senior Managers, Operations Manager: Rural Water and Sanitation, Manager: Sanitation Hygiene and Education, Construction Officer	Policy, planning and project rollout.	Person-to-person interviews
eThekweni Housing	2 Senior Managers, Operations Officer	Informal settlement sanitation provision	Person-to-person interviews
eThekweni Treasury	Deputy City Manager - Chief Financial Officer of eThekweni Municipality.		Person-to-person interviews
eThekweni Project Management Unit	Senior Manager, Project Manager Expanded Public Works Programme	Expanded Public Works Programme, Municipal Infrastructure Grant	Person-to-person interviews

eThekwini Area Based Management	INK ABM /-URP Programme Planner, Development Planner	Project Manager of the EU Funded Urban Renewal and Area Based Management Programme	Person-to-person interviews
eThekwini Solid Waste	Operations Manager and 4 Operations Officers	Practitioners responsible for project implementation and monitoring	Person-to-person interviews and focus group discussions
eThekwini Health Unit	Senior Manager	Policy, strategy and intergovernmental relations	Person-to-person interviews
eThekwini Environmental Health Section	Senior Manager, and Environmental Health Officers	Policy, Strategy and MDG backlog eradication programmes	Person-to-person interviews
eThekwini Political Representatives	3 Councillors Inanda. Community liaison and political representation. Chair of Ward Committee.	Community and political representatives	Person-to-person interviews
Community Development Workers (CDW)	3 Ward based community development workers (CDW)	Foot soldiers and Ward Committee members	Person-to-person interviews
Community Leaders	4 Community leaders from NGO, CBO and Faith Based Organisations.	'Organised community sector' representatives	Person-to-person interviews

Table 4.3: Focus Group Discussions

Focus Groups Discussions	Targeted Respondents	Location
Focus Group Interviews	Focus Group interviews in targeted wards 3, 54, 57, 56, and 59.	Various ward, selected community groups
eThekweni Solid Waste Department	Sector-focussed group discussions	Field officers deployed in Inanda

Table 4.4: Surveys Undertaken

Surveys	Size of Cohort	Purpose & Profile of Respondents	Instrument
Household surveys	170 households	Demographic survey of respondent sample	Questionnaire surveys
Practitioner surveys	35 practitioners across the identified government departments	Questionnaires were mailed to practitioners/ officials who had a role in sanitation delivery	Questionnaire surveys

Table 4.5: Conferences, Workshops and Meetings Attended

Conferences, Workshops & Meetings	Level/Number of Engagements	Purpose	Instrument
eThekweni Area Based Management Joint Government Technical Forum Meeting	70 Monthly attended over a period of 7 years as an employee of the eThekweni Municipality.	Inter-governmental collaboration, integration and co-ordination of service delivery.	Documenting the proceedings of the meetings was undertaken by the researcher
INK Monthly Stakeholder Forum Meeting	50 meetings at Besters Hall in Inanda as a platform to promote participatory governance and deepening democracy in policy implementation.	Participatory governance mechanism.	Meeting of approximately 350 CBO's from the Inanda, Ntuzuma and KwaMashu areas
Urban Renewal Forum Meeting	Engagement at National Policy and Strategy meetings aimed at fast tracking development in the node.	Development and inform the re-formation of national policy.	Attended quarterly National Meetings of Policy Development, Implementation and Monitoring and Evaluation of the Presidential Urban Renewal Nodes countrywide. Inanda being one of the identified nodes.

4.6 SECONDARY DATA SOURCES

The secondary data consulted for the study included published research results which were used to compare and verify primary data or to provide enhanced understanding of the socio-political landscape of sanitation delivery, were as follows:

- Research publications on sanitation delivery in South Africa and specifically Inanda and the eThekweni Municipal Area (EMA) were consulted;
- Policy documents, business plans, project plans and reports on sanitation provision were examined;
- Case-studies of international, national and local experiences in sanitation provision were used as a comparative analysis; and
- Attendance at conferences and seminars provided more insight into the approaches to sanitation governance.

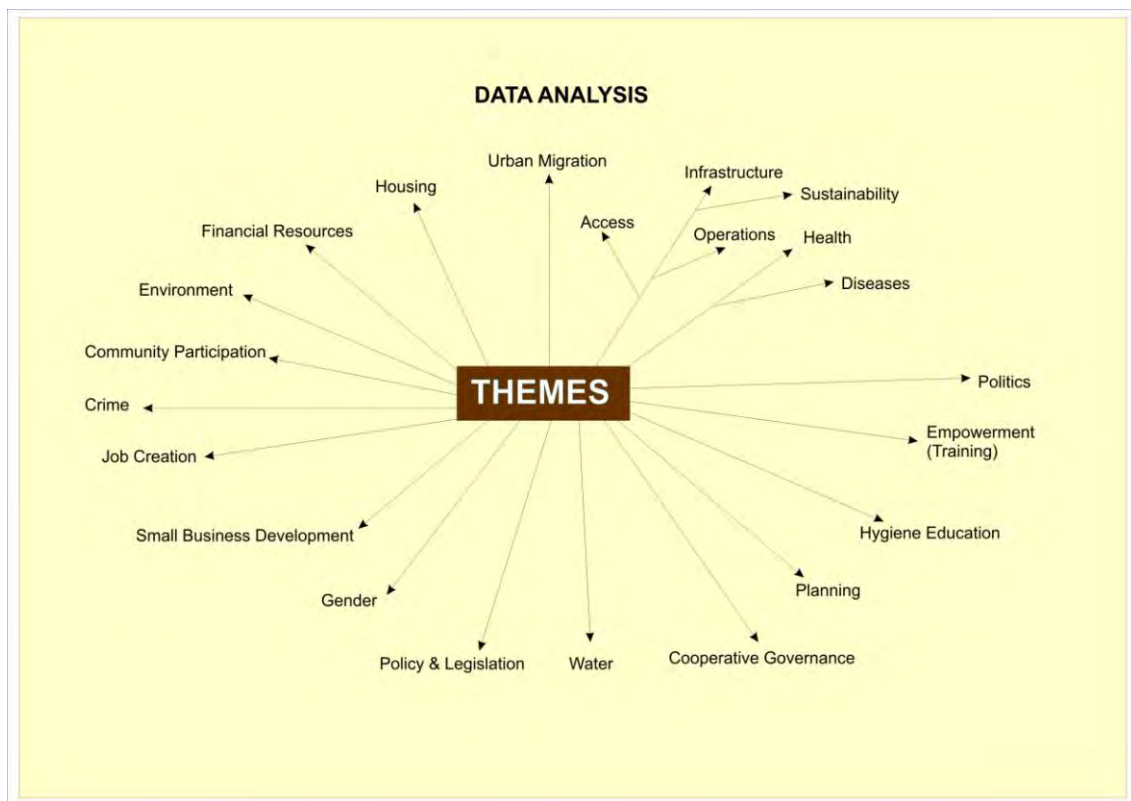
4.7 DATA ANALYSIS AND PRESENTATION

The analyses, results and discussion of the data were presented in two chapters. Chapter Five pertained to the approach to sanitation governance in Inanda and Chapter Six recorded the experience of communities with sanitation delivery in Inanda. The Inanda area comprises a mix of peri-urban and rural areas and the analysis took cognisance of this context. The approach and type of sanitation facilities differed in accordance with area type and housing typology within Wards. Each Ward comprised more than one housing type, formal, informal or traditional hut type of dwellings. Descriptive analyses of perceptions of respondents in the enlisted dwelling types were then presented in order to understand the context and the related challenges of respondents with different types of sanitation facilities. Data were organised thematically and also categorised as per area type (peri-urban or rural) and per housing type (formal, informal and traditional).

i) Thematic Analysis and Discussion

Creswell (2007: 183-4) points out that writing a narrative research report using qualitative research allows for flexibility with emphasis on core elements in a systematic way that ultimately answers the research question. He refers to qualitative data presentation as a “reduction downwards” to themes which fit the core elements of the study. At the same time, the researcher needs to look for the common threads across all participants’ responses.

Figure 4.7: Dominant Themes Emerging from Data Analysis



Source: Developed by the Author

According to Creswell (2007: 37), qualitative research analysis is inductive and produces patterns and themes, descriptive interpretations and the “voices of the participants”. The findings of the study drawn from the data gathered from multiple data sources, together with the researcher’s reflexivity and conceptual reflection of literature, were analysed and presented as results of the study. Figure 4.7 presents the dominant themes emerging from the totality of data, both qualitative and quantitative. The narrative was arranged thematically,

analysing the research problem and findings with accounts of the experiences of respondents regarding sanitation provision in Inanda, Durban.

4.7.1 METHODS OF DATA ANALYSIS AND WRITING OF RESEARCH REPORT

i) Qualitative Analysis

Qualitative research is self-reflective in nature. The researcher was therefore aware of the need to remove herself from the context to critically analyse the empirical evidence elicited through the observation and interaction on foot in the field (Creswell, 2007).

The researcher gathered sets of qualitative materials from key interviews, focus group discussions and seminars. Accompanying such discussions were the supporting documented evidence provided by respondents or gathered by the researcher.

Thematic capturing of verbal expressions of respondents was undertaken using the software Nvivo. Coding of words and phrases from the range of respondents and linking them to determine perceptions and experiences were categorically stored. According to Walsh (2003: 253-254):

“The coding system is a way of labelling certain aspects of your data and sorting the information into distinctive categories. It is an easy way of keeping track of your ideas as well as documents about specific topics. Coding lets you use words, phrases, and ideas directly from the text and you can capture information about things (such as how someone was feeling, when something happened) and explore them further when you decide it’s time”.

The thematic data analysis was used to capture qualitative responses and link them to the quantitative analysis from the survey questionnaires. Results were presented in Chapter 5 and 6, thematically drawing on both types of sources in order to create a triangulation of

information that presented the empirical reality of sanitation delivery successes and challenges.

ii) Quantitative Analysis

The data collected from the respondents were analysed using the Statistical Package for Social Sciences (SPSS) version 18.0. The results are presented in the form of graphs and cross tabulations. The quantitative data comprised mainly results of the socio-demographic profile of respondents and the degree of perceptions which complemented the qualitative data.

4.8 VALIDITY, RELIABILITY AND CREDIBILITY

According to Creswell (2007: 204), validation and reliability of qualitative research are acquired by judging the amount of time of engagement with the research environment and respondents. The triangulation of multiple data sources establishes credibility, confirmability and dependability of research findings. Therefore, in qualitative research it is apt to measure credibility rather than validity of findings. Creswell (2007) also notes that utilising quantitative equivalent criteria to assess the reliability of qualitative research is inappropriate, as qualitative research is undertaken through observation of a naturalistic unique context. He emphasises that the term “validity” neither guides nor informs qualitative research, and therefore “credibility” is more appropriate (Creswell, 2007: 203).

The credibility of the findings of the approach to governance and service delivery in the case-study of sanitation in Inanda was tested using triangulation. Data gathered from in-depth interviews, focus group discussions, site visits, seminars, meetings, surveys and overall interaction with respondents and observation in the study area formed a repertoire of information that was synthesised, analysed and presented as results of this study.

According to a number of scholars (Faegin *et al.*, 1991; Mouton, 1996), scientific status can also be afforded to case study research through triangulation. Case study requires triangulation, especially because it employs multiple methods that relate to the enquiry of a single phenomenon. Its logic is rooted in the complexities of social realities and the almost

impossible task of grasping a totality of views utilising one method. Triangulation also complements and supplements the debatable weakness or shortcomings of one method against the other, thereby increasing the reliability of the observation. It adds richness when drawing from a mixture of methods, namely participant observer, informal conversations, coupled with formal and informal interviewing which include focus groups (Fern, 2001).

4.9 RESEARCH ETHICAL CONSIDERATIONS

This research followed the University of KwaZulu-Natal ethical protocol during the study. Ethical considerations were also carefully considered when gathering data at the eThekweni Municipality, as well as other government departments. A letter of consent was acquired from the eThekweni Municipality's Deputy City Manager: Treasury for use of information generated by the Municipality and to access information through staff surveys within the organisation. All interviewees and respondents who completed survey questionnaires were informed of the purpose of the study and engaged at their own volition. To ensure confidentiality during the presentation of results, designations rather than names were used to protect the anonymity of the interviewee/respondent.

Informed consent was acquired during community surveys and focus group discussions. Confidentiality was ensured during all contact sessions with respondents. Participants engaged in discussions willingly and were allowed to withdraw when they felt necessary. Although respondents willingly shared their personal identities during interviews, names were changed in this research report to protect their identities, especially when direct quotes were utilised.

Political representatives agreed to what they called "transparent" engagement and utilisation of information and their true identities provided during face-to-face interviews were recorded accordingly. They considered themselves 'representatives of the people' and were confident that their contribution would impact positively and make a difference in the quality of life of their constituencies.

4.10 CHALLENGES AND LIMITATIONS OF THE STUDY

Researching the multi-stakeholder approach to policy implementation in sanitation delivery assists policy-makers with empirical evidence which allows policy revision, tracking progress and assessing areas of further research. According to O'Toole (2000), undertaking research on multi-stakeholder or multi-actor implementation is complex and imposes many restrictions on practitioners. Despite the challenges linked to implementation research, studies to improve policy implementation are relevant and required to improve management of public resources and service delivery (O'Toole, 2000).

A number of challenges were experienced during the execution of the fieldwork:

- The provision of basic municipal services such as water and electricity, refuse removal which are necessary for improving living conditions of all citizens are independent of each other, and are administered by different service units. According to the White Paper on Water Supply and Sanitation Policy of 1994, sanitation is inevitably linked and arguably requires water as its basic resource in enabling adequate facilities and effective hygiene (DWAF, 1994: 1). Furthermore, in accordance with legislation, sanitation is one of the components of water services (Water Services Act 108 of 1997). The administration of sanitation delivery is coupled with water services within the eThekweni Municipality. This required careful sifting of information for the investigation into efficiency and effectiveness of the approach to sanitation provision, without allowing the success or failure of water services as an inference to adequate or inadequate sanitation delivery. However, while water provision does not feature as a key unit of analysis for this research project, substantial reference to and assessment of the availability and affordability of water access as a corollary to improved sanitation infrastructure and sanitation health is made.
- Although assessing hygiene practices was not explicit in the objectives of the study, it was included following the strong themes emerging from the focus group discussions. The provision of basic sanitation infrastructure is not the panacea to improved living conditions. In addition to access to adequate sanitation facilities, knowledge on

sanitation hygiene practices and their impact on health is essential. Sanitation education and information dissemination is one of the outcomes of the EWS department delivering sanitation to communities in Inanda with the aim of improved living conditions, personal health and environmental integrity.

- The study is multi-disciplinary, requiring in-depth analysis of inter-governmental departments and their governance arrangements in addressing the provision of sanitation within the designated study area. It was noted that sanitation was not the core function of many of the departments listed and therefore was not always a priority. Reaching the relevant officials for key respondent interviews was a challenge faced by the researcher. Very often the appropriate persons were in strategic positions and could not avail themselves for person to person interviews. These persons were either Project Executives or Project Managers (engineers) who were out in the field and could not commit to a face-to-face interview. Short telephonic interviews with such executives were undertaken to understand the background and challenges on the field were useful and had similar advantages as face-to-face interviews (Hall & Hall, 1996: 102). The researcher consulted with the middle management and operational level practitioners to assess the engagement of the department in sanitation delivery. Electronic questionnaires were emailed to selected practitioners. The response rate was poor as practitioners preferred to discuss matters face-to-face as they felt filling in questionnaires was time-consuming, which they were unable to accommodate given their busy schedules. Therefore, the electronic questionnaire response was similar to snail mail questionnaires, which Hall & Hall (1996: 100) state are more likely to yield a 60-75% response or even one as low as 50%. Approximately 50% of return email response was received from the governance cohort, with the lowest from the National Department of Water Affairs (DWA).

Furthermore, sanitation provision has been devolved to local government which is the service authority. However, regulatory decisions, policy formulation and implementation strategies are crafted by national government. This demands an inquiry into national government's approach to addressing this nationwide problem and how the sharing of powers and authority, roles and responsibilities are managed.

Inter-sectoral integration and collaboration is recommended as sanitation delivery is complex (DWAF, 1996). The responsibility of sanitation was always coupled with water and located within the Ministry of Water Affairs. In 2009, the decision to move the sanitation responsibility to the Ministry of Human Settlements (previously known as the Housing Department) was taken. However, although this coincided with data collection, this change did not affect the objectives of the study because policy and legislation remained unchanged at that time and the local authority (EWS) continued to deliver sanitation in Inanda.

The Strategic Framework for Water Services (DWAF, 2003: 21-22) lists the departments within the three spheres of government that are mandated to engage in achieving the objectives of the national sanitation policy. Not all departments were reached during the course of investigations, either due to non-availability or lack of interest in supporting research studies. Many stated that they did not have time to complete questionnaires or meet with the researcher. The researcher had to rely on reports and other written information sources to elicit the required data from such departments, which constrained detailed assessment of each department's experience in sanitation governance.

- In light of the above, a brief exploration of the specific roles and responsibilities of the aforementioned departments was undertaken. Details pertaining to the structure function and progress regarding the overall performance of these departments are not within the scope of this study. However, all aspects regarding their co-operative governance role in sanitation delivery were examined.
- Attempts to meet with the Chief or Amakhosi in Ward 3 were unsuccessful. However, a face-to-face interview was carried out with a clan leader in the area. Access to councillors in certain instances delayed planned fieldwork as the researcher undertook to consult with the councillors of the ward prior to visiting the areas. Three of the five targeted councillors were interviewed as key persons. Of the remaining two, repeated attempts to secure an appointment through telephone calls and emails were

unsuccessful. However, administration of questionnaire surveys continued with the guidance of local community members.

- The study area has high levels of crime. Hence, safety was a concern during on-site visits or field investigations. Pre-arranged security personnel escorts were used during all field work and focus group meetings.
- This study had several conceptual limitations. The White Paper on Basic Household Sanitation recommends an integrated approach to sanitation where the Municipality addresses sanitation as part of a “package of plans”. The recommended “package” entailed planning for provision of health and hygiene education and sanitation services, water supply services, solid waste management and housing (DWAF, 2001: 17). This study peripherally explored hygiene education, availability of water services as it relates to sanitation infrastructure, hygiene practices and housing. Furthermore, it was evident that the type of housing infrastructure determined the type of sanitation facility (DWAF, 2001). In-depth statistical examination of the aforementioned services was outside the scope of this study. However, the study included respondent practitioners from the eThekweni Housing, eThekweni Solid Waste and eThekweni Health/Environmental Health Section to ascertain the relationship, interaction, integration and the level of co-operative governance in sanitation delivery.
- The study found that there were several definitions (DWAF, 1994; DWAF, 2001; DWAF, 2003; UNICEF & WHO, 2012; Mjoli, 2010) of basic sanitation. A shortcoming for this study was to select the most appropriate definition for access to sanitation delivery. The study found that the White Paper on Basic Household Sanitation (DWAF, 2001: 5-6) presented a comprehensive definition which correlated with UNICEF & WHO (2012: 33), which guided the definition adopted for this study. The study found that policy and literature were unclear on the exact definitions of ‘improved sanitation’, ‘adequate sanitation’ and ‘acceptable basic sanitation’ meant, resulting in these being utilised interchangeably.

The definition adapted for the study with reference to basic acceptable level of household sanitation provision, focused specifically on access to safe and dignified human waste disposal:

“An improved sanitation facility is one that hygienically separates human excreta from human contact. It may be further described as a system for disposing of human excreta, which is acceptable and affordable to the users, safe, hygienic and easily accessible and which does not have an unacceptable impact on the environment. Good sanitation includes appropriate health and hygiene awareness and behavior, and sustainability” (UNICEF & WHO, 2012: 33).

4.11 CONCLUSION

This chapter on research methodology and design mapped the route taken by the researcher to collect, analyse and write the research report for this study. The multi-method approach enabled the collection of diverse sources of data with multiple perspectives to meet the objectives of the study. The multi-method approach presented a rich source of data allowing the researcher to delve deep into the real experiences of respondents regarding sanitation governance.

The chapter also provided a description of the study area where data were collected, the choice of population or respondents, as well as the scientific methodological techniques employed to extract data for the study, in an area with different geo-spatial formations and housing typologies.

Validation of the research findings was strengthened through triangulation from multiple data sources which enhanced credibility of the findings. Qualitative research complemented by quantitative data enhances findings in case study research. The chapter also provided details on the approach and software utilised for data analysis.

This chapter also captured the socio-economic, historical and geographical description of Inanda which contextualises the study, presenting a vivid picture of how communities

experience service delivery, especially sanitation amidst numerous exogenous challenges. It also underscores the developmental interventions by government in the study area post-democracy in 1994, to better assess changes or progress with sanitation delivery gleaned from the experiences of communities in Inanda.

CHAPTER FIVE: SANITATION GOVERNANCE IN INANDA

5.1 INTRODUCTION

This chapter presents the results and analysis of quantitative and qualitative data which were gathered to meet the objectives of the study. The quantitative or numerical results pertain mainly to the assessment of the demographic profile and perceptions of the respondents within the governance spectrum gleaned from their planning and implementation of sanitation in Inanda. A large part of the study captured significant qualitative and textual data emanating from observation, interviews and group discussions. The primary data are punctuated throughout this chapter with supporting arguments and information from secondary sources. Merging the data gleaned through multi-method approaches presented a sound understanding and a flow of information in a multi-dimensional context in which this research was undertaken.

The aim of this chapter is to assess the governance approach to sanitation delivery in the study area Inanda, in Durban. While eThekweni Water and Sanitation (EWS) Unit is the water services authority, the efficient delivery of sanitation is dependent on how the principles of co-operative governance are adopted and adhered to. These principles include integrated service delivery, co-operation, and collaboration, interaction of all stakeholders within sector departments and beyond. The governance ‘actors’ responsible for implementation are inter-departmental partners within the Municipality, other spheres of government as well as civil society.

The chapter is structured thematically to align to the objectives of the study. The discussions are based on the institutional approach, interventions and implementation experiences of practitioners and other stakeholders in meeting the sanitation demand in Inanda. The broad themes in this chapter include multi-stakeholder engagement, co-operative governance in sanitation delivery, empowerment through sanitation, research and innovations instituted by the eThekweni Water and Sanitation Unit in sanitation governance in Inanda.

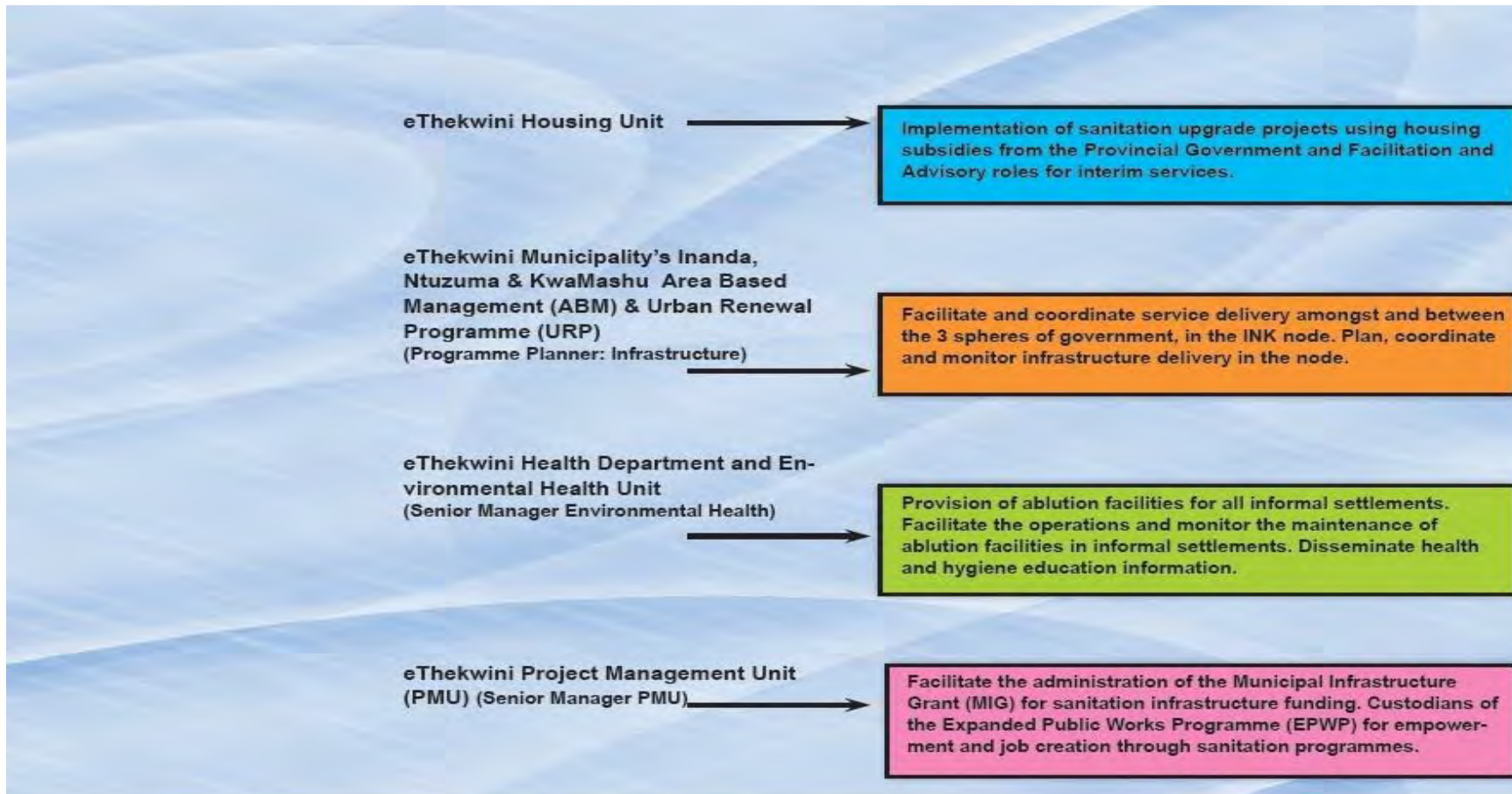
5.2 SANITATION GOVERNANCE IN INANDA

This section assessed the approach and perceptions of practitioners (also referred to as managers or officials) in sanitation delivery. Key respondent interviews executed with officials from national, provincial and local government provided added insights into current trends and challenges in sanitation delivery.

Figure 5.1 represents the key respondent cohort for the sanitation enquiry, enlisting the department, the role of the department and the designation of the respondents.

Figure 5.1: Roles and Responsibility of Inter-departmental Sanitation Governance Respondents

NAME	DEPARTMENT	ROLES AND RESPONSIBILITIES
NATIONAL GOVERNMENT	Department of Water Affairs (DWA) → (Chief Development Expert: Institutional Regulator)	Intergovernmental coordination, Capacity building (policies, strategies, induction programmes) and training to water services institutions and other sector stakeholders. Appraisal of technical reports submitted by the Water Services Authorities (WSA). Regulation through performance monitoring of WSAs and formulation of necessary interventions. Compliance monitoring of norms and standards. Financial support.
PROVINCIAL GOVERNMENT	Cooperative Governance Traditional Affairs (CoGTA) → (Project Manager: Engineer)	Custodian of Municipal Systems Act and Municipal Structures Act. Promoting the IDP process, ensuring capacity and providing financial support (MIG) for local government.
LOCAL GOVERNMENT	eThekweni Water & Sanitation (EWS) <ul style="list-style-type: none"> <li>• EWS Operations Unit EWS Deputy Head → <li>• EWS Construction Unit (Construction Administrator) → <li>• EWS Control Centre (Project Co-ordinator) → 	Construction of the urine diversion toilets to eradicate the sanitation backlog. Emptying of existing pit latrines. Involving communities in sanitation operations. Wastewater management.
		Provision of Urine Diversion Sanitation facility and Sanitation Hygiene Education. Research and sanitation innovation.
		Conducting baseline surveys to establish the levels of sanitation in the rural areas within the eThekweni Municipal boundary and make recommendations to the planning department on the best basic sanitation system to be implemented.



Source: Developed by the Author

5.2.1 NETWORK OF INSTITUTIONS IN SANITATION GOVERNANCE: ROLES AND RESPONSIBILITIES

The Constitution (Act 108 of 1996) requires that the three spheres of government work together to deepen democracy and provide services to its people, in order to achieve the goals of co-operative government working in an interrelated, independent, yet interdependent manner. Chapter 3 of the Constitution provides guidelines for a co-operative governance system. In order to translate the government's mandate into action, a framework of legislation, policy and guidelines were crafted to enable well co-ordinated and integrated governance machinery. The Inter-governmental Relations Framework Act (Act 13 of 2005) defines the role of departments within national, provincial and local government as an 'interacting network of institutions' in promoting sustainable service delivery. This is particularly relevant to sanitation delivery as the constitutional principles of co-operative government are "based on the belief that government is more effective, efficient and responsive to community needs when the individuals and organs responsible for exercising state power act in collaborative and cooperative ways..." (Inter-governmental Dispute Prevention and Settlement, 2006: 9). Lack of clarity on roles and responsibility is identified as the main reason for failure to deliver effective and acceptable sanitation (DWAF, 2002). With regard to sanitation, roleplayers were identified as follows:

i) National Department of Water Affairs (DWA)

The national Department of Water Affairs (DWA), previously known as the Department of Water Affairs and Forestry (DWAF), is responsible for the regulation of water services (defined as water, waste water and sanitation services). As regulators of water and sanitation delivery in South Africa, DWA prescribes guidelines and protocols for implementing sanitation and water services. According to the Strategic Framework for Water Service, municipalities are responsible for the provision of sanitation services within their jurisdiction (DWAF, 2003: iii). They also have the flexibility to craft implementation strategies suitable for their local context and needs.

ii) Provincial Department of Co-operative Governance and Traditional Affairs (CoGTA)

The provincial Department of Co-operative Governance and Traditional Affairs (CoGTA) is the custodian of the Municipal Systems Act (2000) and Municipal Structures Act (1998), promoting the IDP as an integrated process. CoGTA ensures that local government organs have the capacity to execute resources efficiently, providing financial and technical support to municipalities through the Municipal Infrastructure Grant (MIG).

iii) Local Government: eThekweni Municipality - eThekweni Water and Sanitation (EWS) Unit

In accordance with the Municipal Systems Act (2000) and the Strategic Framework for Water Services (2003), eThekweni Municipality is the water services authority responsible for the regulation and operations of water, sanitation and wastewater services in the metropolis. It is also the legal entity authorised to engage private, public or community organizations in the implementation of water and sanitation services. The eThekweni Water and Sanitation (EWS) Unit's Sanitation Department is responsible for the bulk reticulation of sanitation infrastructure. EWS also provides support services to householders regarding the operations and maintenance of basic sanitation facilities provided by the Municipality e.g. VIP toilets where periodic emptying of pits are required. In the CBD and surrounding areas, full waterborne sanitation is available, delineated as the waterborne edge. In the peri-urban and rural areas, various types of sanitation infrastructure to suit the topography and settlement type is provided. EWS undertakes surveys to establish the existing levels of sanitation in the rural areas within the eThekweni Municipal boundary and makes recommendations to its planning department on the most suitable basic sanitation system to be provided.

According to DWAF (2002: 10), "Good sanitation is as much about people and their personal dignity as it is about public health, infrastructure provision or environmental management". The EWS Sanitation Education Programme also disseminates health and hygiene education to peri-urban and rural communities pertaining to the use and maintenance of sanitation facilities provided to them. The Department has also been proactive in innovations around various sanitation technologies including the recycling and reuse of human waste.

iv) eThekwini Housing Department

The planning and delivery of sanitation is dependent on the collaborative efforts of partner departments. At municipal level, the eThekwini Housing Department is responsible for housing development throughout the municipal area. Low cost housing developments and planning for sanitation requirements also fall within the Departments' functions. The appropriate sanitation infrastructure is selected in accordance with the dwelling type and the availability of bulk infrastructure (eThekwini Municipality, 2012). The eThekwini Housing Department is also responsible for informal settlements upgrades as well as assessment of the type of sanitation facility suitable for informal settlements, following consultation with the community and the local councillors. Recommendations are then made to EWS regarding the locality, the community needs and the most suitable type of sanitation, based on the medium and long-term housing plan. For example, if an area is designated for housing upgrade then temporary communal toilet facilities are provided as an interim solution to sanitation needs (eThekwini Municipality, 2012).

v) eThekwini Health Unit: Environmental Health Section

The eThekwini Health Department's primary function is to manage and operate health service centres within the Municipality. Health and hygiene education and information dissemination are key functions of the Environmental Health Section. In 2007, the eThekwini Environmental Health Section was tasked with the responsibility of piloting communal sanitation projects in informal settlements. This was a drive to provide access to basic sanitation service to all its citizens. Education on sanitation hygiene and the proper use of facilities also formed part of the communal sanitation pilot project in informal settlements.

vi) eThekwini Project Management Unit (PMU)

The potential for job creation through the construction of sanitation infrastructure has two key benefits. The construction of toilets and the reticulation of bulk infrastructure have economic benefit to local communities through income generation as labourers acquire skills through on-site training provided by the national Expanded Public Works Programme (EPWP). EPWP

promotes labour intensive construction projects with a view to creating jobs for the poor. The programme supplements the job creating efforts of the Municipality with funding subsidy for EPWP projects. The provision of sanitation services to the majority of the country's previously unserved citizens was viewed as an ideal job creating and empowerment opportunity through engagement of local labour in sanitation infrastructure construction and maintenance (DWAF, 2005).

The eThekweni Municipality's Project Management Unit (PMU) was established to execute the national EPWP strategy. The PMU is also responsible for overseeing the execution of the Consolidated Municipal Infrastructure Program (CMIP), now called the national Municipal Infrastructure Grant (MIG), which funds sanitation infrastructure. The Provincial Co-operative Governance and Traditional Affairs Department (CoGTA) was tasked with the responsibility to administer and monitor the execution of the MIG funds for infrastructure development in municipalities. However, this changed around 2000 when funds earmarked for capital or infrastructure projects were transferred directly to municipalities. Sanitation infrastructure provision is aligned to the EPWP job creation strategy. The EPWP approach targets the poor and unemployed and seeks to provide meaningful work through engaging local people in sanitation projects.

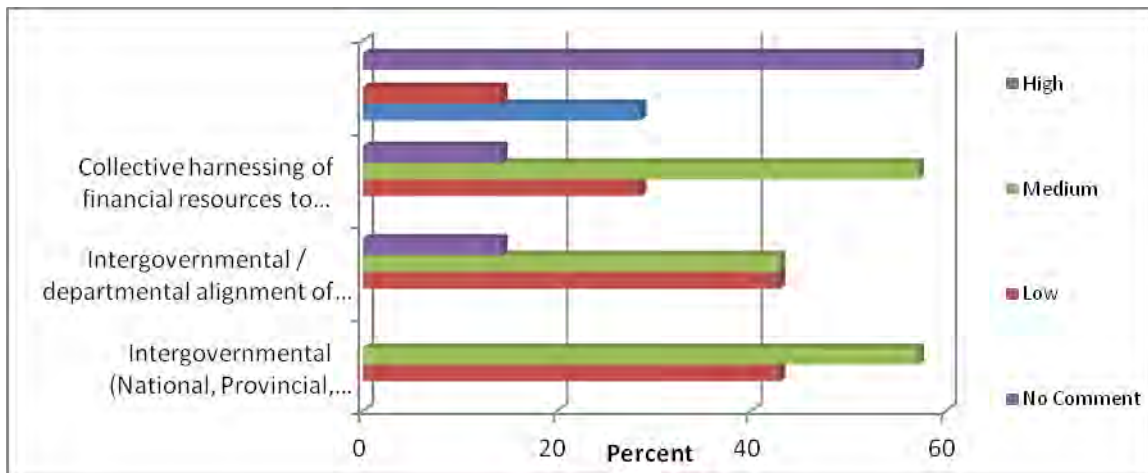
5.3 INTER-GOVERNMENTAL RELATIONS: SANITATION GOVERNANCE

The Municipal Systems Act (Act 32 of 2000) presents a framework for municipalities to uplift the social and economic status of local communities through the provision of essential services. Chapter 5, Section 24.2 of the Act also provides executive rights to local government to enact the core principles of co-operative government as envisaged in the Constitution in order to deliver services in its jurisdiction. The delivery of sanitation requires integrated efforts of national, provincial and local government departments to work in synergy for effective and efficient services (Municipal Systems Act, Act 32 of 2000).

Figure 5.2 presents the perceptions of practitioners working in departments responsible for the implementation of sanitation services within the eThekweni Municipality. The respondents comprised officials from DWA, Provincial CoGTA and departments from within the

eThekwini Municipality involved in sanitation delivery. The study explored respondent departments' perceptions and experiences pertaining to inter-governmental co-operation, collaboration, synergy and alignment of programmes and budgets for integrated sanitation delivery.

Figure 5.2: Inter-governmental Co-operation, Co-ordination and Integration in Sanitation Delivery



5.3.1 INTER-GOVERNMENTAL SYNERGY AND COLLABORATION

This study found that there was no expression of high levels of inter-governmental co-operation in sanitation delivery in Inanda. This meant that managers felt that departments across the three spheres of government do not work together sufficiently or well enough to provide an integrated sanitation service. It was observed that respondents from the Departments of Housing, EWS Sanitation Control Centre and Inanda, Ntuzuma and the KwaMashu Area Based Management/Urban Renewal Programme felt that inter-governmental and inter-departmental co-operation was low and attention should be given to strengthen such relationships so that integrated and co-ordinated delivery was achievable. However, through the INK Area Based Management initiative, monthly joint government technical stakeholder meetings are held to engage dialogue and discussion on project implementation in the Inanda, Ntuzuma and KwaMashu (INK) areas. The Joint Government Technical Forum (JGTF) meeting serves as a platform to co-ordinate and integrate services provided by all departments across all spheres (JGTF Minutes, 24:05:2006; DPLG, 2006). The INK ABM/URP Programme Planner clarified that whilst the INK ABM made concerted effort to integrate, co-

ordinate and align service delivery in the area, sanitation was not a key priority in its budget allocations. Also, the ABM did not engage with sanitation delivery at an operational level (INK ABM/URP Programme Planner Interview, 22-08-2009). Periodic support funding was offered for implementation to EWS. He added that the needs are vast and the number of different stakeholders at different levels of government responsible for the efficient delivery of sanitation complicates co-ordination efforts. Hence, “sanitation is best managed by eThekweni Water and Sanitation Department as that is their competency” (INK ABM/URP Programme Planner, Interview, 22-08-2009).

The above findings align to the DPLG study in 2006, ‘Documenting Emerging Practices in the Urban Renewal Node. DPLG’s study confirms that departments across the spheres of government still work in “silos” and therefore co-ordinated service delivery was not achievable. The absence of integrated planning and sectorally focused implementation prevails in the INK node (which includes Inanda) (DPLG, 2006: 80). The above implies that the URP’s aim of improving inter-sphere and inter-departmental co-operation and commitment was weak thereby creating little or no impact on fast tracking or co-ordinating sanitation delivery in Inanda.

5.3.2 ALIGNING DEPARTMENTAL RESOURCES FOR EFFECTIVE SANITATION DELIVERY

The findings of this study showed a 42.9% response regarding the alignment of annual programme budgets for sanitation between and amongst departments. There was a 28.6% to a 57.1% response regarding the harnessing of financial resources to ensure appropriate sanitation provision. Only 14.3% indicated that investment in sanitation was a priority. This is due to the role of other departments being more a support role in sanitation delivery. All line department priorities are determined by their mandatory or core function. Sanitation was not a priority allocation for the different implementing departments. The MIG fund caters for the sanitation infrastructure delivery while eThekweni Municipality funds the implementation, operations and maintenance costs of sanitation delivery.

Overall, 57% of the respondents indicated that sanitation is rated high in their department's priorities, with 14.3% stating it is low and 28.6% choosing not to comment on whether it is a priority or not. These responses were possibly due to certain departments providing supporting services as per their mandate. For example, the eThekweni Housing Department's (EHD) core competence is housing delivery, with sanitation and water forming a critical component in their planning and implementation plans. EHD advises on their housing development and upgrade plans for the long and medium terms which guide EWS on bulk infrastructure installation and hence, the type of sanitation suitable for the various types of settlements. The implication of this finding is that efforts to invest in sanitation delivery in Inanda were insufficient. Furthermore, practitioners declined to corroborate their claims of co-operative and integrated delivery.

5.3.3 HARNESSING COLLECTIVE FINANCIAL RESOURCES FOR SANITATION PROVISION

According to DWAF (2002), the promotion of sustainable, affordable and efficient sanitation services remains a challenge despite the development of a series of policies to guide implementation of free basic services and tariff charges. There was a medium (57.1%) to low (42.9%) response from Managers who felt that there is greater need for collective harnessing of financial resources for appropriate sanitation provision. They cited operations and maintenance as a huge cost borne by the Municipality for both bulk infrastructure as well as sludge evacuation services. Where local committees were formed to manage the communal toilet facilities, stipends are paid by the Municipality. The eThekweni Municipality receives funding from National Treasury (MIG funds) for sanitation infrastructure provision. All operational and maintenance costs are the financial responsibility of the Municipality. There is no involvement of Provincial tier that is mandated to execute support funding on behalf of National Government (Project Manager, eThekweni Municipality's Project Management Unit, Interview, 22-02-2010). The Head of EWS iterated that there was still a need for increased financial resources to improve sanitation delivery. The eThekweni Municipality draws on fiscal resources from national Equitable Share allocation in the form of the Municipal Infrastructure Grant (MIG) and revenue raised from levies and tariffs. There is a critical need for additional funding to expedite the eradication of sanitation backlog. Water receives

priority and hence addressing water needs was achievable within a realistic timeframe. The Head of EWS explained:

“...the City allocates funds from its fiscus to sanitation however, it is insufficient to speedily eradicate backlog and sustain operations and regular maintenance, and it could take 20 years. Whereas with water there was additional funding from national and we moved fast. If there was funding allocated for sanitation by national government, we will be able to move faster. We receive no funding support from provincial government; in fact we have zero relationship with Province regarding sanitation. There are discretionary funds that Province can allocate, but eThekweni does not benefit, other metropolitan municipalities do (Head EWS, Interview, 03-12-2009).

During a key informant interview, the City Treasurer affirmed that there was no additional external funding for sanitation delivery. He added that the City Council has motivated for a more sustainable MIG funding and a non-conditional overall funding as opposed to project based funding for sanitation (City Treasurer, Interview, 02-12-2009). At the time of interview, no response regarding the aforementioned request was received from the Department of Water Affairs (DWA).

These findings imply that insufficient financial planning delayed sanitation backlog eradication. This finding also underscores the contravention of Section 154 of the Constitution which categorically binds national and provincial governments to supporting and strengthening the capacity of municipalities to deliver on their developmental mandate (Act 108 of 1996, Section 154 (1)).

5.3.4 MOBILISING RESOURCES FOR OPERATIONS AND MAINTENANCE

The Municipal Systems Act (Act 32 of 2000) stipulates that municipalities engage in integrated planning and implementation. The primary guiding strategic plan for the eThekweni Municipality is a 5-year Integrated Development Plan (IDP), which was developed following consultative processes and baseline research which formed the basis of determining how

budgets were allocated. The eThekweni Water Service Development Plan (2004), which forms the part of the IDP) includes the provision of sanitation to informal settlement in eThekweni which is regulated by guidelines in the Water Service Act (Act 108 of 1997) and the National Water Act (Act 36 of 1998). Extensive needs assessments were undertaken to establish priorities for delivery to the citizenry as per the National Sanitation Policy, which defines the minimum level of sanitation to communities.

Funding for the upgrade of informal settlement ablution facilities was allocated to the eThekweni Health Unit for interim basic level of services as well as the EWS, whose primary function is water and sanitation delivery. The programme roll out began in 2006. Departments were challenged with the huge demands and limited resources. The eThekweni Health Unit stated that the meagre allocation did not meet the huge service demand for informal settlements' communal facilities. Funds for bulk sanitation infrastructure were awarded to eThekweni Housing and EWS for *in-situ* upgrades (informal shacks rebuilt with brick and mortar; eThekweni Health Unit Report, 11-08-2009). The cost of maintenance and operations of communal ablution facilities increased consistently and was not recoverable from the national allocations. Certain departments 'squeeze budgets' to maintain facilities provided (Senior Manager, eThekweni Environmental Health Section, Interview, 25-09-2010).

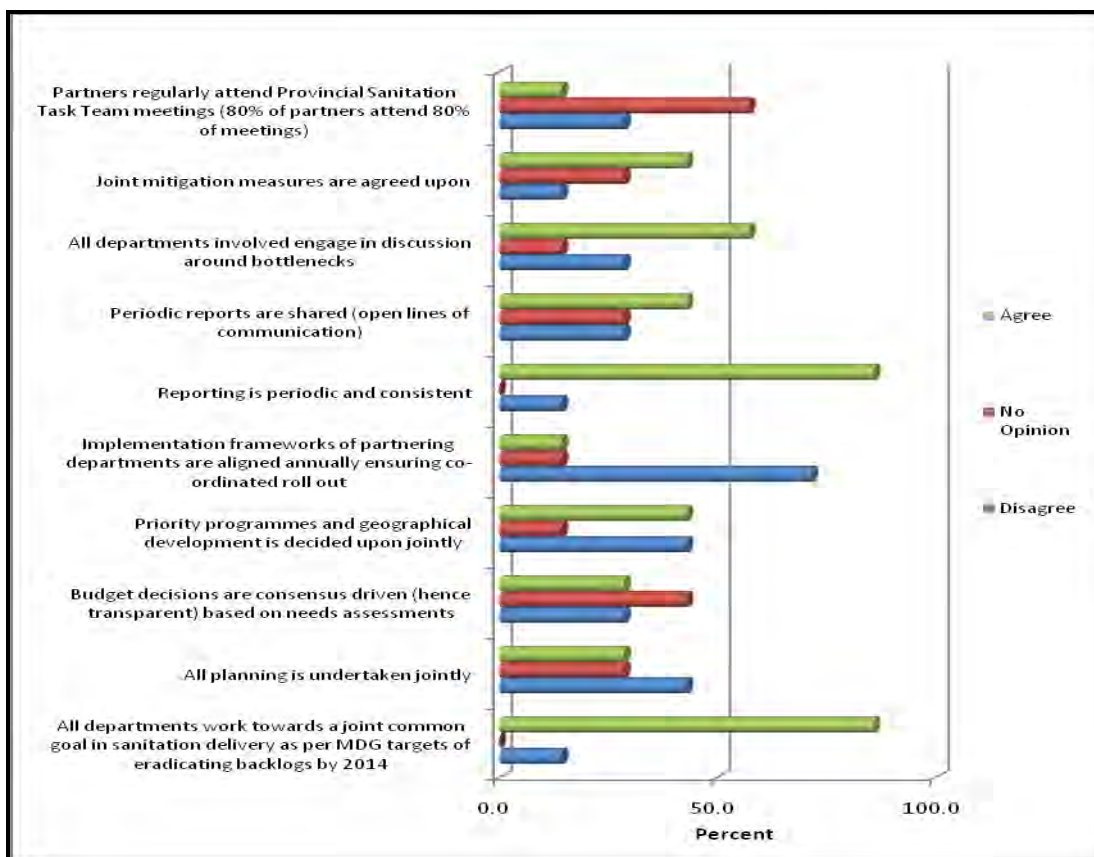
This implies that there needs to be more strategic decision-making regarding the conduit for sanitation funding allocation. This study found that there were 42.9% respondents who agreed that budget decisions are consensus driven (hence transparent), based on needs assessments, whilst 20.6% disagreed.

The overall perception following key person interviews and surveys was that the allocation of funds for effective sanitation did not align with the core function of the department providing sanitation service or support services. However, more strategic intervention and decision-making of how this should be done was recommended for efficient delivery.

5.4 EFFECTIVE CO-OPERATIVE GOVERNANCE THROUGH CO-ORDINATION AND INTEGRATION

The co-ordination and integration of efforts for sanitation delivery are important pillars of co-operative governance. In accordance with the national policies, the institutional approach and strategies need to be rigorous for the eradication of backlogs amidst, social, economic and political challenges in sanitation delivery. Figure 5.3 captures the perceptions of practitioners regarding efforts to co-ordinate sanitation programmes.

Figure 5.3: Officials' Perceptions and Experiences with the Delivery of Sanitation Services



5.4.1 CO-ORDINATING DEPARTMENTAL ACTIVITIES PREVENTS WASTAGE OF RESOURCES

In assessing the application of governance principles and the institutional approach to sanitation delivery, the Head of eThekweni Water and Sanitation emphasised that there is a

strong need to co-ordinate and align activities between the departments of Health, Housing and Water and Sanitation. He advised that to prevent wastage of resources, housing delivery at national, provincial or local government tiers need to be aligned:

“For example, we don’t want to roll out sanitation in informal areas and then discover that there is a plan for formal housing. In areas like the Inanda, Ntuzuma and KwaMashu we were able to go ahead and roll out ablution blocks in informal settlements subsequent to learning that there is no plan for formal housing there. Provincial Housing would densify an area where it’s rural or less dense then the toilets we put in would be replaced. It’s wastage of resources and effort (Interview, Head EWS, 03-12-2009).

5.4.2 WORKING TOWARDS A COMMON GOAL

There was agreement amongst respondents that there is a need for all departments in local government to work towards a joint common goal in eradicating sanitation backlog. There was a medium to low response regarding inter-departmental co-operation, which was further endorsed by the Head of eThekweni Water and Sanitation. He emphasised that integrated and co-ordinated efforts are only feasible when relationships between departments reflect commitment and common objectives. He felt that departments need to work as ‘one government or one municipality’ jointly delivering services. The importance of a common purpose and outcome is critical to the delivery of sanitation services as backlogs are immense and the need is urgent. Working harmoniously is the only solution for expeditious delivery:

“... the relationship of EWS and certain departments are totally dysfunctional, because they promote the mentality of *all for some and not some for all*. This works against our objectives of eradicating backlogs. It makes communities averse to us providing facilities which are affordable by themselves and government. They are coached into demanding waterborne flush toilets which are unsustainable” (Interview Head EWS, 03-12-2009).

The EWS Head of Department's frustration implies that there are underlying 'fractures' in relationships amongst governance actors or implementing practitioners which is hampering efficient sanitation delivery within the Municipality. It also implies that there are infringements on the tenets of the White Paper on Water Supply and Sanitation Policy (DWAF, 1994). According to the White Paper, basic improved sanitation for better living conditions and sound health is a human right.

There was a lack of recognition by the practitioners that gradual escalation up the 'sanitation ladder' should be affordable and sustainable without compromising environmental integrity and economic viability. This finding also implies there is a need for clarity regarding definition of roles of the different practitioners, the absence of which build frustrations and discord.

5.4.3 JOINT PLANNING AND ALIGNMENT OF IMPLEMENTATION PLANS

Joint planning and alignment of efforts prevent wastage of resources ensuring smooth implementation and efficient services. Approximately 14.3% of the respondents reserved their opinion regarding the alignment of work amongst departments. Most (42.9%) respondents felt that not all projects were jointly planned amongst and between departments, and 28.6% are of the opinion that joint planning does take place, while the remaining declined to respond. The bottlenecks in implementation therefore stems from the lack of joint planning and alignment of sanitation programme delivery in Inanda. The principles of co-operative governance were not adhered to as a strategy for efficient sanitation delivery.

5.4.4 REPORTING AND INTER-DEPARTMENTAL COMMUNICATION

The overall majority of managers (85.7%) agreed that reporting was periodic and consistent. This suggests that there was compliance with legislation as reporting was a periodic requirement within Council and to Provincial and National committees (Local Government Municipal Systems Act, 2000). This implies that although significant compliance with the reporting requirements were adhered to, reporting could become ritualistic if its cost-benefit is not realised through action resulting in improved sanitation delivery.

There was 42.9% agreement on the question of regular sharing of reports and open lines of communication amongst departments. Unwillingness to communicate regularly was a weakness which could hamper effective and efficient delivery of services. While less than half the respondents felt that there was open communication, almost a third alluded that there was very little or no communication. A few respondents found this to be sensitive and did not commit to answering the question. The total sum of negative and non-response indicates that there are blockages in open communication which do not augur well for co-ordinated service delivery. Inter-departmental reporting also provides a platform for project partners to account, identify challenges and agree on joint mitigation measures.

5.4.5 ADDRESSING BOTTLENECKS IN SANITATION DELIVERY AND MITIGATION MEASURES

Regarding departmental engagement in ameliorating hurdles in sanitation delivery, almost 60% of respondents agreed that all departments engage in discussions, almost 29% disagreed and 11% did not comment. Furthermore, 42.9% agreed that all departments embark on joint mitigation measures and 28.6% disagreed. These results resonate with the abovementioned weakness in open communication, thereby diluting the intention of joint planning and prompt response to delivery challenges.

5.4.6 MEETING THE MILLENNIUM DEVELOPMENT GOALS (MDG)

The Millennium Development Goals set in the year 2000 secured the world's commitment to targeted time-bound development to improve the lives of poor around the globe. A ten year assessment of the progress with achieving the eight goals by 2015 was made by the United Nations (2010), and identified a need for improved institutional governance. This study found that more than 85.7% of respondents within management in the sanitation sector alluded to the need for all departments to work towards achieving the MDG goals by 2015 and eradicating the sanitation backlog. Key person interviews also indicated a need for increased synergy, commitment and dedication to meeting the MDG target:

“The demand for sanitation is increasing as a result we are working with moving targets. Therefore, increased co-operation from all departments is essential so that we may meet the MDG targets” (Deputy Head EWS, Interview, 12-11-2009).

The Head of EWS stated that the sanitation backlog eradication was a huge challenge, as there are “moving targets” due to in-migration and people moving to areas because services are being provided. As a result, the demand increases and so does financial requirements each year (Head EWS, Interview, 03-12-2009).

This implies that the eThekweni Municipality is not confident that it will meet the MDG targets due to governance challenges. Management alludes to the need for a more cohesive relationship between departments within government which is required to address the sanitation demand and meet the MDG targets. Furthermore, adherence to the principles of accountability and commitment is required if the MDG target of halving the population without access to improved sanitation is to be realised.

5.5 CLEAR DEFINITION OF ROLES FOR EFFECTIVE SANITATION GOVERNANCE

A degree of irritation and confusion prevailed amongst practitioners from the eThekweni Municipality regarding the definition of roles and responsibility of implementing departments engaged in sanitation backlog eradication. The urgent need for sanitation in the mushrooming informal settlements throughout the EMA required careful planning and strategy, diverse fields of expertise, community co-operation, political support and clear definition of roles for speedy delivery. Officials in key informant interviews stated (my summary):

During the early 1990s the City was faced with gross in-migration resulting in a flare of informal settlements. The Municipality was at the time unprepared to deal with this huge influx of people. With housing delivery programmes being in their infancy, all that could be done was to manage the informal settlements service needs to prevent squalor, disease and social problems. The eThekweni Health Unit was requested to find quick solutions to making basic services accessible to the now new residents in

informal settlements. At the time, EWS's ambit of work was largely confined to dealing with formal infrastructure for water provision and hence they didn't see the temporary sanitation need as part of their core function. EWS would only service formal projects be it commercial, residential or industrial. Infrastructure for informal settlement was not their forte and was not considered as part of their responsibility. Political challenges exacerbated the situation with informal settlements, placing even greater pressure on the eThekweni Health Unit. However, the need for speedy delivery of sanitation to informal settlements was urgent.

Councillors in these areas demanded bulk infrastructure reticulation and waterborne sanitation systems for informal settlements. However, following much persuasion and explanation of the geo-technical challenges in these areas, councillors consented to the ablution block type facilities. The first pilot informal settlement sanitation project was implemented successfully in Johanna Road, approximately 10 kilometres from the CBD. The success was attributed to the intense community consultation and councillor cooperation. However, the challenge grew as did informal settlements, subsequently, placing enormous demands on the Environmental Health Section who did not have the expertise to deliver ablution facilities to the mushrooming informal settlements throughout the EMA. The Department, however, persisted by testing different methods of delivery and different types of infrastructure. Brick and mortar ablution blocks were installed by procuring the services of consultants to expedite delivery. This was not viable because it was expensive, time consuming, the quality was unsatisfactory and the architectural design became complicated as most settlements were built on undulating terrains (Senior Manager, eThekweni Environmental Health Section, Interview, 06-08-2009).

An alternative option for ablution blocks was piloted. Custom-made 'shipping container' type facilities were installed. This type of facility was more cost-effective and mobile, allowing upgrade through replacement if and when required. Following councillor and community consultation and buy-in, the delivery of container ablution facilities was undertaken on a massive scale. Approximately 150 ablution facilities were installed during 2009-2010, with a target of 300 units before the end of 2011.

Co-ordinating committees were established constituting a number of implementing departments within the Municipality. These departments who were the conduits to the communities included EWS, Electricity, Housing, Architecture, and Environmental Health. However, the required expertise, intensity and scope of the work grew beyond the capacity of the eThekweni Environmental Health Section. Following requests and recommendations from eThekweni Health Unit, the responsibility was redirected to EWS. The Environmental Section was now a co-ordinating partner supporting the dissemination of health and hygiene information and training through its Environmental Health Section (Senior Manager, eThekweni Environmental Health Section, Interview, 06-08-2009).

5.5.1 LACK OF SUPPLY-SIDE DEMAND

The lack of skilled personnel exacerbates the problem of poor service delivery (Muller, 2010). This study found that there are gaps on the supply-side where appropriate skills and proper planning and clear task definition to match the available skills were deficient. The eThekweni Environmental Section admitted that the provision of ablution facilities to informal settlements was beyond the capacity and expertise within the department. In terms of the Municipal Systems Act (Act 32 of 2000), community participation is pivotal to empowerment and improved serviced delivery goals. However, departments' attempts to meet objectives of empowerment were fraught with challenges:

“The Health Unit had delivered communal ablution facilities to Ohlange and Amoati in Inanda beginning in 2007. However, dense informal homes and lack of access had hindered installation in Besters (in Inanda). Community steering committees were formed. Volunteer caretakers were appointed to manage the operations and maintenance of the ablution facility. This arrangement failed as lack of commitment of the caretakers selected by the community resulted in poor maintenance and vandalism of the facilities. Community partners require ongoing training and demanded remuneration for their efforts. Internal power struggles disintegrated steering committees. Subsequent changes in steering committee membership was a regular experience requiring new recruitments and repeated training initiatives which strained

timeous, efficient and cost effective sanitation delivery” (Senior Manager, eThekweni Environmental Health Section, Interview, 06-08-2009).

The mindset of ‘housing before sanitation’ prevailed despite the evident appalling sanitary conditions in the informal settlements. Communities perceived the temporary container facilities as an obstacle preventing them from acquiring formal housing. They believed that government has reneged on its promise of ‘houses for all’ and are therefore providing ‘quick fixes’, due to their inability to deliver housing.

Hence, intense education and interaction with communities to change mindsets was essential. The desperation for shelter placed sanitation as a lesser need of poor people in informal settlements. This finding also suggests that communities dwell on promises made during elections, yet such promises are not time-based, leaving people disappointed with government’s slow rate of delivery. The general perception was that government has failed poor people.

Furthermore, high demand of community-driven empowerment programmes through sanitation delivery stretches the resources within the department and hampers service delivery. Sanitation programme delivery is therefore dependent on the effective co-ordination and co-operation from a number of internal departments and external stakeholders so that the required skills and resources are accessed.

5.5.2 CONTENTIOUS LAND TENURE ISSUES HAMPERS SANITATION DELIVERY

Most informal settlements in Inanda were located on privately owned land. Land acquisition for installation of ablution facilities in privately owned land containing informal settlements remains a contentious challenge. The Municipality is required to gain permission to install ablution facilities for pockets of informal dwellings erected on privately owned land. Refusal by land owners for access to their property to install toilet facilities required expert land acquisition support to secure ‘permission to occupy’ for installation of container-type ablution

facilities, this remained a daunting legal process for the Municipality (Health Unit), further delaying sanitation delivery to the poor:

“...this was not within the function and expertise of the Health Unit. The need for legal support and ‘hands on’ project management was also critical for efficient and timeous installation or construction of the facilities at identified sites in Inanda” (Project Coordinator, eThekweni Health Unit, Interview, 20-08-2009).

Frustrated government officials stated that the eradication of massive sanitation backlogs was only attainable through the co-operation and efforts of a number of stakeholders identified:

“Increased technical support from government departments, NGOs, communities and councillors is required to enable delivery outcomes to be achieved” (Project Coordinator, eThekweni Health Unit, Interview, 20-08-2009).

These findings gives meaning to what Kooiman (2003) espouses, that effectiveness of the interaction amongst a range of actors across the governance spectrum is required to solve societal problems. Sanitation programmes in Inanda lacked harmonious and integrated efforts from actors across the governance chain.

5.6 EXPERIENCES OF THE MULTI-TIER AND MULTI-DEPARTMENTAL APPROACH TO SANITATION DELIVERY

There was scepticism regarding the effectiveness of a multi-departmental approach to sanitation. Approximately 14% of the respondents agreed that the multi-departmental approach worked well provided there was continuous assessment of sanitation delivery by all departments concerned. A significant 57.1% did not respond to the question. The non-response seemed to suggest that there was dissonance and a degree of ‘silo’ mentality which still existed between departments. This flouted the principles of co-operative governance required for integrated service delivery. It was evident that increased inter-departmental consultation, and ongoing monitoring and evaluation were essential.

Certain respondents also felt that Provincial Government departments needed to be more involved in their role as advisors and monitors of sanitation delivery. Key person interviews indicated that there was minimal support from the Provincial Co-operative Governance and Traditional Affairs Department (CoGTA) mandated to support municipalities.

The provincial CoGTA reacted to the above statement by clarifying that its mandate regarding sanitation delivery was to establish delivery mechanisms, support (both technical-engineering and financial) and strengthen local government's capacity to deliver sanitation together with monitoring progress with meeting the MDG goals. A Senior Engineer from CoGTA explained that in their opinion and in comparison to many other municipalities:

“eThekweni Municipality has the required management expertise, technical and financial resources to deliver to its population. The Municipality has been progressive with its initiatives in both water and sanitation delivery with minimum bottlenecks. Provincial CoGTA therefore focuses mainly on the district municipalities that often do not have a single engineer or the financial resources to deliver sanitation to its rural communities where the need is abysmal. Their property rates revenue is extremely low compared to eThekweni Municipality. Resource allocations for infrastructure investment and specialist support are therefore directed to smaller municipalities” (Senior Engineer, Provincial CoGTA, Interview, 06-08-2010).

Mosdell (2006) alludes to the lag in the implementation of the Free Basic Sanitation Policy (2004). He also alerts that while it was the responsibility of municipalities to raise the required revenue to execute the national free basic services policy, national equitable share allocation is imperative to address the urgent sanitation needs (Mosdell, 2006). eThekweni had devised its own strategy and utilised resources from municipal revenue to deliver sanitation to its jurisdiction. The municipality also confirmed that the portion of national funding for sanitation infrastructure was insufficient to serve its vast needs, with no support for operations and maintenance of facilities (Head EWS, Interview, 03-12-2009).

The implication in this finding is that the eThekweni Municipality has the potential to resource its sanitation demands both technically and financially. The Municipality's efforts, progress and innovations in sanitation delivery is being recognised by other spheres.

5.6.1 OPENING LINES OF COMMUNICATION BETWEEN GOVERNMENT DEPARTMENTS

Communication, collaboration, reporting and joint mitigation measures were triangulated through interviews and focus group to assess the impact on the ground. Focus group discussion held with eThekweni Municipality's departmental officials emphasised the need for increased stakeholder communication. Increased inter-departmental communication was imperative in a complex location like Inanda, which has diverse needs. Government departments working in the area have expressed a need for ongoing liaison and information sharing so that unlawful and hazardous practices are averted. Officials from the eThekweni Solid Waste Department who interface with communities on a daily basis find that there are regular complaints about poor services including roads, disruption of water supplies, illegal connections of water and electricity, amongst others.

Officials from the Solid Waste Department felt that sanitation was the most problematic of all the services provided in the area. The evacuation of VIP pits in the peri-urban areas are outsourced to private companies and are undertaken once in five years, as per EWS internal policy (eThekweni Municipality, 2012). Those evacuating the pits have observed poor methods of solid waste disposal by communities. People are callous and disposed their solid waste in open fields and into their toilet pit which caused blockages and eventually resulted in dysfunctional toilets with overflowing pits.

Furthermore, the eThekweni Solid Waste Department felt strongly that organisations and private companies operating in the area should be educated on how to dispose of waste material hygienically and safely:

“Education is important as organisations engaging in home-based care dispose of their syringes and adult nappies with human waste into the solid waste skip provided by

eThekwini Solid Waste Department, placing workers who clear the skips at risk. We have contacted the eThekwini Environmental Health Section about this but this practice continues. Private companies hired for pit evacuation offload sludge into the solid waste skips. This practice is unhygienic, annoying and insensitive to solid waste disposal workers (Operations Co-ordinator, eThekwini Solid Waste, Interview, 06-10-2010).

These findings suggest that close monitoring of service providers, education on sludge (human waste) management and the proper use of sanitation facilities by communities is lacking. It also implies that sludge disposal mechanisms and procedures were either not available or not complied with by service providers. Poor monitoring and management of facilities by sanitation steering committees was evident. The Centre for Science and Industrial Research (2012) recommends the franchising route to assist municipalities with managing and maintaining sanitation infrastructure, as micro-enterprises are trained and work well in other sectors.

5.6.2 POOR COMMUNICATION: THE ABSENCE OF ‘ONE GOAL’

Ile (2010) asserts that the growing chasm in service delivery is as a result of the lack of a common vision to achieve the goal of co-operative governance. The absence of strong inter-governmental synergy and collaboration is prevalent. The mandate for sanitation infrastructure planning for schools lies with Provincial Department of Education (DOE), as opposed to household sanitation which is the responsibility of the local authority. The study found that there are a number of schools in Inanda without sanitation. Even though the Municipality has provided some type of sanitation to the surrounding communities, schools have not been prioritised:

“In Eziphembeleni Secondary School there is no proper sanitation. They are still utilising the old pit system which is not the most efficient and healthiest type of facility. It is just an example of one of the schools with no sanitation. Yet there are sewer networks present. What was disturbing also is that in rural Ward 3 there was a school that didn’t have sanitation facilities....children used the nearby bushes. If you

can't provide sanitation to children how do you expect them to learn?" (Councillor Shembe, Interview, 21-11-2009).

There is glaring absence of inter-governmental collaboration for school sanitation as the municipality does provide sanitation infrastructure, maintenance and operations support to schools in Inanda, in light of education being a provincial mandate. A special planning branch of DOE oversees the sanitation provision for the schools. Councillor Shembe who is also a school principal states: "Due to lack of resources and the huge demand it seems that DOE is not coping and hence schools are neglected. Learning is compromised" (Councillor Shembe, Interview, 21-11-2009).

The schools' crises required all spheres of government to address the issue in a co-operative manner. Increased communication and inter-governmental support was required to deal with critical sanitation need. The health of learners and their learning ability is dependent on a hygienic, healthy and conducive learning environment which a school should represent (CSIR, 2012).

The study found that people do not differentiate between the spheres of government; they are oblivious, or least concerned about the division of responsibilities. For the poor and less literate, there is just one government. Institutional setback and fragmented planning was the diagnosis of the schools sanitation crisis:

"People view government as one entity and councillors represent government and should deliver on the people's expectation. A key problem with schools is that there is often confusion over whether it is within the jurisdiction of the Provincial DOE responsibility or within a circuit that lies within the Municipal boundary. To mitigate against fragmented planning and co-ordination, a local education steering committee is being established to facilitate more communication amongst departments contributing to better inter-governmental and inter-departmental collaboration. The local committee aims to assess governance matters and engage in joint planning and management of schools in Inanda" (Councillor Shembe, Interview, 09-01-2010).

This finding implies that joint resource planning from local, provincial and national government is necessary to address the schools sanitation challenge. The CSIR (2012) emphasises the importance of access to, as well as properly maintained sanitation infrastructure at schools to enable learning: “Good infrastructure at schools enhance access to education, while inadequate and poorly maintained infrastructure excludes learners” (CSIR, 2012: 12)

5.6.3 POWER STRUGGLES AND DISJUNCTURE IN INSTITUTIONAL GOVERNANCE

Another development challenge was the relationship between the councillors and the ward committees. Councillors complained that ward committees want to overpower them regarding local decision-making. A review of the role and relevance of ward committees was necessary so that the councillors are able to exercise their political right and authority to make informed and appropriate decisions for all the people:

“This problem comes up when decisions on employment of local labour emerges. Ward committees then begin to act as political structures and attempt to influence decisions whether it privileges some and not others” (Councillor Shembe, 21-11-2009).

According to councillors, the EPWP approach promoting labour intensive means of development was implemented in Inanda before 2006. Installation of sewer networks in certain areas in Inanda was implemented utilising the EPWP model. The attempt was disastrous. A project was tendered out to three emerging contractors who were commissioned to train and mentor local labour and equip them for employment for the future. The digging of trenches began but came to a halt when disagreement between contractors erupted. The dug up trenches remained open for 3 months and unattended because the problem could not be resolved. This impacted on timeous project delivery as well as on surrounding communities:

“Residents’ vehicles could not access the entrances to their property. The project was a failure until the Municipality intervened and reverted to the project management

style of sub-contracting infrastructure development. The lesson learnt is that, emerging contractors need to be managed and mentored by established companies so that they are able to learn business ethics and professionalism” (Councillor Shembe, Interview, 21-11-2009).

The EPWP initiative aimed at drawing the unemployed into a systematic privilege of gaining skills while doing productive work was faced with an array of implementation challenges. Almost two decades into a democratic era, the problem of unemployment persists. Government is unrelenting about job creation for improved lives of citizens (Zuma, 2011). The government’s drive to create employment through the EPWP model of community empowerment raises questions of whether the people are psychologically and technically ready to seize the opportunity and make a difference in their lives, without focusing on quick financial gains. Emerging contractor capacitation was in its infancy. Quality of work was compromised due to lack of technical and financial management expertise.

5.7 MERGING TRADITIONAL GOVERNANCE WITH MUNICIPAL GOVERNANCE

The local traditional rule has its own enterprise and structure. Land is owned by the King, it is administered by the Ingonyama Trust Board, and managed by the Chiefs (traditional leaders) appointed by the King. Traditional authorities perceive themselves as being parallel to the Municipality. In Emachobeni, Inanda, for example, there are development committees which work closely with the traditional leadership. These operate similar to ward committees which work with eThekweni Municipality through their councillors. The relationship between the development committee and the ward committees was weak to non-existent. Interventions by the Municipality have to be approved by the nKosi (Chief) through communication with the local headsman. However, securing meetings and following through with regular interaction was not easy (Councillor Shembe, Interview, 21-11-2009).

Hence, divergent institutional goals and the exercise of authority to rule traditional areas impeded expeditious delivery. Co-operative governance through established relationships

between the traditional authority promises mutual benefit: “Working independently not much can be achieved” (Councillor Shembe, Interview, 21-11-2009).

5.8 JOB CREATION AND EMPOWERMENT THROUGH SANITATION PARTNERSHIPS

Against the backdrop of abject poverty and unemployment, government’s focus on job creation through utilising local labour in service provision was stipulated in the Sanitation Job Creation Stakeholder Paper (2005). Employing local labour was aimed at developing capacity and empowering people. The eThekweni Municipality has made concerted efforts to engage local labour. However, these efforts note a limited degree of success.

i) Training and Development through Sanitation Projects

In order to engage, empower and comply with participatory policy requirements, communities are mobilised and small groups called steering committees led by councillors are established. These committees then assist in the recruitment of local labour for programme delivery. The relationship between the Municipality and the local small businesses was thereby formalised.

Training was provided to small business engaged in block-making and materials production. Many of these small businesses previously operated as backyard block-makers who were unsuccessful due to the poor quality materials they produced. An assessment programme was devised by EWS to develop their capacity and correct their weaknesses. A marked improvement in materials manufactured resulted through the training programmes offered. Blocks were supplied to the Municipality for construction of sanitation facilities. Certain local block makers were awarded contracts for approximately 300 000 blocks, worth R1.5 million. Their experience and service to the Municipality improved their marketability and which expanded their business horizons due to the improved quality of goods produced and their reputation. In EWS construction projects, the department assumes responsible for quality assurance and project management (Head of EWS, 03-12-2009).

ii) Tripartite Partnerships between Private Sector, Government and Community creating 'decent work'

Increased mechanisms for empowerment and engagement of local labour are provided by the national Expanded Public Works Programme (EPWP) guidelines. In compliance with this national strategy, the eThekweni Municipality established the Project Management Unit (PMU) to drive EPWP. The PMU's business strategy included partnership arrangements with other roleplayers so that communities are capacitated to deliver sanitation services through training and development. The Senior Manager at PMU alluded to a tripartite arrangement with government departments, training institutions and the private sector:

“For the EPWP learnership, a tripartite agreement with eThekweni, ABSA, the Construction Sector Education Training Authority (SETA) and the Department of Public Works was entered into. In the financial year 2009-2010, twenty four Emerging EPWP contractors each with 2 supervisors were trained on various projects. Rural water and sanitation programmes were implemented in Inanda. Sanitation in Inanda was mainly *in-situ* (improvement of existing shack settlements) sanitation projects. The advantage of hiring local labour is that there was an understanding and awareness of the social dynamics and geo-spatial problems. It helped project progress, as such upgrades are unlike greenfields projects where plain fields are cleared and construction progressed. Delivery of sanitation in each location came with its unique set of challenges. However, the tripartite agreement worked well and communities benefitted in many ways” (Senior Manager PMU, Interview, 20-01-2010).

This finding implies that the potential benefits for multi-stakeholder partnerships augur well for community empowerment.

iii) Skills Development and Empowerment through Sanitation Programmes

In peri-urban Ward 57, for example, 81.8% of respondents have waterborne flush toilets reticulated by the Municipality. Communities were engaged during the construction of toilets through the EPWP empowerment programme. Many of them worked for small companies

hired as labourers in housing development projects. Some local community members joined private companies that built 18.2% of the waterborne toilets in the area.

The EPWP labour-intensive capacitation programme advanced skills acquisition thereby having a positive spin off on sanitation access mainly in areas where bulk sewer infrastructure was available. Where bulk sanitation networks were lacking, a higher level of service was not accessible.

vi) Political Interferences Compromised Quality of Sanitation Delivery

eThekwini Water and Sanitation (EWS) Department senior management stated that political interference hampered their ability to produce quality products when constructing toilets in Inanda and other areas. Councillors who are the political representatives have immense clout in terms of making decisions regarding who is awarded the jobs for local sanitation facilities construction. These recommendations were most often not based on competency but rather favour the councillor. EWS reported discontent as such influences compromised the department's objective of quality assurance (Deputy Head EWS, Interview, 12-11-2009).

The implication is that political power opens doors for corrupt practices. The power of councillors to decide who is employed and who is not, defies democratic principles of equity, transparency and equal opportunity for all. It also suggests that abject poverty and unemployment in Inanda causes communities to view government partnerships as an opportunity for employment through engagement in local water and sanitation infrastructure delivery.

5.9 COMMUNAL ABLUTION BLOCKS IN INFORMAL SETTLEMENTS

i) Challenges with Maintenance and Operations of Communal Ablution Facilities

Peri-urban Inanda is conveniently located in close proximity to commercial and industrial zones for which it provides cheap, unskilled labour. In 2008, 23.2% of Inanda's population resided in informal settlements (Everatt & Smith, 2008: 44). These areas were overcrowded

and became a breeding ground for disease and ecological degradation due to the absence of sanitation facilities. In 2006, the eThekweni Municipality embarked on a sanitation roll out to all informal settlements within its jurisdiction in compliance with a Water Service Development Plan (2004), which forms part of the eThekweni Municipality's IDP, and defined national minimum level of sanitation to communities. Provision of sanitation to informal settlements in South Africa is regulated by the Water Service Act (Act 108 of 1997) and National Water Act (Act 36 of 1998).

The eThekweni Health Unit was tasked to plan and execute the rapid sanitation delivery programme to informal settlements as this was conceived as an initiative to promote improved environmental health (Senior Manger, eThekweni Environmental Health Section, Interview, 25-09-2010). The Senior Manager explained that the sanitation facilities or ablution blocks provided in informal settlements were a temporary measure intended for operations and maintenance by the community. The process was planned, implemented and facilitated by the Municipality in consultation with the local people. Local sanitation committees were formed at the inception of the programme roll out. The local committee facilitated operations, monitors and cared for the facility post construction (Senior Manger, eThekweni Environmental Health Section, Interview, 25-09-2010).

Different types of structures were selected as suitable and feasible in a particular area:

- Constructed Ablution block, built with block and mortar. This option was selected if the area falls within the long term housing plan for the receipt of proper houses.
- Container facility, fabricated from used shipping containers, and re-useable for communities earmarked for areas with a short-medium term housing plan.
- Shared Block-VIP Toilet, block and mortar construction, long drop into a Ventilated Improved Pit (VIP), when flush facilities are not feasible (eThekweni Health Unit Reports, 2008).

The structure of the facility was constructed with the following specifications:

- Translucent sheeting used as outside walls, to allow for infiltration of flood lights.

- Ventilation was compliant with building regulations.
- Container-type facilities had floors with impermeable finish.
- Low flush urinal facility, with roof above urinal area and grill for ventilation.
- Wash troughs and flood lighting for hand wash was also provided.
- Ablution facilities also included shower facilities with screen walls on the outside. There were concertina doors in the showers (eThekwini Health Unit Reports, 2008).

Post-construction, the ablution facility was then handed over and the consequential maintenance was discussed with local committees which are formed in full consultation with the affected community and the ward councillors for the respective areas. Local Sanitation Committees established by the eThekwini Health Unit met fortnightly with all relevant service units to deal with delivery issues surrounding the ablution facility programme. Housekeeping of the facility was the responsibility of the elected Local Sanitation Committee. The eThekwini Health Unit provided consumables (toilet paper and hand wash soap, and cleaning materials), and structural maintenance and repairs when necessary (eThekwini Health Unit Reports, 2008).

Monitoring by the eThekwini Health Unit in 2008 discovered that the communal ablution blocks were non-operational due to community neglect and vandalism. There was under-utilisation of facilities in some areas. Communities neglected their responsibility of maintaining the facility even though the local sanitation committee was formed. Conflict arose between the officials and local sanitation committee members when they were questioned about the fulfilment of their agreed duties:

“The Community Sanitation Committee is formed in each area. They look after the facility during the day. The caretaker is nominated by the committee. He is in charge of locking the facility at night because people steal equipment etc. from the communal facility if it’s not locked. Initially, there was no payment for the caretaker or the volunteers who helped clean it every day. So we ask the people to pay 50c when they use the toilet or shower. Some people paid but most people don’t ever pay. They leave the place in a bad state. It is not fair to the cleaners and me as caretaker. We complained to the officials but they said we are not doing our job. It is a thankless job.

Nobody cares about us” (S. Zulu, Interview, Community Sanitation Committee, Peri Urban Bhambayi, 23-11-2009).

Communities refused to donate the requested 50c for the use of the facility. There was an increased need for hygiene education (eThekweni Health Unit Reports, 2008). Furthermore, given that the 50c ‘surcharge’ was optional, community members could not be reprimanded by the councillor or ward committees for not co-operating.

The Municipality’s approach to servicing informal settlements with shared facilities does not provide a solution to sanitation problems in Inanda. It amplifies governance challenges and lack of participatory decision-making, resulting in poor co-operation and ownership by communities.

5.9.1 SPEEDY SOLUTIONS FOR SUSTAINABLE COMMUNITY COMMUNAL FACILITIES

The internal evaluations undertaken by the eThekweni Health Unit recommended measures for project sustainability as communal toilet facilities were tedious, requiring ongoing monitoring and after care by the Municipality. A project of this nature could only succeed with commitment and support from communities and councillors from the inception of the ablution facility planning and delivery. The initial approach to engage voluntary local committees to maintain the facilities did not work because users were negligent and careless when using the facility. This was unpleasant for volunteers and demanded a lot of their time. The eThekweni Municipality then undertook to work with local people by establishing local community co-operatives that would take care of the facilities and earn an income. It was envisaged that the establishment of the local co-operatives would increase commitment to the role as project partners responsible for operations and maintenance, reducing the neglect and abuse of facilities by users. A nominal fee paid to the caretaker served as an incentive. However, such partnership efforts between the Municipality and the local communities were thwarted due to lack of commitment of elected persons, their frustration with people’s abuse of facilities and demands for substantial payments to operate and maintain community facilities.

A substantial portion of land in Inanda has private ownership, so permission to install communal facilities for informal settlements on private land is a huge challenge. The eThekweni Municipality decided to address the problem through various options. The National Health Act (Act 61 of 2003), stipulates that legal action should be taken with private property owners who do not allow the Municipality access to their property to install or construct ablution facilities for informal settlements. The Municipality's procedures include authorisation through a "permission to occupy" order submitted to the private owner of property where shacks in informal settlements are rented.

Rejection by private land owners to permit the Municipality to install sanitation facilities for informal settlements would compel the owner to provide access to sanitation for the occupants of his/her property. Thereafter, the Municipality will have the right of access to the said property to act in default should the owner fail to comply with the notice.

Following immense challenges faced by the eThekweni Environmental Health Unit in delivering sanitation to informal settlements, the responsibility was transferred to the eThekweni Water and Sanitation Department as it was deemed their mandate and competency (eThekweni Municipality's Executive Committee Decision Action Certificate, 11-11-2009; Senior Manager, Environmental Health Section, Interview, 25-09-2010). In 2009, a Combined Rapid Delivery programme of laying bulk sewer reticulation to informal settlements and erecting ablution containers was driven by EWS and also involved other departments, namely, the Health, Housing and Electricity Departments. The purpose of the Combined Rapid Delivery programme was to prevent the wastage of resources as the bulk network facilities would serve future housing developments.

5.10 INVESTMENT IN PROVISION OF BASIC SERVICES OR PRIVATE SECTOR PROFITEERING

Against the backdrop of limited skills and resources to efficiently provide basic services to its jurisdiction, the EWS Unit outsourced the bulk reticulation of water and sanitation infrastructure to consultants. A private company was commissioned to construct ablution facilities in approximately 320 informal settlements that have had inadequate sanitation

services for the past 10-17 years. The identified settlements were earmarked as beneficiaries of housing upgrade in the short to medium term (eThekweni Municipality and Aurecon Project Minutes, 04-09-2009; www.durban.gov.za accessed 30-09-2012).

The duration of the Informal Settlement Ablution project was a multi-year rapid delivery project during 2009-2011 as the first phase. The Project was outsourced to an engineering company called Aurecon at a cost of R280 million to provide communal ablution facilities to 320 settlements throughout the EMA, including Inanda. The stakeholders included eThekweni Water and Sanitation, eThekweni Housing Department, eThekweni Environmental Health Section, eThekweni Wastewater Management Department, Project Management Unit-EPWP, local communities, councillors and contracted construction staff.

A number of sites were identified in Inanda as recipients of container type ablution facilities. The deliverables included the construction of platforms, precinct site works, the placing of converted container ablution facilities and the provision of water and sewer connections to the ablution blocks in the informal settlements. The recipient settlements received a toilet block within a 250m radius servicing approximately 75 informal dwellings. Targeted placement of the block toilets were in areas earmarked for incorporation into the eThekweni Housing Department's future formalisation of reticulation within the informal settlement and surrounding catchment areas.

The rapid sanitation delivery project identified a number of social deliverables apart from access to sanitation services:

- Job creation as labour is sourced from local communities.
- Sub-contractor development programme.
- Stimulation of small business development by utilisation of local resources.
- In-service training for technical students (eThekweni and Aurecon Project Meeting Minutes, 28-03-2011).

The EWS Unit felt that sanitation delivery needed to be expedited and that the previous delivery by the eThekweni Environmental Health Section was challenged with installing

container type facilities to informal settlements due to lack of technical skills. EWS then undertook to reticulate bulk infrastructure for waterborne sanitation in close proximity to informal settlements. This would allow for the provision of communal blocks with flush toilets and wash facilities to informal dwellers. It would also promote hygienic lifestyles, thereby reducing the risk of disease/health issues in Inanda as well as other areas of EMA. A key benefit of the project included the GIS mapping of bulk water and sanitation networks and the installation of ablution facilities assisting in future monitoring and evaluation of service delivery. The project generated assets which fell under the care of the Municipality (eThekweni and Aurecon Project Meeting Minutes, 28-03-2011).

A special workshop to clarify roles and functions was held. The EWS Project Managers were strategic inter-departmental facilitators engaged to manage community liaison, local political interface, access to private owned land for construction of the ablution facilities and to guide the procurement processes. The eThekweni Environmental Health Section's role was confined to the overseeing of health-related matters and the Environmental Health Practitioners were replaced by consultants called Institutional Social Development (ISD) facilitators, who were hired by EWS and assumed all duties previously undertaken by the Health Unit. It was further stipulated that the eThekweni Health Unit should limit its role to securing community buy-in principally (eThekweni Municipality and Aurecon Project Minutes, 04-09-2009).

The Project Executive from EWS Unit affirmed that the role of the local community in the operations and maintenance of communal ablution facilities was critical:

“Community involvement and buy-in are a key component in ensuring the success of this project. We see the community as the main stakeholders in the project. Before handover of the facilities, a caretaker, approved by the community is appointed. This will ensure that the ablution blocks are kept clean and well maintained” (www.durban.gov.za accessed 30-09-2012).

However, numerous challenges prevailed: despite huge financial investment, sanitation governance log jams remained a hindrance to rapid sanitation delivery. Notwithstanding a

number of projects having been completed and handed over to communities in Inanda, Aurecon noted numerous challenges with the Rapid Informal Settlement Sanitation Project:

- The Inanda eKuphakameni Shembe site, required authority from the Head Pastor as entry into ‘holy ground’ may disturb sensitive religious practices and may be viewed as being disrespectful;
- EWS strategic management emphasised that the role of the Environmental Health Practitioners was “to sell the project to the community and not to make decisions on where the ablutions are to be placed”. A degree of discord was prevalent amongst departments. Co-operative and consensus driven decision-making seemed to be lacking.
- Community Liaison Officers (CLOs) were appointed at the early stage of the project for continued community involvement. CLOs receive a stipend of R1500 per month, from EWS. Their duties entailed daily maintenance and cleaning, monitoring of operations and use, and safety of the facility. There was a language barrier as many of the selected community volunteers did not speak English. Many CLOs did not perform their functions as prescribed, which created governance blockages. Reappointment of new CLOs required renewed liaison with the local councillor, training and induction which delayed access to services. Delays in caretaker training impacted hugely on the project as a whole (eThekweni Municipality and Aurecon Project Minutes, 04-02-2011). Many new ablution facilities were vandalised, and air vents and plumbing parts were stolen from newly installed container ablution blocks.
- Lack of co-operation from the partnering departments exacerbated the operations challenge post-construction hand over. “EThekweni Wastewater Management Department is not co-operative and is not ready to take over these ablution blocks, this needed to be urgently addressed” (eThekweni Municipality and Aurecon Project Minutes, 12-11-2010: 4).
- Containers that were not handed over to government departments timeously were vandalised and required repairs. These repairs could only be effected in the next funding cycle, resulting in a wastage of resource and delaying delivery time (Interview, EWS Practitioner, 25-04-2011).

- Aurecon reported that 45% of its projected budget was utilised in the first three months of implementation. This translated into huge budget constraints. Expenditure was increased due to a number of factors including the use of helicopters to position container ablution facilities in densely populated informal settlements that had no road access leading to the sites. Absence of bulk network infrastructure for waste water management further increased cost of reticulation. For example, in Gwala's rural informal settlement, the existing bulk water network system is approximately 2km away. Container ablution facilities installation was not feasible. A contingent plan of 4 to 6 ablution blocks could be placed on other sites. However, residents of Gwala Farm would have to cope without ablution facilities due to the lack of bulk infrastructure. On other sites, the projected infrastructure costs were also increased given topographical and bulk infrastructure constraints, increasing the cost of the project. EWS was required to raise the additional funds for project completion as advised by the consulting company (Aurecon Team Member, Interview, 06-04-2011).

The EWS Unit reiterates that access to additional funding from foreign donors is being sought to deliver services to more communities living without improved sanitation. A budget of R375 million has been disbursed for the rapid sanitation delivery to informal settlements to be completed in 2013. Access to sanitation for poor communities was largely dependent on the availability of financial resource. The budget for the rapid sanitation delivery programme was increased from R280 million to R375 million and the duration of the project was increased from a 2-year project to a 5-year project ending in 2013 (www.durban.gov.za accessed 30-09-2012). While the key mandate of government is the delivery of services to its citizenry, the main objective of the private sector is to make a profit. Within a context of limited resources and service backlogs, government's dependence on the private sector and agencies to deliver basic services is increasing. The rapid sanitation delivery programme provided 1 communal ablution block to serve almost 75 households living in squalor conditions. The question therefore is: who benefits most, the private sector or the communities? Operational costs are further borne by government. Maintenance of facilities assigned to salaried community workers questions the cost effectiveness and sustainability of the government's services expenditure. This study indicates that despite different strategies employed to deliver

sanitation, communities in Inanda still do not enjoy the comfort of hygienic and efficiently working sanitation provided by government.

The study evaluated that the rapid sanitation delivery to informal settlements beginning in 2007 was a failure even though the Municipality may report otherwise. It is evident that despite change of strategy and involvement of the private sector to expedite delivery, sanitation in Inanda was still dogged with governance challenges. The lack of co-operation between departments that was evident in 2007 still remained even three years later. Reliance on community buy-in and ownership of local sanitation interventions were unsuccessful.

5.11 IMPACT OF AREA BASED MANAGEMENT (ABM)/URBAN RENEWAL PROGRAMME (URP)

The Area Based Management (eThekweni Municipality's pilot project) and Urban Renewal Programme (national intervention) was piloted as a geographically-focused development model aimed at integrating and fast tracking service delivery in the historically neglected township areas. Increased efforts by national, provincial and local government departments was made over a period of 10 years commencing in 2001, to address and expedite service delivery needs in the Inanda area. The Inanda, Ntuzuma and KwaMashu (INK) ABM/URP Programme therefore served as a dual service delivery intervention. It had municipal privilege where all government departments within the eThekweni Municipality were required to co-ordinate their programmes for speedy service delivery in the INK area. Furthermore, as a Presidential Lead Urban Renewal Programme, the Inanda area was beneficiary to national and provincial government interventions to fast-track service delivery in the three enlisted townships (Everatt & Smith, 2008).

The INK ABM/URP Programme provided a platform for inter-departmental collaboration and dialogue regarding service delivery interventions. The INK Enviro Forum was established to engage implementing partners providing services to citizens of the INK node. The need for this platform was identified due to the plethora of problems being experienced by line function departments during implementation. Development planning practitioners from the INK ABM/URP, Community Development Workers (CDW) deployed in each ward to

monitor service delivery locally, as well as councillors, discussed sanitation delivery concerns and community complaints at meetings (INK Enviro Forum Minutes, 11-03-2009).

Project implementation challenges dominated the agendas of meetings. Neglect of infrastructure, overlap of initiatives, damage to municipal property, and the need for increased services were matters arising monthly. Persistent problems like crime in the area attributed to poverty and desperation of those living without incomes, hampered service delivery. Municipal officials as well other service providers became victims to crime in Inanda. Municipal vehicles were hijacked and the machinery and implements were stolen: “Contracted service providers and their workers were held at gun point and robbed of their personal belongings, machinery as well as the implements in their trucks” (CDW Report, INK Enviro Forum Minutes, 11-03-2009: 2). The INK Enviro Forum enabled information sharing and discussion on mitigating local challenges in a co-ordinated manner. However, little success was recorded.

5.12 EXCEEDING RECOGNISED BEST PRACTICE: SANITATION AS A LEARNING AREA

This study has found that the delivery of sanitation to communities in Inanda remained a challenge to government, community activists, councillors and other stakeholders. However, the eThekweni Water and Sanitation Unit continued its exploration of strategies to deliver sanitation to previously unserved areas as well as to unplanned settlements. The EWS received international acclaim for introducing innovative sanitation technologies for sustainability. The eThekweni Municipality has attracted international interest in the innovative UDD toilet facility. Internationally-recognised philanthropist Bill Gates visited the Besters informal settlement and Umzinyathi district to view the dry sanitation system and how it worked for impoverished communities. While the UDD toilets showed potential ecological benefits, social acceptability was very low. Only 10% usage was recorded (Kockott, 2009: 15).

Further media reports of “Persistent flush of innovations: Durbanites to be paid for minding their Ps and Qs” illuminated further international interest in peri-urban and rural and

sanitation in the eThekweni Municipality (Pillay, 2011: 5). Experiments on how to derive maximum benefit from human waste (urine) instead of flushing it away is being undertaken by the eThekweni Municipality in conjunction with the Bill and Melinda Gates Foundation and the Swiss Federal Institute of Aquatic Science and Technology (EAWAG). The Foundation and EAWAG have invested R20 million for feasibility studies in eThekweni, where the processing of urine into commercial fertilizer will be explored. The study also seeks to encourage local people to derive monetary gains by collecting their urine appropriately for recycling into fertilizer (Pillay, 2011: 5).

The Head of EWS welcomed the four-year feasibility study in Durban. He viewed the end product to be of immense agricultural benefit, as it is also promoted environmentally friendly practices. It is envisaged that the benefits of eco-sanitation technology such as the UDD that is promoted by the Municipality will become more acceptable, encouraging better faecal waste management and urine disposal by locals. It would also promote environmental sensitivity and hygienic practices. The Head of EWS stated that the urine recycling system would synchronise well with the UDD, as currently urine that was diverted from the toilet was deposited into the environment. He alluded to the current non-acceptance of the UDD facilities provided to people in Inanda. People had rejected the technology and were destroying the structure and using the doors and roofs in their houses. The Head of EWS was hopeful that if human waste could be promoted as a revenue generator, more people would engage in dry sanitation practices. The urine diversion and collection for recycling also promises great potential for small and medium enterprises in the city. Households would capture the nitrate rich urine in 20 litre cans which would be sold to the Municipality for R30. The urine would be recycled and sold as fertilizer (Pillay, 2011).

The city of Durban's enthusiasm about engineering new technology to recycle and reuse human waste was lauded for its innovative technology. The Municipality in conjunction with the University of KwaZulu-Natal's School of Engineering Pollution Research Group, won sixth prize for inventing a toilet that burns waste solids and re-routes urine to a storage facility which then decontaminates and purifies the liquid waste to be repurposed for flushing and hand-washing (Independent on Saturday, 2012: 10).

The Municipality has also been recognised for its participatory learning-based approach to raising awareness on water and sanitation (Gounden, no date). This approach was initialised in the recognition that rural and peri-urban communities are vulnerable to diseases such as cholera, which stemmed from being previously unserved as well as their lack of awareness on the proper utilisation of sanitation facilities (Gounden, no date).

5.13 UDD SANITATION IMPLEMENTATION PROCESS: EDUCATION, TRAINING AND WASTE MANAGEMENT

5.13.1 ETHEKWINI MUNICIPALITY'S SANITATION 'BEST PRACTICE'

The EWS Sanitation Department has an established sanitation and water education branch responsible for public consultation, awareness and education. Sanitation research, education and training are undertaken by the Branch. The Branch has received worldwide recognition for its pioneering work to save water and improve sanitation around the city. The UN Secretary General, Ban Ki Moon, presented the “Water for Life – Best Practice Award” to the eThekwini Water and Sanitation Education Manager in Spain during April 2011. He commended eThekwini for its outstanding contribution to raising awareness around water conservation and improved sanitation for poor communities. The city was recognised for preventing the outbreak of cholera and reducing the rate of diarrhoea by 31% (Carnie, 2011: 1).

5.13.2 SANITATION HYGIENE EDUCATION: HOW GOOD IS 'BEST PRACTICE'?

This study questions the effectiveness of the participatory approaches to sanitation access and hygiene education programmes offered to communities. This study found that the benefits of the UDD type latrine were limited. Policy objectives of access to adequate or improved sanitation were reversed through community rejection. Communities did appreciate the ecological value. Insufficient ecological education resulted in lack of community ownership. Dissatisfaction with the facility resulted in non-use and non-acceptance of the dry sanitation system which eco-san gurus have coined as the “eThekwini latrine” because it was developed

in Durban <http://duncanmarasanitation.blogspot.com/2008/01/rural-sanitation-ethekwini-latrines.htm>.

Interaction and discussion with managers and field officers mapped out the processes and procedures undertaken prior to the delivery of the internationally acclaimed UDD system. Prior to the construction of the UDD toilets in Inanda, community surveys and education projects were undertaken in Umzinyati, Ekukhanyeni, Ngcolosi as well as Mphapatheni, amongst other areas (EWS Education Officer, Interview, 28-01-2010). However, upon request, the researcher was informed that these results were not available for circulation.

Table 5.1: Sanitation Hygiene Education Programme

PHASE	INTERVENTION
First phase	Community surveys to understand the needs and the status quo of sanitation in rural communities in Inanda.
Second phase	Community education on the sanitation technology/mechanism, its operation and maintenance.
Third phase	Construction of the facility utilising local labour, empowering people with skills and reinforcing their knowledge on this type of facility.
Fourth phase	Water provision as well as hygiene education.
Fifth phase	Return visits to monitor the usage, mapping problems experienced by users and providing mitigation measures.

Still *et al's.* (2009) study attests to the 5-phase education programmes during the implementation of UDD. Detailed processes preceding the construction of the UDD facility for the rural areas were undertaken. Rigorous efforts to educate people on of the merits of utilising the dry sanitation system were undertaken. Recipient communities were consulted and educated about the facility, the operations and maintenance. The Education Manager at EWS enlisted the tools utilised to engage communities and educate them on the new type of toilet facility:

- Training and hiring of ISDs in conjunction with the Energy SETA was then undertaken. Community members were identified and trained to disseminate information related to the new interventions;
- Surveys undertaken in targeted communities assessed the sanitation needs and perceptions of community regarding the introduction of the UDD facility into the area. The report establishes the number of persons per household, number of disabled persons and their specific needs, number of children so that variations to the facility were expanded to accommodate children;
- A community education programme was implemented prior to the construction of the facility;
- Street theatres for better understanding on the operations and of the facility were held in public places;
- School education programmes including school plays and demonstrations were also undertaken;
- Follow-up visits occurred and further educational information was disseminated;
- Pamphlets with pictorial and diagrammatic illustrations in isiZulu, Afrikaans and English were distributed;
- Physical demonstrations on use, operation and maintenance with special focus on pit evacuation were part of the education programme, and
- Partnerships were created with the eThekweni Health Unit so that these efforts are supplemented with health and hygiene information (EWS Education Officer, Interview, 28-01-2010).

The Education Officer confirmed that all sanitation delivery was accompanied by these procedural education programmes. While some valued the service, admittedly the majority either did not appreciate government's efforts or lacked the sense of responsibility for their part in making their own lives better (EWS Education Officer, Interview, 28-01-2010).

This study found that despite international recognition and commendation for innovation in sanitation awarded to the EWS Sanitation Department, the success with community acceptance and behaviour change was limited. Whilst certain respondents appreciated that they now have access to a toilet, the majority of the respondents of this study were unhappy

because it was not culturally acceptable to handle their own faeces and they could not see the value of using human waste to grow their vegetables. The implication of this finding resonates with Duncker et al. (2006), who found that Urine Diversion toilets may be acceptable as a toilet facility but not as a technology, as users found it difficult to maintain and operate as expected.

This finding also indicates that there was insufficient effort to plan with the community rather than for the community. While the UDD dry toilet bode well for undulating geographical terrains where bulk water and sanitation reticulation was not feasible or not available, it was not the user's choice. There was no evidence of communication and advocacy during the planning phases of the project; therefore communities felt that the technology was imposed upon them.

Follow-up education efforts were weak and ineffective. This further implied that not just follow-up education dissemination was required but also training sessions on how to operate and manage the facilities during evacuation. It was ambitiously assumed that communities would efficiently manage the use and evacuation process of the technology and that decanting of the contents of the pits would be willingly accepted and executed by users. This was not the case and therefore this study deduces that the UDD technology in Inanda was an unsuccessful initiative, as user acceptance was limited. Furthermore, users' ability to utilise the facility was not compliant as directed by the instructions provided by the Municipality, which rendered the urine diversion and dehydration technology intention futile.

5.13.3 LACK OF INTEGRATED SECTOR SUPPORT HAMPERS PROGRESS

The success of the UDD intervention depended on community acceptance and ownership of the facility. Effective co-operation from the various identified sectors was essential. Proper use of the facility and regular and procedural maintenance was necessary. The use of protective gear to avoid contact with faecal matter during pit evacuation was essential for the prevention of potential diseases. Proper disposal of the pit contents was imperative.

Rejection of the UDD type of technology by the eThekweni Health Unit further hampered progress. The eThekweni Health Unit raised concerns about the safety of users handling faecal matter. Subsequent research undertaken during the period 2005-2007 by EWS in conjunction with the University of KwaZulu-Natal found that the health benefits associated with the use of the facility outweighed any threat of disease through the use and operation of the facility (EWS Education Officer, Interview, 28-01-2010; Buckley *et al.*, 2007). More than 100 000 units were successfully constructed throughout the eThekweni Municipality and it was reported that users were happy (Head EWS, Interview, 03-12-2010).

This study found that the users were not offered further support following the installation of either the VIP or UDD facility. Waste management, technical support with dismantling the back of the vault for evacuation and replacing broken or worn out material was absent. This resulted in rain water, urine and grey water seeping into the facilities, rendering its purpose superfluous as the intention is to reuse dried out faecal matter. The fear of unhygienic handling of faeces and the exposure to health hazards regarding the use of faeces for agriculture was not dispelled through the necessary scientific education, thereby contributing to greater rejection of the technology. Lack of sector support was evident and detrimental. Lack of open channels of communication assumed that communities were coping with the innovation.

Duncker *et al.* (2006: 33) stated that improved collaborative and integrated demand responsive approaches such as Participatory Hygiene and Sanitation Transformation (PHAST) programmes are necessary together with more effective channels of communication to improve the sustainability of sanitation innovations.

5.13.4 POLITICAL INTERFERENCE: LOCAL COUNCILLORS' INFLUENCE ON COMMUNITY MINDSETS

Despite some degree of community consultation and education, acceptance still remained a challenge. Councillors are the gateway to the local people and influence the mindsets of communities, but in this case, making inroads and introducing interventions in their rural areas was very difficult without their co-operation. Community rejection of the UDD was

exacerbated by political interference where councillors demanded waterborne flush toilets for the people without understanding the geography and engineering requirements which made reticulation difficult in a short to medium timeframe. The cost of reticulating sewer networks in rural areas was exorbitant and with limited resources, the provision of waterborne toilets for rural settlements was not feasible. There were initial structural defects with the UDD technology which required review and revalidation of the model and methodology for implementing this system. According to EWS, this was corrected and the revised version was more user-friendly (EWS Education Officer, Interview, 21-04-2011).

Plate 5.1: UDD Toilet in Rural Inanda



Source: The Author

The UDD facility was invented and designed for user operations and maintenance. However, despite revision and improvement of the technology, user acceptance and co-operation was the main setback (Mjoli *et al.*, 2009).

5.14 COMPARING ‘OLD’ AND ‘NEW’ SANITATION INTERVENTION

The eThekweni Municipality has pioneered sanitation technology to suit local conditions. The rationale behind innovating around sanitation infrastructure was to meet the demands of

residents and eradicate inherited backlogs. In the post-1994 era, the identification of sanitation as an important human need catapulted the roll out of basic level sanitation. Basic Ventilated Improved Pit (VIP) toilet facilities were provided to impoverished townships and rural areas where sanitation was previously self-managed or absent. However, over a period of time it was discovered that the VIP system was not successful due to the excessive costs of maintenance and operations (emptying of pits). It posed a risk to the environment through groundwater contamination. Vector control was problematic.

The source-separating mechanism of the Urine Diversion Dehydration (UDD) toilet was piloted, which then superseded the VIP because of the low cost of operations. It allows for easy maintenance by the users and its liquid and solid contents are separated into different chambers. A twin pit or “double vault” is designed for the collection and dehydration of solid contents, while the urine drains into a soak pit, hence its descriptive name, Urine Diversion Dehydration toilet (Buckley *et al.*, 2007: 2).

There was an absence of sufficient scientific literature regarding the merits and demerits of the different types of technologies utilised for human waste disposal. A comparative study was undertaken by the University of KwaZulu-Natal in partnership with the eThekweni Water and Sanitation Department to ascertain the environmental integrity, economic benefit and sustainability of both the Ventilated Improved Pit (VIP) and the Urine Diversion Dehydration (UDD) technology in Inanda and other peri-urban and rural areas. The purpose of the research was to explore design options for peri-urban and rural sanitation provision within the Municipality. Indicators for environmental, economic and socio-cultural perspectives for sustainable development were used to evaluate alternate technologies (Flores *et al.*, 2008).

Flores *et al.* (2008) found that internationally, waste water systems or managing human waste focussed on the use of local and affordable resources and water conservation which, while intended to be sustainable, could well be unsustainable. The study therefore broadened its indicators to a multi-dimensional perspective using the scientific sustainability indicators to assess ecological footprint, the economic dimension used, financial assessments as they relate to affordability by the user, the business generating potential, and the socio-cultural aspects,

which were tested qualitatively through interviews, focus groups, surveys and observation within the specific context (Flores *et al.*, 2008).

5.14.1 ECOLOGICAL INTEGRITY AND ENVIRONMENTAL IMPACT OF THE VIP AND UDD TECHNOLOGIES

Flores *et al.* (2008) found that both the VIP and UDD systems operate as dry sanitation systems where waste does not discharge into bulk waste water systems. Human waste collected by both the facilities was discharged on land preventing microbial contamination of surface water supplies. Both the VIP and UDD only allow for “black water” management, meaning urine and faeces and not waste water. However, the VIP operations allow for contamination of groundwater as storm water, and household waste water seepage was prevalent through the porous pit in the ground. In the case of VIP toilets, the faeces, urine and household wash water was discharged into the pit in the ground, while UDD allows for separation of solid waste from urine through the dual technology of the system. The use of water for anal washes was replaced by the use of soft bio-degradable paper (Flores *et al.*, 2008: 8).

5.14.2 ECONOMIC BENEFITS OF THE VIP AS COMPARED TO THE UDD TECHNOLOGY

According to Flores *et al.* (2008), both the UDD and VIP systems are not material-intensive. They require similar construction materials which include brick, blocks, cement mortar, wood for the door, and tin for the roofing. However, from an operational perspective, the cost of the UDD facilities can be reduced to zero as the systems can be maintained by the user, whereas the VIP systems require the Municipality to desludge regularly (period of 3 to 5 years). The desludging of VIP pits is particularly difficult as most of the peri-urban areas do not have access roads or are congested informal settlements.

The UDD facility is currently provided by the Municipality covering full capital costs and the education on the operations and maintenance of the system by users. The VIP technology in most instances requires manual clearing of the pit as access to the area was restricted. The

twin vault mechanism of the UDD can be cleared more frequently by the users with ease. The study by Flores *et al.* (2008: 8) recommended further studies into what proportion of users would be evacuating their own pits and the cost thereof. A degree of user resistance to this type of operations and maintenance was evident. More intense enquiry and mitigation measures will be determined following investigations into socio-cultural acceptance of the UDD technology. In countries like Bukina Faso and Malawi, dehydrated faeces are reused for agricultural soil fertilization. EThekwini Municipality engaged scientific researchers to assess the benefits and risks and sustainability of the VIP toilet as compared to the UDD (Flores *et al.*, 2008: 8).

Table 5.2: Preliminary evaluation and comparison of the alternative sanitation systems installed in peri-urban/rural areas in the eThekwini Municipality

INDICATORS	VIP	UDD
User acceptability: compatibility with user habits and preferences; convenience; comfort; personal security; attractiveness	Medium	Medium
Adaptability to different age, gender, and income groups	Medium	Medium
Current legal acceptability and institutional compatibility	Low	Medium
Exposure to pathogens and risk of infection related to all system elements including collection, treatment reuse and final destination of products/wastes	Medium	Low
Risk of exposure to hazardous substances: heavy metals, medical residues, organic compounds, etc.	Medium	Low
Health benefits due to improved hygiene, food production, nutrition, status, livelihood	Medium	Medium (greater potential with safe excreta reuse for agriculture)
Effects of system failure	Medium	Low
Robustness of system	High	Low
Possibility to use local competence for construction and O&M	High	High
Ease of system monitoring	Medium	Medium
Durability/Lifetime	Medium	High
Complexity of construction and operations & maintenance	Low	Medium
Compatibility with existing systems	High	High

Source: Adapted from Flores *et al.* (2008: 8)

From a socio-cultural and institutional perspective, the study by Flores *et al.* (2008: 9) concluded that:

- From an operations and maintenance perspective, the UDD was the selected option as costs to the institution was greatly reduced;
- The VIP system poses risk for ground water contamination as the viability of pathogens is theoretically higher than in the UDD system;
- From a durability/lifetime perspective, the UDD technology arguably shows potentially higher degradation rates;
- Space requirements are lower for UDD toilets and they theoretically can operate indefinitely;
- VIPs perform better from system robustness and ease of monitoring perspectives (are less complex to use as urine and faecal separation are not required, and even some water in the VIPs is acceptable), and
- In terms of complexity of construction, operations and maintenance perspectives, the UDD toilets have a more sophisticated design given the two chambers and urine separation requirements, and the operation requires more user discipline.

Flores *et al.*, (2008) noted that while both the systems perform similarly, the UDD technology was preferred from an institutional perspective as it was more viable within the geographical context and from a socio-economic perspective. Both the systems were assessed with similar merits from a “user acceptability, adaptability, health benefits, and compatibility with existing systems perspective” (Flores *et al.*, 2008: 9).

5.14.3 BIOLOGICAL SAFETY OF COMMUNITIES EXPOSURE TO FAECES WHEN EVACUATING UDD CHAMBERS

Prior to the implementation of the UDD dry sanitation system in peri-urban and rural areas where waterborne flush systems were not feasible, the VIP system or a self-built pit was the main type of facility used. Various research initiatives were undertaken to test the safety, environmental integrity and cost-effectiveness of the UDD technology. Studies were undertaken to explore the feasibility of the dry sanitation system for poor communities. In

addition, an exploratory study by the Municipality in conjunction with the University of KwaZulu-Natal on the clinical safety of the UDD system pit/vault evacuation was done (Buckley, 2007).

The study found that contact with faeces is a health hazard to human beings. Buckley *et al.* (2007) analysed the faecal content of UDD in Zwelibomvu, Durban, which found the prevalence of high worm loads. Human contact with faeces in the UDD pit runs the risk of contamination and diseases. The presence of *Ascaris* egg (roundworm) and hookworm eggs found in the sample taken from the UDD pits was only hazardous if there was faecal contamination through food or water, or direct contact with faeces. It was also found that the *Ascaris* egg was resilient in cold climates and will not survive in high temperatures of 29-30 degrees Celsius in Durban. The *Ascaris* egg was only infectious through ingestion and was in a dormant state in the UDD chamber. While protective gear for those clearing the chambers was recommended, it was also noted that service providers are at greater risk and may circulate and contaminate facilities through exposure to multiple facilities. The *Ascaris* egg was only present in faecal chambers of families who have *Ascaris* infection. For this study, Buckley *et al.* (2007) noted that 40% of the samples recorded the presence of *Ascaris* eggs.

Based on the above findings, the eThekweni Municipality continued with the delivery of the UDD sanitation facility as it was deemed low risk if proper hygiene and protective gear was used during evacuation by householders. Similar to the findings of Buckley *et al.* (2007), on *Ascaris*-infected faeces, the study by Foxon *et al.* (2007) points out that there was significant presence of helminth eggs in faecal matter found on face masks of service providers engaged in VIP pit evacuation. This posed high risk to the workers as well as those with whom they come into contact. Further research into the potential use of dried out faecal waste for agricultural purposes continues. The UDD system was deemed as the most viable, cost-effective and convenient basic level of service the Municipality could offer (Buckley *et al.*, 2007).

While the Municipality has attempted to comply with national standards of basic level sanitation, the safety of operations and maintenance of the VIP and UDD sanitation facility was a cause for concern. Scientific research on its risk to users who come into contact with

faecal matter proves that there was potential for contamination. Such conditions can be averted if users are rigorous with their practice of personal hygiene after the use, operations and maintenance of the facility.

The Senior Manager at EWS who heads the research and education component of the project, responded that the vision of the city was to conserve water through sustainable practices. The use of dry toilets was one way of preventing unnecessary wastage of water. The concept of ‘dry toilets’ was researched intensely following the cholera outbreak in KwaZulu-Natal in 2001-2002. The use of dry toilets have been tested internationally and worked well in countries like Germany. User acceptance required education and understanding of the ecological benefits of the system. The system can also provide farming communities with cost saving fertilizers, as when the faeces are dried out it is odourless and safe to utilise in gardens. Scientific research has shown that the dried out contents of the UDD pits are safe for agricultural consumption (EWS Senior Manager, Education Section, Interview, 15-05-2009).

However, the community’s acceptance of their role in maintenance of their toilets was still posing a problem. Handling of own waste seemed taboo and culturally unacceptable. In addition, the quality of the infrastructure and constraints with water supplies still leave communities in Inanda exposed to health, environmental and safety risks.

5.15 CONCLUSION

The focus on sanitation governance in Inanda highlighted a number of institutional, policy implementation, innovation and service delivery challenges in the Inanda area. The study found that concerted efforts to institute the constitutional “co-operative governance” principle yielded limited success. Policy interpretation and implementation presented a range of challenges as not all localities and communities within the study area are homogenous. Therefore, translating national policy and regulation in diverse local areas spurred experimentation and innovation in sanitation delivery, highlighting a need for context specific integrated policy approach to sanitation in Inanda.

This chapter also highlighted that the eThekweni Municipality's interventions for improved sanitation in Inanda aimed at achieving the global MDGs targets, backlog eradication and greater access were hampered by in-migration, limited resources and increasing service demands. Community readiness to adapt to change was stymied due to poverty, cultural beliefs, and a mindset of entitlement. The efforts to achieve adequate sanitation for all remain an ongoing task. An overall analyses indicated that structural (infrastructure), educational, economic (financial resources), social challenges prevailed.

CHAPTER SIX: COMMUNITY EXPERIENCES AND PERCEPTIONS OF SANITATION DELIVERY IN INANDA

6.1 INTRODUCTION

Chapter Seven presents the findings of the study as relates to community perceptions and experiences regarding sanitation delivery in Inanda. The analyses are presented as follows:

- Socio-demographic profile of community respondents, description of the types of dwellings and occupancy.
- Experiences and perceptions of sanitation facility utilised by respondents in peri-urban and rural Inanda.
- Sanitation hygiene education and practices in Inanda.
- Water Service Delivery: Access, Experiences and Perceptions.
- Community participation in sanitation programmes.

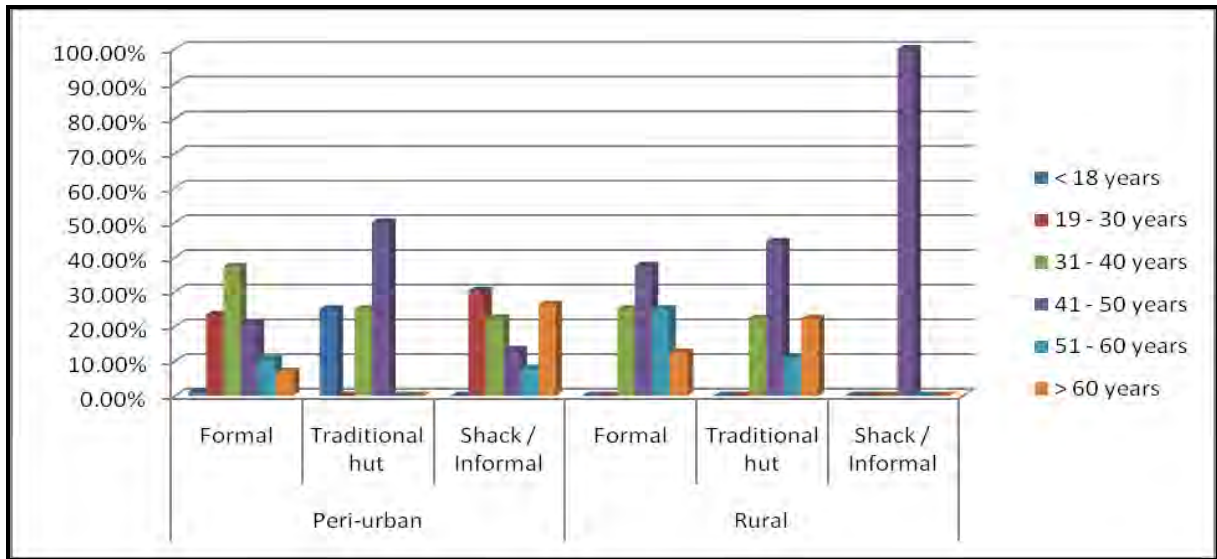
6.2 SOCIO-DEMOGRAPHIC PROFILE OF RESPONDENTS IN INANDA

This section presents the demographics of respondents who participated in the household surveys.

6.2.1 AGE OF RESPONDENTS

Figure 6.1 illustrates the age of respondents in years, aggregated per area type.

Figure 6.1: Age of Respondents per Area Type



There were significant differences in the peri-urban type of dwelling with respect to age of respondents, education and income. There was a fairly even spread of respondents by age group in all areas (peri-urban and rural) living in various types of dwellings. This indicates that this study achieved a representative response to challenges and experiences, as sanitation is a critical basic service that affects all.

The average age of the respondents in the peri-urban area was 37 years and that in the rural area was 41 years. A younger population was noted in the peri-urban area as opposed to the rural areas. Statistically, in this respondent population, the difference was not alarming. Observations made by the researcher in the field confirmed that the peri-urban areas showed a greater presence of younger population, which was in agreement with the Department of Social Development Livelihood Survey (Smith & Everatt, 2006). The peri-urban influx was a consequence of migrant workers from rural areas relocating closer to the city centres. Younger people are more inclined to migrate.

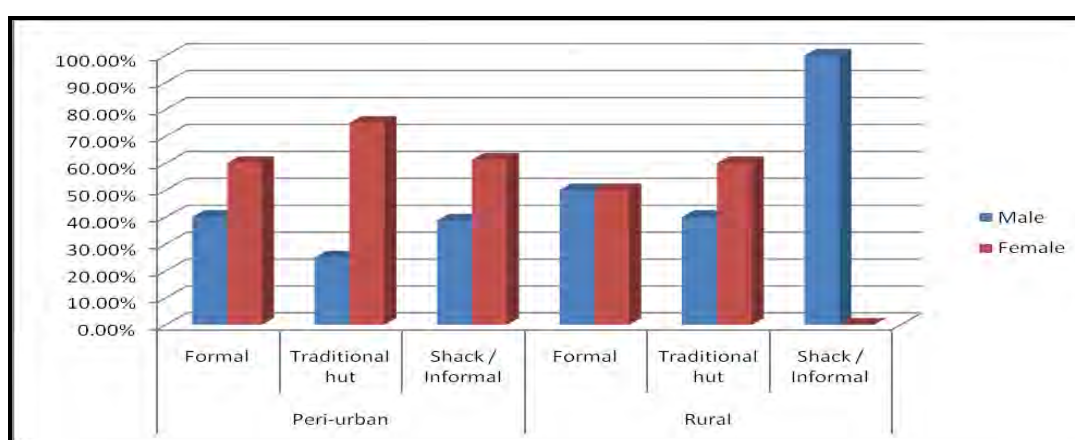
The DSD Livelihood Survey confirmed that the peri-urban areas of Inanda house residents migrating from other parts of the province, especially the Eastern Cape in search of better economic opportunities. Almost 43.9% of those residing in Inanda are younger than 19 years and more than half fall within a potentially economically active age, yet unemployment in Inanda was very high (66.2%) as compared to the national rate of 48.6% (Everatt & Smith,

2008: 14). The MDG Country Report (2010) records an average of 24% unemployment to population ratio which indicates that Inanda still has the highest rate of unemployment by any standards (MDG Report, 2010: 30).

6.2.2 GENDER OF RESPONDENTS

Figure 6.2 is an illustration of the percentage of female and male respondents.

Figure 6.2: Gender of Respondents



In the peri-urban areas of Inanda, there were more female respondents with majority confirming that they were the head of their households. An equal number of male and female respondents (50%) were interviewed in formal dwelling types in the rural areas. The significant presence of male respondents in the traditional and informal rural settings was possibly attributed to the cultural and traditional practices where women withdraw when outsiders (e.g. researchers) visit. Therefore, rural women were less engaging. Focus group discussions supported evidence to this finding as women sat quietly on the floor in an obscure corner listening to the conversations between the researcher and the male members of the community. However, a concerted effort was made by the researcher to engage rural women on a separate day in a women-only interview session.

Whether the female respondents were heads of households or not was not significant in achieving the objectives of the study. What was significant is that female respondents stated that they were most often burdened with the responsibility of maintaining toilet facilities in

the household. Female respondents were caregivers to the young children, the sick and aged, and battled with the lack of facilities or inadequate sanitation and water. Female respondents are victim to crime in the area, when walking long distances to access to water and sanitation facilities. Despite being burdened by numerous demands, females prove to be harder workers: “When communities are employed in sanitation construction and maintenance, women work harder than men and are more committed” (Senior Manager, EWS, Interview, 12-11-2009). This was potentially because women are naturally burdened with the responsibility of ensuring overall well-being of the family with or without their male counterparts, and therefore work harder to achieve that end.

In the five wards surveyed for this study, a greater prevalence of female than male respondents were observed in peri-urban areas. The implication for sanitation services in Inanda therefore means that adequate facilities and easy access to sanitation was important for the well-being of women living in these areas. User-friendly sanitation facilities are critical basic services for women (Van der Voorden & Eales, 2002).

6.2.3 EDUCATIONAL QUALIFICATION OF RESPONDENTS

Table 6.1: Educational Qualification of Respondents

Qualifications	Peri-urban			Rural		
	Formal	Traditional Hut	Shack / Informal	Formal	Traditional Hut	Shack / Informal
None	10.00%	0.00%	38.70%	0.00%	0.00%	0.00%
Primary school	11.30%	50.00%	18.70%	0.00%	0.00%	0.00%
Secondary school	46.30%	25.00%	24.00%	37.50%	50.00%	100.00%
Matric	28.70%	25.00%	18.70%	50.00%	40.00%	0.00%
Diploma	3.80%	0.00%	0.00%	12.50%	10.00%	0.00%
Degree	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

None of the respondents had degrees; only 3.8% (formal, peri-urban) and approximately 2 % of rural respondents had diplomas. An overall average of 33% of respondents had some form of secondary schooling. Approximately 25% of the peri-urban respondents had only a primary school education. There was a significant difference in educational qualification by dwelling type in the peri-urban areas. This was not the case in the rural areas (Table 6.1).

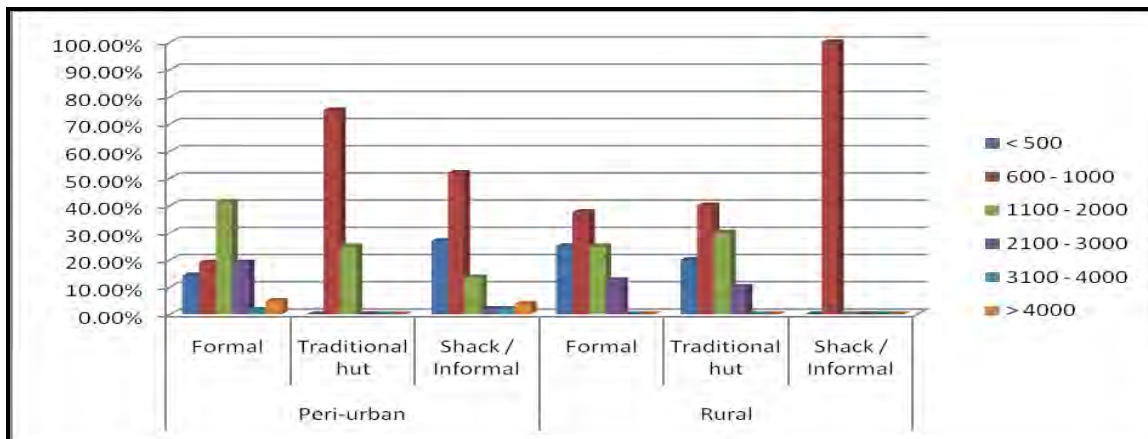
The peri-urban respondents were mainly migrant workers, younger people who have some formal education. A large proportion of respondents live in the peri-urban areas hoping to find employment. The rural area was homestead to a number of people whose work residence was in the Central Business District (CBD), in the peri-urban townships or in some cases other provinces. In most instances, rural dwellings housed mainly the elders, the unemployed and young children of the families.

The overall cohort of respondents may be described as literate with either primary, and/or secondary level of formal education.

6.2.4 MONTHLY INCOMES OF RESPONDENTS

The monthly incomes of respondents are depicted per dwelling type and denominated in Rand(s) in Figure 6.3.

Figure 6.3: Monthly Income of Respondents in Rand(s)



The average monthly income in the peri-urban area was R1346 and in the rural area, it was R1065. The implication is that most peri-urban respondents were engaged in some form of temporary employment, while others may be in receipt of some type of social grant. The average for the rural area (R1065) indicates that the respondents are predominantly pensioners or earn a little money through their subsistence farming.

The most frequent income range was R600-R1000 per month in five of the six dwelling categories. Four in every ten respondents earned between R1100 and R2000 in the formal peri-urban sector. The respondents with the low monthly income of between R500-R1000 resided mainly in informal settlements or traditional huts. They expressed their dissatisfaction with the squatter living conditions but had no other option. Further probing revealed that the low rural incomes were supplemented by family members working out of home and contributing to the maintenance of their rural home and families. Many of the rural traditional dwellers lived off government grants and often used the same to support orphaned young children (Focus Group, KwaGwala, 12-12-2009).

6.3 OCCUPANCY AND TYPES OF DWELLINGS

This study surveyed four peri-urban wards and one rural ward. It was found that all wards comprised a mix of dwelling types including formal houses (RDP or self built), traditional huts, and informal settlements (shack dwellings) either built on municipal or privately owned property (owned by landlords). The classification of the dwelling type was important for this study as this dictated the type of sanitation services accessed or not accessed. According to Statistics SA, the type of dwelling and level of basic services is a determinant of well-being and comfort levels of the people of South Africa (Statistics SA Community Survey, 2007).

The Statistics SA Community Survey for the entire country notes that the denomination of formal, traditional and informal dwelling types is still prevalent in SA. It also states that the number of formal dwelling types has increased from 64.4% to 70.5% between 1996 and 2007. The traditional dwelling types decreased from 18.2% to 11.7% during the same period. Informal dwellings remained constant from 1996 to 2001 (16%) but decreased slightly in 2007 to 14%. This suggests that despite more people are now housed in formal dwellings, 14% of SA's population still reside in squatter conditions with minimum or no basic services. Approximately 8.6% of the households surveyed by Statistics SA still live without any access to sanitation facilities (Statistics SA Community Survey, 2007).

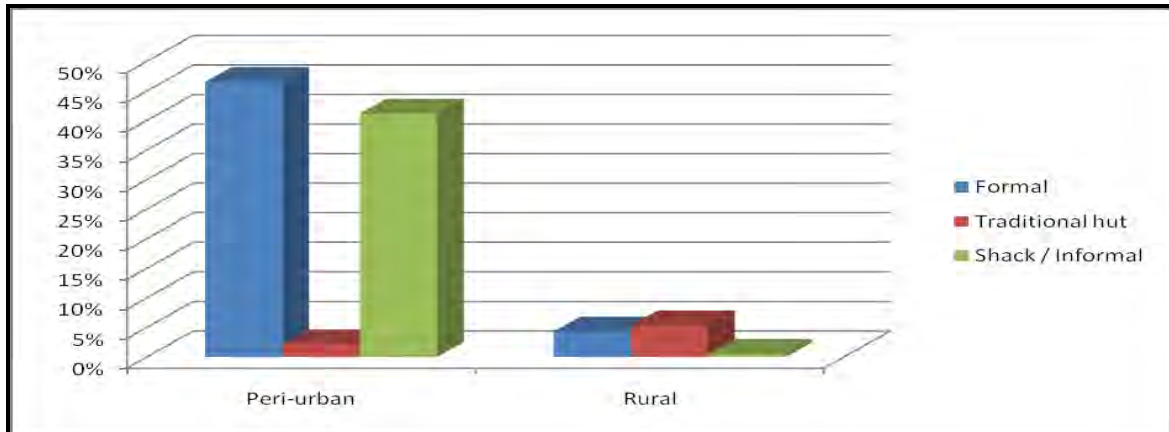
A household survey of Inanda published by eThekweni Municipality indicates that 49% of the respondents lived in formal dwelling and an almost equal number of households were informal dwellings (INK Household Survey Report, 2005: 23). This implied that informal settlements were still the alternative to formal housing. The INK Household Survey also described the type of sanitation access: 20% full flush waterborne toilet, 51% basic pit latrine, 25% chemical toilets and 0% bucket in Inanda. This meant that in 2005 more than half the surveyed population in the aforementioned study did not have an improved level of basic sanitation facilities, such as VIP as defined by the National Sanitation Policy of 1996 (DWAF, 1996). The desired waterborne toilet was least prevalent. In comparison to its neighbouring townships of KwaMashu and Ntuzuma, Inanda suffered the worse conditions. Despite varying service levels, overall dissatisfaction with sanitation services was noted in all three areas (INK Household Survey Report, 2005: 23).

6.3.1 TYPES OF DWELLINGS OCCUPIED BY RESPONDENTS IN INANDA

Table 6.2: Type of Dwelling Occupied by Respondents in Inanda

Dwellings			Area Type		Total
			Peri-urban	Rural	
Type of dwelling	Formal	Count	87	8	95
		% within Type of dwelling	91.6%	8.4%	100.0%
		% within Area Type	51.8%	42.1%	50.8%
		% of Total	46.5%	4.3%	50.8%
	Traditional Hut	Count	4	10	14
		% within Type of dwelling	28.6%	71.4%	100.0%
		% within Area Type	2.4%	52.6%	7.5%
		% of Total	2.1%	5.3%	7.5%
	Shack / Informal	Count	77	1	78
		% within Type of dwelling	98.7%	1.3%	100.0%
		% within Area Type	45.8%	5.3%	41.7%
		% of Total	41.2%	.5%	41.7%
Total		Count	168	19	187
		% within Type of dwelling	89.8%	10.2%	100.0%
		% within Area Type	100.0%	100.0%	100.0%
		% of Total	89.8%	10.2%	100.0%

Figure 6.4: Dwelling Types in Peri-urban and Rural Areas



Carolini (2012) points to countries like India, South Africa and Brazil that have failed to identify that the urban-rural categorisation of dwellings are varied and that “intra-urban” or “peri-urban” areas comprise precarious dwelling types and different levels of access to basic services. The respondents in this study lived in different types of dwellings, 49% had formal housing, 7% lived in traditional huts and 44% lived in informal or shack dwellings in the peri-urban areas. In the rural areas, 42% of the respondents lived in formal houses and 53% in traditional huts.

In summary, the percentage of respondents living in formal dwellings in the peri-urban areas in Inanda is almost equal to those living in informal shack dwellings. This implies that the type of facility, maintenance and operations of sanitation service demands in the peri-urban areas vary. The differences are visually significant.

6.3.2 DURATION OF STAY PER DWELLING TYPE

Table 6.3 presents statistical assessments of the number of years residents (respondents) of Inanda lived in their respective dwellings. The percentages indicate the proportion of respondents per dwelling type per peri-urban and rural Inanda.

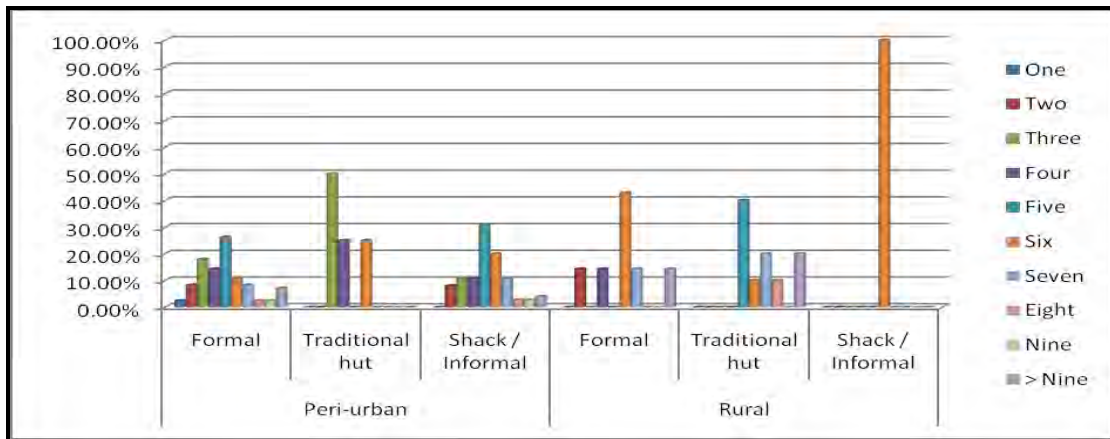
Table 6.3: Respondent's Duration of Stay per Dwelling Type

No. of years	Peri-urban			Rural		
	Formal	Traditional Hut	Shack / Informal	Formal	Traditional Hut	Shack / Informal
< 1 year	2.40%	0.00%	2.60%	0.00%	10.00%	0.00%
1 - 5 years	41.50%	0.00%	35.50%	0.00%	10.00%	0.00%
6 - 10 years	20.70%	50.00%	15.80%	42.90%	10.00%	0.00%
11 - 15 years	13.40%	25.00%	15.80%	14.30%	30.00%	100.00%
16 - 20 years	14.60%	25.00%	15.80%	28.60%	10.00%	0.00%
> 20 years	7.30%	0.00%	14.50%	14.30%	30.00%	0.00%

The average length of stay in the peri-urban area was 9.5 years while it was 14.6 years in the rural area. In the peri-urban area, 42% of the respondents had lived in a formal house for less than 5 years and 36% had lived in an informal dwelling. In the rural area, 43% and 29% had lived in a formal dwelling for 1-5 years and 16-20 years, respectively. The relatively fewer years of residency in formal housing was due to the slow pace of housing development projects rolled out by government during the past 7 years. Some government (RDP) housing development was evident in the rural area. However, the traditional dwelling and shack dwelling respondents lived in the rural areas for 20 years and beyond. Many rural respondents stated that they are confident that their areas would be prioritised for development and prefer to remain there for the rest of their lives. However, they also stated that some of the interventions by government, particularly the types of toilets being provided, were not suitable as the aged residents were unable to maintain the facilities (Rural Mphaphathi, 31-09-2009). This was with reference to the UDD toilet which is discussed in detail later in this chapter.

6.3.3 NUMBER OF OCCUPANTS PER HOUSEHOLD IN PERI-URBAN AND RURAL AREAS

Figure 6.5: Number of People Living in a Household



The average number of people living in one household in formal dwellings in the peri-urban area was 5, while the corresponding value in the rural area was 5.9. The overall average in the peri-urban dwelling types was 5 people per household and that in the rural area was 6.4.

It is evident that irrespective of the type of dwelling, the average number of occupants at any given time was 5 or more people per dwelling. The only exception was that for the shack dwellers in the rural areas, where almost all respondents indicated that there were 6 or more people in one shack. This aligns with reports that reflect high levels of overcrowding in Inanda compared to other township areas in the country (Statistics SA, 2001; Everatt & Smith, 2008). The implication is that the sanitation delays and problems experienced in overcrowded dwellings and densely populated areas are exacerbated by the varying housing types and lack of bulk infrastructure to service a vast area. This also implies that intense status quo assessments need to be undertaken to inform inter-sectoral planning required to address development challenges in Inanda.

6.3.4 ANNUAL PROPERTY RATES PAID BY RESPONDENTS PER ANNUM (IN RANDBS)

Table 6.4: Annual Property Rates Paid Per Household

Property Rates Paid per Annum	Area Type											
	Peri-urban						Rural					
	Type of dwelling						Type of dwelling					
	Formal		Traditional Hut		Shack / Informal		Formal		Traditional Hut		Shack / Informal	
	N	%	N	%	N	%	N	%	N	%	N	%
0 – 200	2	56.40	0	0.00	46	100.00	1	100.00	0	0.00	0	0.00
250 – 400	1	28.20	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
450 – 600	5	12.80	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
650 – 800	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
850 – 1000	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
> 1000	1	2.60	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00

Only 1 respondent in the (formal) rural area paid property rates. In the peri-urban area, none of the respondents living in traditional dwellings paid rates. Those living in informal dwellings paid no rates but confirmed that they paid rental to landlords or shack lords. Of these, all paid less than R200 per year rent. In the formal peri-urban areas, the majority of respondents paid less than R600 rates to the Municipality annually. In the traditional rural areas, respondents indicated that they do not pay property rates to the Municipality as most of their homes are built on land owned by traditional leaders.

This indicated that the Inanda area was a very low revenue generating area for the Municipality. Most residents do not pay any property rates. The implication was that the development in Inanda was funded by the public purse. Households receive free basic sanitation services. Users pay only for water use exceeding the 9kl per month. Those households with waterborne flush toilets incurred costs only if the free basic water limit was

exceeded. The eThekweni Municipality was responsible for bulk sanitation maintenance and operation costs in Inanda.

6.4 SANITATION DELIVERY IN INANDA

i) Repercussions of Apartheid (un)planning and Development Challenges in Inanda

The topography of Inanda is described as “gently rolling coastal plain to deeply incised river and ridge systems”, contributing to the challenge of reticulating bulk infrastructure for both water and sanitation. Waterborne sanitation, ventilated improved pit (VIP) and urine diversion toilets are provided by government to eradicate the sanitation backlog due to the historic under-serviced and unserved areas. Research by the Department of Social Development (DSD) in 2008 indicates that 68.3% of households in Inanda did not have running piped water on their premises. Also 42.5% have sanitation facilities below the basic level recommended by the Reconstruction and Development Programme (Everatt & Smith, 2008: 37). The Livelihood Survey conducted by DSD further revealed that there was no improvement in service delivery during the study period from 2006-2008 (Everatt & Smith, 2008: 35).

ii) Local Perspectives of Development Challenges in Inanda

This section presents a descriptive analysis of development in selected areas of Inanda. The selected areas are those that arose most frequently as examples during field investigations and conversations with local people, councillors, and community activists, and religious organisations who provide their account of how development progressed in Inanda. It sets the scene for the next section which presents the real experiences of residents (respondents) who are beneficiaries or victims of the approach to advance development and planning of Inanda post-democracy in the year 1994.

Inanda is unique in its composition as it has a mix of formal, informal and rural areas. Development of the area was experimental. While interventions of improved housing and basic services was the main aim of the local authority, the vast needs of the growing population, and social, political, cultural and environmental conditions challenged

development. The people and spaces in the township are heterogeneous, presenting urban planners with a spectrum of development challenges.

iii) Besters Camp Area

Observation and interaction with all respondents groups for the study painted a picture of the historical background and an understanding of development in the Bester's Camp Area situated adjacent to the multi-billion rand Bridge City development initiative. Local councillors highlighted the historical neglect of the Bester's Camp Area. Poor apartheid planning of the area had contributed to worsening social and developmental problems. Councillors also alluded to the grave need for services, especially sanitation to improve the lives of the people. Housing and density problems are exacerbated by ongoing in-migration. The local councillor explained the situation by backtracking and providing the historical background to (under)development of the area:

“The Besters area was an unplanned area. Prior to 1989 there were no roads or formal housing. Post-1994 people began flooding into the area and constructed their own temporary shelters. Houses mushroomed close to one another without access pathways. There were no toilet facilities at the time. People used the open field and then began building their own toilets with pits. The current population ranges from 15 to 20 000 people. Shacks were upgraded by the Municipality into one or two room houses. However, sanitation had always been and remains a problem.

Water tanks were provided by the Municipality and 200 litres free water per day which has now increased to 500 litres. This still does not meet the community needs as most households comprised of more than 8 people. Over the past ten years (from 2000-2010), VIP toilets were provided to people. These were built in-between the houses. It was even worse than not having a toilet as it was very close to the house and the odour was unbearable as pits filled up sooner than expected and had not been evacuated. Most often people used their neighbour's toilets; this was shameful.

People deposited their rubbish into the pits: car engines, broken stoves and even fetuses were found in the toilet pit. A group of community volunteers were trained to educate people on how to use their VIP pit. However, maintaining the toilet is still problematic.

The area is overcrowded and a haven for criminals because police cannot arrest them as they disappear into the dense shacks. More than 40% of the people living in Besters are unemployed. When VIP toilets were being built during the upgrade part of the area, people were employed through the EPWP programme. However, that opportunity has never recurred as there was no more space to build anything. Local people cannot be employed.

Besters urgently needed proper planning. Feasibility studies for housing, water and sanitation projects were recommended. Infrastructure is old. Although people have taps in their yards, they do not have water. The Municipality replaced large water pipes but that was mainly to accommodate the large developments in the area, not the informal settlements or RDP houses.

Councillors have raised these matters with the three sphere of government. No definite plan for the area has been reported. The Minister Lindiwe Sisulu announced that informal houses will be replaced by housing development and people will own houses and have access to proper water and sanitation. Councillors emphasised that the Municipality engaged in feasibility study so that well planned interventions are undertaken.

Whilst the National Sanitation Policy is good, meeting the MDGs will not be achieved due to the bad planning, lack of finance, delays in environmental impact assessments, and increasing demand for water and sanitation. Private sector investments in developments like Bridge City Mall encouraged migration to the area, the density is increasing in Besters and there is no plan to deal with that” (Councillor Majola, Interview, 20-01-2010).

Councillor Majola's account of development and societal challenges in Inanda allude to the endemic symptoms of poverty, poor development planning and hardship experienced by communities. Almost two decades into democracy, government is still battling to meet its vision of improved living conditions for all. An assessment of Councillor Majola's account of the situation on the ground confirms that the MDG targets will certainly not be met in Inanda. To halve the population of Inanda living without basic water and sanitation services by 2015, and eradicating slum conditions by 2020, remains a pipedream.

iv) Government and Private Sector Investment in Inanda

There was also positive reaction to investment in the Inanda area. Increased intervention and attempts to address water and sanitation services in previously unserved Inanda was prevalent and encouraging. A number of initiatives to provide the basic level of sanitation to communities are prevalent. However, growing populations, infrastructure and limited resources present municipal services authorities with challenges. Respondents acknowledged and appreciated the large scale infrastructural investment in and around the Inanda area. People were excited about the new Bridge City Mall, which is a joint venture between the eThekweni Municipality and Tongaat Hulletts Development. The new transportation infrastructure provided easier access and improved the aesthetics of the area. People stated that they now felt proud to live in Inanda. However, Inanda is a vast area and such developments were appreciated by those living in close proximity to the major developments. Respondents felt positive that if such interventions and investments continued, their lives would improve. Communities felt that increased partnership networks to engage with government would enable meaningful participation (Besters Focus Group Discussions, 09-08-2010).

Triangulation with Councillors' interviews and surveys confirmed the appalling conditions in most of the survey areas in Inanda. People are exposed to the risk of contracting diseases due to poor sanitation facilities. The pace of sanitation delivery was too slow to meet the demands of the densely populated informal settlements. Councillors felt that greater investment and focus needed to be given to sanitation services. The greatest challenge was operations and maintenance. Neglected facilities are a breeding ground for diseases:

“The condition of the toilets in this area is terrible. You have to be careful when you step inside and a person from outside can see the bad condition. It stinks even if you are not inside. The flies are all over the place it is no place for kids. Some people have rashes and severe mosquito bites due to the bad living conditions” (Councillor Kunju, Peri-urban Amaoti, Interview 24-04-2010).

v) *Inanda Newtown A*

A part of Inanda Newtown A houses the working class black community. In Inanda Glebe, people have purchased sites and built houses of their own choice. Emachobeni is rural and is ruled by Inkosi Ngcobo. The Emapulazini area was previously largely informal settlement; a series of RDP housing projects have been implemented here. The Piesangs River area also has formal RDP houses provided by government. Inanda Namibia is still a squatter camp area. There are housing projects being planned for the area in the medium term. According to Councillor Shembe (Interview, 21-11-2009), “The entire ward comprises of approximately 40 000 people with 16 000 eligible voters”.

Councillor Shembe also stated that in his view “local authorities and urban planners’ strategies to expeditiously address the sanitation needs of the vast housing types (e.g. shacks, RDP houses, self-help low cost housing, etc) by providing the appropriate and adequate services infrastructure have failed badly”. Developmental policy encourages a bottom-up approach as a panacea to meeting diverse needs; however, poor implementation fails government’s objectives:

“Immense problems were faced with the quality of houses built. Mitigation measures are still being sought to rectify the problems identified by a commission of enquiry following structural failure of houses. Roofs were falling apart, foundations were sinking and walls were cracking” (Councillor Shembe, Interview, 21-11-2009).

vi) Inanda Newtown and Inanda Glebe

Many homes at Inanda Newtown and Inanda Glebe have piped water supplies with individual meters. Emachobeni comprises rural housing. Water supplies are provided by water tanks. However, the community is affronted as their personal dignity is compromised in light of inconsistent services and poor sanitation facilities:

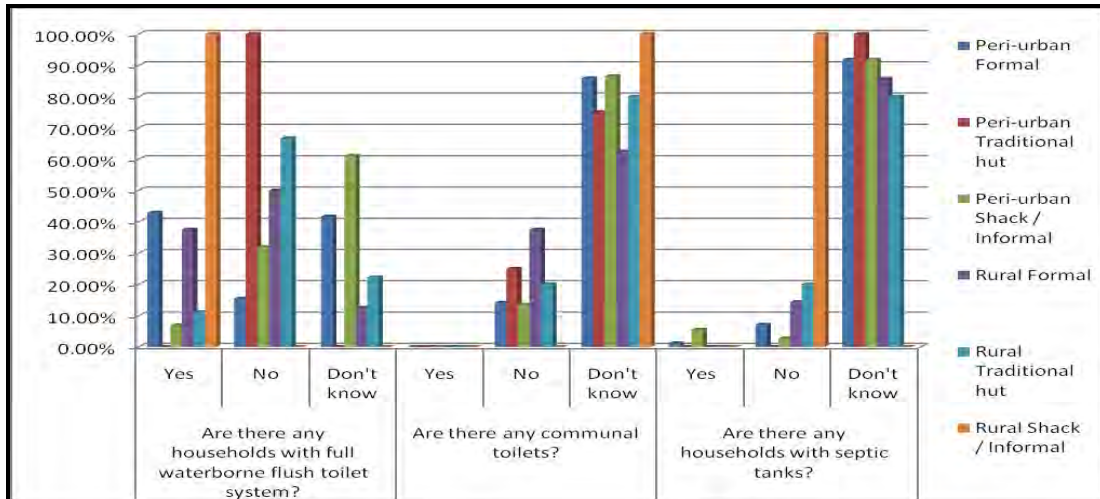
“These water supplies are highly problematic and irregular. A part of Inanda Newtown A and Inanda Glebe still utilises VIPs or old pit toilets. VIP toilets that have been provided are in a disgraceful condition. People complain that there is no more space to dig pits because they have moved the toilets all around in their property. Although areas like Inanda Newtown A and Inanda Glebe have waterborne flush toilets, there are often leakage of sewer. Communities wait between 1 to 3 days before the Municipality responds to the complaint” (Councillor Shembe, Interview, 21-11-2009).

Approximately 18 years into the new dispensation, local government is struggling to deliver adequate sanitation. Demarcation of new boundaries and classification of a new form (decentralisation) and structure of local government is still in its infancy regarding its capacity to deliver services to its jurisdiction. Ongoing countrywide service delivery protests are testimony to government not meeting the needs of the people.

The next section focuses on the access to sanitation, type of sanitation technology, levels of satisfaction and challenges experienced by respondents with sanitation in the Inanda area.

6.4.1 TYPE OF SANITATION PROVISION IN PERI-URBAN AND RURAL AREAS

Figure 6.6: Type of Sanitation Facility present in the Peri-urban and Rural Areas



Respondents (42.9%) living in peri-urban formal dwellings stated that certain households had full waterborne flush toilet systems. Nearly 16% did not agree, while 41.7% did not know.

In the peri-urban informal shack settlements, 31.9% stated there were no flush toilets in their area and 61.1% did not know. The majority who did not have knowledge of the flush toilet systems added that they had never had the privilege of using one in their own homes. They had been raised in informal settlements. They heard rumours of “block toilets” but did not see that in their areas yet (Community Activist, Interview, Besters, Peri-urban, 20-05-2010).

In the rural areas, 37.5% stated that there were households who had waterborne flush toilets, 50% stated that there were no waterborne flush toilets and 12.5% did not know. Figure 6.7 indicates that there was some degree of awareness regarding waterborne flush toilet systems in the area. However, although respondents (60% of informal dwellers) were aware of flush toilets in the area, they were sceptical as to whether they would ever enjoy such progression up the ‘sanitation ladder’ from VIP to waterborne facilities.

In the rural areas, the major response to knowledge of waterborne sewers in their areas, was negative (60%); 11.01% responded that there was waterborne sanitation in the area, and 22%

did not know. The lack of awareness of operations and maintenance of facilities available to respondents indicated that the given cohort was either indifferent towards the upkeep of the facility or they did not have facilities on their premises. In such cases, apart from on site VIP, UDD or water borne toilets, most respondents utilised communal facilities, or practised open defecation. The respondent's lack of awareness about sanitation facilities suggests that people had no choice but to cope with whatever facilities were at their disposal. Also, where facilities were not easily accessible or not available, open defecation was their only option (Focus Group, KwaGwala, 12-12-2009).

An equal number of respondents stated that their toilets were either self-built or built by the Municipality. This indicates that the rate of eradicating backlogs was still slow. As a coping strategy, almost 50% of the respondents stated that they were constructing ablution facilities by themselves, to meet their urgent daily needs. It is evident that while government was making a concerted effort to provide a basic level of sanitation, respondents were still building facilities themselves, especially in peri-urban areas.

In peri-urban ward 56, sixty-four percent of the water borne systems and 26.3% VIP toilets were installed by the Municipality. A further 27% living in formal houses built their own waterborne flush toilets or pour flush toilets and in informal shack dwellings, 57.9% of respondents built their pit toilets.

In the rural Ward 3, more than eighty-nine percent of the sanitation facilities were constructed and provided by the Municipality. A total 10.5% of respondents stated that they built their own pit toilets. This implied that the government's rural sanitation programme has reached a vast majority of the population. However, self-built pit toilets were still being used.

In the rural areas, increased government intervention was noted. The predominant sanitation facility was VIP or waterborne flush toilet in peri-urban formal houses. However, a significant portion of respondents living in informal settlements still battled with shared or self-built facilities.

6.4.2 MAINTENANCE OF VENTILATED IMPROVED PITS (VIP)

Figure 6.7 illustrates the frequency of pit evacuation. The structures referred to include the VIP as well as self-built pits. In rural areas there was a mix of VIP facilities as well as the UDD facilities.

In the peri-urban area, 77% of the respondents indicated that the pit toilet was cleared at most once a year. Family members (76%) are mainly responsible for cleaning pit toilets. Furthermore, 17% indicated that the toilets were only cleared once in a period of 3 to 5 years by the Municipality. Respondents commented that the pit evacuation service offered by the Municipality was totally inadequate. The frequency of pit evacuation was insufficient, and respondents had no choice but to endure the use of full toilet pits, much to their discontent. Pit evacuation services procured by the Municipality from private companies were unsatisfactory, leaving residents disgruntled because their living area was exposed to the risk of environmental contamination and health hazards. These companies' work was not monitored. They were haphazard, untrained and unconcerned about the satisfaction of the people. The Municipality's pit evacuation response was also erratic and inconsistent. Respondents relate varying experiences:

“When the Municipality came to drain they didn't come to my house. I saw the back of the toilet was open. I don't know what stopped them from draining it. I did go to the councillor to report but he told me that they will come after five years so I don't know what to do because it is almost full” (Londiwe, Community member, Peri-urban, Bhambayi, 14-09-2010).

Respondents were unable or reluctant to maintain their facility by themselves. They were largely dependent on the Municipality for the evacuation of their VIP facilities. They related their experience in maintaining the VIP facility and the initiatives of the Municipality regarding the provision of evacuation services, and post-evacuation support regarding maintenance of toilet facilities:

“After they come to drain they give you a pamphlet that tells you how to maintain the toilets and that it should be covered all the time to prevent germs. When our toilet gets full we wait for four to five years for them to come clear the pits. The pamphlet doesn’t help, if the pit is full in 1 year. You are forced to use your neighbours’ toilets, if it is not already full” (Focus Group, Besters, 23-10-2010).

Certain community members complained that they have had no education, support or consultation from the Municipality regarding the maintenance of the VIP facilities:

“Nobody came to talk to us about maintaining these VIP toilets. They only came to drain the toilets they provided these toilets eighteen years ago but they only came after sixteen years but no one came to teach us about the hygiene and maintenance” (Focus Group, Besters, 23-10-2010).

Sludge management was a challenge to both users and the Municipality. Pit evacuation services required co-operation by the user to enable drainage to take place. The condition of the pit content had to be conducive to drainage. Householders had to ensure that the consistency of the contents made suctioning or mechanical waste removal viable. Contact with human waste was still occurring and was inevitable. The costs and nature of this task was a burden for many users:

“When your toilet gets full you have to go to Newtown A offices to notify the Municipality. They come after 3 or 4 days and it is very difficult because I am old, sick and I can’t walk. If there is no child around, it becomes a big problem for me to go there. Before you go to the Municipality you have to shovel the sludge to make it soft, so that the Municipality can insert the suction pipe. I pay R120 for somebody to do the shovelling, if not they won’t drain my pit” (Londiwe, Community member, Peri-urban, Bhambayi, 06-12-2010).

These findings resonates with a study by Bhagwan *et al.* (2008), over the period 2002-2007, which found the Besters Area, in Inanda to have the fastest pit filling rate in comparison to the six areas studied. Poor drainage of pits was cited as the reason for the ‘full pit’ crises. Manual

pit evacuation with spades and shovels was most feasible, but workers are required to climb into the pit to manually remove contents. Hence, health and safety of workers were at risk (Bhagwan *et al.*, 2008).

This study similarly found that the user's safety, health and hygiene as well as personal dignity were compromised due to the absence of efficient planning and poor maintenance. The eThekweni Municipality's 'once in five year' policy (eThekweni Municipality, 2012) is insufficient to meet the demands of communities in Inanda.

The Municipalities admitted to the challenge with sludge management. They also alluded to the high cost of frequent pit evacuation. They also elaborated that communities utilise their toilet pits for disposal of solid waste, which makes mechanical suctioning of pit contents impossible (Senior Manager, EWS, Interview, 20-08-2010).

While communities battle to maintain their toilets, the Municipality's policy on maintenance and operations support remains rigid. The Municipality reiterates in its recent policy document that its cyclical pit evacuation programme was restricted to VIP facilities only for clearance once in 5 years, with conditions (eThekweni Municipality, 2012: 113). The following enlistment implied that poor communities in Inanda have to contend with the peril of overflowing unhygienic sanitation pits due to poor sanitation delivery.

In accordance with the Policies and Practices of eThekweni Municipalities Water and Sanitation Unit (2012: 29), the following sanitation systems are excluded from the pit emptying programme:

- a) Proprietary Digestive Systems
- b) Double Pit VIPs
- c) Urine Diversion VIPs
- d) Chemical Toilets
- e) Pit Latrines that are in danger of collapsing in the course of emptying
- f) Septic and Conservancy Tank Systems

Figure 6.7: Frequency of Pit Evacuation per Area Type

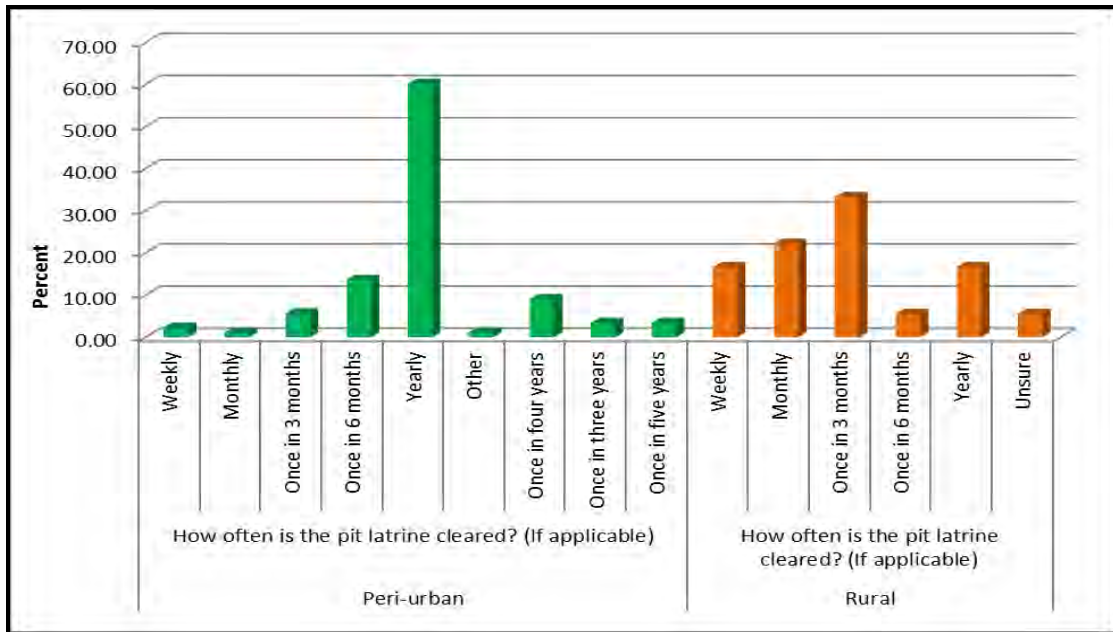


Figure 6.7 suggests that most people in peri-urban areas needed to clear their pits annually; however, upon clarification, rural focus groups qualified that reference to weekly and monthly evacuation was actually the cleaning of toilets and not evacuation of pits. In the rural area, respondents (94%) stated that their toilets were cleared by family members. The remaining 6% hired labour to clear their toilets. In cases where there was family involvement, pit evacuation was more frequent than other areas. It was also observed that a few households do take responsibility for their own facilities either willingly or because they feel they do not have a choice with the maintenance being imposed on them. The study also found that the majority of the users were dissatisfied with the machinations of the UDD toilet which is discussed in detail later in this chapter.

The initial collection and disposal of the faecal matter from VIP pits into a waste management plant at Mshayazafe in Inanda was met with controversy and technical challenges. There was community uproar when the site was being utilised to dispose of the faecal waste from the VIP pits. Surrounding communities felt it was unhygienic and it burdened them with the odour. Objection from political party representatives, from the Inkatha Freedom Party and Democratic Alliance in the area halted the use of the waste management plant in Mshayazafe. Waste management sites at Tongaat, Umlazi and Ezimangweni did not have the capacity to manage the volumes of human waste from the rural areas. This forced the Municipality to

innovate around recycling human waste to mitigate against such problems, which gave impetus to the promotion and delivery of the Urine Diversion Toilets (UDD) twin vault toilets installed by the Municipality, encouraging users to clear their own pits and utilise the contents as fertilizers in their gardens. However, response from peri-urban and rural recipients ran counter to the objectives of the technology as users used them as storerooms and continued with open defecation and digging up unimproved self built facilities.

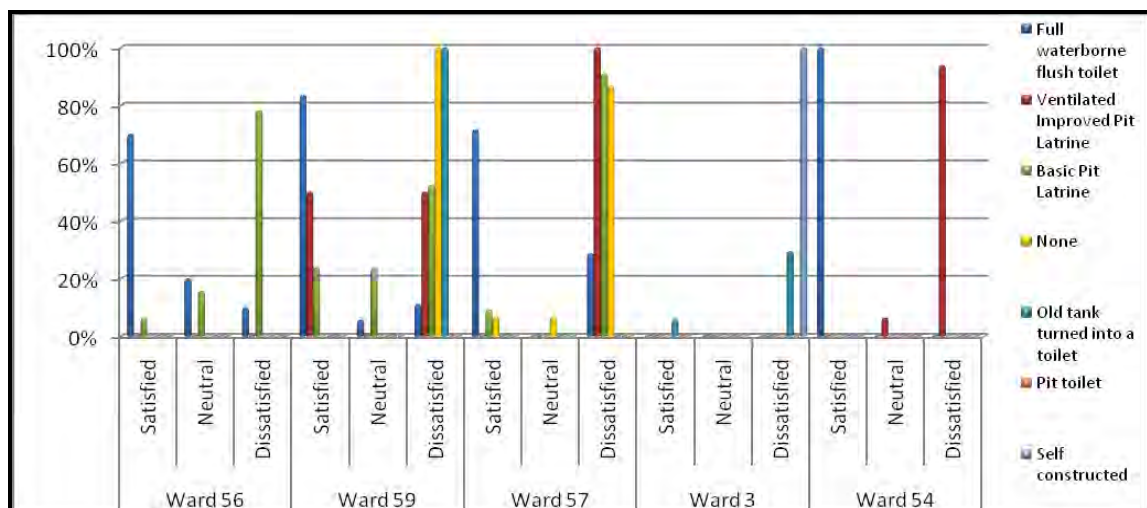
6.5 LEVEL OF SATISFACTION WITH SANITATION PROVISION

The type of sanitation facility utilised across the 5 wards surveyed varied, mainly due to the differentiated settlement types. Table 6.5 presents the type of facility utilised by the respondent population in the different wards.

Table 6.5: Type of Facility and Satisfaction Level per Ward

Ward	Satisfaction levels	Full waterborne flush toilet	Ventilated Improved Pit Toilet	Basic Pit Toilet	None	Old self-built toilet	Pit toilet	Self-built
Ward 56 Peri-urban	Satisfied	70%	0%	6%	0%	0%	0%	0%
	Neutral	20%	0%	16%	0%	0%	0%	0%
	Dissatisfied	10%	0%	78%	0%	0%	0%	0%
Ward 59 Peri-urban	Satisfied	83%	50%	24%	0%	0%	0%	0%
	Neutral	6%	0%	24%	0%	0%	0%	0%
	Dissatisfied	11%	50%	52%	100%	100%	0%	0%
Ward 57 Peri-urban	Satisfied	72%	0%	9%	7%	0%	0%	0%
	Neutral	0%	0%	0%	7%	0%	0%	0%
	Dissatisfied	29%	100%	91%	87%	0%	0%	0%
Ward 3 Rural	Satisfied	0%	0%	0%	0%	6%	0%	0%
	Neutral	0%	0%	0%	0%	0%	0%	0%
	Dissatisfied	0%	0%	0%	0%	29%	0%	100%
Ward 54 Peri-urban	Satisfied	100%	0%	0%	0%	0%	0%	0%
	Neutral	0%	6%	0%	0%	0%	0%	0%
	Dissatisfied	0%	94%	0%	0%	0%	0%	0%

Figure 6.8: Levels of Satisfaction with various Types of Sanitation Facilities per Ward



6.5.1 SATISFACTION LEVELS IN PERI-URBAN AREAS

Respondents who had waterborne sanitation on their premises were pleased. The findings were as follows: high level of satisfaction with water borne flush toilets in the formal peri-urban areas in Ward 59 (83%), Ward 54 (100%), Ward 57 (72%) and Ward 56 (70%). The notable satisfaction with water borne sanitation was because respondents felt that they were now served with a higher level of service, and were therefore ‘moving up the ladder’. The level of dissatisfaction with waterborne flush toilets in peri-urban wards averaged approximately 12%. The main reason for dissatisfaction was associated with high costs of water and the high volumes required for operating such systems. Even though respondents living within the urban edge had bulk water and sanitation infrastructure in the area, and hence waterborne flush toilets, they were unable to afford utilising their flush toilets freely. The cost of water was unaffordable. The free basic water of 200 litres (which later increased slightly) per day was only enough for cooking and washing. Toilets could therefore only be flushed once or twice a day. The water tariff beyond the free basic allocation was exorbitant and unaffordable. A stepped tariff rate beginning with R7.20 per kilolitre beyond the 9kl free and progressively increasing beyond each 25kl utilised, is being charged (Policies and Practices of eThekweni Water and Sanitation Unit, 2012: Annexure 5).

A high level of dissatisfaction was noted in all peri-urban wards with VIP toilets. Ward 54 recorded 94% dissatisfaction with VIP. Ward 56 received no response in this category as most people (those interviewed) had waterborne flush toilets. In Ward 57, all respondents stated that they were dissatisfied with the VIP toilet.

“We must combine money and build our own communal toilets and stop waiting for government. I am old and not having a toilet is giving me a hard time, most times I use a bucket inside the house and that is not healthy because we cook and eat in the same room” (Mina, Community member, Peri-urban, Gandhi Settlement, 21-05-2010).

Respondents in the focus group discussions revealed their unpleasant experiences due to the ‘squatter’ living conditions. In the peri-urban areas, informal settlement dwellers as well as backyard shack dwellers access water from communal or neighbouring residential taps, and

utilise VIP toilets or the old self built pit toilets. The main challenge with pit toilets was the lack of ground space to dig another pit when the one in use was full. Respondents were also dissatisfied with the VIP toilet being built too near to their homes, which contributed to the unhygienic environment and illness, especially amongst infants. The odour and infestation of flies were unbearable. Conditions were aggravated due to poor maintenance of the sanitation facilities, together with restricted and irregular supply of water:

“These VIP toilets are too near our houses our, babies get rashes and diarrhoea. When the toilets get full we dig another pit next to it. Now there is no more space available to dig. We also do not have water because the owner of the tap is working and he comes back at night so during the day we don’t have water” (Focus Group, Peri-urban, Bhambayi, 20-10-2010).

Plate 6.1: Poor Positioning of Toilet Facilities too close to Dwellings



Source: The Author

On average, only 2% of the respondents stated that the toilets provided to them in their yards were in good condition, they were satisfied with the facility and felt that it was clean and usable. Half the respondents from the peri-urban area of Ward 59 hesitantly stated that they were satisfied and the other half were dissatisfied with VIPs. Those that said that they were satisfied explained that the government began to replace their self-built pit toilets which were

leaking or overflowing into their yards, with VIP toilets in the 1999. While they were unhappy with their self-built pits which overflowed and had bad odours, they were happy to receive the 'government VIP toilet'. However, they added that it was no better, as promises of pit evacuation were not fulfilled and their living environment was once again contaminated by faecal matter and unbearable stench.

There was a dominant negative response received from respondents regarding the quality of sanitation services provided by the Municipality. Only 11% of the respondents from the peri-urban area and 6% in the rural area believed that the quality of sanitation services was satisfactory. In the peri-urban area, nearly half (47%) of the respondents perceived the quality of service to be poor. In the rural area, 39% of respondents experienced poor quality service. Communities complained profusely of the lack of maintenance services in their areas.

The survey responses were triangulated with focus group discussions in the peri-urban Besters settlement. The experiences of residents reflected the reality regarding impact of the quality of service:

“The VIP toilets were built by the Municipality. Our toilets are in bad condition and the trucks do not come often enough to service us. If they do come, they do not complete all the houses in the area. They do a few and disappear. Some of them are collapsing they don't have doors, the frames are falling” (Mkhize, Community member, Peri-urban Besters Settlement, 11-11-2010).

Community focus group (Peri-urban, Bhambayi, 06-12-2010) discussions revealed that communities were totally dissatisfied with the services procured by the Municipality from local contractors. Local community contractors were provided with opportunities in line with the national sanitation job creation strategy to engage in toilet construction (DWAF, 2005). However, they lacked experience even though they had been trained through the EPWP initiative. Poorly skilled or inexperienced labourers produce unsatisfactory materials (e.g. blocks) for toilet construction. Local contractors lacked project management and financial management experience. Poor monitoring by the Municipality of services procured from the emerging contractors resulted in the lack of quality assurance by government.

Pit evacuation services provided by private contractors hired by the Municipality were not monitored and were unsatisfactory. Householders were vexed with insect infestation and odours emanating from their toilets. Due to overuse, pits get full sooner than anticipated. Sludge management was onerous:

“Our toilets are too small. When the pit gets full it smells very bad. We go and notify Newtown A offices. They warn you that if you don’t shovel the sludge first to make it soft the drainage truck will not extract it. How can one expect human beings to shovel sludge? It is shocking. Drainage must be regular preferably every 3 years, as opposed to what the Municipality provides every 5 years. Because in most houses there are more than eight people in one house so their pits gets full more often. Even though we have toilets it is impossible to keep it clean and clear it ourselves. When my toilet gets full I buy some chemicals and shove the sludge myself but it smells for days. You can’t even open doors and windows in my house after that because of the smell” (Kwanda, Householder, Peri-urban Gandhi Settlement 03-11-2010).

“If we use a bucket to empty some of the pit we have to walk very far through the houses with the sludge falling all over. It’s also embarrassing to do this. We just dump it in the nearby bush. People living near the bush chase us because it stinks. We are helpless” (Focus Group Discussions, Peri-urban Uzomusha-Besters, 15-04-2009).

These responses alluded to the poor planning of peri-urban housing where operations and maintenance of facilities were tedious due to lack of access roads. The densely clustered houses following *in-situ* upgrades in this particular area does not alter or improve living conditions. The lack of access paths to homes made service provision difficult. This perpetuated the apartheid-type of planning crisis experienced by poor communities. The ‘interim’ basic VIP facility did not contribute to improved environmental integrity or improved human conditions, as primitive methods of waste removal were still employed. The Municipality’s efforts in maintaining the VIP systems provided were clearly inadequate.

In response to the above, officials who were interviewed explained that the endemic overcrowding in peri-urban areas worsens pitfalls in planning for services. People begin to

move in with friends and family because areas are being serviced, which increases the number of households, as well as members per households projected for services provision. *In-situ* upgrades are interim housing services which were provided to residents to increase comfort levels (as compared to living in informal shacks). Steadily increasing household occupancy increases service demands. Population control and increased demand for services placed pressure on meeting the needs of the people due to moving targets and limited resources (Official, eThekweni Housing, Interview, 01-03-2010).

These findings suggested that area-specific planning, operations and maintenance of facilities (like water and sanitation), rapid urbanisation and the migratory culture of peri-urban populations, poor access and inadequate housing remains a perennial shortfall and a root cause of the service delivery crisis in Inanda.

This study has found that householders lived in squalor due to lack of services, exacerbated by poverty and unemployment. Municipal services offered to the poor living in peri-urban communities not far from the city centre and affluent areas like Umhlanga, are disparate and appalling. Housing, water, sanitation, access roads, amongst other services, are incongruent to other residential and industrial areas just 3 to 10 kilometres away from Inanda. Coping strategies adopted by communities to manage their faecal sludge, for example, are inhuman and hazardous to their health and environment. Government's approach to service delivery backlog eradication and a 'better life for all' is clearly falling down the pit, as communities in Inanda are candid about their hardship and atrocious living conditions.

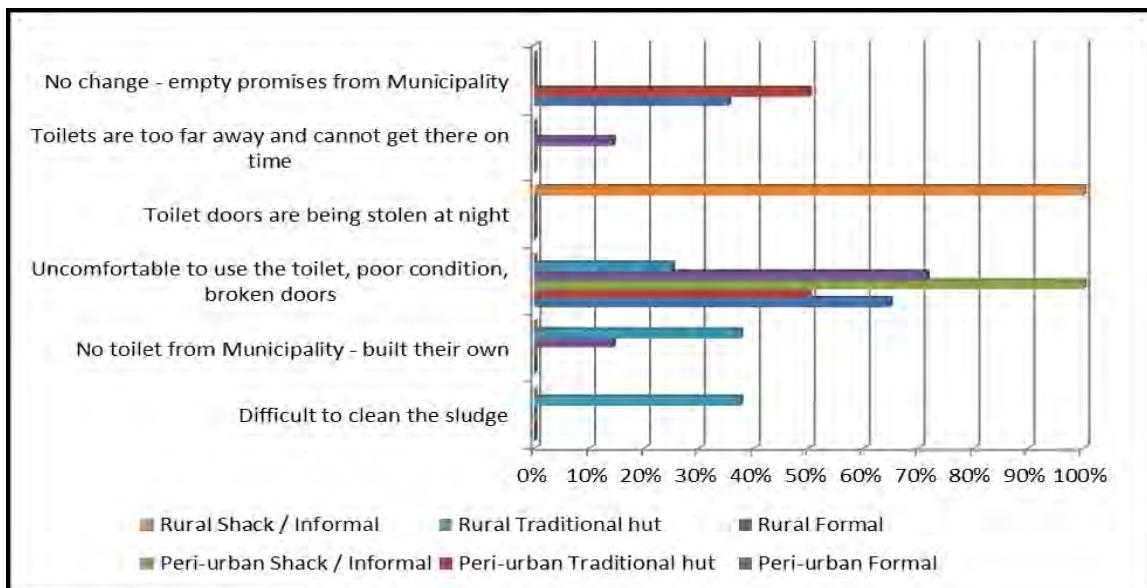
6.5.2 SATISFACTION LEVELS IN RURAL AREAS

According to Statistics South Africa (2001), only 4% of Ward 3 had some form of waterborne flush system. During interviews, the greatest level of satisfaction in rural areas was expressed by those respondents who had access to waterborne pour flush sanitation. However, Table 6.5 indicates that those who constructed their own means to meet their sanitation needs were highly dissatisfied (100%). They felt that they were being sidelined and were still utilising primitive means of disposal:

“We have to dig holes everywhere in our yards and build toilets. The stink is terrible. We are no better than we were when it was apartheid times. We are still considered ‘bush people’ so government think we are animals. We must shit in the bush and wait till they have money to give us toilets” (Young Community Leader, Rural Mphaphatheni, 30-09-2009).

Residents felt discriminated against. They complained that progress with rural development and especially sanitation delivery was not a government priority. They were therefore expected to continue living as traditional communities taking care of their own basic toilet needs, even though their practices posed health and environmental hazards.

Figure 6.9: Reasons for Dissatisfaction with Sanitation Facilities



In Figure 6.9 both peri-urban and rural respondents voice their frustrations regarding the inadequate toilet facilities provided to them. The technology they are expected to operate and maintain was complicated (for example VIP and UDD); they also raised issues of safety due to facilities being far away from their homes especially in the rural areas. They therefore did not utilise the facility and made do with no facility at all. The dominant response was that there has been no change and that their unpleasant experiences with sanitation facility maintenance and operations were still prevalent.

6.5.3 DISSATISFACTION WITH COMMUNAL SANITATION FACILITIES PROVIDED BY THE MUNICIPALITY

In both the peri-urban and rural areas combined, 18% of respondents believed that the communal toilets were in a poor condition, unhealthy and dangerous. Residents (8.4%) complained about the unpleasant odour and the infestation of flies due to exposed faeces and dirty toilets. They (5.8%) stated that water had to be used to move sludge. This was not possible because water was not available. In addition, 7.4% of respondents complained that the facility did not provide the proper structure for faecal disposal. The elderly (5.3%) explained that they were unable to use the facility due to their inability to climb up stairs. They had to revert to defecating in the bushes.

Approximately 50% of the respondents in the peri-urban traditional dwelling types were unhappy because the government promised to provide many services which were not fulfilled. With reference to the communal toilets provided by the Municipality, in almost all dwelling types the common complaint was that this toilet facility was uncomfortable to use, was in poor condition and of poor quality. In the peri-urban formal dwellings, approximately 63% of the respondents complained of the distance to the communal toilet blocks from their dwellings. The toilets were not reachable when the call was urgent. Furthermore, during the mornings and the evenings, there were people waiting in queues. In rural formal dwellings, just over 60% were dissatisfied with the quality and durability of the structure. The peri-urban shack dwellers (100%) stated that their communal toilet facilities were vandalized and were in appalling condition, and therefore unusable:

“Communal showers and toilets are provided in some areas but insufficient to serve the large communities. Communal toilets are unusable because there is no water to flush or wash ourselves. It’s in a bad state. There is nobody caring for the facility. We are too many people. I stand in the queue for more than one hour before I use the toilet. Councillors do not assist” (Sthembile, Peri-urban Dube Village, 01-05-2009).

Focus group discussions confirmed that three toilets facilities were shared by more than 70 families in the peri-urban informal settlements (which were often vandalised, and often not in

working order). The condition of these facilities was appalling and a breeding ground for disease due to poor maintenance. Users complained about the inhumane compromise for sanitation in the democratic era. Similar discontent was expressed with the interrupted water supply at communal taps that were provided. One tap was shared by approximately 350 people per day. This was inconvenient as people waited in queues for at least 2 hours for washing facilities.

Community members were despondent and frustrated with the inadequacy of the communal ablution block facilities. Due to the inconvenience and difficulty in accessing the toilet and wash facility when most needed, they reverted to unhygienic and primitive ways of meeting their sanitation needs:

“We don’t have toilets and the block toilets are always broken or full of people. We wait in long queues and get tired. Now we don’t go to those block toilets, we use newspapers, plastics bags and buckets as our toilets. We lay down a newspaper and relieve ourselves on it. Then when you finish you fold it and throw it inside the black (municipal) plastic bag and we are living in a one room house so can you imagine, you sleeping or resting and someone is doing that in front of you. Then you are forced to get out until he/she is finished, everyday. So the health is very bad we get running stomachs almost weekly. It is very bad. How can a human being live like this?” (Focus Group Respondent, Peri-urban, Gandhi Settlement, 21-05-2010).

There was overall dissatisfaction with the shared sanitation facility provided by government in peri urban and rural areas, irrespective of dwelling type. In addition, respondents lacked the enthusiasm and energy to co-operate with the Municipality in order to maintain facilities. They were resistant because, although communal facilities were an interim measure, they were inadequate and did not service the needs of the large population in the area. Furthermore, people were suspicious of government’s interim sanitation measures. They felt it was a ‘tactic’ that would hamper their opportunity for formal housing and that government would delay action or even exclude them from future housing projects:

“Some communities (informal settlements) were refusing the intervention of communal sanitation, as they interpreted the intervention as something that will prevent them from getting houses” (Senior Manager, eThekweni Environmental Health, Interview, 20-08-2010).

According to senior officials, tedious ongoing communication and consultation with councillors, NGOs and local committees were undertaken to dispel doubts, suspicion and perceptions of negativity regarding government’s intention. Communities lacked confidence in government’s short and medium term housing development and their eligibility to be beneficiaries. They believed that government was incompetent as delivery took too long (Senior Manager, eThekweni Environmental Health Section, Interview, 20-08-2010).

6.6 PROVISION OF URINE DIVERSION AND DEHYDRATION (UDD) SANITATION TECHNOLOGY

The Urine Diversion and Dehydration (UDD) waterless sanitation technology was delivered to eThekweni households in rural and peri-urban areas to address the backlog and huge demand for sanitation following the redrawing of boundaries of the Municipality (Giraut & Maharaj, 2003). The top-structure of the unit is built with blocks, and twin human waste collecting vaults are constructed above the ground (therefore not pits). A movable squat-pan or pedestal seat with a urinal led away from the contents of the vault discharging into a soak away. According to the Sustainable Sanitation Alliance (2011: 1), 450 000 people across the eThekweni Municipal Area were served with water and basic sanitation services between the years 2003 and 2007.

6.6.1 URINE DIVERSION AND DEHYDRATION (UDD) TYPE OF FACILITY “A NIGHTMARE TO USERS”

Further probing during focus group discussions revealed reasons for the dissatisfaction with the facility provided by the Municipality. Respondents stated that information posters were required and that sludge removal was difficult. They suggested the use of chemicals to dissolve the contents of the pits for increased hygiene and to douse the odour. Rural

respondents stated that toilet paper was too expensive and if the system required the use thereof, it should be provided free of charge by the Municipality. This was the recommended means of cleaning oneself as water should not be poured into UDD toilet pits. Emphatic resistance to clearing of the UDD twin vault was prevalent. Requests were made for the Municipality to assist with removal of the contents of the chamber every two to three months because the UDD was very difficult to use and keep clean.

Education about the use and maintenance of the facility was important for the effective operation and sustainability of the system. Strategies to change mindsets for increased acceptance through education were also required.

Plate 6.2: Twin vault UDD Vault Latrines



Source: The Author

6.6.2 EXPERIENCES OF RURAL COMMUNITIES REGARDING THE USE AND MAINTENANCE OF THE UDD TOILETS

An overwhelming majority of respondents stated that their facilities (UDD Toilets) provided by the Municipality were being vandalized. Toilet doors are being stolen at night. About 25% of respondents reported that the facility was uncomfortable to use, as the structure was

unstable and doors were broken. The predominant concern was that they had to clear the vaults themselves regularly, and this was a difficult task. Insect infestation was a nuisance. Communities do not want to handle their own faeces. They felt that it is an impingement on their human dignity:

“I also don’t like these toilets, and don’t want it. Firstly, these toilets are worse than the bucket system, it is worse than the toilet we used before where we dug a long hole. That was better. With these toilets it is easy to get diseases, especially in summer. There are a lot of flies, we need to buy chemicals to kill the flies and worms in the toilet. Putting sand in the toilet doesn’t solve any problem. When the toilet is full you go yourself with a spade to clean the toilet and take out all what is in there and when it is raining it goes to the river and then into the dams that we are washing our clothes and even collect drinking water” (Mrs Dube, KwaGwala, Rural Ward 3, 03-12-2009).

Rural respondents shared their dissatisfaction with the UDD toilets provided by the Municipality. They were unhappy about the poor quality and lack safety. They felt that the structure was unstable, placing the aged, disabled and children at risk of falling into the pit. There was further discontent with the design of the structure as the contents of the pits were visible. Respondents expressed discontent with the physical structure:

“The door frames are falling out, even the toilet seats are not good, and they can easily break. It is loose. When you sit on it, you can see the mess. The seat goes to one side and you feel you are going to fall inside. It is difficult for Gogos to use the toilet, it’s too far and toilet steps are too high, it is really difficult” (Mrs Thanda, KwaGwala, 12-12-2009).

There were also complaints about the inconvenience of the location of the facility. There were also concerns that the facility was not conducive for use at night, and this was especially problematic for those who are physically disabled. Plate 7.3 illustrates the location of facilities in the hilly bushes, approximately 25 metres away from the dwellings. It is a distance away from the house which places women and vulnerable people at risk of attack and rape:

“The toilets are too far, when it is dark you can’t go to the toilet and it not suitable for women. It’s worse for disabled females they are struggling they can’t use these toilets. They can only use the bushes which are very embarrassing” (Mrs Thanda, KwaGwala, 12-12-2009).

Plate 6.3: Rural Toilets constructed too far from House



Source: The Author

The UDD toilets, as observed during site visits in KwaGwala, Mphapatheni did not make provision for people with special needs. The top structure of the toilet was not sturdy enough for able persons, rendering it totally unsafe for people with disabilities. In the rural areas toilets were constructed at least 30 metres from the dwelling and the pathway leading to the toilet was rocky and hilly, thereby inaccessible by wheel chairs or other types of mobility devices. Those on crutches also battled to make their way to toilets which were purposely positioned in gardens to provide for evacuation of pits.

Acclimatising to the use and maintenance of the facility was difficult, as the UDD toilets required community cooperation for the upkeep, and evacuation of the vault at much shorter intervals to that which people were accustomed. The sick are vulnerable and find the facility difficult to use as the prescribed method of maintenance was not sustainable:

“There are 10 or more people in one family using the same toilet. We have to clean these toilets every two months. Our old toilets we had dug long holes were better because we forget about it maybe for two to three years. If it is full you seal it and dig another hole next to it. These UDD toilets are full within one or two months, you can see everything inside and you got to clean and if you got a function at home it is worse. I don’t want to touch the ‘thing’ inside” (Mr Vusi, Community leader 12-12-2009).

UDD vault evacuation was difficult and viewed as unhygienic and unhealthy. Many householders are physically unable to empty the pits as required. The frequency of evacuation of the twin vault UDD technology was more demanding than the old pit to which they were used. Community members complained that they had to hire able and willing people to assist with the emptying every few months. This became unaffordable. Respondents admitted to rejecting the facility completely and utilising the space as a storeroom rather than a toilet. Unbearable odour emanating from the toilets and insect infestations especially during the summer months were revolting. People preferred to use the open field or old pit latrines rather than this new technology.

Approximately 18 years post-democracy, the old and infirm have fallen victim to the lack of services to meet their needs. Their quality of life was compromised. An irate old man, aged approximately 76 years, expressed his difficulty and coping strategies after having been subjected to inadequate and poor quality toilet facilities and unhealthy water crisis in the far flung rural areas of Inanda for most of his life: “We are living like pigs here and our councillor doesn’t have time to listen to our complaints because he is also doing a full-time job. So we are in middle of nowhere” (Unnamed Man, Rural, KwaGwala- Mphaphatheni 26-04-2010).

Similarly, dejected elders in peri-urban areas stated their experience with lack of facilities, their unsafe environment, vandalism of their facilities and their helplessness due to their incapacity:

“I am too old. The taps are too far. I pay young boys to carry water for me. My grant gets finished. I eat very little, so I don’t have to go to toilet much. People break the lock on my toilet at night and use it, it’s very upsetting. My toilet is already full” (uBaba, Peri-urban Gandhi Settlement, 23-05-2010).

The UDD toilet system was introduced by the eThekweni Municipality for more affordable, sustainable and eco-friendly waste management systems in rural areas where bulk waterborne sanitation networks were not feasible and affordable (Buckley *et al.*, 2007). It was evident that the introduction of UDD technology compromised the quality of living. There was overall discontent and resistance by users to the adoption of the new UDD technology. Focus Group discussions (Rural Mphaphathi, 15-06-2010) confirmed the following reasons for discontent with the UDD sanitation facility provided by the Municipality:

- People are appalled by the UDD facility as they do not see it as progression or ‘stepping up the ladder’; they see it as an imposition by the Municipality because in their minds flush toilets are the ideal dignified type of facility. They believe that because they are poor and ‘black’, punishment was perpetuated similar to the apartheid era.
- They do not agree that the faeces are dried and odourless. They also do not see the value of utilising the ‘dried up’ faeces for agricultural use as it is perceived as unhygienic.
- Respondents stated that the objective of the urine diversion machinations and collection was unfathomable. They felt that the recommended use of urine for agriculture was absurd as they believed that the acidity will kill their plants. “Urine is too strong”.
- Covering the faeces with ash as prescribed was cumbersome because ash is not readily available, so they have to find wood, burn and create ash for use. They felt that even if faeces are covered diligently after use, it does not reduce the odour or insects. Users felt that they had to get out of the toilet as soon as possible as they believed that they were exposed to disease and illness.

- Communities complained that after a few months the toilet seat and the shutter for the twin vaults became weak and broke. The cost to replace broken parts was the householder's responsibility and was unaffordable.
- Broken vault shutters resulted in faeces leaking out into the open when vaults are full. This placed their health and the environment at risk.

Similar concerns were presented at a seminar hosted by the University of KwaZulu-Natal on Urine Diversion Dehydration facilities. The Seminar held on 10 & 11 August 2010, was attended by international researchers and practitioners in a learning discussion with technical experts from EWS and the Water Research Commission. Field visits and debates around the type of technology revealed that:

“The UDD facility is an innovation for the future. In light of the global water crisis, dry sanitation is the solution for the future. The UDD technology ought to be tested, not only in rural areas but also in urban areas to promote water conservation”

(J. Bhagwan, Water Research Commission, Interview, 10-08-2010).

Social unacceptability and the difficulty of maintenance and operations due to lack of co-operation of users was the key concern raised at the UDD Seminar. This finding clearly indicates that there was social non-acceptance of the new UDD facility due to a lack of community planning and participation in decision-making. It also implied that users were not consulted and educated sufficiently about the benefits, operations and maintenance of the new technology. Vault evacuation processes were assumed to be manageable by users, but this was clearly not the case. Insufficient information or demonstration about the use of the facility was evident.

Scientific education on the value of utilising human waste for vegetation was not sufficiently communicated to communities, hence their scepticism about utilising the dried faecal matter as manure in their gardens. They were unfamiliar with the concept of ‘dry sanitation’ and did not understand its advantage to communities living with limited quotas of water provided through groundwater tanks. The findings also indicated that rigorous needs analysis, feasibility and sustainability of the new type of sanitation was omitted. The cost benefit

analysis was not shared with users. The experiences of users pertaining to the structure of the facility clearly indicated that there was a lack of quality assurance by the Municipality.

Communities were not convinced that such facilities had any health benefits to users. On the contrary, they believed it would make them sick. Their resistance to change resulted in communities using the structure as a storeroom (Plate 7.4). Rejection of the facility implied that communities have reverted to their old pit latrines or have resorted to open defecation once again. Insufficient research and ambitious attempts to address sanitation backlogs resulted in the neglect of socio-cultural considerations regarding the UDD implementation for rural communities in Inanda.

Councillors confirmed that the provision of UDD toilets in certain parts of Inanda was met with fierce rejection. People felt undermined by the imposition of such facilities upon them. The facility required them to remove their own waste at regular intervals. People found this to be absurd. Users lacked a clear understanding about the nature of operations and maintenance of such facilities. Initially, people welcomed the idea and were pleased to have their own individual facilities. They later discovered that the maintenance required for this type of technology was difficult and unpleasant. In certain instances, they understood this to be an interim measure until the housing development arrives, but this was clearly not the case (Councillor Shembe, Interview, 21-11-2009).

Communities expressed their difficult experiences with maintenance of the UDD facility:

“We are cleaning toilets ourselves and it gets full in no time even though the toilet has two pits. This is because we are asked to put sand inside after using it. Digging up your own waste which smells very bad, it is annoying. We would love to have flush toilets because they are clean and easy to maintain because you feel sick to dig out the faeces from the pit, you lose appetite for weeks. We feel like ‘gulubers’ (isiZulu word for pigs) digging in filth” (Focus Group, Rural, Mphapatheni, 26-04-2010).

6.6.3 VECTOR CONTROL AND DISEASE

Respondents reiterated that vector control in the use of the UDD facility was challenging. Pit contents were accessible by rodents. During summer months flies and mosquitoes infested the toilets and made it impossible to use the facility. Communities felt that this contributed to the spread of disease and skin rashes which affected children. Community members muse on the irony of the recommended methods of operations:

“We are tired of the flies from the toilet they go everywhere. Some people suffer from TB and other diseases. Running stomach is common. The Municipality gave us instructions on how to use the UDD toilets where we need to cover the sludge with leaves or ashes. We no more have ashes as the Municipality has given us electricity. We now need to burn fires to make ashes for the toilet” (P. Gwala 12-12-2009).

Plate 6.4: Use of UDD Toilets as a Storeroom



Source: The Author

The utilisation of toilets as storeroom is not unique to South Africa. Scholars found similar response to government provided toilets which failed to change social and culturally steeped

habits of people. This response is attributable to lack of pro-poor planning and weak institutional support (Reddy & Batchelor, 2012).

6.7 “MOVING UP THE LADDER”

Most respondents were unhappy with the toilet because the type of technology does not suit their needs. Many of residents confirmed that they could afford waterborne flush toilets and were not consulted. “The Municipality did not ask me what type of toilet I want. I am a qualified brick-layer by trade and can afford to pay for a flush toilet system in my house” (Sbu, Community Member, 19-11-2009). The VIP toilets were imposed upon them. Furthermore, the water supplied was insufficient for personal use. People felt that if they were consulted about their affordability and told how water tariffs are meted out, they would be able to assess their affordability (Councillor Shembe, Interview, 21-11-2009).

The key principle of a bottom-up approach to development is community consultation. Councillors felt that there was an endemic problem with the approach to community consultation and were critical of the ‘one size fits all’ approach of the Municipality:

“The Municipality convenes community meeting when most people are at work. Those people then claim that they were not consulted. There is a need to for the Municipality to diversify its means of communication. I don’t think these toilets are the solution but other questions which were raised and very important was regarding those who can afford flushing toilets. The Municipality should give people options to choose from with regards the level and type of infrastructure they can afford instead of just imposing poor services onto them. The Municipality should take note of the developmental trends. Inanda is now becoming a sought after residential area” (Councillor Shembe, Interview, 21-11-2009).

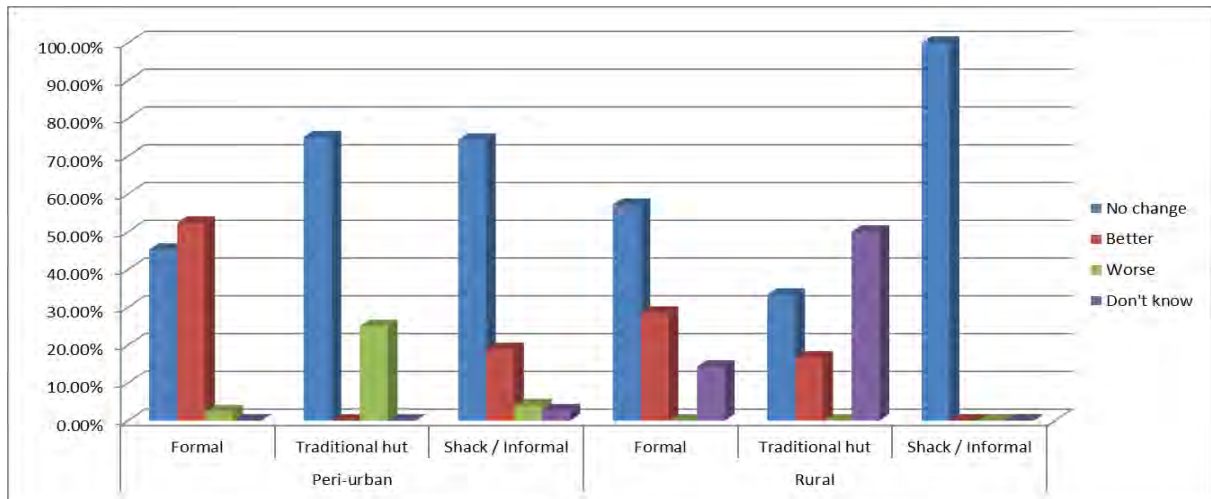
The National Sanitation Policy (DWAF, 1996) promotes the progression of communities to better facilities by their own choice and affordability. Communities across Inanda are not homogenous. Where communities are able to pay, it is recommended that they are allowed to ‘move up the sanitation ladder’ for improved quality of life. However, in Inanda, lack of

interaction, co-operation and community engagement prevented government from understanding that people also aspire and desire to live well with improved facilities.

6.8 COMMUNITY PERCEPTIONS OF THE QUALITY OF SANITATION SERVICE SINCE 1994

Figure 6.10 presents communities’ perceptions of their experience with quality of services after the democratic dispensation in 1994.

Figure 6.10: Perceptions of the Quality of Sanitation Service since 1994



The predominant opinion of respondents from the different dwelling types was that there had been little change since 1994 in the level of sanitation delivery, except in traditional rural areas, and a slight difference in the formal peri-urban sector.

The most significant negative responses were received from the shack dwellers in peri-urban (74%) and rural shack dwellers (100%), who believed there was no change in the sanitation situation in the democratic era:

“We still use the bush, and the communal taps are as though we are still in the years of apartheid” (Snhe, Community member, Peri-Urban Informal, Tea Estate, 04-02-2009).

“I am too old and I can’t go to the bushes, I use a bucket and empty it behind my house. I know it is filthy but there is nothing I can do because the toilet that I had was blown away during the storm. I don’t have material to build another toilet. I am paying someone to go and fetch me filthy, smelling water from the dam” (Fana, Community member, Rural Mphapatheni 17-04-2010).

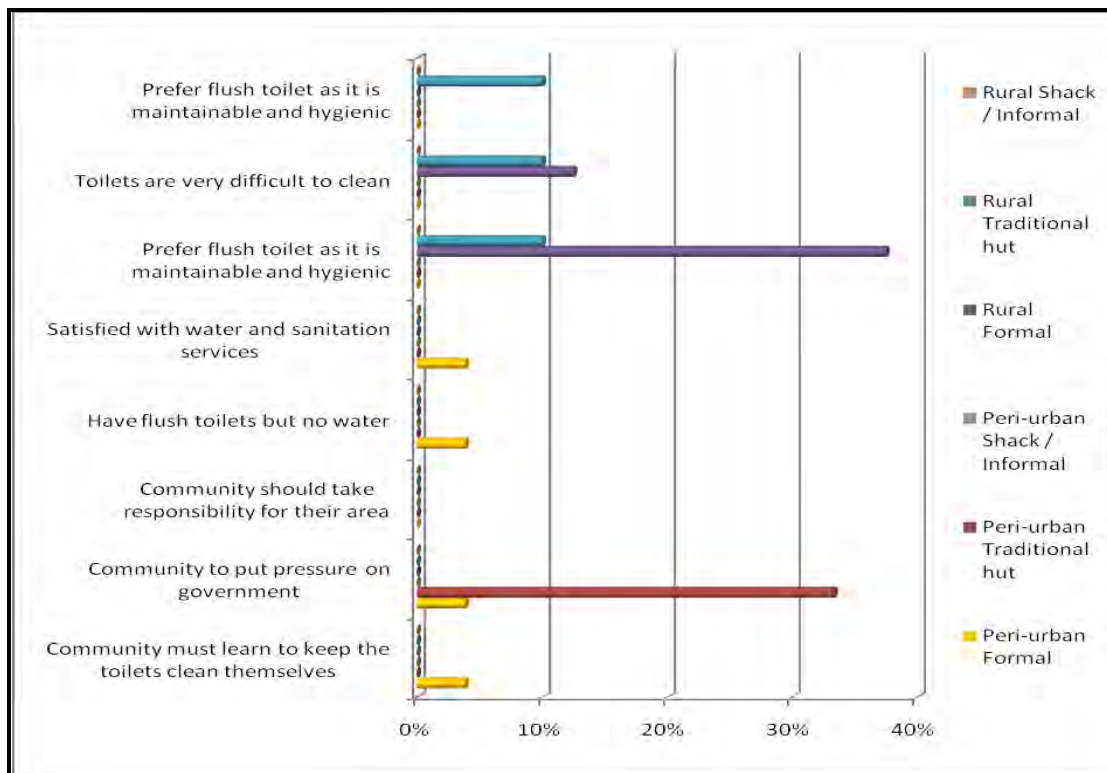
In both the formal peri-urban (52%) and formal rural dwellings (29%), improved sanitation provision was noted. However many respondents in formal peri-urban areas expressed dissatisfaction with service delivery. Although some degree of progress with housing provision was noted, the non-availability of water rendered waterborne flush systems meaningless. Those living in RDP houses were provided with infrastructure, yet they still did not reap the benefits of improved living conditions: “There is nothing we can do about toilet provision we are really suffering because we have toilets but we don’t have water even though we live in a RDP house” (Bulelwa, Community member, 23-05-2010).

In the traditional peri-urban dwellings, there was a general expression that sanitation conditions were worse than in the pre-1994 period. Community members in focus group discussions expressed their despair at the violation of their dignity and shared their alternative strategies in coping without facilities:

“You don’t know the feeling of not having a toilet. Sometimes when you are sick with a running stomach, you need to knock at your neighbours’ doors and ask to use the toilet. It is embarrassing. Our community needs to pull water straight from the communal tap and pipe it straight to their houses. I really don’t think that there is any improvement because they haven’t even provided us with temporary toilets. I don’t have any suggestions on how to improve this because they are planning to remove us from this area. That also stresses me because they didn’t inform us of where and when this will happen” (Focus Group, Peri-urban, Gandhi Settlement, 21-05-2010).

The lack of access to services exposed communities to unsafe and unhealthy environments. In peri-urban informal areas, 12% stated that they were subjected to “inhuman living conditions” due to lack of access to water and sanitation facilities.

Figure 6.11: Communities' Suggestions of Actions for Improved Sanitation Services



The significant feeling of peri-urban dwellers was that communities should “put pressure on government” to deliver better services. There was a general preference for a flush toilet system as respondents felt that it was more hygienic. A general lack of enthusiasm was noted amongst respondents in all dwelling types to take responsibility for their own facilities.

There was commonality in people’s belief that government has reneged on its election promises, and communities need to take a stand and demand services. People felt despondent about services in their areas. Communities felt that they were at risk of diseases because they resorted to primitive ways of defecation (buckets, packets, open fields etc). However, respondents stated that they were eager to work with government to improve the services in their areas, if they are valued as partners. However, the findings above also reflect a degree of reluctance to operate and maintain facilities provided by government to the many previously unserved households over the past 10 years. There was a prevalent view that the ‘government’ or municipality’s toilets’ were inferior and an insult to their dignity, due to their poverty-stricken status.

6.9 WEAK MONITORING OF SANITATION DELIVERY

There were strong sentiments expressed amongst formal peri-urban residents (40%) that monitoring of sanitation delivery should be done by specially appointed “inspectors” to ensure that “councillors are doing their job”. The conditions of toilets were a concern and the inability to maintain hygiene and cleanliness of communal facilities was also linked to the regular disruption of water supplies. This also perpetuated insufficient hand washing. Certain peri-urban formal dwellers (32%) who were still utilising the VIP systems stated their preference for waterborne flush toilets as they were easy to maintain and hygienic. Similarly, in rural areas, respondents living in formal as well as traditional dwellings preferred waterborne flush toilets, as they battled with the maintenance of their toilet facilities provided by government, as well as self-built facilities. Neither the Municipality, nor the Councillors monitor how communities are coping with the type of facility provided. Maintenance support provided by the Municipality was irregular and insufficient.

This finding is important for both the political and administrative arms of government. People were frustrated with the unresponsiveness of both councillors as well as the level of Municipal services provided. They were conscious of the implications of representative democracy, and therefore demanded councillors’ accountability. The policy implication is that people have a desire to ‘move up the ladder’ regarding sanitation facilities. Almost two decades into democracy, people have not experienced a step up from the basic level sanitation (i.e. the VIP toilet) or improved living conditions through service delivery.

Government’s effort to provide basic facilities for clusters of informal settlements in the peri-urban and rural Inanda was blighted by the prevalence of crime. Communal or shared water and sanitation facilities as well as yard standpipes were reticulated to address the urgent need for services in the growing informal settlements. The structure is erected close to the access road to facilitate connection to bulk water and sewer systems. Shower facilities, wash basins and toilets are part of the block ablution (shipping container type structure). While delivery of these facilities are indicators of government efforts to provide basic services to poor

communities, people felt that their safety was compromised due to the proximity of the facilities. Most respondents stated that the facility was too far from their homes:

“Water is too far to collect and you can’t go at night because there is a lot of crime in this area. Sometimes you have to wait in long queues for water and it happens that you come back home without water, you can’t wait there to get raped. Same with using block (communal) toilets, you can’t get in, in time because it is used by so many people, then you sit anywhere in the bushes, you can get raped” (Priscilla, Peri-urban Informal, Bhambayi, 23-05-2010).

It was evident that poverty-stricken communities faced many social problems which did not allow them to lead a better quality of life despite concerted efforts by government to provide basic services such as water and sanitation.

6.10 VULNERABILITY OF WOMEN, CHILDREN AND AGED

The researcher’s exposure to the area and interaction with communities provided the confidence required for respondents to express their feelings about very personal aspects of sanitation, and especially the vulnerabilities of women, children and older folks. Focus group discussions illuminated the daily encounters and their impact on quality of life, in different areas of Inanda.

“...life is difficult my child has TB. I am sure it is caused by the situation we are living in because when he is in hospital he gets well. When he comes back - four days after that he becomes worse again because the toilets are next to the houses we always have diseases and rashes” (Community member, Focus Group Discussion, Peri-urban, Gandhi Settlement, 21-04-2010).

Lack of water and sanitation facilities grossly impact on the vulnerable groups, namely, the aged, women and children. A disillusioned pensioner alluded to open defecation as the only means:

“Sanitation to me is something that doesn’t exist. I have been using the bush since I came to Tea Estate. So I don’t think anything is going to change for me as a pensioner, even till I die” (Pensioner, Mrs Mthetwa, Peri-urban, Tea Estate, 04-02-2009).

The elderly were especially vulnerable, but expressed aspirations for a better life for their grandchildren:

“I’m an old woman and I don’t know much about service delivery but I wish to have water in my yard and have a toilet before I die. I need to know that my grandchildren will be well provided” (C. Mbhele, Peri-urban Informal, Bhambayi, 23-05-2010).

As the representative of the local people, councillors alluded to the difficulty faced by women who are expected to maintain the toilet facility. Councillor Majola confirmed that irrespective of whether there were male family members in the household, women were responsible for cleaning the home, including the toilet. He alluded to the patriarchal norms of African culture that still exist and disadvantage women in many ways. Women bear many responsibilities. Men can go out and look for employment, but are not compelled culturally to assist with domestic chores:

“Women suffer because there is poor sanitation. They are expected to maintain the home and its surroundings, including the sanitation facilities provided to them. In most instances, women are expected to clean toilet pits and the surrounding areas when pits overflow, it is neither hygienic nor pleasing for a woman. Women are also exposed to criminals when sanitation facilities are situated far from their homes” (Councillor Majola, 20-07-2010).

Women and children are most affected by the lack of sanitation facilities. Women and children in peri-urban Inanda resort to desperate measures to manage their toilet needs:

“Sanitation is not a problem, it’s a crisis. I have five children. Most times we use the black bin packets (refuse bags) and throw it in the skip. That’s easier than finding a toilet or cleaning your pit yourself. Walking to the container (communal) toilet and

waiting in queues, doesn't help when we have to go to toilet urgently. At night it is worse. We just use the bin packet. Government must clean the solid waste skip where we offload those packets because they cannot provide toilets" (Zola, Community Member, Peri-urban, Bhambayi, 23-05-2010).

Women experienced public humiliation when their physiological needs were challenged as menstrual hygiene was compromised and most times impossible to manage due to the lack of water and inaccessibility of sanitation facilities. They stated that young girls were embarrassed and preferred to stay away from school for days due to the inconvenience and inability to maintain the desired level of hygiene:

"I am very embarrassed as a woman, because during certain times of the month I cannot use the toilet that doesn't have water to clean myself. When I use the bush with my children in the mornings, they have many questions about the blood and they get scared. I am helpless and embarrassed" (Mrs Musa, Community Member, Peri-urban, Bhambayi, 06-12-2010).

Gupta *et al.*, (2010) state that girls' absenteeism from school due to lack of access to sanitation is a world-wide setback. It is common in the developed as well as the developing world and undoubtedly a violation of human rights as it denies women economic, health and educational benefits (Gupta *et al.*, 2010).

The slow delivery of sanitation to poor communities and more especially its impact on vulnerable groups, disregards the rights of citizens as stipulated in the Constitution of South African (Act 108 of 1996) and the Bill of Rights (1996). By implication, all citizens also have a right to services which protects their health and living environment (Bill of Rights, 1996, Section 27.1.b). The conditions explained by female respondents translate the lack of sanitation to the perpetuation of poverty and marginalisation.

The peri-urban informal settlements respondents confirmed that the state of sanitation services was appalling and their dissatisfaction with the basic level sanitation facilities provided:

“Our toilets are really in a bad condition. It doesn’t have a door, I have a curtain hanging, when its windy people can see me in there...” (F. Manzi, Peri-urban Informal, Amaotana, 16-03-2009).

Respondents shared alarming experiences regarding survival without sanitation facilities. They complained profusely about the quality of the facility, the conditions due to poor maintenance of the facility. Respondents alluded to the facility being inappropriate for young children who have to resort to open defecation:

“Young children in our area are using bushes for toilet needs and it is not healthy for them. They are bitten by insects and even snakes” (N. Dali, Peri-Urban Informal, Tea Estate, 04-02-2009).

The greatest challenge with the type of basic level of sanitation provided by the government to peri-urban and rural households in Inanda was the maintenance and operations of the VIP and the UDD toilet facility. Users felt that it was unacceptable and problematic to maintain and that their dignity, safety and access were compromised by the choice of technology adopted by the Municipality.

6.11 SANITATION HYGIENE EDUCATION AND PRACTICES: THE “HIDDEN SCANDAL”

The Third African Sanitation and Hygiene Conference held in Kigali, Rwanda from 19-21 July 2011 identified an urgent need to raise the profile of sanitation hygiene for improved living conditions and quality of life. Sanitation hygiene and behaviour change serve as a determinants for sustainable development (AfricaSan3 Conference Statement, 2011).

Poor sanitation hygiene relates to washing of hands after defecation as well as socially unacceptable open defecation. The AfricaSan3 Conference recognised that poor sanitation hygiene practices affect “the poorest 20%, [who] are twenty times more likely to defecate in the open than the richest twenty percent”. The impact of this “hidden scandal” is devastating

to health and quality of life, in particular to the lives of women and girls” (AfricaSan3 Conference Statement, 2011: 2).

In addition to environmental detriment, the lack of adequate sanitation impacts hugely on health. Sanitation services or a toilet facility are required by an individual at least 2-5 times a day, the absence of which then forces one to utilise inadequate and undignified means, most commonly the open field. This compromises healthy clean environments and hygiene practices. The White Paper on Water Supply and Sanitation Policy view sanitation hygiene education as integral to addressing the historically neglected topic of sanitation (DWA, 1994: 32). Sanitation Hygiene Education is a mandatory function of the Department of Water Affairs in conjunction with Department of Health.

6.11.1 SANITATION HYGIENE EDUCATION AND PRACTICES IN INANDA

This study found that water and sanitation hygiene (WASH) education is linked to sanitation and water provision and needs to be given priority status to positively impact on hygiene awareness. Reddy & Batchelor (2012) recommend a paradigm shift in governance processes where WASH services receive policy importance in its own right. Water and sanitation hygiene education needs to be escalated and mainstreamed in policy discussions. Intervention studies by the WHO suggest that personal hygiene is primary to healthy living but for poor communities, disease and death caused by contaminated water and faecal exposure is a common occurrence:

“...disease burden from water, sanitation, and poor hygiene to be 4.0% of all deaths and 5.7% of the total disease burden (in DALYs) occurring worldwide, taking into account diarrhoeal diseases, schistosomiasis, trachoma, ascariasis, trichuriasis, and hookworm disease” (Pruss *et al.*, WHO, 2002: 537) .

According to Carolini (2012), communities’ awareness of health risks related to water, sanitation, and hygiene, influences their behaviours and hygiene practices. This part of the study in Inanda explored community awareness and practices of cleaning following the visit to the toilet, as faecal contamination through lack of knowledge and hygienic practices causes

diseases. The study also examined the level and extent of sanitation education offered to users of facilities provided by government.

The MDG prioritises sanitation hygiene education for poor communities who are at risk due to living with limited access to water and health services (WHO & UNICEF, 2012). Education on hygienic practices is essential in curbing the spread of disease and fatalities. The eThekwini Municipality provides an integrated sanitation programme accompanied by a participatory learning-based approach to sanitation hygiene education dissemination pertaining to the different types of technology provided:

“...these included the installation of full pressure, semi-pressure (roof tanks) and ground tanks for the provision of water, and the use of water borne sewerage systems, ventilated pit latrines, ablution blocks and urine diversion toilets for sanitation. It was important to ensure that the type of sanitation system used matched the type of water supply system. A free basic water supply of 9kl per month per household was also introduced (eThekwini Municipality, no date: 1).

The study assessed respondents' exposure to sanitation hygiene education in Inanda. Despite being in areas that were part of an integrated sanitation programme (eThekwini Municipality, no date), there was 47% negative response in the formal peri-urban dwelling types, 16% in the traditional peri-urban, and 4% in informal settlements on whether they were visited by anybody disseminating sanitation hygiene education. Similar negative response was received from the rural areas with 16% in formal, 12% in traditional huts, and 2% in informal settlements who had not received any sanitation hygiene education or information. Respondents from both peri-urban and rural wards were in agreement that nobody informed them about health and hygiene issues. Two percent of formal peri-urban and 2% from traditional rural were unsure. Fifty percent of those who did receive information stated that it was disseminated by the eThekwini Environmental/Health Department on a monthly basis. However, it did not help improve their sanitary practices because the toilet facility (UDD toilet) provided was difficult to use. There was no wash facility in the vicinity of the toilet. They also implied that the interrupted water supply prevented them from washing their hands

each time they visited the toilet. Respondents admitted that even having a bath is not a daily practice as there is limited water for each family member.

Table 6.6: Information Dissemination on Sanitation Hygiene Practices

Questions and Responses		Area Type											
		Peri-urban						Rural					
		Type of dwelling						Type of dwelling					
		Formal		Traditional hut		Shack / Informal		Formal		Traditional hut		Shack / Informal	
		N	%	N	%	N	%	N	%	N	%	N	%
Has anybody visited you to tell you about health and hygiene?	Yes	-	-	-	-	-	-	-	-	-	-	-	-
	No	24	47%	8	16%	2	4%	8	16%	6	12%	1	2%
	Unsure			1	2%					1	2%		-
Has anybody visited you to tell you about health and hygiene? – Who?	Health Department			3	50%					3	50%	0	-
Has anybody visited you to tell you about health and hygiene? – When?	Once a month			3	50%					3	50%		
Has anyone visited you to tell you about how to use your taps and toilet and how to maintain them?	Yes	-	-	-	-	-	-	-	-	-	-	-	-
	No	24	44%	12	22%	1	2%	7	13%	10	19%	0	-

This study records an overall negative response in all dwelling types regarding education or information on how to use and maintain the facilities provided by the Municipality. Majority negative responses indicated the following:

- 44% peri-urban formal dwellers
- 2% in peri-urban informal shacks dwellers
- 22% in peri-urban traditional hut dwellers
- 13% formal rural dwellers
- 19% rural traditional huts
- 0% in rural informal settlements

It was evident that there was more education and information dissemination in the rural area as compared to the peri-urban areas. This was due to the national drive to eradicate sanitation and water backlogs in historically unserved areas. These findings imply that the targeted efforts to deliver an integrated programme did not meet its objectives as respondents did not feel that it had changed their lives in any way. Respondents felt that living with insufficient and irregular water supplies blighted their enthusiasm to live a sustained healthy hygienic lifestyle.

6.11.2 HYGIENE PRACTICES: USE OF SOAP AND WATER

Bessong (2009) stated that education and awareness on the value of water purification and health and hygiene education cannot be over-emphasised to avert health crises, as poor communities, especially in rural areas, are constrained with poor access to improved sanitation and lack of clean potable water. The use of soap for hand washing after defecation is protective and reduces the risk of contamination and disease by 40%; therefore, hand hygiene education is important (Mahamud, 2012: 239). This study found that there were 3 times as many respondents who used soap and water after visiting the toilets in peri-urban formal residence than their counterparts in the rural areas. Similar percentages were observed for traditional huts and informal dwellings in both area types. In peri-urban formal dwellings 42% used soap and water after visiting the toilet, 22% in traditional huts, and only 2% in informal settlement areas were conscious of the importance of washing their hands after defecating. In the rural formal dwelling types, only 14% used soap and water after going to the toilet, while 19% in traditional huts and 2% in informal settlement shacks followed this practice.

None of the respondents admitted that they did not wash their hands after each visit to the toilet. This meant that there was some degree of awareness and link with washing of hands after visiting the toilet as a recommended hygiene practice. However, it was evident that hand washing was not a priority or a regular practice. This finding implies that the respondents' awareness regarding hand hygiene as a prerequisite for healthy living and diseases prevention was prevalent. This further implies that hand washing was not prioritised or that amidst lack of basic services (or water shortage) was not a habitual practice.

6.11.3 USE OF WATER ONLY AFTER USING THE TOILET

Most of the respondents in all dwelling types used water only, with the highest (56%) number of users living in peri-urban formal dwellings. In traditional peri-urban homes, 6% used only water, and 25% in formal rural and 6% in traditional rural dwellings washed their hands with only water after defecation. In the formal peri-urban dwelling types, 6% used disinfectant after defecation (Dettol). In the rural informal shack settlements, only 2% of respondents used water and soap for hand wash after visiting the toilet. The non-response regarding washing of hands in all instances was due to the embarrassment of not practising personal hygiene. Respondents felt that most times they did not have enough water to cook and drink, and therefore hand washing was a luxury.

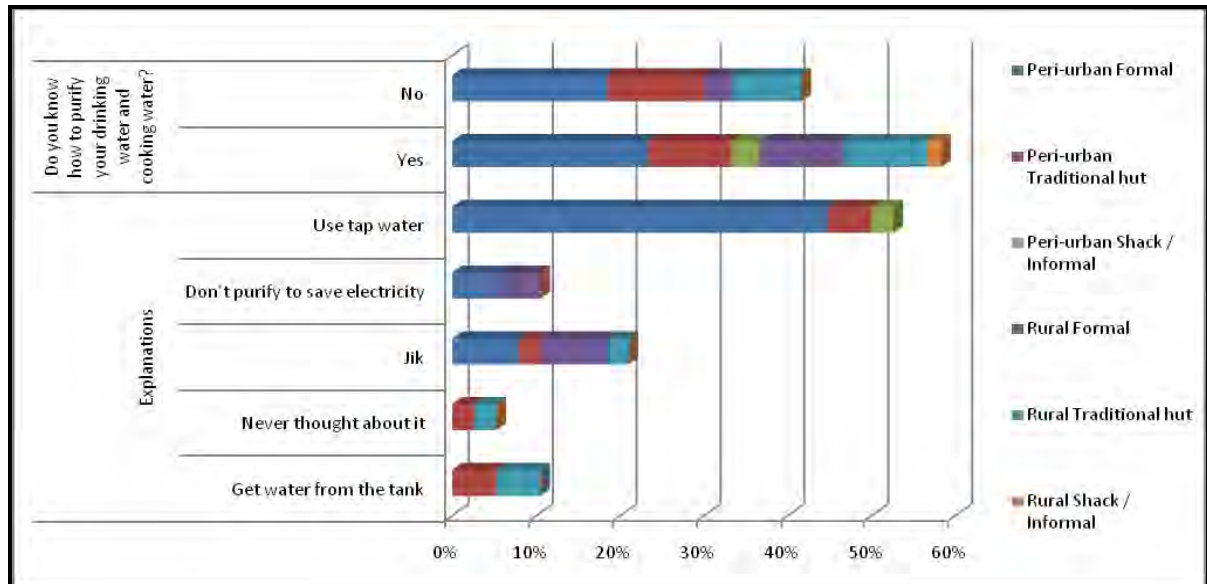
This finding is significant for this study as it links the availability of water to hygiene practices. It further indicates that health and hygiene education was minimal and therefore awareness and practices of using soap and water for cleanliness was not significant for all respondents, irrespective of the dwelling type or the type of sanitation facility. Low levels of awareness linking health and hygiene coupled with the lack of hand washing after defecation, was reflected in habitual non-practice. It also implies that the lack of resources like water and soap, the value of hand washing, and minimising contact with oral faecal contamination, are insignificant challenges amidst the greater challenges of survival for the poor communities in Inanda.

6.12 KNOWLEDGE AND PRACTICES REGARDING WATER PURIFICATION

Bessong (2009) cautions that poor people living with poor unimproved sanitation facilities, relying on rivers and dams for drinking water, are at risk of contamination through diarrhoeogenic parasites. Poor communities in Inanda source water from rivers, dams, springs, rainwater tanks and other collection methods where piped running water is not available or not close enough to their homes. This requires them to store water which runs a risk of contamination through stagnant storage and return to rivers due to difficulty of accessing piped water increased health risks. Communities are encouraged to purify water and this

practice was emphasized following the massive outbreak of cholera in KwaZulu-Natal in 2001 (Hemson, 2006).

Figure 6.12: Communities' Knowledge and Water Purification Practices



This study found that in peri-urban formal households, 23% of the respondents had knowledge on water purification, compared to 10% in the traditional huts and 3% in informal shacks. In the rural areas, 10% in formal dwellings, 10% in traditional huts and 2% in shacks knew how to purify drinking and cooking water. There were nearly as many respondents who knew how to sterilise their drinking water as those who did not. More than twice the numbers of peri-urban formal respondents (23%) were aware of the methods when compared to their rural counterparts (Figure 6.12).

Water purification was not viewed as a priority by respondents. In both peri-urban and rural areas, only the traditional hut dwellers responded (5% in both) that they get water from tanks and did not see the need to purify it. Three percent living in similar dwellings stated that they never thought about water purification. In both the area types, 8% of formal householders and 3% of traditional hut dwellers used Jik to purify water. Five percent of both peri-urban and rural formal dwellers stated that they did not purify (boil) their water because they saved on electricity costs. While in the peri-urban formal homes, 45% used water from the tap and 5%

in traditional areas and 3% in informal areas did not see the need for purification because they used tap water.

6.13 COMMUNITIES' KNOWLEDGE OF DISEASES

There was a general lack of knowledge on the cause and symptoms of illness such as diarrhoea. Very few respondents knew what diarrhoea was and believed that there were not many illnesses related to it. This finding implies that communities lacked clinical information on healthy living. Understanding the impact of unhygienic conditions and unsanitary behavioural patterns was the key to improving the general health of communities. This study therefore examined the communities' general knowledge of causes of illnesses such as diarrhoea, which resulted mainly from contamination through poor hygiene and unsanitary behaviour patterns.

There was an overall low level of awareness on the causes of diseases such as diarrhoea, cholera and skin rashes, amongst others. This suggests that knowledge on potential illnesses caused through faecal contact and unhygienic conditions which was related to poor sanitation was low. This was evident in open discussions during focus group meetings which revealed that young children living in congested squalor conditions were worst affected by the poor hygiene and sanitation practices:

“We get sick often, even my children are sickly, it is caused by the situation of the toilet and if we go to the clinic they laugh and say you are living at Besters and you expect not to be sick, so it is difficult” (Nomti, Peri-urban, Besters, 20-05-2010).

Most respondents were reluctant to admit that they or their family members suffered from rashes or sores as the stigma of HIV/AIDS was rife amongst poor communities in Inanda. Community members believed that those who have sores and were ill were most likely infected with HIV/AIDS and preferred not to talk about such sensitive topics. However, respondents were concerned about the health of their children and assigned their poor health

to the lack of basic services (Focus Group Discussion, Peri-urban Besters Informal Settlement, 20-05-2010).

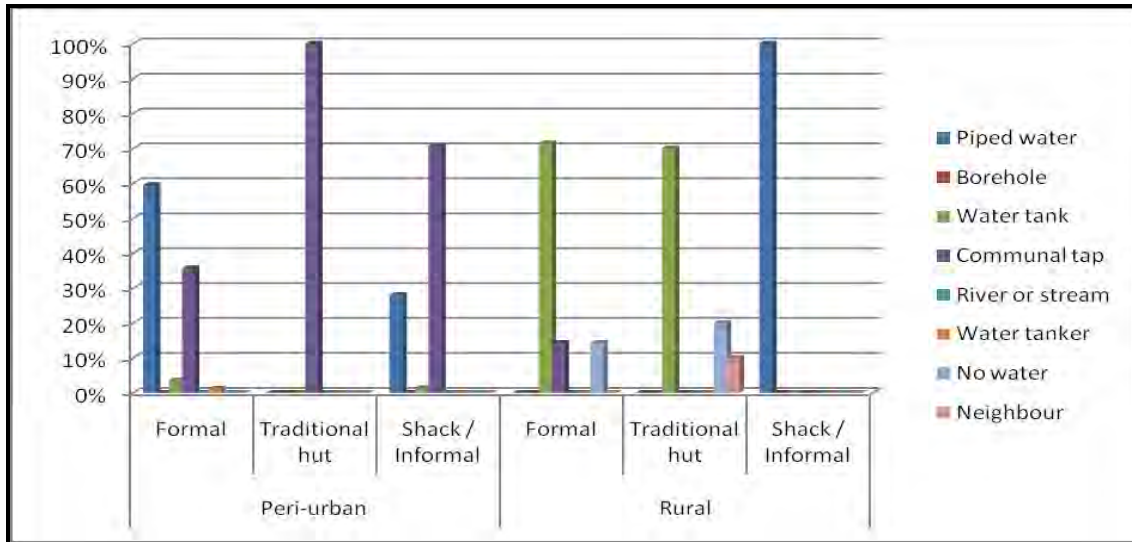
6.14 WATER SERVICE DELIVERY

In South Africa as well as other developing countries, sanitation policies are incorporated into or often merged with water policies, as managing human waste arguably falls within the waste water management cycle. Water is intrinsically viewed as the accompanying service as sanitation hygiene is only possible if there is access to adequate water for personal hygiene, washing and cleaning of toilet facilities. In the more affluent areas where the network of bulk sanitation infrastructure is available, water is an essential element. For the peri-urban and rural communities where waterborne sanitation is absent, water is still required for hygiene practices. This study therefore examined the access to water, the perception and practices of communities in Inanda and how access or non-access to water affected their sanitation practices.

The availability of water impacts both on sanitation hygiene practices and use of water for the disposal of sludge in waste water systems. The availability of water is also necessary where bulk infrastructure is reticulated for full waterborne sanitation systems. Therefore, the investigation into access to water was relevant for this study.

6.14.1 RESPONDENTS' SOURCES OF WATER

Figure 6.13: Sources of Water for Peri-urban and Rural Communities



The most common types of water provision in the peri-urban areas were piped residential water supply in formal houses and communal taps mainly in informal settlements. In the peri-urban formal dwelling, 60% had piped water, and in informal shack settlements, 28% had piped water through communal facilities. In the rural area, the most common method was by water tanks, either self-constructed or installed by the Municipality.

In the rural dwellings, water tanks were the predominant source of water. Seventy-one percent in formal dwellings and 70% in traditional huts received water through tanks which fill up with the free basic quota (9kl monthly) provided by the Municipality. In rural informal shack settlements, all respondents stated that they accessed water from communal standpipes. Communities also complained of the time burden of collecting water, waiting in long queues at standpipes increased the difficulty of access to water. In rural formal dwellings, 14% of the respondents did not have water from any source and 20% traditional hut dwellers did not have water. Ten percent of those who do not have water stated that they sourced it from neighbours.

In the rural areas, there was huge reliance on natural water resources such as rainwater and groundwater. This was also true for respondents living in informal dwellings, in both peri-

urban and rural areas. In the formal peri-urban locations, respondents stated that they depended on neighbours as water supplies were irregular, insufficient and most times unaffordable. Focus group discussions revealed that a sense of community amongst people was an important survival mechanism. People accessed water and utilised neighbours' toilets when their water supply was terminated due to non-payment or if their sanitation facilities were not in working order (Focus Group Discussions, Peri-urban Informal, Bhambayi, 23-05-2010).

The implication of this finding underscores the social dilemma of poor communities. Their sense of 'community' and the need to maintain social cohesion was their key survival strategy. Reliance on other community members for their personal needs such as toilets reflects that the solution lies amidst themselves and not government, even if it sacrificed their pride and human dignity.

6.14.2 PRESENCE OF WATER METERS IN RESPONDENTS' PREMISES

Very few water meters existed in all vicinities. In the peri-urban formal dwellings, water meters are found in 42% of the households. In rural formal dwellings, 29% of respondents and 20% in traditional huts have water meters, respectively. Those living in informal dwellings had no water meters anywhere near their dwellings. Most respondents who did have water meters stated that they were installed when their homes were built. They also complained that water was illegally connected from their pipes and was uncontrollable. This increased the cost of water to the household. They further stated that they would not pay for the water because it was the Municipality's responsibility to resolve the illegal connections and they would therefore continue to ignore water bills.

The implication of revenue lost due to criminal behaviour exacerbates the water crisis and revenue base of the Municipality. Water tariffs are high in the EMA. The more affluent areas cross-subsidised the poorer household. Inability to curb illegal connections encroached on the rights of paying customers and increased the non-revenue water loss to the Municipality. Unemployment and poverty perpetuated a vicious cycle.

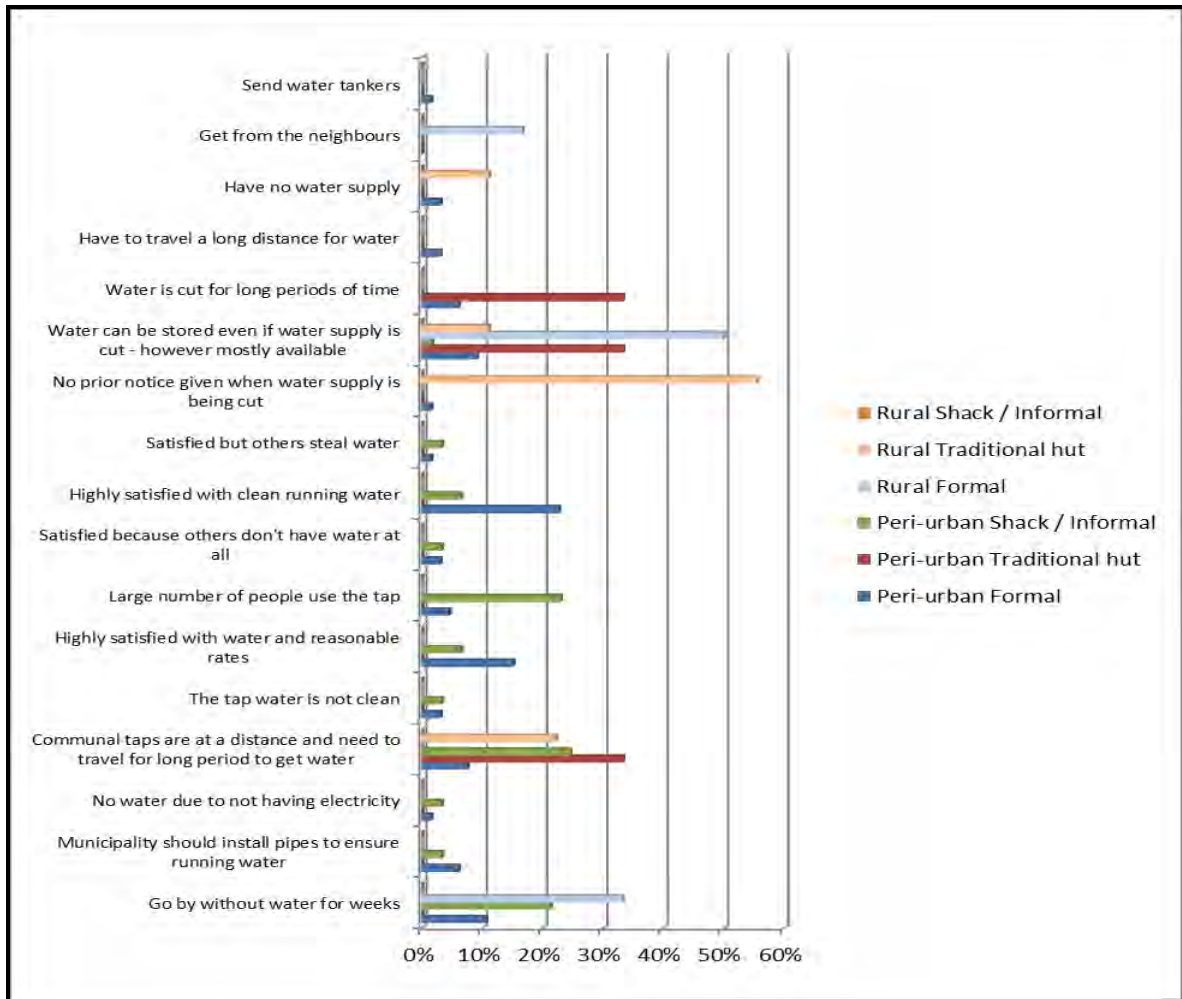
6.14.3 SATISFACTION WITH WATER SUPPLY: PERI-URBAN AND RURAL AREAS

Table 6.7: Satisfaction with Water Supply: Peri-urban and Rural Areas

Responses	Peri-urban			Rural		
	Formal	Traditional Hut	Shack / Informal	Formal	Traditional Hut	Shack / Informal
Satisfied	62%	25%	29%	67%	25%	0%
Neutral	12%	50%	12%	17%	13%	0%
Dissatisfied	26%	25%	59%	17%	63%	100%

Respondents living in formal dwelling types in both peri-urban and rural areas were more satisfied than those in the other dwelling types. Fifty-nine percent of peri-urban formal dwelling owners and 60% living in peri-urban informal settlements were dissatisfied with water supplies. There were high levels of dissatisfaction with water supplies in rural areas. Approximately 63% of rural traditional hut occupants and 100% living in rural informal settlements expressed dissatisfaction with water supplies which were insufficient and irregular. Groundwater tank connections with flow restrictors provide for the free quota of daily water. However, the flow or supply is irregular and tanks often remain empty and dry for days. Respondents stated that they were still depend on nearby streams and rivers and if they were lucky, they were sometimes able to collect rainwater.

Figure 6.14: Reasons for Dissatisfaction with Water Services



A diverse range of reasons were presented regarding dissatisfaction with water services (Figure 6.14). Thirty-three percent of respondents in formal rural houses indicated that they ‘go by without water for weeks’ and 21% in peri-urban informal settlements had similar experiences. Respondents (56%) living in the traditional rural dwellings noted that no prior notice was given when water supply is discontinued or disrupted. Respondents in formal rural households stated that they got water from their neighbours. In the traditional peri-urban dwellings, 33% of respondents complained that the interruptions (water cuts) are experienced for long durations.

Even those living in formal RDP houses experienced problems with lack of water supplies and were unable to access water from any source. Their plight impacted severely on their children: “Not having water in my home (RDP) has affected my children because sometimes I

ask my neighbours for water and if they don't want to give we even sleep without supper” (Mahoi, Community member, 23-05-2010).

Almost 25% of those living in informal peri-urban settlements complained that the communal taps are too far and travelling to collect water was time consuming. Only 2% of the formal peri-urban dwellers alluded to getting water from water tankers during water supply disruptions.

6.14.4 INCONSISTENT WATER SUPPLY IN PERI-URBAN AND RURAL AREAS

Communities' experience or knowledge of water leakages was significant in both peri-urban and rural areas. Sixty-two percent of formal peri-urban respondents, 50% traditional hut dwellers and 62% of informal shack dwellers had experienced or knew of water leakages in the area. A water leakage was a common complaint of respondents across all dwelling types. In the rural areas, all informal settlement dwellers stated that due to leakages, water flowed down the streets and sometimes through their homes. When leakages or burst pipes occurred, water supplies to neighbouring areas were disrupted for many days. Approximately 50% of respondents living in formal homes and 30% in traditional rural dwellings stated that they experienced water leakages frequently.

Table 6.8: Respondents' Experience/Opinion of Turn-around Time for Repairs of Leakages

Duration/ Turn-around- time for Repairs of Leakages	Peri-urban			Rural		
	Formal	Traditional Hut	Shack/ Informal	Formal	Traditional Hut	Shack/ Informal
Within one day	30%	0%	7%	20%	0%	0%
1 - 2 days	16%	33%	14%	0%	20%	0%
2 - 3 days	14%	33%	26%	20%	20%	0%
> 3 days	40%	33%	53%	40%	20%	100%
Unsure	0%	0%	0%	20%	40%	0%

Respondents reported that most often repairs to burst water pipes occurred after more than a week. Forty percent of those living in formal peri-urban dwellings reported that the response time to complaints of leakages was more than 3 days. Focus group respondents stated that these leakages from burst pipes or communal yard taps were sometimes only repaired after 3 to 4 weeks. Pools of stagnant water were found in the vicinity of communal facilities and where children played. Women often stood in the puddles of water whilst they washed clothes. Stagnant water bred insects and increased the risk of diseases. Respondents also stated that the cause of leakages was weak or old piping but most often due to people connecting water illegally.

All respondents across the various sectors indicated that water interruptions occurred more than 4 times a year. Both peri-urban and rural respondents explained that water supplies were often disrupted either through burst pipes or when water bills were not paid.

6.14.5 AFFORDABILITY OF WATER

Table 6.9: Respondents' Affordability of Water Supply

Responses	Peri-urban			Rural		
	Formal	Traditional Hut	Shack/Informal	Formal	Traditional Hut	Shack/Informal
Yes	49%	50%	3%	63%	30%	0%
No	51%	50%	97%	38%	70%	100%

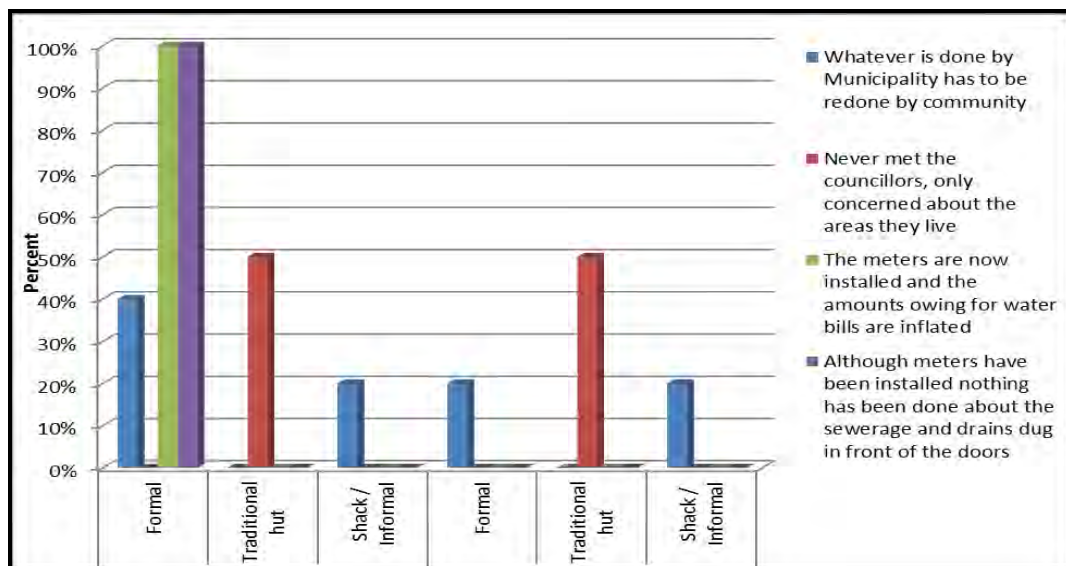
The rural respondents living in formal dwellings indicated that they were paying more than non-paying users of water. In peri-urban formal dwellings, more than half (51%) of the respondents stated that they could not afford to pay for water supplies, while 49% stated that it was affordable. Ninety-seven percent of the respondents from the peri-urban informal and all of the rural informal dwelling respondents indicated that they were unable to afford any payments.

Many of those who stated that they could pay also elaborated that the 9kl free water was insufficient but very helpful, and if they used water sparingly thereafter, it was affordable. There are those who also mentioned that they did not exceed the free basic limit to avoid water costs. Focus group discussions highlighted that those who did not have water borne flush toilets, still used VIP toilets and therefore utilised the free basic water supplies for cooking and washing. Even if piped water was available in dwellings, people still washed clothes at communal facilities to save water:

“There are too many people (11 in total) in my family. Many of them do not work. We cannot afford to pay for water. Therefore we wash our clothes once a week at the communal taps where we can use unlimited water. It is difficult but we save on the cost of water” (Nonto, Community member, Peri-urban Gandhi Settlement, 23-05-2010).

Peri-urban respondents were more vociferous with regards to unaffordability and poor service levels than those from the rural areas. Peri-urban residents were more inclined to be concerned with cost factors associated with the service in a metropolitan area. They felt that the installation of water meters forced them to pay for water, and that their bills were inflated and the tariffs were unaffordable. Respondents living in the peri-urban traditional dwellings and formal dwellings complained that since the installation of water metres in their yards, they were expected to pay for water which they cannot afford. They stated that even though they received the basic 6kl and of recent 9kl free, it was insufficient. Their families were big (more than 7 people) and consumed large volumes of water. They also stated that the tariff beyond the free basic water was exorbitant.

Figure 6.15: Community Perceptions of Challenges with Water Delivery



In peri-urban formal dwellings, respondents stated that although water meters had been installed, nothing has been done about the sewerage and drains dug in front of their doors (at the time of the field visit). They added that whatever the Municipality had done in respect of sanitation and water facilities, “has to be redone” due to poor quality. Furthermore, communal taps installed by the Municipality were very far from their homes and therefore, fetching water was a very difficult task. Rural respondents did not respond to the enquiry regarding payment for the services as most rural residents do not pay.

6.15 PARTICIPATION IN BASIC SERVICE DELIVERY IN INANDA

Participation in service delivery is an unwritten “social contract” between communities and government pivotal to democratic local governance (Kroukamp, 2005). Public participation in decision making is a key element embedded in legislation for effective developmental local government (Municipal Systems Act 32 of 2000, 5.1 (a)).

There was a predominant negative response to participatory planning and implementation in service delivery irrespective of dwelling types. In peri-urban formal housing settlements, 98% indicated that they did not participate in any planning or implementation of service delivery programmes. In the formal peri-urban households, 41% had no input. In the peri-urban informal settlements, 96% indicated that they did not participate; others stated that they “didn’t care anymore” (Focus Group, Peri-urban, Bhambayi, 20-10-2010). Most respondents in traditional dwellings stated that did not have any ‘voice’ in planning and implementation of services in their areas.

The majority of the respondents were despondent as they felt neglected; they held on to governments’ promises during elections and believed that it was their only platform to participate and it had failed them: “We need to stop voting and let the government know that we are tired of waiting for their promises, in that way maybe they will start with service delivery” (Mzo, Community member, Rural Informal Settlement, Mphaphathi, 04-02-2009). On average, only 3% of peri-urban informal dwellers who answered positively indicated that community input was through ward forums.

This finding resonates with that of the study undertaken by the Public Service Commission which states that poor planning, lack of necessary skills and resources, and the absence of effective methodologies to promote participatory local governance are among the few barriers to effective public participation (Public Service Commission, 2008).

6.15.1 COMMUNITY ORGANISATION INVOLVEMENT IN THE DELIVERY OF WATER AND SANITATION SERVICES

In the peri-urban areas, at most 3% indicated that there were community organisations involved in water and sanitation projects. Respondents who lived in traditional huts in the rural area indicated that there was approximately 30% community involvement through organised groups. A community activist, who is part of a civil society organisation called Umpilo Amanzi, explained that the key challenge in areas such as Umzinyati, Umbumbulu and other semi-urban and rural areas is their proximity to the knowledge and science of service delivery. Their interaction with the Municipality is limited. Therefore, organised civil society groups are the conduit to information and engagement for local communities. Umpilo Amanzi is active in research through its relationship with tertiary institutions, and have established relationships with the local authorities as well as traditional authorities as active communities. Their engagement enriches local knowledge generation. They are able to understand and interact with local communities more regularly and successfully, as communities are more responsive to their engagement. A level of trust is established through enquiry and feedback to communities. Government programmes note a greater degree of success when facilitated via civil society organisations (Community Activist, Interview, 09-08-2010).

There was significantly more engagement of rural community members in water and sanitation delivery as compared to those in peri-urban areas. This was due to an increased focus by national government (DWAF, 1994) and the eThekweni Municipality to expeditiously provide a basic level of service in unserved rural areas. As a result, more interventions and increased opportunity for engagement and job creation is evident.

At most, only 5% of peri-urban respondents were aware of projects. In the rural area, half of the respondents who lived in rural traditional huts were aware of projects, yet 75% of formal dwelling owners did not know of any projects. A poor response was received from informal shack dwellers in both areas. Shack dwellers are recipients of communal water and sanitation facilities. The respondents from the formal peri-urban areas who answered positively identified the ANC youth organisations as being instrumental in motivating and ensuring that

meters were installed speedily in these areas (Focus Group, Peri-urban, Bhambayi, 20-10-2010).

Respondents are of the view that certain community-based organisations were active but not established enough to include a larger community of people. Civic organisations that are active are largely dealing with social development issues. Their impact and clout on government delivery as compared to pre-1994 was far less than required. Many of the civic organisations benefited directly from government subsidies. They therefore “speak the same language” as government, thereby limiting their civic activism:

“They are almost co-opted, they do not fight for the people, even the Inanda Development Forum disappeared, they all work for government now” (Focus Group Discussions, Peri-urban, Besters, 20-05-2010).

6.15.2 RIGHTS TO REPRESENTATIVE DEMOCRACY DENIED

Respondents stated that their right to representation was denied due to neglect and indifference of political leaders. There was an overall negative opinion regarding support from political representatives and forums. Respondents believed that such neglect perpetuated poor services in the area. Residents (48%) of formal peri-urban dwellings, 50% in traditional peri-urban and 88% in informal peri-urban stated that they had been living in demolished houses without water and lights for many years and that councillors made promises but they did not deliver on them. Respondents complained that they had no knowledge of any meetings being held by the councillors.

A dominant negative perception regarding councillors and their service to communities prevailed. However, more than half (53%) of the respondents were unhappy with their councillor’s support. Fifty percent of respondents living in traditional dwellings, 7% in informal peri-urban, and 14% in formal peri-urban areas respectively, stated that the support elicited from their local councillor had no influence on the delivery of proper sanitation facilities. Their perception was that councillors were engaged in party political matters in government or held second jobs, and therefore had no time for service delivery issues. Some

respondents believed that there was minimal improvement in access to services with or without the support of councillors:

“We do not get any support from our councillor and we do not even know anything. We are suffering and we are large numbers of people and do not have anybody to talk on our behalf. That is why we do not have the right provision of water and sanitation in our area. Sanitation provision in our community is of very poor quality (Mabaso, Peri-urban, Amatikwe, 21-04-2009).

“Government must be hands on and forget about creating local committees. I believe things will then start happening. Local committees do not help communities. It’s just government’s way of making people believe that they have a voice. That is not true.” (Masinga, Peri-urban, Amatikwe, 21-04-2009).

However, 31% in formal peri-urban dwellings noted good support with water and sanitation services and that working with Councillors increased their access to service delivery related participation.

Communities are aware of their right to representative democracy, systems and processes in promoting community participation and local democracy. Lack of confidence in local ward committees and councillor representation was incited by the community’s experience of poor service delivery. Low vote of confidence in local systems presented an opportunity for communities to call on government to meet voter expectations. A low degree of confidence in government’s ability to directly intervene as a corrective measure was indicated in respondents’ suggestions to addressing weak local representation.

6.15.3 COMMUNITY PARTICIPATION THROUGH WARD COMMITTEES

Post-1994, mechanisms such as Ward Committees have been established to ensure and increase community participation in service delivery. The purpose of their engagement at all levels of implementation is various and specific. During the planning phases of programmes

or projects, the engagement of the community was important to ensure collaborative planning, giving local communities a 'voice' in the type and level of service for their specific needs.

Participation during the implementation phase was aimed at capacity building of local communities through training and empowerment programmes. Incomes of local people who participated improved as service delivery projects become a revenue generating source. Engaging communities was also aimed at creating a sense of ownership with a view to sustainable operations and maintenance of services or facilities provided by the Municipality.

The Ward Committees are chaired by the Councillors of each ward. The communities of Inanda expressed their dissatisfaction with such conduits for their engagement. They are apathetic about the effectiveness of the ward committee structures in involving them in project planning and implementation. Respondents also believed that ward committees are dysfunctional. They view ward committees to be beneficial for a select few who are politically inclined and those who agree with and serve the Ward Councillor. Communities are of the opinion that political factionism and tensions make these structures non-responsive and undemocratic. Communities were also highly opinionated about the Community Development Workers (CDWs) employed by government as 'foot soldiers' for the purpose of monitoring community service needs and improving communication with government. The study found that CDWs viewed themselves as 'élites' who are not accountable to councillors but rather to a higher authority. Communities perceived the tensions between Ward Councillors and CDWs as power struggles defeating the purpose of community service: "Councillors feel threatened because they believe that the CDWs will compete with them in the next elections" (Focus Group Discussions, Peri-urban, Besters, 20-05-2010).

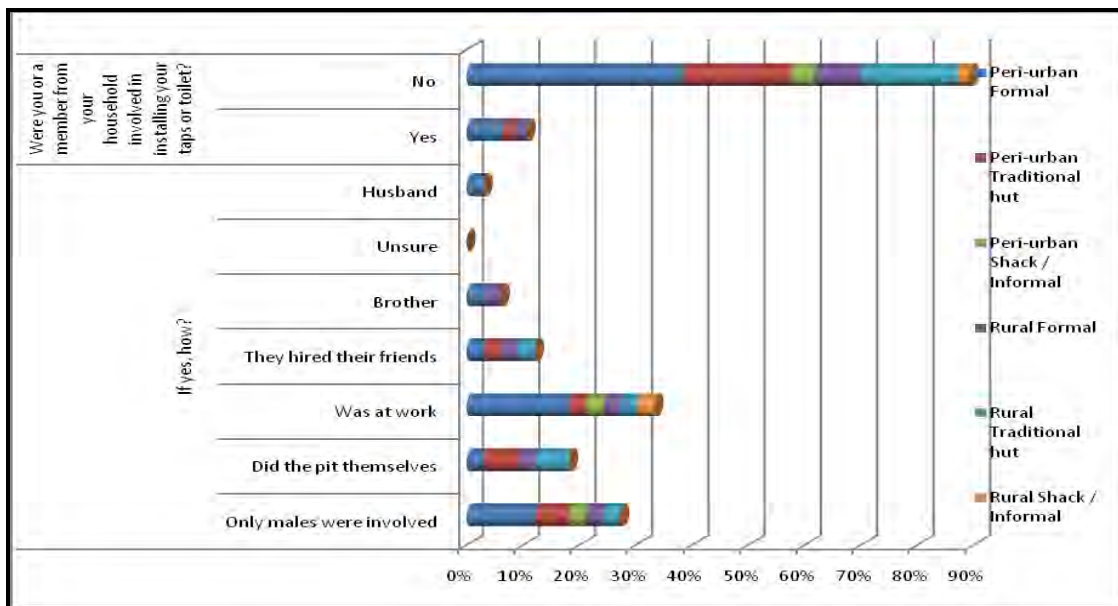
This finding implies that institutionalised mechanism for public participation, communication and support are ineffective, unresponsive and lack representation of the people they are intended to serve. These interventions are dogged by power struggles and self-centredness. The internal tensions were apparent and community confidence in such mechanisms was low. This finding also suggests that effective community participation from project inception through ineffective facilitative mechanisms impede participatory decision-making, planning and implementation of service delivery in Inanda.

However, the eThekweni Municipality has embarked on a drive to revive the dwindling ward committee structures. During 2012, municipal wide activation of Ward Committees were being held to reconstitute and promote its institutional purpose.

6.15.4 ENGAGEMENT IN EMPOWERMENT PROGRAMMES THROUGH CONSTRUCTING TOILETS

According to the Sanitation Job Creation Stakeholder Paper (DWAF, 2005), the sanitation sector in response to the GEAR policy has the potential to create jobs and improve the economic status of local communities. The study noted minimal involvement of local communities in government-led sanitation programmes. Those who did engage stated that it did not make much difference to their income as it was short term, mainly labour intensive work which was tokenistic with reference to employment.

Figure 6.16: Respondents' Involvement in Water and Sanitation Installation



This study found that there was a dominant negative response to community participation in water and sanitation facilities construction implemented by the Municipality. In peri-urban areas, 38% of those living in formal dwellings, 19% in traditional and 4% from the informal dwellings stated they were never involved in construction projects related to water and

sanitation. There was lower level of involvement of rural communities than the peri-urban communities in job creation efforts by government. In rural areas, 9% living in formal dwellings, 17% in traditional dwellings and 2% in informal dwellings were never part of the construction of water and sanitation facilities. Many respondents did not answer the question. Mainly males indicated some involvement. There was a perception that those who were hired were done so on the basis of being “somebody’s friend”, and in that way, favoured part-time employment. In most instances, respondents alluded to pit toilets constructed by themselves and not government. Furthermore, these findings imply that mainly male community members were engaged in installation of water and sanitation infrastructure in Inanda and that females were excluded.

6.15.5 EXCLUSION FROM PARTICIPATION DUE TO BEING POOR

Communities also felt that they are neglected and excluded from participation in service delivery related discussions because they were poor. They still lived in squalor without basic services, yet their neighbouring communities who paid for services got government’s attention. Those living in informal settlements felt excluded from service delivery matters or even communication from government. In parts of Ohlange, for example, housing development was quite advanced yet pockets of informal settlements still did not have basic services which created disputes in the community:

“A small portion of Ohlange lacks basic services and people are frustrated when they compare their services with their neighbours. Those who have services are of the view that it’s due to their ability to pay their rates and pay for the services that they receive and other communities should do likewise. We are like outcasts because our neighbours have meters and they pay for water, they don’t help us. We have to steal water” (Zikah, Community member, Peri-urban Ohlange, 01-05-2009).

In the rural formal dwellings, 14% of the respondents stated they did not participate, 19% in traditional rural dwellings and 2% in informal dwellings had no input into project planning and implementation with regard to services being delivered to them. Many respondents in the rural informal settlements were unaware and indifferent, with a belief that quality services

would never reach them. There was no positive response, which means that respondents felt that they had no 'voice' in service delivery related initiatives. Many did not respond because of frustration resulting from their expectations not being met.

Respondents were apathetic about government's ability to serve their needs. They complained about the turnaround time for delivery:

“They promised us in 1994 that water will be the first thing but it's still the same, we still don't have water in 2010” (Mpo, Community member, Rural Informal Settlement, Mphapatheni Rural Informal Settlement, 17-04-2010).

The findings of the DSD study confirm that 68.3% of households in Inanda do not have piped water to their dwellings. This is astonishingly higher than the national 37.7% average who had no piped water, throughout South Africa (Everatt & Smith, 2008: 17). Respondents perceived that their non-participation and lack of basic services was because they were the 'forgotten' communities:

“We have been waiting for the Municipality for a very long time and we need to put illegal pipes to get water to our houses, that's the only way we can improve our situation because they forgot about us” (Xaba, Community member, Mphapatheni, 17-04-2010).

The application of different technologies and tactical 'art' of neo-liberal governing is criticised. The intention of government and the benefit to the governed is questioned. According to Lemke (2007: 8), Foucault conceives that the analytics of government avoid the question of the pre-analytics of the individual and the state. The question of legitimising neoliberal local governance brings to light the relationship of the different technologies of government. This has relevance when examining neoliberal local governance where the potential for exploitation of individuals or communities is often implicit in the guise of communal governance.

6.15.6 COMMUNITIES' EXPERIENCES AND SUGGESTIONS FOR IMPROVING PARTICIPATING IN SERVICE DELIVERY

A range of challenges were identified by respondents, with the need for improved services by the Municipality cited as the main concern. The need for improved quality of sanitation facility was expressed by 29% of formal rural dwellers and 17% of informal rural respondents. Respondents (23%) from the peri-urban informal settlements felt strongly that the Municipality should work together with communities to expedite service delivery. Eleven percent of informal and 6% of formal peri-urban dwellers were of the opinion that building the capacity of community members through training will enable them to engage with the Municipality in providing better sanitation services. People felt strongly that there was a need for the Municipality to increase contact with communities, and regularly monitor their living conditions. They felt that there was weak communication or miscommunication by councillors to the Municipality. Therefore, government's knowledge of their poor conditions was minimal. Furthermore, in the peri-urban areas, 41% living in formal houses believed that Councillors should be monitored closely to ensure that they delivered what was expected of them as public representatives.

6.15.7 LEVEL OF SUPPORT FROM WARD COUNCILLORS

Respondents expressed strong views regarding support from councillors. They felt that councillors promised but did not deliver and some reported that there were no community meetings in their areas. In certain wards (areas), people were vocal about their frustrations with not having the necessary representation due to the councillors' indifference. Residents in the peri-urban Amatikwe area expressed their discontent with ward committees and offered solutions:

“There is no support from councillors we only attend meetings but nothing happens” (Mzo, Community member, 21-04-2009). I don't attend meetings because we have been addressing some of the same problems for years but not a single thing has been done (Zanele, Community member, eTafuleni, 21-04-2009). “We never receive any

help from the Councillors, they help those who are close to them” (Ningi, Community member, 21-04-2009).

They also felt that where councillors were active and they benefited only a few people who had a good relationship with the councillor.

6.15.8 COMMUNITIES’ REACTION TO LACK OF REPRESENTATION FROM COUNCILLORS

Communities were vocal and candidly shared their experiences. Despondent communities resorted to criminal means of accessing services:

“Since we don’t get any support from the councillors, we steal the water like people in the other areas do. We need our councillors to do their jobs. We don’t have toilets and water, the place is very untidy” (Ningi, Peri-urban, Community member, Informal Settlements in Gandhi Settlement, 21-05-2010).

6.16 CONCLUSION

This chapter analysed data collected from a number of sources using various data collection tools. The cohort comprised community members, councillors, engagement at meetings, workshops and observances in the locality. Implementation challenges and experiences of officials who have a role in sanitation governance were also reported. Secondary research pertaining to sanitation delivery within the EMA, including Inanda, was reviewed. The key findings extrapolated from the results of the study pertain to poor governance, the need for increased communication, community participation in decision- making, inadequate housing and access to settlements (households), inadequate monitoring and evaluation of sanitation services and government’s unresponsiveness to the plight of the poor communities in Inanda. Respondent’s dissatisfaction with the type of sanitation facility, quality of structure, difficulty with operations and maintenance, crime, as well as the Municipality’s unresponsiveness to the basic services needs of communities in Inanda, was significant. The risk of exposure to crime when accessing sanitation needs and vandalism of facilities provided by the Municipality

further worsened the quality and adequacy of services. Government is also challenged with lack of skills and resources and hence the supply-side is dependent on private sector intervention to ameliorate delays in service delivery. However, such efforts are also met with huge challenges and cost. Insufficient and poor institutional participatory mechanisms impact on the community's acceptability of innovations and different systems employed to meet service needs.

Non-access to facilities was a significant challenge to the communities of Inanda. Government's efforts to provide basic level of water and sanitation were met with immense dissatisfaction and with certain types of sanitation technologies; rejection of facilities indicated a counter-impact of backlog eradication. There was marginal expression of satisfaction with general service delivery since 1994, and a significant negative response to government's efforts at service delivery was found. The awareness of hygienic sanitation practices was rated medium to high, but a lack of resources to follow through on safe hygienic practices thwarts the drive to alter behavioural practices amongst communities in Inanda. Community activation and mobilisation to partner in sanitation projects was weak. The need for increased community ownership for sustainable sanitation services prevailed.

CHAPTER SEVEN: CONCLUSION, EVALUATION AND RECOMMENDATIONS

7.1 INTRODUCTION

The provision of sanitation has been plagued with two critical challenges in the developing world. First is, the urgency to satisfy a human need through adequate sanitation access for the millions who resort to primitive and unhygienic methods in the absence of ablution facilities and hygiene education. Secondly, the governance and institutional reforms in the sector worldwide has not resolved the sanitation crisis, due to fiscal constraints, insufficient capacity, and the unresponsiveness to context and societal-specific sanitation problems. The experience of the delivery of sanitation services to the communities of Inanda has been no different as the disjuncture between the satisfaction with what has been prescribed by policy and the impact of what has been implemented, is evident in this thesis. The problems with the provision of adequate sanitation access, infrastructure management, and shared governance responsibilities, following the decentralised institutional reforms, are still prevalent despite policy measures to address the sanitation challenges.

This study on sanitation governance in Inanda was an investigation into of how policy translates into practice and an empirical analysis of how practitioners apply governance principles through a broad spectrum of actors (Hubbard *et al.*, 2002). The study also explored how the practice of decentralised governance in South Africa influences policy choices for sanitation delivery. The study of sanitation in Inanda reflected on the experiences of communities based on choices made by the state in response to the sanitation crisis. The White Paper on Basic Household Sanitation emphasises the urgency of addressing sanitation delivery in peri-urban (informal) and rural areas, which are areas of greatest needs (DWAF, 2001). Inanda's mix of peri-urban and rural communities presented an ideal testing ground for the successes and failures of sanitation policy interventions.

This study examined the approach to sanitation governance in the Inanda township within the eThekweni Municipal Area, Durban.

The objectives of the study were to:

- i) Explore the application of governance as an organising analytical framework for sanitation delivery.
- ii) Assess policy interpretation and application regarding sanitation delivery in Inanda.
- iii) Examine the extent of community participation in sanitation delivery in Inanda.
- iv) Assess the experiences and perceptions of the residents of Inanda regarding sanitation.
- v) Identify sanitation successes and challenges in Inanda.

The key exploratory questions focussed on the conceptual ‘trialogue’ of governance, service delivery and sanitation aligned to the objectives of the study.

- i) What are the theoretical and conceptual debates relating to governance as an analytical framework?
- ii) What is the approach to governance in South Africa?
- iii) Are the approaches, systems and mechanisms for sanitation delivery responsive to the needs of peri-urban and rural communities in Inanda?
- iv) What are the challenges, experiences, perceptions and level of engagement of the communities in sanitation delivery in Inanda?

This chapter presents the general conclusions of the study, aligned to the objectives and key questions of the study. It further presents an evaluation of findings, concluding with recommendations emanating from the study.

7.2 CRITICAL EVALUATION OF KEY FINDINGS

The key findings of the study illustrate that despite concerted efforts by government since the advent of democracy to deliver adequate, equitable and affordable basic services to previously unserved communities, the impact has been marginal. The case of sanitation in Inanda

demonstrates that abject poverty, dire need for employment, housing and the growing demand for basic services remain unresolved challenges for local authorities.

This study also critiqued the approach to sanitation governance based on the premise that devolution of responsibilities to the local authority which is closer to the people, will enable faster and more effective water and sanitation delivery. The decentralised governance approach increased pressure on local government to meet the basic needs of the people. A plethora of governance challenges including skills deficiency, financial constraints, poor inter-governmental relations, and a national priority shift from being pro-poor to pro-economic growth diluted the political will and impetus to improve the lives of the people.

While sanitation policy frameworks in South Africa recommend a multi-stakeholder approach, sanitation delivery in Inanda was state-centric, with limited community participation in decision-making, and the lack of mechanisms to mobilise communities to share the responsibility of improving their sanitation dilemma. Swyngedouw (2005: 2001) aligns such order of participation to the disconnect between the spheres of institutional governance where the “second order” of governance, which is the actual sphere of implementation, being far removed from the “first order” or “meta governance”, which refers to the principles of governmentality instituting hierarchy between orders of governance. This study found that the potential hierarchy in governance resulted in community-led sanitation initiatives in Inanda being minimal in areas surveyed, burdening the municipality with the total responsibility of services, and perpetuating dependence on government.

Conceptualising sanitation within the framework of governance was pertinent for this study, while governance in different disciplines has various definitions. The commonality in the definitions of governance alludes to an integrated nature of governing. It focuses on the interactive relationship between the state, market and civil society actors, who have a stake in the delivery of public services and resolving societal problems (Kooiman, 2003), and that interactive governance is fundamental to sustainable development (Hall, 2011).

7.2.1 GOVERNANCE AS A CONCEPTUAL EDIFICE FOR SANITATION DELIVERY

i) Theoretical and Conceptual Lens of Sanitation Governance in Inanda

While some theorists found that applying governance as a central organising framework is a form of “methodological anarchy and definitional chaos”, its applicability around the world has become increasingly popular as a useful tool to assess how practitioners deliver public services (Hubbard *et al.*, 2002: 192). Robichau (2011) is of the opinion that the ‘definitional conundrum of governance’ may be dispelled by exploring the ‘logic of governance’ in empirical applications.

This study therefore applied ‘governance’ as an organising framework to assess the delivery of sanitation in Inanda, Durban. Scholars observed that defining governance as an organising framework was complex and sometimes chaotic, with blurred boundaries between the many actors (Stoker, 1998; Hubbard *et al.*, 2002; Kooiman, 2003; Robinson & Keating, 2005; Robichau, 2011).

This thesis selected the definitional commonalities identified by various scholars, who adopt a multidisciplinary approach to studying governance. The study of sanitation governance in Inanda, was complex. The exploration of collective roles and responsibilities of multiple actors from within the public sector, private sector and civil society (local communities) also suggested that governing was a dynamic process (Kooiman, 2003). The study applied the theory of ‘governmentality’ which espouses that it is the knowledge and science of government that determines how the state balances the social, political, economic dimensions so that it is of service to its people (Foucault, 1991). According to Foucault, governance referred to the state’s interaction through the processes of governing with actors internal and external to itself. The state then adopts a governing style referred to as the ‘art of governing’. This study found that the art of sanitation governance in South Africa is based on a decentralised governance model through devolution of responsibility to sub-levels of government (Muller, 2002). Decentralisation was the mechanism to achieve fiscal and administrative efficiency, as well as an attempt to increase citizen’s participation in

governing. Post (2011) cautioned that decentralisation yielded complex systems of shared governance. The complexity and confusion arises when defining governing responsibilities of actors from within and beyond the state.

Sanitation delivery in Inanda is largely the responsibility of government. The study found that the South African governance system employed what Foucault called the ‘tactics’ of the state or the ‘art of government’, where the state tactically asserts its authority through regulatory governance. The state interacts with the governed through a perceived ‘social contract’ yet still wields power over the governed (Foucault, 1991), through selecting neoliberal governing strategies for economic growth and relegating its social ideals (Bond, 1999). In South Africa, the precedence of the GEAR macro-economic policies over the RDP social justice principles remains a contentious argument amongst scholars (Bond, 1999; Heller, 2001).

The significance of Foucault’s theory of governmentality lies in the ability of the state to build indigenous ‘art of governing’ that will contribute to social cohesion (Joseph, 2010). This study explored how the state (with particular reference to eThekweni Municipality which is an entity of local government in the South African decentralised governance model), employed different governing styles in sanitation delivery in Inanda, in the city of Durban.

The study of sanitation in Inanda also drew on the principles of good governance to assess what Foucault called the ‘conduct of conduct’ (Swygendouw, 2005), where state deploys mechanisms of rules and regulations to protect its political and economic agendas. According to the UNDP (1997), good governance is the criterion for assessing such conduct enacted via machinations of governance adopted by the state in the distribution of public resources. The founding principles of good governance strengthen the integrity of government by adopting an inclusive, representative, accountable, and transparent approach in governing (UNDP, 1997; Auclair, 2001). According to Halfani (1997), governance guides the institutional framework within the state while good governance ensures equity and the rule of law in the delivery of services. Kinuthia-Njenga (1996) suggests that the principles of good governance form the founding bases in the partnership between government, private sector, and civil society. This study drew on the principles of good governance to assess the impact of multi-stakeholder interaction in the provision of sanitation of services in Inanda.

ii) Multi-stakeholder Sanitation Governance in Inanda

The study found that the role of the state, private sector and civil society (local communities) were significant, albeit at different scales, in the delivery of sanitation in Inanda. While sanitation delivery was state-led, the private sector's role was significant in plugging the skills deficiency for expeditious delivery of sanitation to Inanda by outsourcing the installation of bulk infrastructure. Outsourcing was a mechanism adopted to address the supply side constraints of government. The role of civil society (communities) was minimal in the delivery process.

iii) The role of organs of state in Sanitation Governance in Inanda

The Constitution of South Africa (Act 108 of 1996) entrenches co-operative governance as a key principle in its decentralised governance model. It is envisaged that each sphere of this framework is distinctive, interrelated and interdependent but working in synergy between and across the spheres to achieve the aims of co-operative governance. Sanitation delivery is devolved to the sphere of local government. Successful provision of adequate sanitation hinges on the commitment to the principles of co-operative governance. The Municipal Systems Act (Act 32 of 2000) provides executive authority to local government to enact these principles through engaging all spheres of government in developmentally oriented planning and the provision of basic services. The White Paper on Local Government (1998) identifies municipalities as key in operationalising developmental objectives by integrating, co-ordinating and planning the delivery of municipal services like sanitation.

Scholars proffer that in a decentralised governance framework, good inter-governmental relations is the glue for co-ordinated democratic practice yielding optimal service delivery results. However, inconsistencies and inability of the different spheres of government to perform their function with shared common focus results in the fragmentation in both vertical and horizontal synergy in a co-operative governance system resulting ultimately in poor service delivery. Competition rather than co-operation is detrimental to service oriented outcomes (Wittenberg, 2003; Edwards, 2008; Ile, 2010).

This study of sanitation delivery in Inanda has found that the provision of sanitation was a multi-sphere function with local government responsible for implementation, while national government regulated and provincial government provided technical support and monitoring. This study revealed that co-operative governance in sanitation delivery was discordant in eThekweni Municipality. Inter-governmental relationships were weak. An overall assessment suggested that there was no expression of high levels of co-operation and collaboration, and that the three spheres of government did not operate synchronously to deliver integrated sanitation services. There was poor alignment and co-ordination of annual sanitation programmes with other departmental programmes within the eThekweni Municipality. This led to wastage of resources when poorly completed *ad hoc* work needed to be reconstructed to correct irregularities arising from the lack of integration, co-ordination and joint planning of sanitation provision with other services like roads and housing delivery. While reporting progress on sanitation provision was periodic and adhered to, communication and sharing implementation knowledge and experiences was limited, resulting in poorly co-ordinated and sub-optimal sanitation delivery in Inanda.

Similarly, weak joint departmental efforts in the amelioration of sanitation problems in Inanda indicated that solutions were not collaboratively crafted and that the provision of adequate sanitation was not a priority for all departments. The 'shared governance' strategy proved complex as there was confusion resulting in unclear definition of roles and responsibilities within the eThekweni Municipality regarding sanitation delivery and access to hygiene education for communities in Inanda. This led to delayed eradication of backlogs, poor access to facilities and disjointed delivery of sanitation infrastructure. Furthermore, there was discord amongst departments at local government level regarding the responsibility to deliver sanitation to the spiralling informal settlements in Inanda. Various departmental officials felt that responsibilities for sanitation delivery were imposed upon them as it did not constitute their core function and competency. This translated to fragmentation in the system where EWS felt that Health Practitioners were working against their policy of 'some for all and not all for some' by encouraging communities to demand waterborne rather than dry eco-san or basic sanitation services resulting in dissatisfaction and rejection of sanitation services being provided to them.

Councillors in Inanda also alluded to faultlines in inter-governmental synergy which compromised speedy sanitation delivery. The repercussions of weak inter-governmental synergy and breakdown in joint financial planning were evident in sanitation in schools in Inanda. Education is the mandate of provincial government while sanitation delivery was the responsibility of local government. Councillors in Inanda identified the gross neglect of sanitation at schools and assigned the problem to the lack of co-operative governance and 'one goal', yet citizens view government as one institution mandated to deliver services.

The overall cracks in the governance systems for sanitation provision in Inanda suggested that service delivery outcomes were destined to fail. Unco-ordinated efforts, institutional setbacks and fragmented planning exacerbated the slow delivery of sanitation. These findings corresponded with previous research (Everatt & Smith, 2008) which stated that sanitation delivery in Inanda was challenged due to the ineffective sanitation governance as departments still worked in 'silos'. Ile (2010) also noted that the reason for the lack of commitment to the principles of co-operative government thwarts the aim of efficient service delivery in a decentralised governance system. He found that competition between departments, weak leadership and delays in instituting critical legislative frameworks like the Inter-governmental Framework Act (2005) contributed to poor inter-governmental relations.

iv) Harnessing Financial Resources

According to UNESCO, sustainable sanitation solution is only achievable through collaborative efforts of local government, investors and communities (The Water Wheel, 2008). Financial investment and inter-sectoral support is pivotal in addressing the sanitation crisis globally (Bradford, 2004). The report on 'Progress with Commitment to the eThekweni Declaration (2008)' toward the achievement of the MDGs reflected that South Africa has made progress with halving the number of people living without sanitation. However, the country has not complied fully with the financial resource commitment for sanitation.

The Head of EWS affirmed that the national funding for sanitation infrastructure was insufficient to serve the vast needs of residents of Inanda as well as across the Municipality. Furthermore, no institutional support was offered by national or provincial government for

operations and maintenance of facilities provided to poor communities like Inanda. The Municipality is solely responsible for costs. Sanitation is not a direct revenue generating service especially in informal and low cost settlement types. Yet, costs of providing sanitation to these households soar annually as demand increases. The Municipality's responsibility of service delivery, especially sanitation and water, is challenged with moving targets as communities migrated to areas like Inanda which is located on the urban fringe, in close proximity to an industrial zone, promising employment.

The decentralised governance model in South Africa was aimed at instituting fiscal devolution of responsibilities for expenditure on basic services to sub-levels of government. A move away from financial dependence on national funding allocations was encouraged, especially at municipal level. However, scholars have contended that fiscal devolution was a political and economic strategy of the ruling party to wield power over sub-levels (Heller, 2001; Niksic, 2004). The devolved responsibility for sanitation was challenged by the lack of financial resources to eradicate backlogs and meet the MDG targets before 2015. It is therefore dependent on other sources of funding. National government partially subsidised sanitation infrastructure for previously unserved areas through the national Municipal Infrastructure Grant. This study found that the allocation was insufficient to meet sanitation needs in Inanda as well as other areas within the EMA. Population growth in Inanda through in-migration increased the demand for services, yet national fiscal resource allocation remained unchanged.

The eThekweni Municipality was responsible for sanitation maintenance and operations but was struggling to provide maintenance and rehabilitation support to communities in Inanda. The cost of maintenance and operations of sanitation services drawn from the Municipality was inadequate. Communities were unable to pay for regular maintenance of their facilities and there was high dependence on the eThekweni Municipality to deliver sanitation infrastructure and to bear the cost of maintaining their toilet facility. The study found that the impact of insufficient financial resources perpetuated inadequate sanitation and unhygienic living conditions in Inanda.

Decentralised governance through devolution of responsibility without sufficient fiscal provision does not yield optimal service delivery outcomes (Wittenberg, 2003; Ile, 2010). While sub-levels of government (like municipalities) may have the capacity to manage fiscal resources, there was systemic lack of proper planning for alignment of different budget cycles at national and sub-levels within the South African governance system (Momoniat, no date).

The inability to maintain, operate and provide a higher level of sanitation services to communities in Inanda due to high costs and limited resources emerged as an impediment to sanitation access. The eThekweni Municipality was regarded as financially sound and received no fiscal support for sanitation operations from provincial government. Momoniat (no date) asserts that municipalities have the capacity and the responsibility to generate its required revenue to deliver adequate services to people within its jurisdiction. The study found that the eThekweni Municipality's inability to harness sufficient fiscal resources for improved sanitation services in Inanda was evident in the experiences and perceptions of communities.

There was no evidence of any substantial additional external financial investment from the private sector, donors or national government to alleviate the sanitation crisis in Inanda. Sanitation delivery appeared to be the sole responsibility of the Municipality, despite rapidly growing demands. Insufficient funds for operations and maintenance perpetuated the unhealthy and unsanitary environment due to overflowing toilets and sludge effluence in most communities in Inanda. Loads of faecal waste removed from VIP pits were being dumped illegally in gorges/or open fields in Inanda, much to the discontent of residents. There was a critical need for more efficient and additional waste water treatment plants to ameliorate the sludge management crises. Wall *et al.*, (2006) stated that financial distress is the main barrier to sustainable service delivery countrywide. Municipalities are financially challenged as non-payment, increased demand for free basic services, repairs to ailing infrastructure as well as imprudent allocation of funds, reduced financial efficiency (Wall *et al.*, 2006).

v) Political representation expedites service delivery through reduced bureaucracy

According to Cheema and Rondellini (2007), decentralised local governance increases political accountability, where political representatives influence policy decision in favour of the people, thereby affording expeditious service delivery to a larger number of people through reduced bureaucracy. There was limited intervention by political representatives to improve the poor sanitary conditions. Respondents' dejection and lack of confidence in local councillors was evident. They felt that councillors' support with alleviating their water and sanitation crisis was minimal, and that their living conditions in the democratic era have remained unchanged. Structures, such as ward committees established for community engagement with political representatives were defunct and, in areas where it did exist, it only benefitted a privileged few. Councillors in Inanda criticised the Municipality for their unresponsiveness to the sanitation demands of the growing population in Inanda. They also complained about the Municipality's inability to correct the gross neglect of sanitation services which perpetuated the apartheid planning legacies. For example, lack of access roads prevented bulk infrastructure reticulation and maintenance services for existing poor toilet facilities.

Steinich (2000) cautions that decentralised local political governance structures do not always work to deepen democracy. It could exercise greater control on local people, stifling independence and leaving the majority apathetic. However, political power may serve to grow a few local élites, thereby attenuating accountability by political representatives. However, this study suggests that the plight of poor living in squalor with worsening sanitation challenges, did not benefit from political representation. They also noted the inability of councillors to effectively manage and utilise mechanisms such as ward committees which were instituted to serve as an interface between the community and government to increase accountability, and ensure demand-responsive service delivery.

7.2.2 THE ROLE OF THE PRIVATE SECTOR IN SANITATION DELIVERY

i) Private Sector filling the Skills Gap

Ile (2010) points out that weak institutional governance and capacity constraint hampered co-ordinated service delivery. This study found that weakness in institutional capacity marred expeditious sanitation delivery. Departments within eThekweni Municipality have struggled to provide a basic level of sanitation to a large portion of informal settlements within the Inanda area. This difficulty exists due to the diversity of skills required to address technical challenges, land tenure issues, community mobilisation and social problems in poverty-stricken communities. Diverse institutional capacity is essential in addressing a plethora of development challenges concurrently to expedite and co-ordinate service delivery (Allen, *et al.*, 2006).

According to Muller (2010), municipalities countrywide lacked appropriately skilled personnel to expeditiously meet the increased demand for sanitation. This study found that the eThekweni Municipality was no different. The public procurement process was sought as an alternate service delivery option (National Treasury, 2007) to acquire the necessary skills to eradicate backlogs expeditiously, and provide ablution facilities for the growing informal settlements in Inanda. The EWS Unit is hugely dependent on private companies to deliver sanitation to residents of Inanda as well as other areas in the EMA. Private companies were commissioned to execute the rapid delivery of sanitation for informal settlement through the provision of communal ablution blocks at exorbitant costs. There were a number of implementation drawbacks and delivery targets that were unmet by the engineering company hired by the Municipality. Additional funds were required for successful completion of the project, as the original tendered amount was insufficient. An assessment of outsourcing of sanitation delivery in Inanda found that this constituted private sector profiteering rather than service delivery gains. The study found that, in this instance, despite large scale investment by government and the appropriate expertise drawn from the private sector, timeous delivery of sanitation to informal settlements was not met and communities remained dissatisfied.

Similarly, experiences with an alternative service delivery approach through public private partnership arrangements in Queenstown and Dolphin Coast for the purposes of increased financial injection and technical expertise yielded unsatisfactory results as users were unwilling and unable to pay exorbitant prices for services (Sohail *et al.*, 2008). In the Eastern Cape, KwaZulu-Natal, Mpumalanga and Northern Province, the BoTT model aimed at expediting service delivery was aborted due to community rejection of the responsibility to take ownership of maintenance and operations of water and sanitation infrastructure (Muller, 2002).

While the White Paper on Local Government affords municipalities the latitude to select alternative delivery options, its choice contradicted the Foucauldian human capacity development ideal of a neoliberal state like South Africa (Lemke, 2001). The eradication of sanitation backlogs undertaken through contracting out services in Inanda further refutes Foucault's argument that links the aims of decentralised local governance to empowerment of citizens through private sector engagement. The alternative service delivery option to expedite sanitation delivery in Inanda realised greater gains to the large private company than the beneficiaries who were utilised for purely labour intensive tasks, without any significant empowerment for their future development.

ii) Tripartite Partnership for Skills Transfer

The eThekweni Municipality entered into tripartite arrangements with private companies' corporate social responsibility programmes through the EPWP, that empowered community members through on-site training. Although programmes were successfully completed, the impact thereof was marginal. Post-training, local contractors became slaves to the notion of 'tenderpreneurship' rather than spreading and growing their businesses and skills base. Small contractors were largely dependent on government contracts. Lack of capital in the production sector resulted in sub-standard materials for sanitation infrastructure construction. Although departmental reports and officials confirmed that EWS ensured quality of infrastructure and materials utilised for sanitation projects, experiences of communities indicate differently. Poor quality top structures of toilets provided by the Municipality enraged local communities as they were unable to repair or replace their toilets due to high costs.

The study also found that small local contractors were employed by the established companies as semi-skilled sub-contractors. While a degree of training and skills transfer was evident, this was only in the labour intensive aspect of the work. Local contractors were not trained or engaged in strategic interventions like construction planning, project management or financial planning, which will equip them with management skills and make them more marketable as small businesses. In other countries like Peru, the success of small scale entrepreneurs engaged in creating integrated sanitation delivery models, not only built capacities but empowered them to operate as independent entities (Boskovich, 2008).

It was found in this study that the state-led approach to sanitation delivery is flawed in its approach. Its weak attempts to empower local communities through delivery mechanisms failed the ultimate goal of improved service delivery and empowerment in a decentralised local governance system. Furthermore, against the backdrop of poverty and unemployment the local authority's alternative outsourcing approach does not present opportunities for equitable participation by ordinary citizens. Inequitable engagement is characteristic of the entrepreneurial neoliberal approach that excludes those who do not have the ability to engage in new democracies, and benefits a privileged few (Heller, 2001).

7.2.3 THE ROLE OF COMMUNITIES IN SANITATION DELIVERY IN INANDA

The aim of decentralised local governance is to enhance public participation, expedite service delivery, introduce innovation and empowerment, and mobilise private resources for investment in infrastructure and facilities (Cheema & Rondellini, 2007).

The MSA (Act 32 of 2000) provides for integrated service delivery through the IDP of a municipality. The Act also institutes participatory governance as a key tenet of local governance. The study found that participation in sanitation delivery was an example of tokenism. It was predominantly what Arnstein's Ladder of Citizen's Participation (Burns *et al.*, 1994) illustrates as degrees of tokenism, which constituted information, consultation and placation. Community participation in Inanda was merely through information sharing. No joint participative planning from project inception was evident. This emerged when respondents complained profusely that the type of facility provided did not meet their needs.

Furthermore, rejection of innovative sanitation solutions suggested that communities did not understand the benefits because of poor communication and lack of experience in participatory governance. A participatory approach is aimed at joint decision-making on the type of facilities for increased user acceptance and sustainability of operations and maintenance. The study found that communities were not afforded a choice of toilet technology; they felt that the toilets provided by government was imposed on them and was complicated and difficult to maintain. The findings of this study emphasised that communities were unhappy with the technological burden and the cost attached to maintaining the innovative toilet solutions provided to them.

A feeling of marginalisation and exclusion prevailed when communities in rural and peri-urban Inanda were provided with VIP and UDD types of sanitation facilities. Almost 18 years into democracy, communities in Inanda believed that government has failed to address the basic needs of the poor; therefore, progressing up the sanitation ladder to better services was a distant reality. Innovative dry sanitation (UDD) technology was perceived as regressive rather than an environmentally friendly sanitation solution as advanced by the local authority. Insufficient participatory planning and decision-making, together with potentially inappropriate education on eco-friendly sanitation facilities, thwarted the eThekweni Municipality's efforts to recycle human waste and encourage reuse for agriculture at the household level. The use of dehydrated human excreta was considered taboo and culturally unacceptable.

Community partnerships were in the form of local steering committees for operations and maintenance of communal ablution facilities, following the Combined Rapid Delivery Programme for informal settlements. Such committees proved ineffective due to micro-level people dynamics, lack of education and political interference. Engagement in sanitation projects were seen as income opportunities for the select few. Failure of local committees to execute their role in monitoring and operations arrangements led to facilities becoming unusable.

Sabela & Reddy (1996) contend that in the decentralised mode of governance, local government which is closer to the people, was well positioned to facilitate decisions for local

development. However, successful policy implementation is achieved through consultation and co-operation with various local actors. The findings of this study suggested that the inability of the Municipality to establish sustainable partnerships with local communities for the maintenance and operation of the facilities, derailed its goal of adequate sanitation in Inanda. Within three months of construction, communal ablution facilities were vandalised, dirty and unhygienic to use, and in most instances facilities were non-operational because infrastructure was broken and stolen.

According to Swygendouw (2005), political governance is an aspect of social innovation and a terrain for advancing inclusive developmental processes. It denotes a move away from state-centric institutional arrangements for policy implementation. It includes the state, yet goes beyond the state, promoting social innovation and inclusivity.

Ward committees, legislated by the MSA (Act 32 of 2000), were aimed at increasing participatory governance at a local level. In Inanda community participation and partnerships through ward committees were non-existent or where they did exist, operations were inconsistent and most times in disarray. From a developmental perspective, deliberate and representative democratic participation of ordinary citizens is envisaged in decision-making, not just as recipients of services (Govender, 2008). This study found that participation in sanitation delivery was limited. It was in a form that Burns *et al.*, (1994) cautioned against, passive observation, non-participation, and no engagement in decision-making.

Efficient sanitation delivery is dependent on synergistic relationships between the sectoral partners in the government sector, private sector support and meaningful community engagement. Lessons from developing countries around the world indicate that the key to sustainable sanitation delivery is community-driven and society centric rather than government driven-state centric delivery (Boskovich, 2008; Mehta & Movik, 2011).

7.3 COMMUNITY PERCEPTIONS AND EXPERIENCES WITH SANITATION IN INANDA

The study explored sanitation services by categorically distinguishing the peri-urban from the rural, and further delineating them according to the housing type, as sanitation facilities varied accordingly (DWAF, 1994).

7.3.1 EXPERIENCES AND PERCEPTIONS OF SANITATION DELIVERY OF THOSE LIVING IN PERI-URBAN INANDA

The study has found that due to its history of neglect, communities in Inanda lived without access to sanitation for decades. Since the advent of democracy in 1994, areas in Inanda began to receive some basic services.

However, this study has found that Inanda still suffered gross deficiency in adequate sanitation access. Almost half of the respondent population were still living in informal dwellings in the peri-urban areas. Since 1994 large scale provision of VIP toilets as defined by the National Sanitation Policy (DWAF, 1996), was delivered to residents. Poor spatial planning inherited from the apartheid era when township areas were never a development priority, persisted. This was exacerbated by the lack of integrated package of services for such areas, resulting in facilities being built in-between dwellings which already lacked pedestrian and motor vehicle access, and decent housing. Informal settlements were weak tin structures built adjacent (or almost adjoined) to each other.

The study found that on average there were 5 people living in a small shack. Shack dwellers had to share facilities which in effect trebled the number of people utilising one facility. VIP toilets which were installed between 1996 and 2000 were dysfunctional due to lack of maintenance, leaving communities with no option but to resort to open defecation or other unhygienic and humiliating options. The problem stemmed from the Municipality's neglect and lack of a sludge management strategy. Pits began to overflow, and communities resorted to primitive means such as bucket scoop desludging of pits. Exposure to faecal matter exacerbated the already poor environmental and health conditions. The Municipality's

reactive measures resulted in services being procured from untrained small enterprise operators who did not have the knowledge and capacity to engage in sludge management. The dominant negative experiences with sanitation in peri-urban Inanda can be summarised as follows:

- The eThekweni Municipality was reactive and did not proactively plan for VIP clearance and sludge management. Communities were also unable to manage facilities on their own due to cost and specialised nature of the task.
- Lack of access roads made pit clearance more difficult.
- Communities disposed of sludge on the verges or in the solid waste skips, causing greater environmental hazards.
- Service providers hired to clear pits were inexperienced.
- Pits filled at a faster rate due to the sharing of facilities by three or more families. Inadequate and unhygienic facilities were equivalent to having no facility at all.
- Those living in formal houses found the close proximity of VIP toilets to their house annoying and a health hazard.
- Communal ablution blocks with toilets and wash facilities were insufficient for the number of households which required the service. Crime, vandalism and poor operations and maintenance reversed the purpose and intention of the intervention.
- Respondents of peri-urban informal settlements which comprised almost half of the study population were most dissatisfied. They felt they were the ‘forgotten’ citizens, ‘second class’ citizens, and some even felt they were being “treated like animals” with regard to sanitation provision.
- Vulnerable groups (women, children, aged and physically disabled) suffered immensely due to inadequate sanitation facilities. Custom designed infrastructure was not provided for differently-abled people. Accessing a toilet was the greatest challenge as facilities for informal settlements were far from their homes.

The National Sanitation Policy (DWAF, 1996) describes the lowest rung of the ‘sanitation ladder’ as access to a ventilated improved pit latrine (VIP), especially for those who have never had access to sanitation. The intention of initial adequate basic level of sanitation was to speedily respond to the interrelated problems of health, environment, hygiene, and to restore

human dignity. However, at the same time, the analogy of the ‘sanitation ladder’ implicitly suggests that this should not be the final and only solution. Communities should graduate to better facilities as conditions allow. Government should strive to enable the move up the ladder and not believe that communities are homogenous. Empirical evidence gathered in this study affirmed that sanitation delivery in Inanda was not progressive, and communities were of the opinion that their living conditions were worsening, that government’s promise of better services was just a pipe dream.

The empirical evidence revealed in this study also refutes claims of the speedy short term sanitation solutions such as Community Ablution Blocks being a novel solution to informal settlement toilet needs (<http://www.citizen.co.za>). This study also found that the claims of social, environmental and health benefits through communal container facilities in Inanda were short-lived. Poor maintenance, operations, monitoring and evaluation during the lifespan of such facilities returned communities to primitive means of defecation due to the desperation of living without functional facilities.

i) Sanitation Infrastructure: ‘Falling Down the Pit’

In both peri-urban and rural Inanda, communities battled with poor quality sanitation infrastructure provided by the Municipality. Toilet top-structures were not durable and broke in inclement weather or due to poor quality building materials. Communities were unable to repair facilities due to high cost of replacement. They had to contend with limited or no access, reverting to open defecation. Poor design and quality of the pit resulted in seepage and environmental contamination. The DWAF’s report on the State of Infrastructure and its Management (DWAF, 2005) categorically stated that the building of water services infrastructure (including sanitation) alone did not constitute service delivery. Sustainability of operations and maintenance determine the net effect on service delivery. These should be planned and implemented at household level together with owners for sustainability.

ii) Sanitation Innovation: The “eThekweni Toilet”, a User’s Nightmare

EThekweni Municipality’s lauded innovation of dry sanitation Urine Diversion Dehydration (UDD) technologies received international acclaim. However, in practice, it proved to be a nightmare. Users rejected the eco-friendly twin vault type of facility which was provided to communities on the premise that it would provide sanitation access to each household in peri-urban and rural Inanda. It would also support and promote organic farming methods if dry pit contents were utilised as fertiliser in domestic gardens. Experiences in Inanda revealed that the UDD toilet was unsuitable and unsustainable. The objective of environmental integrity was questionable as users were unable to utilise the technology as designed. Respondents complained of the following critical factors which made the use of the UDD facility unsuitable:

- Insufficient user education and impracticality of instructions to utilise the facility appropriately.
- Toilet structures were not durable and unstable.
- Incessant vector infestation.
- Reluctance of users to dig up their own faeces.
- Cultural unacceptability. Women found it difficult to use, as the technology for separation of urine from faeces was not practical for females. Inability to utilise the facility as expected resulted in embarrassing outcomes.
- Toilets were unsafe due to the distance from dwellings (usually far into their gardens to allow for pit emptying and use of contents for agricultural purposes).
- Users found it unhygienic, smelly and unpleasant as contents were visible and exposed.
- Unavailability and difficulty of utilising ash or sand to cover excreta after use discouraged users, especially the aged and young children.
- Users rejected the UDD innovation as they felt that it was not what they wanted and that it was imposed onto them by the Municipality.

Communities in Inanda rejected the facilities and returned to open defecation, which was easier and more convenient. UDD toilets were then utilised as storerooms or animal pens.

Community experiences with the UDD sanitation innovation proved that state-driven policies and imposed sanitation solutions denied local people an opportunity to choose the best solution themselves (Dahlstedt, 2009). State centric governance keeps citizens on the periphery (Bell *et al.*, 2010). Society centric governance could be an effective mechanism to enhance state capacity to deliver services (Bell *et al.*, 2010).

The global drive for sanitation innovation for improved access and eradication of open defecation is viewed as a panacea to millions living without access to a toilet. However, joint planning and decision-making, and user convenience promises greater success for innovative sanitation technology. The ‘Peepoo’ technology piloted in Kenya and Bangladesh yielded greater success as the biodegradable ‘peepoo’ bag was more user friendly and dignified. Women and children were amenable to its use as it obviated the need to leave their homes. Privacy was welcomed as the bag could be used in the confines of one’s home. Women found it to be a dignified and safer option as there was minimal contact with the faeces. The ‘peepoo’ bag may be disposed into the ground or collected by micro-enterprises operators who cleared deposits on a daily basis for safe disposal or recycling.

iii) Women Primarily Responsible and are Victims of Poor Sanitation

Scholars are of the opinion that women bear a triple burden in the absence of proper access to sanitation which perpetuates poverty and hardship. Maintenance of sanitation facilities consumed many hours of their day, often restricting their economic potential of generating an income. They also became victims to crime and ill health through inadequate sanitation (Mara *et al.*, 2010; Mehta & Movik, 2011; Reddy & Batchelor, 2012). This study found that women bear primary responsibility for sanitation in both peri-urban and rural Inanda. Women are most affected due to the risk to which they were exposed. Expression of fear of crime was dominant in this study. The risk was when women needed to use communal toilets 200 metres or more away from their homes at night, or defecate openly in the dark. The fear of being raped was an inevitable psychological trauma. Young girls’ absenteeism from school increased due to embarrassment of inadequate and inaccessible sanitation facilities. Women were challenged without easy access to toilets on their property, especially when raising infants and caring for the infirm. They alluded to using the best available solution, which

include primitive methods of defecation (defecation in plastic bags), compromising privacy and dignity.

Certain habitual sanitation practices were culturally influenced in many communities worldwide, often promoted by the absence of facilities. In Kenya, apart from open defecation, men and women alike defecated in polythene bags and flung them into the fields, which were dubbed as 'flying toilets'. In Bangladesh, people crouched over and defecated in streams and swampy areas, dubbed as 'hanging toilets' (Munch *et al.*, 2009). In rural Inanda, women are steeped in traditional practices, and values and therefore do not utilise the same facilities as male family members. They still practised open defecation in secluded bushes. Innovations around dry UDD sanitation were impractical as evacuation of the pits was the responsibility of the householder. In these areas, most rural men are migrant workers and only return home periodically. Women were challenged daily with the physical decanting of faecal matter of their family members who refused or were unable to utilise the UDD facilities. They also found it culturally unacceptable.

The need for a toilet is a natural involuntary response which is compromised in the absence of a designated facility. There is gross discrimination against women in Inanda due to poor sanitation. Gupta *et al.* (2010) argue that this is a common phenomenon in the developing world, and undoubtedly a violation of their rights as it denies women time to engage in economic activities to generate an income, impacted on their health and deprived them of educational benefits, as absenteeism at schools were high amongst girls due to the lack of toilet facilities.

iv) Women as Catalysts for Change in Sanitation Delivery

The Strategic Framework for Water Services categorically states that women should be actively engaged in sanitation (and water services) planning, decision-making, operations and maintenance (DWAF, 2003). One of the most significant shortfalls identified in this study was the absence of women in driving sanitation delivery projects in Inanda. Yet, women were found to be more committed and hardworking than men when engaged in toilet construction projects in Inanda. In India and other countries, women were catalysts for change through

leading community-led total sanitation projects. Women were instrumental in sanitation development; they understood and were emotionally more able to educate family members and encourage other women regarding elimination of open defecation, sanitation hygiene, behavioural change, and acceptance of innovative sanitation technology to preserve their dignity and safety (Asian Development Bank, 2009; Munch *et al.*, 2009; Mehta & Movik, 2011).

In Inanda, peri-urban and rural women were burdened with the responsibility to clean up after poor methods of faecal disposal (in packets, in buckets or even encouraging their children to use the nearby bushes). Both peri-urban and rural women were exposed to the risk of crime. Yet, there was no distinct evidence to suggest that the ability of women to promote good sanitary practices or mobilise community driven initiatives in sanitation was maximised. Lack of leadership, foresight and the inability of government to identify women as catalysts for development and change in Inanda were evident. In developing countries like India and Bangladesh, women successfully instituted a mental and psychological paradigm shift amongst rural and poor communities through their sanitation awareness and activism to change mindsets and reduce open defecation (Munch *et al.*, 2009; Mehta & Movik, 2011).

v) *Violation of Human Rights*

The Constitution (Act 108 of 1996) of South Africa and the United Nations General Assembly identified water and sanitation as human rights (UNICEF and WHO, 2012). The Human Rights Commission of South Africa (SAHRC) underscores the international obligations of sanitation delivery. It is based on safely accessible facilities, safe top-structure, culturally acceptable solutions and women and child-friendly facilities. The Commission also underscores the inter-dependent and intertwined (human) rights leading to a better life, dignity, good health and safety (SAHRC, 2012). This study found that communities were critical about government's commitment to provision of basic services. They felt that their right to health through water provision, and their right to dignity through improved sanitation, were violated as all they had access to was inadequate, interrupted, unclean water supplies and smelly, insect infested toilets, with overflowing pits. Sanitation delivery did not meet

their needs. Promises of access to housing for all and basic services were delayed, almost 18 years into democracy.

Peri-urban Inanda's increasing development challenges delayed the efficient delivery of sanitation: migratory patterns, undulating geological terrain, abject poverty and unplanned settlement patterns and inadequate housing were amongst the many development challenges that were prevalent. Communities felt that their lives and living environments had not changed since they had acquired democratic rights. Despite living in a democratic era, the goal of each household having its own toilet was not achieved. Access to sanitation was a physiological need that restores the dignity inherent in every human being. Yet, thousands still share toilet and water facilities in Inanda.

These findings suggest that the MDG goals are far from being realised in Inanda. Yet, MDG Goal 11 identifies sanitation access as one of its key indicators for improved living conditions of informal settlement dwellers (United Nations, 2009). Furthermore, eThekweni Municipality's response to the provision of sanitation to informal settlements was through the construction of shared facilities or communal ablution blocks which do not represent improved sanitation or living conditions (UNICEF and WHO, 2012). This illustrates further policy misinterpretation in addressing sanitation in Inanda.

The findings of this study affirmed that the local authorities are facing major challenges with sanitation implementation. According to constitutional and international law, the inadequate provision of sanitation in Inanda is tantamount to the violation of human rights.

vi) Sanitation: Panacea to Improved Health

The key principles of the National Sanitation Policy (1996) in South Africa as well as the WHO (2004), refer to the access to adequate facilities and hygiene education as the main contributing factors for improved healthy living. In this study, respondents were of the opinion that poor sanitation caused several illnesses suffered by their children and the aged. Diarrhoea-related illness and rashes caused by faecal contamination was rife in the area. Respondents felt helpless in light of limited access to water per household, where sanitary

practices such as bathing and frequent hand washing were considered a luxury. Furthermore, the study found that the health awareness and communication strategy was ad hoc and ineffective. Promotion of health and hygiene education was limited and should be mainstreamed and provided on a regular basis (eThekweni Health Unit Report, 2008), as the state of poor sanitation is responsible for a number of illnesses, and even potential death of young children worldwide (Mara *et al.*, 2010).

vii) Environmental Impacts and Contamination

Although the collection of scientific environmental and ecological data was outside the scope of this study, other research carried out within the eThekweni Municipal area, including Inanda, revealed that the sludge management crisis was of great concern and hazardous to environmental integrity as it promoted ground-water contamination and pollution (Buckley *et al.*, 2007; Foxon *et al.*, 2007; Flores *et al.*, 2008). Appropriate user-friendly systems and optimum user compliance regarding effective sludge management was not yet achieved. Households were required to maintain and operate their facility and were overwhelmed due to lack of knowledge and support from the Municipality. Insufficient information and technical support was afforded to users on how best to deal with faecal disposal. Backup pit evacuation services offered by the Municipality for sustainable operations and maintenance were unaffordable, leading to neglect and inevitable environmental degradation.

viii) Economic Impact of Poor Sanitation

The study found that unemployment in Inanda was high and the majority of the respondents worked as temporary workers. Their ability to earn an income therefore depended on their fitness and good health. They did not have the luxury of 'sick leave'. The impact of poor sanitation on their health meant loss of income and sustenance for their family. Respondents also alluded to the stigma attached to people living in Inanda when they attend local clinics. People are known to be sickly and unable to work due to poor health which was exacerbated by the lack of sanitation facilities. Communities were despondent about improvement in their health unless their access to basic services such as water and sanitation improved. Mara *et al.* (2010), contend that the shortfall with mitigating the hazards of ill health was that treatment

was given through medication, yet improved sanitation shows greater promise of prevention and mitigation.

ix) Social and Psychological Issues Stemming from Inadequate Sanitation

This study revealed that a toilet is more than a physical structure serving a human need. It was also very private and personal for human beings. Proper sanitation provides a sense of dignity and pride. On the one hand, those who enjoyed waterborne flush toilets felt that they were a part of a progressive society. On the other hand, those who utilised shared facilities or had to resort to open defecation felt socially stigmatized and excluded, which affected their psychological well-being and stature in society.

x) Mechanisms to Monitor the Implementation of and Sanitation Improvement Programmes

This study found that the eThekweni Municipality's Water and Sanitation Department has made good progress in social and scientific sanitation research for innovative sanitation technology and practices (Bhagwan *et al.*, 2008). Large scale sanitation backlog eradication programmes were implemented. However, it did not reach the majority of the people of Inanda. This study found that there was a lack of effective monitoring and evaluation programmes. Occasional surveys to monitor progress and acceptability were executed, which in most cases reflected negative responses to objectives of the programmes. However, the absence of rigorous mechanisms to monitor and implement follow up programmes coupled with the lack of large scale community mobilisation and buy-in negated the intent and purposes of interventions. These shortcomings were evident in Inanda. Efforts to provide an adequate basic level of sanitation to communities in Inanda were thwarted by poor maintenance and ineffective education and information on appropriate methods of household sanitation maintenance and operations. User neglect and abuse of shared and UDD facilities provided by the Municipality were worsened due to reliance on government to maintain what communities in Inanda viewed as the 'municipality's' toilet.

This study suggests that there is a need for new monitoring tools to improve the achievement of sanitation targets, the speedy eradication of backlogs, and an ability to meet new sanitation demands in order to sustain user acceptance and satisfaction with facilities provided by the Municipality. Ongoing review and revision of monitoring tools have proven to be effective in achieving desired sanitation outcomes in Nigeria (Mwebaza, 2010; Cheng *et al.*, 2012).

This study also found that the eThekweni Municipality is struggling to meet increased demands and are in constant flux due to “moving targets”. This challenge is not unique to sanitation delivery in Inanda, but a South African problem due to the slow pace of eradicating infrastructure backlogs (MDG, Mid Term Country Report, 2007). Government delivery of basic services has only met the increase in demand for services while failing to reduce backlogs (Thompson & Nleya, 2008). However, the new tools for monitoring and evaluation of sanitation delivery in Inanda will enable more informed and sustainable delivery mechanisms. Furthermore, effective monitoring of sanitation delivery will justify onward planning and investment in areas like Inanda.

7.3.2 SANITATION HYGIENE EDUCATION AND PRACTICES IN INANDA

This study found that the efforts to promote sanitation hygiene and user education were insufficient across all areas surveyed in Inanda. Education and information dissemination only reached a small portion of residents. This was evident in the rejection of new sanitation technology, where communities reverted to traditional and often unhygienic practices. Planned initiatives pertained mainly to new technology that was introduced. The most significant deficiency was in the informal settlements where squalor conditions, illness and poverty were rife.

i) Water as a Subsidiary for Effective Sanitation and Hygiene Practices

The most significant finding regarding the accessibility of water was the inconsistency of supplies provided to poor communities, who were forced to resort to contaminated rivers (at risk of diseases) as well as illegal connections which were widespread. The lack of water forced communities to share or purchase water from neighbours, wash in rivers, steal water

from other homes, or cope without supplies. Hence there was an inability to improve personal hygiene or overcome poverty and indignity.

7.5 RECOMMENDATIONS OF THE STUDY

Studies of sanitation in most countries throughout the world reveal the following as some of the 'good' practice ingredients that give impetus to sanitation programmes (Asia Development Bank, 2009; Allen *et al*, 2008; Munch *et al.*, 2009; Mehta & Movik *et al.*, 2011):

- strong political support,
- a reflection of national pride through greater resource allocation and policy change, increased multi-stakeholder partnership and commitment,
- regular reviews by the leadership; partnerships with NGOs, CBOs, aid agencies, and government for sustainability,
- efficient and transparent delivery systems,
- community led programmes, and
- women empowerment and engagement in sanitation programmes.

The following recommendations emanate from this study:

i) Sanitation Policy Reviews

Sanitation is about meeting a human need of people living in different places. The heterogeneity of the geographical area and the diverse nature of populations in cities worldwide required policy diversification. According to Michelutti (2008), cities cannot implement a single policy guideline for sub-localities within its service area. Peri-urban settlements resulting from migratory patterns exert pressure on cities for services in territorially different areas, calling for different intervention agendas. Poor migrants moved to peri-urban areas away from the formal services network. This required policy change to deal with the locality and the nature of the occupants (Michelutti, 2008). The findings of this study resonate with the international problem of meeting sanitation needs and therefore recommend

that policy guidelines for policy implementation provide for adjustments to suite geographically heterogeneous formations in Inanda.

The suggestions of this study align to Coning's (2006) proposition of ongoing monitoring of implementation as a policy process. This enquiry of sanitation implementation in Inanda served as a monitoring process which confirmed that there is a need for review and amendment to current policy on basic household sanitation both at national and local level. The high expression of dissatisfaction of respondent communities is an indicator of fractures in the current policy and implementation process. Rigorous monitoring of similar contexts countrywide and review of policies henceforth, guiding the necessary adjustments in implementation is recommended (Coning, 2006).

The current backlog eradication programmes focus on community sanitation. This was in contradiction to the White Paper on Basic Household Sanitation which stipulates that minimum basic sanitation constitutes "a toilet facility for each household" (DWAF, 2001: 6). In addition, a review of regulatory guidelines and the development of a clear consistent definition of sanitation is required to lead local level sanitation delivery and policy interpretations.

ii) Sanitation Sector Financial Management Strategy

Sanitation has remained a "permanent stepchild" (Muller, 2008: 83) of water services. Financial allocation by government for sanitation should be separated from water because sanitation invariably takes second place to water. A strategy to ensure that sanitation is treated as a critical independent basic service should be developed. A key component of the strategy should focus on improved resource mobilisation and financial planning for operations and maintenance of sanitation for poor communities. The strategy should bind all implementing departments to the total end product and operations thereof, to correct the 'silo' working culture amongst departments. Governments of developing countries are urged to re-strategise and prioritise the delivery of water and sanitation facilities in conjunction with housing, basic services, infrastructure such as transport, energy, health and education, as well as promote access to land ownership in an integrated manner (MDG Report, 2011).

iii) Systematic local level monitoring and evaluation mechanisms

Sanitation is a daily critical need with serious shortfalls in provision, operations and maintenance. Clearly crafted indicators to assess local level sanitation with strategies for effective corrective action and mitigation measures are necessary. This should be an integral component of the eThekweni Water Services Plan to address the sanitation crises in poor communities.

iv) Bottom-Up Development through Community-Led Sanitation is recommended through:

- ***Increased bottom-up development:*** A more aggressive bottom-up development plan for the sanitation sector is essential.
- ***Encouraging Community-led Partnerships:*** Sanitation Development Partners through the concept of ‘communities of practice’ that brings people with diverse skills together to learn from each other about resolving problems is recommended. This should become a strategy for “building communities from the inside out”, where communities take leadership, utilise their knowledge-base as their asset and improve their lives (Kretzman & McKnight, 1993) through better sanitation.
- ***Effective Communication of Policy Guidelines:*** Articulation and understanding of government policy and guidelines via unambiguous communication will encourage communities to accept their individual responsibility and contribute to alleviating the sanitation crises. Aggressive policy discussions are recommended via ward committees and other public meetings to conscientise communities of their role in ensuring safer sanitation and hygienic practices.
- ***Stronger leadership to drive community initiatives for improved sanitation is necessary:*** Organized civil society (NGOs and CBOs) are critical ‘agents’ in the governance continuum, and should therefore engage in robust policy discussions and action plans regarding accessibility, adequacy, awareness and the economic benefits of good sanitation.

- ***Increase drive to mainstream sanitation information and health awareness is necessary:*** A need for an increased drive to institute sanitation education regarding the use of facilities and hygiene related information dissemination through a rigorous health awareness and communication strategy is imperative.

v) *Women as catalysts for development*

Women-led initiatives in countries like India, Bangladesh and Kenya have achieved phenomenal success with sanitation services, behavior change and healthy living (Ganguly, no date; Asia Development Bank, 2009; Munch *et al.*, 2009; Mehta & Movik *et al.*, 2011). Women-led sanitation initiatives are able to institute equity and awareness at household level as each woman takes responsibility for her family and community. Women are able to organise community networks that are instrumental in dispelling cultural and traditional beliefs and practices, promoting more hygienic living. They are also able to dispel the culture of entitlement and dependency on government for personal hygiene and sanitation through education and exposure to experiences of other women worldwide.

vi) *Integrated Basic Services Plan for Peri-urban Communities*

A holistic development plan focused on planning for informality with special reference to peri-urban communities is urgently required. Peri-urban communities comprise a heterogeneous mix of traditional, rural and urban style of living, have urgent water and sanitation demands and are victims to fragmented governance (Allen *et al.*, 2006). The current national drive for rural development is gaining impetus. A similar parallel peri-urban development drive is recommended as areas on the urban fringes often become, environmental, ecological and developmental sinks if appropriate strategies are not implemented (Allen *et al.*, 2006).

vii) *Alignment of Skills Development Plans to Economic Modeling of Sanitation Projects*

Faecal sludge management and sanitation infrastructure provision has a number of potential economic benefits. These may be incorporated in a new Sludge Management Strategy:

- The investigation into social acceptability of faecal waste for Agricultural Usage/Food Security needs to be invigorated: The eThekwini Municipality has engaged research to explore the potential and safety of human waste as a byproduct for agricultural usage (Buckley *et al.*, 2007; Foxon *et al.*, 2007; Flores *et al.*, 2008). However, initiatives to pilot the acceptability thereof has had limited or no success amongst communities in Inanda. This needs to be reinvigorated through education. It will also develop skills, create jobs and provide food security.
- Exploring the potential for alternate energy/biogas production from dry faecal remains could provide a solution to the failing UDD innovation of the eThekwini Municipality and sludge management crisis.

viii) Supply Side Gaps

The eThekwini Municipality has a limited skills base for the construction of facilities and overall maintenance of infrastructure which require trained personnel. Targeted skills development to sustain small enterprise engagement for sanitation services is recommended. The tripartite skills development model noted marginal success and should be advanced through further public, private sector and local community partnerships. This study also recommends the exploration of the franchising model (CSIR, 2012) for well-trained local micro-enterprises to support the Municipality with operations and maintenance services. Lessons from the Peruvian Alternative Pro-poor Sanitation Solutions (APPS) pilot project offered an inclusive partnership-driven sanitation solution for poor communities (Boskovich, 2008).

This would increase the Municipality's options with contracting out to skilled local businesses, thereby providing support to government led sanitation initiatives. This also encourages the emergence of what Solo (1999) refers to as the 'other' sector, a paradigm shift that worked in countries like India, China, Tanzania, and Brazil, where small enterprises and community-based organisations designed their own models to respond to the varied sanitation requirements of poor communities.

ix) Sanitation Hygiene and Education Needs

Amidst abject poverty, communities are more concerned about survival than practising hygienic living. There is an opportunity for NGOs, CBOs and educational institutions to jointly engage in educating peri-urban and rural communities on dignified sanitation practices and health care. There is potential to develop a programme to train local people as community health advisors who will vigorously engage with communities while creating awareness and improving community health. Such initiatives will create jobs for trained personnel, address the skills shortage and educate poor communities.

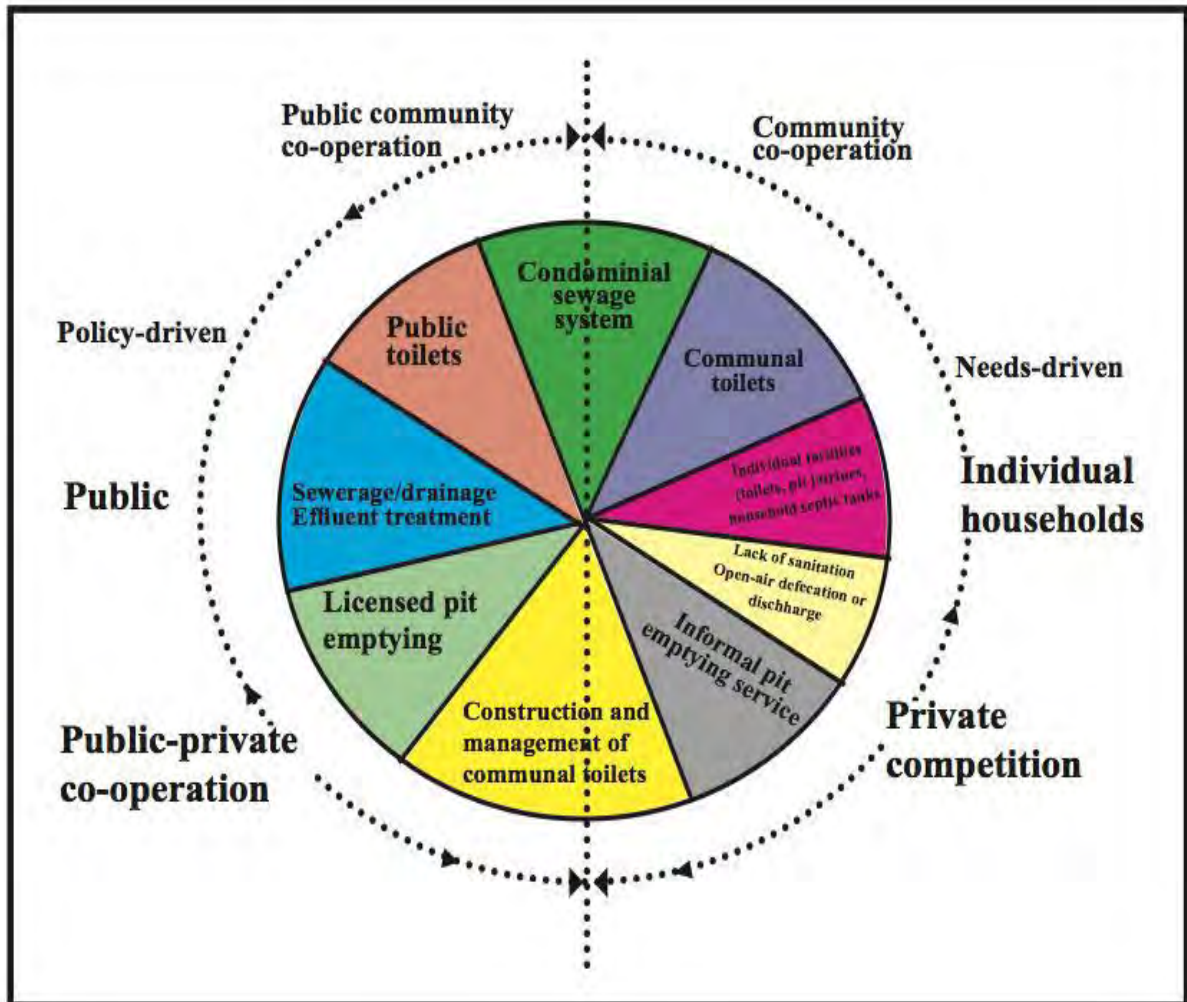
x) Co-production of a Total Sanitation Solution

This study has shown that sanitation delivery in Inanda is clearly state-led with regulation, control, provision and operations mainly by state-owned entities. The findings of the study reveal that there is an endemic sanitation problem which government is attempting to address, but was failing. Interim services in Inanda may provide a physical facility but its adequacy and access to the urban, peri-urban and rural poor is starkly inadequate. Furthermore, the provision of the basic VIP toilet facility does not work due to the excessive number of users for a single facility which cannot be maintained efficiently by the local authority or the householders themselves. The innovative UDD eco-friendly toilet solutions which envisaged the processing of faeces suitable for fertilizer for home gardens and water conservation, had limited success. The real life challenges captured in the findings of this study reflect a dire need to meet the right to adequate accessible, safe and clean sanitation facility for each household.

The implication is that the current governance approach to sanitation delivery in Inanda is not working. Allen & Hofmann (2008) argue that the success factor in peri-urban and rural sanitation is not a state-led or donor-led sanitation delivery which promotes private sector or multinational top-down centred solutions, but a society-centric delivery. A ‘demographic decision-making approach’ is recommended in response to contemporary trends of urbanisation affecting “rural and urban households and individuals – who could be referred to as key ‘demographic decision-makers’ (Allen *et al.*, 2008: 3).

Allen *et al.* (2008: 3) present “The Sanitation Wheel” which is a schematic account of a strategy of social and productive integration representing a potential solution for the sanitation crisis facing urban poor and peri-urban communities.

Figure 7.1: The ‘Sanitation Wheel’



Source: Adapted from Allen *et al.*, (2008: 14)

There are two sides of the wheel: the ‘formal’ on the right side, which represent the policy-driven mechanisms and, the left side, represent the ‘informal’, more localised developed strategies adopted by the poor for the provision of sanitation services. With both sides of the wheel working in tandem, an active spectrum of stakeholders from government, NGOs, private sector and communities themselves are able to jointly develop strategies and implement them as a multi-sectoral co-operative solution to urban and peri-urban contexts.

This multi-agent co-production proved to be effective in changing community perceptions and response to sanitation solutions in cities like Caracas, Mumbai and Tiruchirapalli, thereby redefining their position in sanitation governance (Allen *et al.*, 2008). This study recommends that an interactive network of multi-sectoral stakeholders jointly develop strategies to address the sanitation crises in Inanda. The ‘Sanitation Wheel’ approach has the potential to encourage the interaction, investment and co-operation of all sectors, which could represent a paradigm shift for sanitation delivery in Inanda.

xi) Dissemination of the Results of this Study to Stakeholders

The results of this study should be disseminated to communities, the private sector, councillors and implementing departments at all spheres of government:

- Sanitation is a multi-stakeholder, multi-disciplinary service. It requires the commitment of all stakeholders to effect change. Government stakeholders at all levels should raise their efforts to create strong partnerships with communities, other government departments and the private sector for total sanitation improvement. There is a need for stronger networks of committed groups and individuals to raise the profile of sanitation delivery to an acceptable level.
- At a community level, these results will raise awareness of community responsibility to ensure their role in improved sanitation, moving away from dependency to self-invested dignity.
- Sharing results with the private sector will reveal that social corporate responsibility extends beyond financial donations. Investment in communities through ongoing outreach on issues of sanitation will grow healthy economies and workforce.
- Sharing results with policy makers will underscore the intensity of dissatisfaction, trauma and regression in developmental ideals through the real accounts of experiences with government-led sanitation delivery amongst poor communities in Inanda.

7.6 FURTHER RESEARCH

Further research is recommended to investigate the following gaps identified in this study which will enhance policy decisions and regulation:

- Potential for community-led sanitation.
- Total economic potential of community-driven faecal sludge management.
- The psychological effects of poor sanitation on vulnerable groups (including women, children, disabled and elders).
- Mechanisms to enhance governance in poor peri-urban areas.
- Integrated Spatial Planning for informality with specific focus on sanitation.
- The potential for sanitation services network, as a new governance approach to sanitation for rural and peri-urban communities.
- The Sanitation and Housing Applied Priorities Enquiry (SHAPE) Model (Martin & Pansegrouw, 2009) should be tested with scientific rigour in the Inanda area, to guide policy-makers on a demand-responsive approach to sanitation infrastructure delivery in the area.

7.7 CONCLUSION

This study has confirmed, that, despite the Presidential-Lead interventions and the European Union regeneration and integration efforts to improve service delivery in the Inanda area since 2001, that universal access to sanitation has not been achieved and the experiences of communities has not improved. Poor planning, weak participatory governance mechanisms, and an absence of an integrated demand-responsive approach to service delivery in Inanda has impeded sustainability and an improved living environment.

Efforts at sanitation innovation for improved access and ecological integrity were met with dejection because of the lack of joint planning and decision-making with communities and a broader spectrum of governance actors. Evidence of rigorous community participation was lacking, indicating a failure to meet the objectives of democratic developmental governance. Governing is not about the power exercised upon the subject, but rather a “continuum” of

relationships from political governance to the individual or civil society, which Foucault regards as the “technologies of the self” (Lemke, 2001: 201). The absence of a demand-responsive, people-centred, demographic decision-making (Allen *et al.*, 2008) approach to sanitation delivery in Inanda was prevalent.

The overall findings of the study on sanitation delivery in Inanda further point to flaws in institutional governance which impact adversely on the lives of people resulting in inadequate sanitation delivery. Institutions of government responsible for the delivery of sanitation were weak due to inadequate technical skills, and poor financial planning resulting in insufficient resource allocation for sanitation. The lack of integrated and ineffective inter-governmental planning further constrained funding resources to the detriment of sanitation provision. The study concludes by strongly recommending that improving sanitation delivery in Inanda should be considered a national priority².

² President Zuma made a national call for the prioritisation of sanitation services countrywide (Mpofu, 2012). Current newspaper reports of community protests in Inanda, against inadequate sanitation, ailing service delivery and the need for a speedy response to improve the lives of communities further emphasizes the urgency for sanitation in Inanda (Soobramoney, 2012).

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APPENDIX A

QUESTIONNAIRE FOR MANAGERS (NATIONAL, PROVINCIAL & LOCAL GOVERNMENT) INVOLVED IN SANITATION DELIVERY IN INANDA, DURBAN

*All information and disclosures are strictly confidential
Data shall only be used as part of research for doctoral degree in Development Studies*

1. DEMOGRAPHIC INFORMATION	
Name of department:	
Designation & experience within department:	
Characteristics of the department (in the department's role in the provision of sanitation services):	
Name of Respondent (optional)	
2. BACKGROUND & OVERVIEW	
<p>Basic sanitation services means “provision of basic facility which is easily accessible to a household, the sustainable operation of the facility including the safe removal of human waste and wastewater from the premises where this is appropriate and necessary, and the communication of good sanitation hygiene and related practices” (Strategic Framework for Water Services, 2003: 92) to all citizens.</p> <p>By definition the provision of basic sanitation service implies a multi-stakeholder interaction in enabling delivery. It implicitly implies coordinated efforts by a number of institutions including government departments at all spheres as well as private sector and community participation. Whilst Department of Water Affairs and Forestry (DWAF) is the regulatory body of water and sanitation services other departments play a pivotal role in ensuring effective and efficient sanitation delivery.</p> <p>The purpose of this questionnaire is explore the interactive relations amongst various stakeholders in the provision of sanitation (generally countrywide as well as with specific reference to Inanda, eThekwini)</p>	
3. INTER/MULTI-DEPARMENTAL ROLES IN SANITATION PROVISION	
<p>The Intergovernmental Relations Framework Act (Act 13 of 2005) defines the role of departments within national, provisional and local government as an ‘interacting network of institutions’ in promoting sustainable service delivery. This is particularly evident in the approach to sanitation provision to citizens of South Africa.</p>	
<p>3.1 Describe the role of your department in sanitation provision in Inanda (situated within EThekwini Municipality).</p>	

3.2 Briefly explain the types of programmes being implemented by your Department.

4. INTER-GOVERNMENTAL CO-OPERATION AMONGST AND BETWEEN DEPARTMENTS IN ALL SPHERES	[Mark one with X]				
4.1 Intergovernmental (National, Provincial, Local) cooperation in sanitation delivery is...	High	Medium	Low	No comment	
4.2 Intergovernmental / departmental alignment of annual programmes of action for sanitation provision is...	High	Medium	Low	No comment	
4.3 Collective harnessing of financial resources to ensure appropriate sanitation provision is...	High	Medium	Low	No comment	
4.4 Where does sanitation provision feature in your department's list of priority programmes?	High	Medium	Low	No comment	
5. COLLABORATION & COMMUNICATION OF SANITATION PARTNERS	Strongly agree	Agree	No opinion	Disagree	Strongly disagree
5.1 All departments work towards a joint common goal in sanitation delivery as per MDG targets of eradicating backlogs by 2014					
5.2 All planning is undertaken jointly					
5.3 Budget decisions are consensus driven (hence transparent) based on needs assessments					
5.4 Priority programmes and geographical development is decided upon jointly					
5.5 Implementation frameworks of partnering departments are aligned annually ensuring co-ordinated roll out					
5.6.1 Reporting is periodic and consistent					

5.6.2 Periodic reports are shared (open lines of communication)					
5.7 All departments involved engage in discussion around bottlenecks					
5.8 Joint mitigation measures are agreed upon					
5.9 Partners regularly attend Provincial Sanitation Task Team meetings (80% of partners attend 80% of meetings)					
6. PARTICIPATORY GOVERNANCE IN SANITATION PROVISION	Strongly agree	Agree	No opinion	Disagree	Strongly disagree
Do you think participation is essential for:					
6.1 developmental reasons (to achieve growth); thereby improving their skills capacity contributing to their economic status					
6.2 political reasons (as a means to empowerment) in being one of the stakeholders in democratic dispensation					
6.3 ideological reasons (the right to decide for oneself) by selecting the most suitable facility which is sustainable by themselves (either partially/or solely)					
6.4 involve citizen in the decision-making (participatory governance) enabling them to plan for them with them eg disabled citizens; women and aged					
6.5 effective strategy to diminish client's (community) resistance through communication, transparency and accountability					
6.6.1 participatory governance truly given those at the bottom more control over what happens on top.					
6.6.2 kindly provide a explanation from your experience in relation to your choice in 6.6.1					
7. GOVERNANCE PARTNERSHIPS	Provide specific examples of situations				
Governance is defined as more than what governments do, it is the interaction of a number of stakeholders (private sector, public sector, community organisations, political arm) within a governing context. <i>Governance is about partnerships and participation</i> Do you agree with the following statement?					

<p>“...governance guided by so-called principles of partnership and participation can work toward (see variables below) just as it can work towards democratisation, progress and liberation”</p>					
<p>7.1 In view thereof is there room for exploitation</p> <p>a) Yes/No</p> <p>b) If yes, why do you think so?</p> <p>c) If no, why do you disagree</p>					
<p>7.2 From your experience does multi-stakeholder governance in sanitation provision presents an opportunity for monopolisation?</p> <p>a) Yes/No</p> <p>b) If yes, why do you think so?</p> <p>c) If no, why do you disagree</p>					
<p>7.3 Is there room for benevolent dictatorship, from your experience as a stakeholder in sanitation governance/provision?</p> <p>a) Yes/No</p> <p>b) If yes, why do you think so?</p> <p>c) If no, why do you disagree</p>					
<p>8. ROLE OF LOCAL GOVERNMENT IN SANITATION GOVERNANCE. NAMELY ETHEKWINI MUNICIPALITY AS THE SERVICES AUTHORITY (SERVICING INANDA)</p>	Strongly agree	Agree	No opinion	Disagree	Strongly disagree
<p>There is a need to:</p>					
<p>8.1 Increase participation of communities in sanitation delivery</p>					
<p>8.2 Strengthen partnerships between government and communities</p>					

8.3 Increase dialogue between government and communities					
8.4 Strengthening accountability (of government) to communities					
8.5 Addressing local-level resource constraints					
8.6 Need to disseminate more information at community level around the following:					
8.7.1 Sanitation hygiene (personal)					
8.7.2 Use and maintenance of facilities					
8.7.3 Use and maintenance of public ablution facilities					
8.7.4 Developing capacity of local communities (broad based empowerment in Sanitation Job Creation Guidelines 2005).					
8.7.5 Engagement of communities around co-delivery of sanitation programme (community driven maintenance and operations).					
8.7.8 Communities awareness about opportunities to engage.					
9. COMMUNITY PARTICIPATION IN SANITATION DELIVERY	Strongly agree	Agree	No opinion	Disagree	Strongly disagree
9.1 Community consultation is a primary planning approach					
9.2 In your experience; community partnership ensures successful programme implementation					
9.3 Community-driven programme ensures sustainability					
9.4 Community-driven processes instils a sense of ownership					
9.5 Communities cooperate willingly in the operations and management of facilities					
9.6 What are the specific community engagement initiatives operational in Inanda, eThekweni?	Kindly list and briefly explain:				

10. WHAT IS YOUR EXPERIENCE OF THE MULTI-TIER AND MULTI-DEPARTMENTAL APPROACH TO SANITATION DELIVERY IN MIXED TYPOLOGIES OF RURAL/PERI URBAN/URBAN COMMUNITIES LIKE INANDA?

- **Kindly substantiate in as much detail as possible**
- **Provide specific examples where possible**

THANK YOU FOR YOUR TIME AND INVALUABLE CONTRIBUTION

APPENDIX B

Questionnaire number:

AN ASSESSMENT OF STRATEGIES, APPROACHES AND MECHANISMS ADOPTED BY THE eTHEKWINI MUNICIPALITY IN THE DELIVERY OF SANITATION/BASIC SERVICES WITH SPECIFIC REFERENCE TO INANDA.

Fieldworker

Surname: First name:

SECTION A: HOUSEHOLD PROFILE

1. Age of respondent (in years)

1. < 18	3. 31 – 40	5. 51 – 60
2. 19 – 30	4. 41 – 50	6. > 60

2. Gender of respondent

1. Male	2. Female
---------	-----------

3. Highest formal educational level of household?

1. None	3. Secondary school	5. Diploma
2. Primary school	4. Matric	6. Degree

4. Occupation of respondent?

1. Unemployed	4. Business owner	7. Pensioner
2. Domestic worker	5. Manager	8. Other (specify)
3. Labourer	6. Professional	

5. Total income of household (in rands)?

1. < 500	3. 1100 – 2000	5. 3100 – 4000
2. 600 – 1000	4. 2100 – 3000	6. > 4000

Dwelling

6. Type

1. Formal dwelling	3. Shack / informal dwelling
2. Traditional hut	4. Other (specify)

7. Age of dwelling (in years)

1. < 1	2. 1 – 5	3. 6 – 10
4. 11 – 15	5. 16 – 20	6. > 20

8. How long are you living in this dwelling (in years)

1. < 1	2. 1 – 5	3. 6 – 10
4. 11 – 15	5. 16 – 20	6. > 20

9. No of people living in household

1. One	3. Three	5. Five	7. Seven	9. Nine
2. Two	4. Four	6. Six	8. Eight	10. > nine

10. Do you pay property rates?

1. Yes	2. No
--------	-------

11. If yes, how much (in rands) do you pay per year?

1. 0 – 200	3. 450 – 600	5. 850 – 1000
2. 250 – 400	4. 650 - 800	6. > 1000

SECTION B: MUNICIPAL SERVICES

Sanitation Disposal

12. Type

1. Full Waterborne Flush toilet)	5. Chemical Toilet
2. Septic Tank	6. None
3. Ventilated Improved Pit Latrine	7. Other, specify:
4. Basic Pit Latrine	

13. Who provided the toilet system in your ward? If applicable

1. Municipal workers	2. Private company	3. Don't know
----------------------	--------------------	---------------

14. Did you pay anything for the installation of that system? If applicable

1. Yes	2. No
--------	-------

15. How satisfied are you with toilet facilities?

1. Very satisfied	3. Neutral	5. Very dissatisfied
2. Satisfied	4. Dissatisfied	

16. Please give a reason for your answer

17. Who clears your pit latrines? (If applicable)

1. Municipality	2. Family member	3. Private company
4. Hired labourer	5. Other (specify)	

18. How often? (If applicable)

1. Weekly	3. Once in 3 months	5. Yearly
2. Monthly	4. Once in 6 months	6. Other (specify)

19. Are there any households with full waterborne flush toilet system?

1. Yes	2. No	3. Don't know
--------	-------	---------------

20. Are there any communal toilets?

1. Yes	2. No	3. Don't know
--------	-------	---------------

21. If so, what do they do for their toilet needs?

1. Neighbour	2. Outdoor	3. Don't know
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22. Are there any households with septic tanks?

1. Yes	2. No	3. Don't know
--------	-------	---------------

23. What can you say about the quality of the sanitation service you are getting?

1. Poor quality	3. Good
2. Satisfactory quality	4. Don't know

24. How would you compare the sanitation service delivery before 1994 i.e. Apartheid delivery with post 1994 democratic government delivery?

1. No change	3. Worse
2. Better	4. Don't know

Water Services

25. What is your main source of water

1. Piped water	4. Communal tap
2. Borehole	5. River or stream
3. Water tank	6. Water tanker

26. Who installed / reticulated your water supply?

1. Municipality	2. Private Company	3. Don't know
-----------------	--------------------	---------------

27. Are you satisfied with the water supply?

1. Very satisfied	3. Neutral	5. Very dissatisfied
2. Satisfied	4. Dissatisfied	

28. Please give a reason for your answer

29. Are there any water meters in your yard?

1. Yes	2. No
--------	-------

30. Can you afford to pay for water for your household?

1. Yes	2. No
--------	-------

31. Are you receiving **6KL** free water per month?

1. Yes	2. No
--------	-------

32. Is the **200 litres** free water per day adequate for your households?

1. Yes	2. No
--------	-------

33. Are water leakages common in your area?

1. Yes	2. No	3. Don't know
--------	-------	---------------

34. If so, how long does it take for the municipality to repair it?

1. Within one day	3. 2- 3 days
2. 1 – 2 days	4. > 3 days

35. How often are there water supply disturbances in your area?

1. None	3. 3 – 4 times a year
2. 1 -2 times a year	4. > 4 times a year

36. Is the community notified about the disturbance?

1. Yes	2. No	3. Don't know
--------	-------	---------------

37. Do you have other sources of water?

1. Yes	2. No
--------	-------

38. If yes, please state which type?

1. Rainwater	2. Groundwater
--------------	----------------

39. Did you approach the municipality to assist with supplying tanks?

1. Yes	2. No
--------	-------

40. Do you know of any illegal water connections in your area?

1. Yes	2. No
--------	-------

SECTION C: PAYMENT OF SERVICES

41. What percentage of you income goes towards paying for water?

1. 0-5%	3. 11 – 15%	5. 21 – 25%	7. 31 – 35%
2. 6-10%	4. 15 – 20%	6. 26 – 30%	8. > 35%

42. Where do you pay your Municipal Bill for water?

1. Bank (deposit)	3. Municipal office	5. Retail Store
2. Bank (debit)	4. Post Office	6. Card

43. Have you had problems paying the Bill at a payment point?

1. Yes	2.No
--------	------

44. If yes, please state reasons?

45. Have you ever had problems with the Bill itself?

1. Yes	2.No
--------	------

46. If yes, please state reasons?

SECTION D: COMMUNITY PARTICIPATION

47. Is there any community organization that is involved in the delivery of services i.e. water and sanitation.

1. Yes	2. No	3. Don't know
--------	-------	---------------

48. Are there any existing projects in your area that are aimed at addressing the services backlogs as far as water and sanitation concerned?

1. Yes	2. No	3. Don't know
--------	-------	---------------

SECTION E: GOVERNANCE AND CONTEXT

49. Are you aware of any projects occurring in your community with regard to the above services?

1. Yes	2. No
--------	-------

50. If yes, could you please describe these projects?

51. If yes, could you say who the implementers are?

1. Municipality	3. Private companies
2. CBOs	4. Other (specify):

52. What are your sources of information with regards to the municipality's service delivery?

1. Local councilor	3. Community media
2. Metro Beat	4. No sources

53. Is there any regional centre near your ward from which you can enquire information or pay for your municipal services?

1. Yes	2. No
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54. Do the communities have any input in the planning and implementation of service delivery projects?

1. Yes	2. No
--------	-------

55. If yes, how do they participate?

1. Ward forums	3. Civic structures
2. Political structures	4. Other (specify)

56. Do you think the new Area-Based Management programme of the eThekweni Municipality help speed up basic service delivery in your area?

1. Yes	2. No
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SECTION F: RECOMMENDATIONS

57. Please suggest ways of speeding up delivery of services?

58. Is there any other information regarding water and sanitation that you would like to share?

SECTION G: SANITATION HYGIENE EDUCATION & PRACTICES

59. Has anybody visited you to tell you about health and hygiene?

(Place X in selected box)

1. Who?	
2. When (date)?	

60. Has anyone visited you to tell you about how to use your taps and toilet and how to maintain them? Who? When?

1. Who?			
2. When (date)?			
3. When did you receive instructions on how to use your facility (toilet)?	Before installation <input type="checkbox"/>	After installation <input type="checkbox"/>	Both before and after installation? <input type="checkbox"/>
4. What did you learn?			

61. Were you or a member from your household involved in installing your taps or toilet?

If yes, how?

Please use the following symbols for your answer in the given space?

Yes, X for No

62. Do you use soap and water after you go to the toilet?

<input type="checkbox"/>	
--------------------------	--

63. Do you know how to purify your drinking water and cooking water?

<input type="checkbox"/>	
--------------------------	--

64. How often do you clean your toilet?

64.1 Weekly <input type="checkbox"/>	64.4 Every 3 months
64.2 Fortnightly	64.5 Not often
64.3 Monthly	64.6 Don't clean

65. What do you clean it with?

--

66. Do you know what the cause of diarrhea is?

<input type="checkbox"/>	
--------------------------	--

67. Do you know who to call when your toilet pit is full or tap is not working or if there is a burst pipe in your yard?

<input type="checkbox"/>	
--------------------------	--

68. Interviewee's personal comment on state of toilet or taps (toilet paper or other, detergents, scrubbers, information posters, cleanliness)

--

69. Do your family members often get sick with stomach ache, diarrhea, vomiting, headaches, and skin rashes? If yes, how often?

1. Weekly <input type="checkbox"/>	4. Every year
2. Monthly <input type="checkbox"/>	5. Not often
3. Every six months	6. Other comment (Specify)

70. Is there any other information regarding water and sanitation that you would like to share?

Thank you for your time.

APPENDIX C



16 February 2010

Dear Sir / Madam,

QUESTIONNAIRE: INTER-GOVERNMENTAL/INTER-DEPARTMENTAL PRACTITIONERS ENGAGED IN THE PROVISION OF SANITATION IN THE INANDA AREA, DURBAN.

The researcher, N. Maharaj invites you to participate in a study entitled “Governance and Service Delivery: A case-study of Sanitation Delivery in Inanda, Durban”.

The aim of the study is to investigate the approach to implementation in light of the vibrant policy environment since the advent of democracy in South Africa.

Due to the huge backlog caused by disenfranchisement of the majority of the population during the apartheid era; increased pressure is placed on all government departments who have a role in sanitation provision to work in a co-ordinated manner to effectively and efficiently meet the demands of the now increased population.

The delivery of sanitation requires synergistic and collaborative action by a number of stakeholders across the spheres of government; civil society and the private sector. Sanitation delivery requires the efforts of departments from national, provincial and local spheres of government mandated to contribute to the different requirements in the planning,

implementation, monitoring and evaluation of sanitation provision; it is anticipated that collaborative governance strategies are necessary for successful delivery.

This questionnaire examines the governance relations amongst and between departments responsible for sanitation roll out in the selected study area.

The confidentiality of your participation is ensured. Furthermore, whilst you are a critical source of data required for the study your participation is voluntary and you may withdraw at any time without obligation.

For any query or clarity please contact the researcher; or for verification you may contact the supervisor; Prof B. Maharaj at the School of Development Studies, UKZN.

Thanking you in advance for your valued contribution.

Yours Sincerely,



Prof Brij Maharaj

Supervisor

maharajb@ukzn.ac.za



N. Maharaj

Student

Contact Number: 072 221 6303

APPENDIX D

TO WHOM IT MAY CONCERN

20 November 2012

This dissertation, entitled **GOVERNANCE & SERVICE DELIVERY: A CASE-STUDY OF SANITATION DELIVERY IN INANDA, DURBAN**, has been edited to ensure technically accurate and contextually appropriate use of language for this level of study.



CM ISRAEL
BA Hons (UDW) MA (UND) MA (US) PhD (UNH)
Language Editor

APPENDIX E



TREASURY CLUSTER **Office of the Deputy City Manager**

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E-mail: revline@durban.gov.za
www.durban.gov.za

3 December 2009

Linda Mbonambi

INK Urban Renewal and Area-based Management

Dear Sir

AUTHORITY TO CONDUCT RESEARCH WITHIN THE ETHEKWINI MUNICIPALITY

TOPIC : Governance and Service Delivery:

A Case Study of Sanitation Provision in Inanda EThekwini Municipality

Please be advised that this letter authorizes Ms N. Maharaj, a registered student at the School of Developments Studies at Howard College Campus, UKZN, Student No.: 203518359 PHD in Development Studies to conduct the above mentioned research study.

The study pertains to the governance approach to service delivery, with specific focus on sanitation provision within the context of Inanda in the eThekwini Municipal Area.

It is hereby confirmed that Ms Maharaj has been granted permission to access Council information related to her ambit of research. This further authorizes Ms Maharaj to interview relevant officials ,subject to their consent and approval of their respective Heads,in promoting academic debate in the field of sanitation provision and local government research

Kindly afford her your cooperation in this regard.

Yours faithfully

K A KUMAR

DEPUTY CITY MANAGER : TREASURY