

**Integrated resource management of potable water in Zimbabwe and
South Africa: A comparative study in four local authorities**

by

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May, 2012

SOLEMN DECLARATION

I declare herewith that the thesis entitled:

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which I herewith submit to the North-West University as completion of the requirements set for the degree **Doctor of Philosophy in Public Management and Governance**, is my own work and has not already been submitted to any other university.

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Commissioner of Oaths: _____

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DEDICATION

This thesis is dedicated

to my supportive wife,

Tsitsi.

I appreciate and value

all your support and care

ABSTRACT

This study is a comparative analysis of the development of the IWRM induced public policies/legislation and services relating to potable water supply and their implementation in selected cases in Zimbabwe and South Africa. It looks at the diverse patterns of municipal governance, access to potable water, different intervention mechanisms made by the local authorities and the consequences of these interventions. The study hypothesises that the adoption of the IWRM policy framework in Harare, Masvingo, Tshwane and Vhembe was not followed by comparable implementation of the policy framework. It argues that lack of ownership, lack of political and public administrative will, and low prioritisation of potable water supply translated into a lack of policy implementation and enforcement, and a lack of adequate institutional facilities for dealing with potable water issues. Furthermore it hypothesises that the level of economic development and the status of technological/scientific knowledge within a community determine the adoption of the IWRM paradigm, its implementation, effectiveness and the efficiency of existing water frameworks and institutions.

The objectives of the study were to investigate the extent to which the policy, institutional, legislative and legal frameworks helped in the implementation of the IWRM paradigm in each of four case study areas of Harare, Masvingo, Tshwane and Vhembe; to identify and explain the common and differing perspectives of stakeholders regarding the IWRM paradigm and its implementation in the governance of potable water supply in the four selected locations; to give a clear outline of the challenges faced by each of the four cases in the implementation of the IWRM paradigm and the governance of potable water supply; and to draw comparative lessons from the experiences of the four cases in their attempts to implement the IWRM framework.

Research methods involved both a theoretical review and an empirical study based on case studies, making use of comparative, qualitative, historical and exploratory approaches. The empirical research design was hybrid, although dominated by the descriptive survey approach. The design matched well with the target population and sample that were scattered throughout all four case study areas. Questionnaires, interviews, documentary evidence and participant observation were used in the collection of data for this study. The empirical study was undertaken in three stages. The first was a preliminary study of the four areas and their water sources. This was followed by a pilot study with ten members from the city of Masvingo, and finally, a full scale investigation was made in all four study areas. A total of 521 people were sampled for the study. Questionnaires were distributed through municipal offices, Zimbabwe Open University (ZOU) offices and local schools. Interviews were conducted with the municipal and council executives, water directors and their assistants. Informal discussions were also held with all direct research assistants. Data was then collated and analysed for presentation in narrative descriptions, tables, graphs, and actual frequencies and percentage responses.

The study established that while the framework for a perfect water management system exists in Zimbabwe and South Africa, the situation on the ground does not reflect this common belief. The reform process has not progressed as expected owing to a combination of factors ranging from conflicting policies and weak institutional linkages, to insufficient funding. The effectiveness of the new system has been found wanting as far as implementation is concerned. It

has been established that IWRM in southern Africa has a very strong base in the form of the internal push factors and international pull factors, but also faces an uphill task in terms of aligning local and international challenges thereby coopting the much needed grassroots participation for human capacitation and socio-economic development as guided by the multi-faceted systems framework. All the studied municipalities were found lacking in terms of advocacy or enlightening residents and other stakeholders of the new IWRM framework adopted by the municipalities. Despite the infrastructural and technological sophistication and advancement, in South Africa, this study established that most stakeholders were still unaware of the new developments. Stakeholders, especially at the grassroots have been largely side-lined in the formulation and adoption of potable water supply policies. Due to pipe bursts and water interruptions, access to tap water is by no means always assured. During water cuts, residents depended on risky and potentially polluted sources even in urban centres. Due to agricultural and mining activities, the proximity of cemeteries, poor sanitation and toilet facilities in the peri-urban and nearby shanty communities, and also the dolomitic character of the soil in some of the study areas, there is a high probability that these substitute sources are polluted.

The study recommends an integrated systems approach to the management of potable water supply, full involvement of all stakeholders in the management process, intensive and extensive public campaigns, training, lobbying and advocacy. It is also suggested that potable water supply infrastructure be improved through the use of the business community and other stakeholders, who should be mobilised through the use of attractive incentives. Among other recommendations are the due enforcement of water laws, venturing into entrepreneurial activities, interval reviews and check-ups, and walking the talk. The study also recommends a more detailed and deeper participatory study in collaboration with major cities and rural communities in other countries in the Southern Africa Development Community (SADC) region, as well as regional comparative studies, for example SADC versus Economic Community Organisation of West African States (ECOWAS).

TABLE OF CONTENTS

SOLEMN DECLARATION	ii
ACKNOWLEDGEMENTS	iii
DEDICATION	v
ABSTRACT	vi
TABLE OF CONTENTS	vii
LIST OF TABLES	vi
LIST OF FIGURES	vi
LIST OF APPENDICE	vi
ACRONYMS	vi
CHAPTER ONE	1
INTRODUCTION: PROBLEM STATEMENT AND STUDY METHODOLOGY	1
1.0 INTRODUCTION	1
1.1 ORIENTATION AND PROBLEM STATEMENT	1
1.1.1 Study cases	7
1.1.2 Statement of the problem	15
1.2 RESEARCH AIMS, QUESTIONS, OBJECTIVES AND CONTRIBUTION	16
1.2.1 Research questions	17
1.2.2 Research objectives	17
1.2.3 Contribution of this study to the public management body of knowledge	18
1.3 HYPOTHESES	19
1.4 RESEARCH METHODS	19
1.4.1 Review of sources	20
1.4.2 Empirical study	20
1.4.3 Research design	20
1.4.4 Data collection procedures	20
1.4.5 Data presentation and analysis procedures	23
1.5 ETHICAL CONSIDERATIONS	23
1.6 THEORETICAL FRAMEWORK	24
1.7 OUTLINE OF CHAPTERS	25
1.8 SUMMARY	26
CHAPTER TWO	28
CONCEPTUAL FRAMEWORKS OF COMPARATIVE STUDIES, SYSTEMS THEORY, COMMON POOL RESOURCES AND GOVERNANCE	28
2.0 INTRODUCTION	28

2.1 COMPARATIVE STUDIES	28
2.2 THE SYSTEMS THEORY	30
2.3 COMMON POOL RESOURCES	36
2.4 GOVERNANCE	36
2.4.1 The classical management framework	38
2.4.2 The traditional view of governance	40
2.4.3 The contemporary view of governance	43
2.4.4 Sample definitions and the criteria for effective governance	46
2.4.5 Public policy	50
2.4.6 Decentralisation, participation, gender mainstreaming and empowerment	57
2.4.6.1 Decentralisation	57
2.4.6.2 Involvement and participation	59
2.4.6.3 Gender mainstreaming	61
2.4.6.4 Capacity building and empowerment	62
2.5 SUMMARY	63
CHAPTER THREE	65
A GLOBAL OVERVIEW OF POTABLE WATER RESOURCES AVAILABILITY AND ACCESSIBILITY IN SOUTHERN AFRICA	65
3.0 INTRODUCTION	65
3.1 WHAT IS POTABLE WATER?	65
3.1 WHAT IS POTABLE WATER?	65
3.2 AVAILABILITY OF POTABLE WATER SUPPLY	68
3.2.1 The global overview	68
3.2.2 The African overview	79
3.2.3 The way forward for Africa	89
3.3 THE MAIN FORMS OF RESIDENTIAL COMMUNITIES AND THEIR POTABLE WATER SUPPLY CHALLENGES IN SOUTHERN AFRICA	91
3.3.1 The case of rural and communal areas	92
3.3.2 Potable water supply in the peri-urban communities of southern Africa	97
3.3.3 An overview of potable water supply in urban communities.	103
3.3.4 Potable water supply challenges in southern Africa	107
3.3.4.1 Water availability	107
3.3.4.2 Mining activities	108
3.3.4.3 Governance and management	109
3.4 SUMMARY	114
CHAPTER FOUR	115
LEGAL FRAMEWORKS IN THE GOVERNANCE OF POTABLE WATER SUPPLY IN ZIMBABWE AND SOUTH AFRICA: A GLOBAL, REGIONAL AND NATIONAL OVERVIEW OF THE IWRM PARADIGM	115
4.0 INTRODUCTION	115

4.1 THE GLOBAL LEGAL CONTEXT OF THE HUMAN RIGHT TO WATER	115
4.1.1 A historical overview of the global context of water rights	110
4.2 AN OVERVIEW OF INTEGRATED WATER RESOURCES MANAGEMENT (IWRM)	125
4.2.1 Background to IWRM	125
4.2.2 Integrated water resources management: A theoretical discourse	128
4.3 THE CASE OF FRANCE	138
4.4 THE SOUTHERN AFRICAN REGIONAL FRAMEWORK	143
4.5 THE ZIMBABWEAN FRAMEWORK	150
4.5.1 Traditional water rights as basis for water rights in Zimbabwe	151
4.5.2 Water legislation in Rhodesia.	153
4.5.3 Water legislation in Zimbabwe	155
4.5.4 Why have Zimbabwe's water sector reforms not performed as expected?	158
4.6 THE SOUTH AFRICAN FRAMEWORK	164
4.7 LESSONS FROM THE ABOVE EXPERIENCES	171
4.4 SUMMARY	177
 CHAPTER FIVE	 178
EMPIRICAL CASE STUDIES ON THE GOVERNANCE OF POTABLE WATER SUPPLY IN HARARE, MASVINGO, MUSINA AND TSHWANE MUNICIPAL AREAS	178
5.0 INTRODUCTION	178
5.1 DESCRIPTION OF THE STUDY AREA	178
5.1.1 The Republic of Zimbabwe	179
5.1.1.1 The Harare Province Metropolitan Municipality	189
5.1.1.2 Masvingo District	197
5.1.2 The Republic of South Africa	203
5.1.2.1 Vhembe District (Musina Local Municipality).....	209
5.1.2.2 City of Tshwane Metropolitan Municipality	216
5.2 METHODOLOGICAL RESEARCH DESIGN	226
5.2.1 Research methods and methodologies	227
5.2.2 Subjects.....	230
5.2.2.1 Socio-demographic characteristics of participants	232
5.2.3 Sampling procedures	237
5.2.4 Research instruments	240
5.2.4.1 Questionnaires	240
5.2.4.2 Interviews/discussions	246
5.2.4.3 Documentary evidence	247
5.2.4.4 Municipal websites	247
5.2.5 Data collection procedures	248
5.2.6 Data presentation and analysis procedures	250
5.3 MORAL AND ETHICAL CONSIDERATIONS	250
5.4 CHALLENGES FACED DURING FIELDWORK	251
5.5 LIMITATIONS OF THIS STUDY	253
5.6 SUMMARY	254

CHAPTER SIX	255
PRESENTATION AND DISCUSSION OF EMPIRICAL FINDINGS	255
6.0 INTRODUCTION	255
6.1 PLANNING	256
6.1.1 Formulation and adoption of legislation and policies derived from the IWRM framework	256
6.1.1.1 Documentary evidence and websites	256
6.1.1.2 Interviews and websites	259
6.1.1.3 Questionnaires	261
6.1.2 Awareness and understanding of the new macro-potable water supply governance framework	266
6.1.2.1 Interviews	266
6.1.2.2 Questionnaires	268
6.2 ORGANISING	274
6.2.1 Institutional and technological frameworks	274
6.2.1.1 Documentary evidence	275
6.2.1.2 Interviews and websites	277
6.2.1.3 Questionnaires	280
6.2.2 Relevance and accessibility of potable water supply institutions and infrastructure	288
6.2.3 Potable water quality	291
6.3 LEADING	291
6.3.1 Communication, advocacy and mobilisation	291
6.3.2 Motivation and training	294
6.4 CONTROLLING	296
6.5 MAJOR CHALLENGES FACING IWRM AND POTABLE WATER SUPPLY GOVERNANCE IN THE CASE STUDY AREAS	300
6.6 THE DUBLIN PRINCIPLES <i>VIS A VIS</i> THE SITUATION IN THE STUDIED CASES	303
6.7 SUMMARY	304
CHAPTER SEVEN	305
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	305
7.0 INTRODUCTION	305
7.1 SUMMARY	306
7.2 CONCLUSIONS	311
7.2.1 Foundational conclusions	311
7.2.2 Thematic conclusions	313
7.2.3 The central argument conclusions	325
7.2.4 Overall conclusion	326
7.3 RECOMMENDATIONS	327
BIBLIOGRAPHY	333

LIST OF TABLES

Table 2.1: Criteria for effective water governance	49
Table 2.2: Levels of stakeholder involvement	60
Table 3.1: Freshwater withdrawals in mainland southern Africa	87
Table 3.2 Land and agriculture in mainland southern Africa	87
Table 3.3: Employment in agriculture and agriculture value-added in selected southern Africa countries	88
Table 3.4: Population size and proportion of urbanised and levels of access to safe water and sanitation facilities by the urban and rural population in mainland SADC countries in 2000.	104
Table 3.5: Percentages of the population urbanised in selected southern African countries	105
Table 4.1: Misconceptions on the right to water and sanitation	118
Table 4.2: Comparison of Dublin Principles and French Water Law	140
Table 4.3: Main characteristics of Rhodesian water legislation between 1927 and 1980	154
Table 4.4: Typical original stakeholder representation on Sub- and Catchment Councils	158
Table 5.1: Hierarchy of urban councils in Zimbabwe	185
Table 5.2 Annual rainfall per country in the basin area	216
Table 5.3 City of Tshwane Metropolitan Municipality, local authorities	228
Table 5.4: Sampled research subjects by case study area	230
Table 5.5: Trends in population growth in the study cases since 1900	231
Table 5.6: Age distribution of questionnaire respondents by case study	233
Table 5.7: Respondents' education levels by study case	236
Table 5.8: Respondents' residential areas by study case	236
Table 5.9: Questionnaire response rate by case study	245
Table 6.1: The relationship between residents and their municipality	275
Table 6.2: Residents' responses on their contribution to the decision-making process of their municipal potable water supply	262
Table 6.3: Residents' knowledge of the authority that supplies their potable water	263
Table 6.4: Residents' perception of the most important actor in potable water supply governance in their communities	274

LIST OF FIGURES

Figure 1.1: Map of Southern Africa	3
Figure 1.2: The classical management process	5
Figure 1.3: Greater Harare	7
Figure 1.4: Lake Chivero	8
Figure 1.5: Women carrying containers of water during the 2008-2009 cholera outbreak in Harare	9
Figure 1.6: Masvingo Province	10
Figure 1.7: Lake Mutirikwi	11
Figure 1.8: Rietvlei Dam	12
Figure 1.9: City of Tshwane	13
Figure 1.10: Limpopo Province	14
Figure 1.11: Nandoni Dam	15
Figure 1.12: A multidimensional systems theory	25
Figure 2.1: An organisational system and its subsystems	31
Figure 2.2: Forces influencing and influenced by the public management process	40
Figure 2.3: The traditional view of governance	42
Figure 2.4: Key considerations for phases of the generic process model	56
Figure 3.1: Global distribution of the world's water	66
Figure 3.2: Schematic of the hydrological cycle components in present-day setting	67
Figure 3.3: Availability of fresh water in 2007	69
Figure 3.4: A rural woman fetching water for domestic use in the Manyame catchment area in Zimbabwe	70
Figure 3.5: Global water supply and sanitation coverage in 2000	71
Figure 3.6: Access to an improved water source in 2004	72
Figure 3.7: Global trends in availability of fresh water resources in the twentieth century	76
Figure 3.8: Global water scarcity in 2009.....	78
Figure 3.9: Projected world water scarcity in 2025	79
Figure 3.10: Global projections of water stress (1995 & 2025)	80
Figure 3.11: Emissions from industrial processes	81
Figure 3.12: Global fresh water withdrawal	82
Figure 3.13: Global water withdrawal and use	83
Figure 3.14: Climate change vulnerability in Africa	84
Figure 3.15: Changes in available water in Africa	85
Figure 3.16: Arable land in Africa	88
Figure 3.17: Projected changes in agriculture due to climate change and carbon fertilisation	89
Figure 3.18: Women fetching water for domestic use in a southern African rural community ...	93
Figure 3.19: Children playing with dirty water in a peri-urban residential area in Harare	98
Figure 3.20: A peri-urban shanty township near Johannesburg, South Africa	102
Figure 3.21: Water supply during the 2008-2009 cholera outbreak in Harare	106
Figure 3.22: Sewerage system failures in Harare	107
Figure 3.23: Girl collecting water from a community supply, Abidjan, Côte d'Ivoire	113
Figure 4.1: IWRM and its relation to sub-sectors	133
Figure 4.2: River basin management in France	141

Figure 4.3: Relationships between various instruments in SADC governing water resources management and development	144
Figure 4.4: Conceptual framework for regional water policy development	149
Figure 4.5: Existing and proposed stakeholder institutions in water resources management in Zimbabwe	163
Figure 4.6: Major phases and activities in the South African water policy process (1994-2004)	166
Figure 4.7: South African water supply industry institutional model	170
Figure 5.1: Map of Zimbabwe showing provinces and the two study areas (Harare and Masvingo)	180
Figure 5.2: The seven Zimbabwe water management catchment areas	181
Figure 5.3: Local government institutional arrangements in Zimbabwe	187
Figure 5.4: Parts of Harare Metropolitan Province showing major lakes supplying raw water to the Harare Municipality	190
Figure 5.5: Schematic layout of water supply system for the Harare metropolitan area (P = pump, WTW= Water Treatment Works)\.....	191
Figure 5.6: Aerial photograph of the city centre of Harare	193
Figure 5.7: A sewage spill in Harare	194
Figure 5.8: Women carrying containers of water during the 2008-2009 cholera outbreak in Harare	196
Figure 5.9: Lake Mutirikwi	198
Figure 5.10: Masvingo municipality offices	200
Figure 5.11: Map of South Africa showing the nine provinces	203
Figure 5.12: Toxic water pollution in South African rivers	205
Figure 5.13: Acid mine drainage from West Rand endangers hippos in Hippo Dam	206
Figure 5.14: Ecological map of the Limpopo Basin	210
Figure 5.15: Zimbabwean economic refugees in Musina	212
Figure 5.16: Luvuvhu River catchment and the DDT-sprayed area in Limpopo Province.	213
Figure 5.17: Radioactive acid pours into the Crocodile-Limpopo River system	214
Figure 5.18: View of Tshwane’s city centre	217
Figure 5.19: Water services development plan for the city of Tshwane	219
Figure 5.20: The Lesotho Highlands water project	220
Figure 5.21: Acid mine drainage outflow from Hippo Dam	221
Figure 5.22: Water pollution: crocodiles dying in the Olifants River	222
Figure 5.23: Tshwane daily water requirements	223
Figure 5.24: Governance system of CTMM	224
Figure 5.25: The questionnaire sex ratio of respondents by case study	234
Figure 5.26: Questionnaire respondents’ marriage status by case study	235
Figure 6.1: Imposition of the change process on the people	258
Figure 6.2: Workers involvement in the management of water supply services by case study ..	263
Figure 6.3: Workers’ attendance of potable water supply management meetings	265
Figure 6.4: An NGO sponsored protected household well in Masvingo Rural	269
Figure 6.5: Municipal employees’ awareness of water and related legislation	270
Figure 6.6: Municipal employees’ awareness of IWRM	271
Figure 6.7: Residents’ identification of residential catchment/subcatchment area	273

Figure 6.8: Fetching water for domestic use during water supply interruptions, Mabvuku, Harare	282
Figure 6.9: Proportional water supply interruptions by case study	283
Figure 6.10: Proportion of burst fresh water supply pipes by case study	285
Figure 6.11: Sewage bursts by case study	286
Figure 6.12: Workers' perception of municipal/council potable water status	287
Figure 6.13: Workers' satisfaction with council potable water supply management	288
Figure 6.14: Responsibility for fetching water in the homestead	290
Figure 6.15: Residents' perceptions on whether government is doing enough to ensure that people get adequate fresh water	299
Figure 6.16: Acid mine dam in Gauteng	301
Figure 6.17: River water system pollution in the Gauteng Province	302
Figure 7.1: Number of internet users for eastern and southern Africa (2000-2010)	321
Figure 7.2: Number of mobile users for eastern and southern Africa (2000-2010)	322
Figure 7.3 Mobile density for Zimbabwe (2000-2010)	322

LIST OF APPENDICES

APPENDIX 1: INTERVIEW SCHEDULE	363
A1.1: Interview schedule for municipal water sector officials	363
APPENDIX 3: QUESTIONNAIRES	364
A2.1: English version of the governance questionnaire for residents	364
A2.2: Shona version of the governance questionnaire for residents	365
A2.3: Venda version of the governance questionnaire for residents	368
A2.4: Zulu version of the governance questionnaire for residents	371
A2.5: Tswana version of the governance questionnaire for residents	374
A2.6: Questionnaire for municipality employees	377
APPENDIX 3: LETTERS	379
A3.1: Certification of language editing	381
A3.2: Researcher's letter to municipal authorities requesting permission to conduct research in the relevant municipal area	381
A3.3: Faculty letter introducing the researcher to the municipalities	382
A3.4: Letter from city of Masvingo giving the researcher permission to conduct research in the city	384
A3.5: Letter from city of Tshwane giving the researcher permission to conduct research in the city	385
A3.6: Letter from Masvingo Rural District Council giving the researcher permission to conduct research in Masvingo Rural	386

ACRONYMS

AAAS	American Association for the Advancement of Science
AIDS	Acquired Immune Deficiency Syndrome
ANC	African National Congress
ARC	Agriculture Research Council
AU	African Union
BBA	Bachelor of Business Administration
BC	Before Christ
BOT	Build, operate and transfer
BPFA	Beijing Platform for Action
Bsc.Pol.Admin.Hons	Bachelor of Science in Politics and Administration (Honours)
CBO	Community based organisation
CC	Catchment Council
CCRC	Consultative Citizens' Report Card
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CHRA	Combined Harare Residents Association
CIDA	Canadian International Development Agency
CMA	Catchment Management Agency
COHRE	Centre on Housing Rights and Evictions
COPs	Catchment Outline Plans
CPR	Common pool resources
CSO	Central Statistical Office
CTMM	City of Tshwane Metropolitan Municipality
Dip.	Diploma
Dr.	Doctor
DIS-WD	Directorate of Infrastructure and Services' Water Division
DRC	Democratic Republic of Congo
DWA	Department of Water Affairs
DWAF	Department of Water and Forestry Affairs
ECA	Economic Commission for Africa

ECOWAS	Economic Community Organisation of West African States
ELUs	Existing lawful uses
GAD	Gender and Development
GMB	Grain Marketing Board
GNU	Government of National Unity
GoZ	Government of Zimbabwe
GWP	Global Water Partnership
HDI	Human Development Index
H/Dip	Higher Diploma
HDR	Human Development Report
HIV	Human Immuno-deficiency Virus
Hre	Harare
HRM	Human Resource Management
HRT	Harare Residents' Trust
ICESCR	International Covenant on Economic, Social and Cultural Rights
ICT	Information and communication technology
ICT4D	Information and Communication Technology for Development
IDS	Institute of Development Studies
IDPs	Integrated development plans
IDRC	International Development Research Centre
IDWSSD	International Drinking Water Supply and Sanitation Decade
IFAD	International Fund for Agricultural Development
IMM	Institute of Marketing Management
IPMZ	Institute of People Management of Zimbabwe
IT	Information technology
IRC	International Research Council
IWMI	International Water Management Institute
IWRM	Integrated Water Resources Management
KWCRS	Khuvutlu Water, Consulting, Roads and Services
MBA	Master of Business Administration
M. Dvnt & Mgnt.	Master of Development and Management

MDC	Movement for Democratic Change
MDGs	Millennium Development Goals
MPhil	Master of Philosophy
Msvo R	Masvingo Rural
Msvo U	Masvingo Urban
Mus R	Musina Rural
NGO	Non-governmental organization
NGDO	Non-governmental development organization
NWA	National Water Authority
NWC	National Water Council
NWU	North-West University
PhD	Doctor of Philosophy
POLC	Planning, organising, leading and controlling
Prof	Professor
RISP	Regional Indicative Strategic Development Plan
RSA	Republic of South Africa
RSAP-IWRM	Regional Strategic Action Plan for Integrated Water Resources Development and Management
SADC	Southern African Development Community
SCC	Sub-Catchment Council
SDC	Swiss Agency for Development and Cooperation
UCAZ	Urban Councils' Association of Zimbabwe
UN	United Nations
UNAIDS	United Nations Programme on HIV and AIDS
UNCHR	United Nations Commission on Human rights
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UN-HABITAT	United Nations Human Settlements Programme
UNICEF	United Nations Children's Fund
UNWVLC	United Nations Virtual Learning Centre

USA	United States of America
USAID	United States Agency for International Development
USD	United States dollar (\$)
UZ	University of Zimbabwe
VTC	Vaal Triangle Campus
WARMS	Water Authorisation and Registration Management System
WB	World Bank
WHO	World Health Organisation
WMA	Water management areas
WPP	Water purification plant
WRC	Water Research Commission
WSA	Water services authority
WSS	Water supply and sanitation
WTWs	Water treatment works
WWTWs	Waste water treatment works
WWAP	World Water Assessment Programme
WWC	World Water Council
ZANU PF	Zimbabwe African National Union Patriotic Front
ZCTU	Zimbabwe Congress of Trade Unions
ZEC	Zimbabwe Electoral Commission
Zim	Zimbabwe
ZINWA	Zimbabwe National Water Authority
ZNCC	Zimbabwe National Chamber of Commerce
ZOU	Zimbabwe Open University
ZWRCN	Zimbabwe Women Resource Centre Network