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**INYUVESI
YAKWAZULU-NATALI**

**WATER THEOLOGY AND RELIGIOUS LEADERS' ENGAGEMENT
IN INTERFAITH DIALOGUE TO MITIGATE WATER SCARCITY IN
BOTSHABELO**

By

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DECLARATION

As required by University regulations, I hereby state unambiguously that this work has not been presented at any other University or any other institution of higher learning other than the University of KwaZulu-Natal, (Pietermaritzburg Campus) and that unless specifically indicated to the contrary within the text it is my original work.



MAPULANGA MICHAEL

As candidate supervisor I hereby approve this thesis for submission



PROF. SIMANGALISO R. KUMALO

CERTIFICATION

I, the undersigned, declare that I have abided by the College of Humanities, University of KwaZulu-Natal's policy on language editing. I also declare that earlier forms of the dissertation have been retained should they be required.

A large black rectangular box redacting the signature of the undersigned.

MAPULANGA MICHAEL

DEDICATION

Most profoundly, I dedicate this work to my beloved family, friends and benefactors who have stood by me in my spiritual and academic journey. In a special way, I dedicate this work to my loving late mum Ivona Naluyele. May our loving God grant her eternal rest and to those who are living, may God protect and bless you all with love, peace and mercy.

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ABSTRACT

This research project focuses on a quest for an interfaith dialogue on water theology in the context of water scarcity in Botshabelo, a region in the Free State Province of South Africa. Water theology in this study stands for the theology that cares for water and the environment. From 2014, Botshabelo has been affected by water scarcity which has severely affected people in their daily living and religious rituals. The adherents of African Traditional Religion, Christianity and Islam argue that despite the water shortages in Botshabelo, religious leaders have not been vocal in advocating for water conservation. The adherents of religions in Botshabelo claim that the engagement of religious leaders in interfaith dialogue and advocacy for water conservation could assist in mitigating water scarcity in Botshabelo. According to these believers, the absence of advocacy for water conservation by religious leaders signifies the lack of care for nature. This thesis aims at investigating how could the engagement of religious leaders through interfaith dialogue assist in mitigating the crisis of water scarcity in Botshabelo. The thesis assesses the role and the significance of religion in addressing social problems. The study focuses on three major religions in Botshabelo, namely; African Traditional Religion, Christianity and Islam to obtain the wide views and responses about their engagement in multifaith dialogue to conserve water in Botshabelo. It is also a finding of this study that even though religious leaders are willing to discuss the problem of water scarcity, they lack the tools and approaches which could be provided by interfaith dialogue. Furthermore, it is a finding of the study that water scarcity is due to the failure of the society to take responsibility for water conservation. While recognizing the contributions of the available scholarship on the aspect of water scarcity in South Africa, this study proposes a care for water which is called in this thesis as a theology of water informed by an interfaith dialogue theory of Michael Fitzgerald (2000) and Hans Küng (2004).

KEY WORDS

Botshabelo, Climate Change, Water Scarcity, Leaders, Engagement, Advocacy, Conservation, Interfaith, Dialogue, Responsibility.

DEFINITION OF KEY TERMS

Advocacy: Learn Tearfund organisation (2007:1) states that “advocacy is about influencing people, policies, structures and systems in order to bring about change. It is about influencing those in power to act more fairly.” Tearfund (2007:1) goes on to define advocacy as “seeking with, and on behalf of, poor people to address the underlying causes of poverty, bring justice and support good development through influencing the policies and practices of the powerful. The person who is involved in advocacy is called an advocate.”

African Traditional Religion (ATR): Nokuzola Mndende (2017:21) describes African Traditional Religion as “a combination of religious beliefs and practices of the Africans. These beliefs and practices have been in existence from ancient times and are still adhered to today by many Africans. They have been handed down by their forebears from one generation to another.”

Attentiveness (Attention): Klaartje Klaver (2011:688), defines attention as “the concentration of awareness on some phenomenon to the exclusion of other stimuli. Attention is awareness of the here and now in a focal and perceptive way.”

Climate Change: Alfred Omenya (2011:75) defines climate change as “a state of the climate or in its variability, persisting for an extended period (typically decades or longer).” Alfred Omenya (2011:75) adds that “climate change is manifested in the changes in the traditional patterns of everyday weather, including extreme events such as high or low temperatures, droughts, hailstorms and floods.” Yinging Zhan (2009:2) states that “climate change includes the alteration of environmental conditions in the distribution of world’s water. Excessive heat makes water evaporate quickly, making the ground dry, so becoming unsuitable for agricultural purposes.”

Collaborate (Collaboration): Emily R. Lai (2011:2) defines collaboration as “the mutual engagement of participants in a coordinated effort to solve a problem together. Collaborative interactions are characterized by shared goals, symmetry of structure, and a high degree of negotiation, interactivity, and interdependence.”

Day Zero: The Joint Research Centre (JRC 2018:1) notes that “day zero is a term that was used by Cape Town’s local government to warn people that a day might come when water could no longer be supplied by the municipality. A day when water will not come from taps.”

Development: I am using the word development in this paper to refer to all forms that need transformation, such as poverty, water and health (HIV/AIDS), gender justice, climate change, environmental degradation, food security, land, political, social and economic ethics, human rights and human dignity.

Dialogue: Dialogue, according to Michael Fitzgerald (2000:4-6), means “a two-way communication between persons who hold significantly differing views on a subject, with the purpose of learning more about the subject from the other.”

Drought: Lorenzo Lara Fabrizi (2009:6) states that “drought is a prolonged period of unusually dry weather in an environment due to low rainfall, causing low water reserves.”

Eco-theology: Cecilia Deane-Drummond (2008:7) defines Eco-theology as “a reflection on different facets of theology in as much as they take their bearings from cultural concerns about the environment and humanity’s relationship with the natural world.”

Interfaith dialogue: In this study, interfaith dialogue, interreligious and multifaith dialogue are terms that are used interchangeably. Michael Fitzgerald (2000:4-6) states that “in the context of religious plurality, interfaith dialogue means all positive and constructive interreligious relations with individuals and communities of other faiths which are directed at mutual understanding and enrichment in obedience to truth and respect for freedom.” From this definition Fitzgerald (2000:6) explains that “interreligious dialogue is a response to religious plurality.”

Interfaith dialogue and Responsibility: Hans Küng (2004:29-61) defines interfaith dialogue and responsibility as “a new religious outline, where people search for new practical ways and endeavour for a new inter-religious honesty, encounter and bond. It is having interreligious dialogue with all groups to tackle social problems.”

Religion: Victoria Harrison (2006:133-152) states that “the word religion has no single meaning. Some define religion as a belief in spiritual beings, while others define religion as a belief in an ever-living God. Still others define religion as a belief in an ultimate being that provides answers to the questions and the meaning of people’s existence.” According to Harrison (2006), religion can simply be defined as a belief in a supernatural being which provides answers to people’s problems. Following Harrison’s definition of religion, African Traditional Religion, Christianity and Islam qualify to be called religions because they believe in a Supernatural Being that provides answers to the people’s problems.

Research project, this study, the researcher and the pronoun I: Are some of the words which will be used repeatedly. The two words ‘research project and this study’ will mean the same thing while the words ‘researcher and pronoun I’ will also mean the same thing.

Responsibility: Stephen Keith McGrath and Jonathan Whitty (2018:693-694) define responsibility as “the quality or state of being responsible: as (a): moral, legal, or mental accountability (b): reliability, trustworthiness.”

Theological advocacy: Seth E Bouvier (2013:1) states that “advocacy is rooted in major themes like theology, sociology and many others. The science that studies God is theology. Theological advocacy is rooted in God and responds to God’s call.”

Water scarcity: Anthony Turton, Anja du Plessis, Jo Walker and Stefanie Swanepoel (2016:5) define water scarcity as “the lack of enough water (quantity) or lack of access to safe water (quality).” Steve Hedden and Jakkie Cilliers (2014:2) define water scarcity as “a higher level of total water demand than available supply.”

Water theology: It is a new term that is within the research project meaning the care for water. Eneida Jacobsen, Rudolf von Sinner and Robert Zwetsch (2012:1) state that “water has symbolic meaning in various religious groups.” They maintain that water has been one of the most tremendously terrifying natural elements and the hostilities it suffers will inevitably have catastrophic consequences for humankind.

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

ANC	African National Congress.
ASCC	African Strategy on Climate Change.
ATR	African Traditional Religion.
AU	African Union.
AZTREC	Association of Zimbabwean Traditional Ecologist.
COEJL	Coalition on Environment and Jewish Life.
CR	Collaboration and Responsibility.
CSR	Critical Solidarity and Responsibility.
FAO	Food and Agricultural Organisation.
CSGM	Civil Society and Green Movement.
DALYs	Disability Adjusted Life Years.
GC	Green Economy.
GCRMN	Global Coral Reef Monitoring Network.
GZA	Green Zionist Alliance.
H2O	Water.
IPCC	Intergovernmental Panel on Climate Change.
MDG	Millennium Development Goals.
M&E	Monitoring and Evaluation.
MID	Monastic Interreligious Dialogue.
NGO	Non-Governmental Organisation.
NRASD	National Religious Association for Social Development.
NS	Nostra Aetate (Vatican Document).
RECs	Regional Economic Communities.

SANLAM	South African National Life Insurance Company [Abbreviation of SANLAM is: Suid-Afrikaanse Nasional Lewens-Assuransie Maatskappy].
SCC	Strategy on Climate Change.
WSSD	World Summit on Sustainable Development.
UDF	United Democratic Front.
UN	United Nations.
QCA	Qualitative Content Analysis.
WASSIP	Water and Sanitation Service Improvement Project.
WBG	World Bank Group.
WCRP	World Conference on Religion and Peace.
WGP	Water Global Practice.
WHO	World Health Organisation.
WSS	Water Supply and Sanitation.
WUO	Water User Organisation.

Table of Contents

DECLARATION	ii
CERTIFICATION	iii
DEDICATION	iv
ACKNOWLEDGEMENTS	v
ABSTRACT	vi
KEY WORDS	vii
DEFINITION OF KEY TERMS	viii
GLOSSARY OF ACRONYMS AND ABBREVIATIONS	xi
CHAPTER ONE	1
INTRODUCING THE STUDY: UNVEILING THE PLATFORM	1
1.0 Introduction	1
1.1 Synopsis of the location of the study and the water scarcity scenario.....	1
1.1.1 The Genesis of Botshabelo	2
1.1.2 The Population of Botshabelo.....	6
1.1.3 Water scarcity in Botshabelo	8
1.2 Background to the Study: the need to engage in interfaith dialogue.....	12
1.3 Problem and research question	15
1.3.1 Research question	16
1.3.2 Objectives	16
1.4 Motivation for the study	17
1.5 Limitations of the Study	18
1.6 Outline of the Chapters.....	19
1.7 Conclusion	20
CHAPTER TWO	21
METHODOLOGY AND THEORETICAL FRAMEWORK OF THE STUDY	21
2.0 Introduction	21

2.1	Research Method	21
2.2	Sampling and Data collection	24
2.2.1	Purposive Sampling	25
2.2.2	Snowball Sampling	28
2.2.3	Data Collection Methods	28
2.2.4	Primary and Secondary Data	29
2.2.5	Data Analysis Procedure	30
2.3	Summary on Data Analysis and Interpretation	34
2.4	Research Paradigm	35
2.5	The Theoretical Lens of the study	36
2.5.1	The four forms of dialogue	36
2.5.2	Dialogue and responsibility	42
2.6	Conclusion	43
CHAPTER THREE		45
MAPPING THE SCENARIO OF WATER, THE CAUSES AND EFFECTS OF WATER SCARCITY		45
3.0	Introduction	45
3.1	The state of world water	45
3.2	Water scarcity and conflicts	50
3.3	Water situation in South Africa	51
3.4	Causes of water scarcity in South Africa	55
3.4.1	Natural causes of water shortage in South Africa	55
3.4.2	Human causes of water scarcity in South Africa	59
3.5	Effects of water shortage	63
3.5.1	Effects on Community livelihood projects	63
3.5.2	Effects on crop yield	64
3.5.3	Effect on health	64
3.5.4	Effects on development	64
3.5.5	Effects on rivers	66

3.6	Conclusion	66
CHAPTER FOUR		67
DEFINING THEOLOGY, SIGNIFICANCE OF RELIGION AND THE ROLE OF WATER IN RELIGIOUS PRACTICES		67
4.0	Introduction	67
4.1	Definition of theology	68
4.1.1	Dogmatic Theology	68
4.1.2	Liberation Theology	69
4.1.3	Moral theology.....	69
4.1.4	Natural Theology	69
4.1.5	Practical Theology	69
4.1.6	Systematic Theology	69
4.2	The significance of religion to addressing environmental problems	70
4.2.1	African Traditional Religion’s contribution to nature conservation	71
4.2.2	Christianity’s contribution to environmental stewardship	81
4.2.3	Islamic contribution to environmental care	88
4.2.4	Collaborative effort among religions to address environmental problems	93
4.3	Defining water, its role and significance in religious practices	97
4.3.1	The role of water and its significance in religious practices	99
4.3.2	Sacramental approach to water	101
4.3.3	African Traditional Religion’s teaching on water	102
4.3.4	Christianity’s teaching on water	103
4.3.5	Islamic teaching on water	105
4.4	Conclusion.....	111
CHAPTER FIVE		112
INTERFAITH DIALOGUE IN HUMAN HISTORY		112
5.0	Introduction	112
5.1	Understanding interfaith dialogue.....	113

5.1.1	Defining interfaith dialogue.....	113
5.1.2	The views, possible goals, theories and outcomes of interfaith dialogue	113
5.1.3	Stages of interfaith dialogue and the role of participants in interfaith dialogue	115
5.1.4	Critics and supporters of interfaith dialogue.....	116
5.1.5	The role of interfaith dialogue in addressing social problems in the world.....	128
5.1.6	How to conduct interfaith dialogue	133
5.2	What makes interfaith dialogue difficult?	133
5.2.1	Exclusivism.....	134
5.2.2	Inclusivism.....	134
5.2.3	Pluralism.....	135
5.2.4	Challenges that arise from pluralism	136
5.3	State of interfaith dialogue in South Africa.....	137
5.4	Conclusion	141
CHAPTER SIX		142
PRESENTATION OF DATA AND FINDINGS OF INTERVIEWS ON HOW TO ADDRESS WATER SCARCITY IN BOTSHABELO		142
6.0	Introduction	142
6.1	Data collection method.....	143
6.2	Methods of contacting participants and their response rate	146
6.3	Fieldwork experience and challenges	146
6.4	Interview questions.....	148
6.5	Responses from interview questions	149
6.5.1	On the assessment of the current level of dialogue by African Traditionalists, Christians and Muslims on climate change and water scarcity in Botshabelo (Q1).....	150
6.5.2	On the religious leaders' engagement in interfaith dialogue; why and how could the engagement be relevant to the crises around water sourcing, usage and distribution in Botshabelo? (Q2).....	151
6.5.3	On the role of religions in influencing government to implement policies and strategies that addresses water scarcity in the country (Q3)	152
6.6	Presentation of Findings	154

6.6.1	On the assessment of the current level of dialogue by African Traditionalists, Christians and Muslims on climate change and water scarcity in Botshabelo (Q1).....	154
6.6.2	On the religious leaders’ engagement in interfaith dialogue; why and how could the engagement be relevant to the crises around water sourcing, usage and distribution in Botshabelo? (Q2).....	155
6.6.3	On the role of religions in influencing government to implement policies and strategies that addresses water scarcity in the country (Q3).....	156
6.7	Emerging themes from responses	156
6.8	Conclusion	158
CHAPTER SEVEN.....		159
DISCUSSION OF THE FINDINGS ON RELIGIONS’ SIGNIFICANCE TO ADDRESS WATER SHORTAGES		159
7.0	Introduction	159
7.1	Discussion of Findings	159
7.2	What is advocacy and why advocate for water conservation?	163
7.2.1	Theological advocacy	165
7.2.2	Advocacy for water conservation	166
7.3	Water theology	166
7.4	Eco-theology	167
7.5	Conclusion	174
CHAPTER EIGHT		176
RELIGIOUS STRATEGIES TO MITIGATE WATER SCARCITY IN BOTSHABELO.....		176
8.0	Introduction	176
8.1	Interfaith collaboration	176
8.2	Decentralisation of cities.....	178
8.3	Improving the water management systems	180
8.4	Advocating for ways and strategies that responds to water shortages	181
8.4.1	Promote water security integration.....	181
8.4.2	Promote resilient cities.....	182
8.4.3	Promote transboundary cooperation	182

8.5	Water and gender incorporation	183
8.6	Attract commercial financing into the water and sanitation sector	187
8.7	Measures for saving water	188
8.7.1	Green goal.....	188
8.7.2	Surface water capture and storage	189
8.7.3	Ground water exploitation	189
8.7.4	Monitoring water pipes.....	190
8.7.5	Desalination and pollution control.....	190
8.7.6	Households water usage control	190
8.7.7	Reducing demand	191
8.7.8	Sector measures on water conservation	192
8.7.9	Places involved in water conservation measures	197
8.8	Attentiveness, advocacy and responsibility for water conservation	200
8.8.1	Responsibility in environmental conservation.....	201
8.8.2	Why should people avoid evil?.....	203
8.8.3	Why should people do good?.....	204
8.8.4	An ethic of responsibility in place of an ethic of success	206
8.9	Conclusion	208
CHAPTER NINE		210
RÉSUMÉ OF THE STUDY		210
9.0	Introduction	210
9.1	Summary of the findings	210
9.2	Overview conclusion of chapters.....	211
9.3	Concluding Remarks.....	215
9.4	Value of the Study and its contribution to new knowledge	215
9.5	General Recommendations.....	215
9.6	Potential areas for future research.....	216
BIBLIOGRAPHY		217

CHAPTER ONE

INTRODUCING THE STUDY: UNVEILING THE PLATFORM

1.0 Introduction

Zachary Donenfeld; Courtney Crookes and Steve Hedden (2018:1) note that “South Africa experienced a severe drought from 2014 to 2016.” Botshabelo, a Township in the Free State Province of South Africa has been experiencing water scarcity for the past four or six years, from 2014 to 2019. Water scarcity has affected many lives, from house usage, in farming and making bricks to earning a living. Religions have also been affected in their practices. The government has been trying to address the problem of water scarcity for several years, and yet the problem has continued. The study proposes interreligious dialogue related to the care of water known as water theology in this thesis, as an alternative tool for addressing water scarcity around Botshabelo. The purpose of this chapter is to serve as an introduction to the research project. It gives an overview of the topic, starting with ways a dialogue between African Traditional Religion (ATR), Christianity and Islam could create solutions to problems related to the water crisis in South Africa including water scarcity in South Africa between 2014 and 2019 in Botshabelo. The chapter then presents the research problem, questions and objectives, research motivation, limitations of the study and outline of the chapters.

1.1 Synopsis of the location of the study and the water scarcity scenario

In recent years, South Africa has been hit by droughts. Some of the areas hit most were in the Western Cape, Eastern Cape, Northern Cape and Free State provinces. This study focuses on Botshabelo in the Free State Province. The other areas which were affected by water shortages in Free State Province are Parys, Senekal and QwaQwa. I became aware of these places during interviews with some of the participants. However, the focus of the study is on Botshabelo.

1.1.1 The Genesis of Botshabelo

Martin Abel (2015:1) states that “Botshabelo did not exist before 1978. Botshabelo was created after the Sotho speaking people were forced to move from Thaba Nchu to a farm called ‘Onverwacht’, meaning unexpected place.” Abel (2015:1) notes that “Thaba Nchu is a Sotho word meaning Black Mountain. When the Sotho speaking people were moved from Thaba Nchu to ‘Onverwacht’, they called this place ‘Botshabelo’, meaning place of refuge.” According to him, the Sotho speaking people of South Africa were living in Thaba Nchu happily with good houses, families and livestock before they were forcibly moved to Botshabelo. Abel (2015:1) adds that “these Sotho speaking people were living in a place called *Kromdraai* which was near the railway. It was a place where the railway meanders hence the name in Afrikaans ‘Kromdraai’ which means meander.” He describes that Thaba Nchu was located in a *Bantustan* lead by Lucas Mangope. ‘Bantu Stan’ was a word used by the apartheid government to group Black people. He adds that the apartheid government had brought the idea of Black uprooting, grouping the Black people into tribes.

Abel (2015) notes that the system of Black uprooting and regrouping them into tribal groups was a system used by the apartheid government to divide and rule. Grouping Black people according to their tribes was meant to weaken their unity and strength. This is how Thaba Nchu was created in what was called Bophuthatswana by the apartheid government. Thaba Nchu was an area where most of the Tswana speaking people lived mixed with Sotho speaking people. Abel (2015:2) points out that “between 1968 to 1978, the apartheid government introduced the system of travel documents called, *Lekwalo-la-mosepele* in Thaba Nchu.” This travel document was meant to limit the people according to their tribal grouping, hence whoever accepted to have that travel document was supposed to be cut off from the Republic of South Africa. Abel (2015:2) adds that “to go and work in Bloemfontein, meant that whoever had accepted to have a traveling document was to enter Bloemfontein as a foreigner.” Abel (2015:2) further adds that “since the Sotho speaking people had the South African document, they could not accept to have another traveling document to go and work in the factories in Bloemfontein.” He explains that the refusal of the Sotho people to have a travelling document which was supposed to limit them to a ‘Bantustan’ (black grouping) annoyed the apartheid government. Therefore, the apartheid government with the assistance of Lucas Mangope made the decision to move the Sotho people

by force to another place. Abel (2015:2) points out that “in 1978 -1979, the apartheid government forcibly moved the Sotho people to a farm called *Onverwacht*. The beginning was hard since the government just gave families tents to live. People who had houses in Thaba Nchu were reduced to a small tent because they lost their original homes in Thaba Nchu.” Abel (2015:2) further notes that “in 1979, the government started to build toilets, houses, schools and clinics for the people.”

Abel (2015:3) states that “to divide and marginalize the black opposition, the apartheid regime forcefully relocated some 3.5 million South Africans to rural homelands between 1960 and 1980.” He describes that this event, which is considered as one of the history's largest social engineering exercises, created the overcrowded and poor communities of displaced black people. Kristin Henrard (1996:1) concurs with Abel by pointing out that, “White South Africa's system of apartheid created and maintained a strategy of forced removals of the majority black population as a means of dividing and controlling the economic and political power of black South Africans.” She explains that the policy of forced removals was a pillar of the apartheid system, without which apartheid could not have become as fully entrenched as it was in South Africa, before the establishment of black majority rule with the first multiracial elections in April 1994. Henrard (1996:2) states that “despite the assertion of the black majority to political power, however, the long-standing effects of the white minority's forced removal policy remain and perpetuate the injustice of apartheid, creating an enormous obstacle to the reformation of South Africa and the economic and political empowerment of its black citizens.”

Henrard (1996) notes that although the era of apartheid is generally said to have begun in 1948 with the governing national party's strategy of separate development, features of the segregationist policy with forced removal implications, can be found in the 19th century and further increased in the first decade of the 20th century, intensifying after the formation of the Union in 1910. Henrard (1996:3) points out that “the antecedents of forced removal can be dated back as far as 1652 with the arrival of the white settlers in South Africa. Those early roots had a pervasive impact on the strategies used by the nationalist party after 1948.” Henrard (1996:4) illustrates that “the creation of reserves in the 19th century is a determining factor in the elaboration of the Bantustan policy.” She describes that by the end of the 19th century, the

European settlers had developed a coordinated policy which meant that the original African chiefdoms retained only a fraction of their former lands. Henrard (1996:5) states that “the people were crammed together in those so-called reserves as a result of forced relocation.”

(a) Rural Resettlement

Henrard (1996:6) points out that “Rural Resettlement directed blacks from the white rural areas to the Bantustans.” According to him, this specific movement can in turn be related to two major developments which are relocation due to abolition of the labour tenant system and squatting on white owned farms, the clearance of black spots and, more broadly, the Bantustan consolidation policy consisting of a massive program of putting together a number of pieces of land to create ten separate ethnic units.

(b) Urban Resettlement

Henrard (1996) notes that the low economic viability of the Bantustans led to the so-called displaced urbanization, as people became attracted by the better living conditions in the cities. This emigration pressure on the African population was countered by the system of influx control as the major cause of forced removals became increasingly more sophisticated. Most importantly, it became more difficult to acquire permanent residence rights in the cities because migrant labourers were systematically tied to short term contracts of a maximum of one year. Henrard (1996:7) states that:

The 1960s also saw the emergence of another category of urban resettlement, namely the incorporation of African townships in the Bantustans that resulted in the loss of Section 10 rights for the relocated people (section 10 rights during the time of apartheid stated that anyone who stayed in one place for a period of more than a year had the right to own the land. To avoid giving land to blacks, the apartheid government gave short contracts to farm workers not to exceed a year at one place).

Henrard (1996:8) points out that “if a town was incorporated into one of the four independent Homelands, this even resulted in loss of South African citizenship for the people of that town.” Henrard (1996:8) adds that “this incorporation involved physical removal of African townships within 70 km of the Bantustan, as well as the redrawing of the borders of some Bantustans to include metropolitan townships, the so-called statutory removals.”

(c) Resettlement within the Bantustans

Henrard (1996:9) points out that “within the Bantustans themselves, there was a further relocation due to the implementation of the Betterment Schemes that started in the 1930s.” To maximize agricultural development within the Bantustans so as to improve the image of a separate economic development, these schemes demarcated the Bantustan land into arable, residential and common grazing areas, and thus entailed the relocation of people away from areas that were no longer residential.

Henrard (1996:9) argues that:

The prime motivation of these schemes was to improve output for a limited number of peasant producers in the Bantustans. This scheme was therefore closely related to the goal of class stratification in those areas as a further means of facilitating control. Another cause of forced removals in the Bantustans was interwoven with the overall attempt to reduce squatting and thus several squatter areas were demolished, forcing the inhabitants to move. By the beginning of the 1980s, approximately 60% of the African population was based in the Bantustans, which illustrates the importance of the Bantustan policy in the overall apartheid strategy. Ultimately this policy with its theory of separate development was aimed at having political control over and containment of the political, ideological and economic aspirations of the African population in order to maintain white domination. On one hand, this was achieved through the centralized control over the allocation and location of African labor, which turned the black labor force into rightless, powerless migrants. This in turn prevented the emergence of a powerful class and the formation of an alliance between the poor whites and the poor blacks and helped create a cheap, controllable African proletariat for farms, mines, commerce and industry. The population surplus to the labor needs of the production sector was increasingly located in the Bantustans, which turned them into labor reserves and more generally into dumping grounds for the unwanted blacks, namely the unemployed as well as the old, the children and the women. On the other hand, the Bantustan policy maintained and enhanced the political control over the African population living in the Bantustans.

Alan Cowell (1986) in the New York Times of 23rd November 1986 reports the act of White people removing the Black people from where they were living to another place. The Blacks were displaced from their homes and sent to a place which had no water. The picture below demonstrates this action of black uprooting.



Figure 1.1: Black uprooting picture

1.1.2 The Population of Botshabelo

According to Botshabelo Free State Population Statistics (2011:1), “Botshabelo has a population of about 200, 000 inhabitants and over 50, 000 households following the 2011 census. The population is composed of Sotho speaking people who are the majority with few Xhosas.” According to Botshabelo Free State Population Statistics (2011:1), “Botshabelo township is the second largest township in South Africa following Soweto which has over a million inhabitants.” Some interviewees stated that the population of Botshabelo is increasing at a very fast rate. The building of New Botshabelo Mall has attracted many people to Botshabelo. Each year, there are new sections being built. Below is a map of Botshabelo which was obtained from Botshabelo Municipal Offices in 2019.

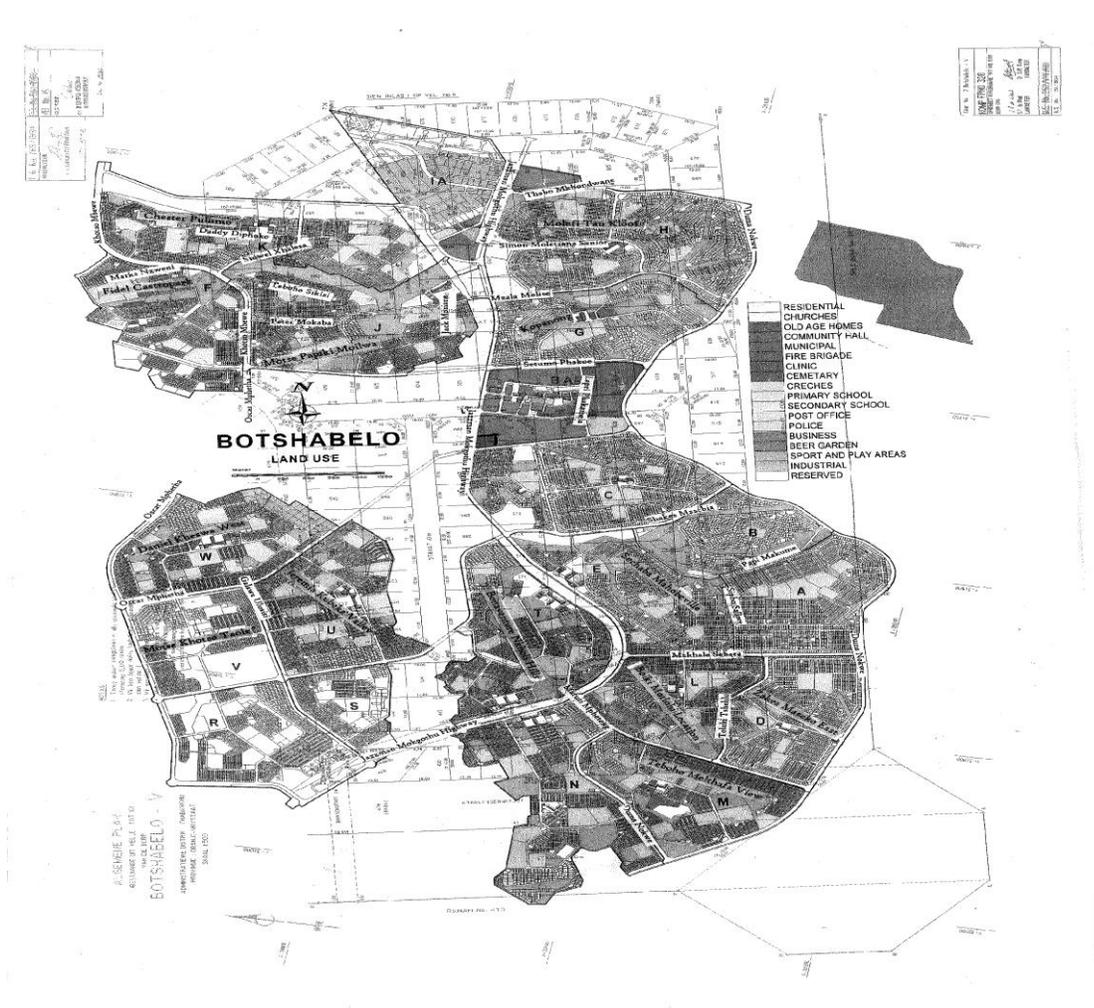


Figure 1.2. Map of Botshabelo

The interviewees explained that the first place to be occupied in Botshabelo was section C, where people were relocated as indicated in the Map of Botshabelo. It is in section C where the Catholic priests, the Oblates of Mary Immaculate (OMI) constructed the hall in 1979 which was used as a multipurpose building, church on Sunday and as a school on Monday to Friday. Different activities were carried out in this hall. The hall was renovated in 2019 by the parish priests and to date, it is still used for different activities such as weddings, funerals and other community gatherings. The Catholic Church in Botshabelo named this hall St. Charles Lwanga Roman Catholic Church which celebrated 40 years of its existence on the 22nd of September 2019. Adjacent to the hall, is a new Church which was built specifically for community worship in 1986. When the hall was built in 1979, there was no running water in section C but section C

now has piped water. Almost every household has water in their homes; however, there are some places where people have not yet received piped water like section R, V and Botshabelo West. Even in section C, there are some days when people have no water as aging water pipes burst.

1.1.3 Water scarcity in Botshabelo

The participants of the interview explained that Botshabelo experienced water scarcity from 2014 up to the end of 2019 due to persistent droughts. They pointed out that animals died, and people could not cultivate even small vegetable gardens for their home consumption. This research project did not go as far asking how many cows, pigs and sheep died during the interviews. The major concern of the study was to find out how many sections lack access to drinkable water. The participants pointed out that there are some houses in Botshabelo which do not have piped water (i.e., 26 houses in section L, 38 houses in section M, and sections R, V and Botshabelo West have no water in their houses). When I interviewed the people at the municipality, they agreed with the interviewees and pointed out that the municipality has a plan for installing water pipes in all areas where there is no water. The houses which have no water now have communal taps nearby, either within the section or nearby sections where they can fetch it. Water scarcity in Botshabelo, is a real problem. Africa Environmental Affairs (2011:61) emphasizes that “South Africa is referred to as a water scarce country”, and du Plessis (2017:1) concurs, stating that “South Africa experiences freshwater challenges, it is a water scarce country. The drought added to an already prevailing problem of water shortage making people to suffer more.” According to the participants, it is not only Botshabelo which was affected by water scarcity between 2014 and 2019, but different provinces in South Africa experienced water shortages as well. The Joint Research Centre (2018:1) asserts that “in recent years, Cape Town has been hit by drought in such a way that there was a looming deadline, or ‘Day Zero’, when the province was presumably to run out of water.” The Joint Research Centre (2018:1) adds that “some social media have stated that there are about 29 districts right now without water in Western Cape Province.” Other provinces of South Africa have also had water crises. Interviewees stated that, although Botshabelo has been experiencing water scarcity, it is better than QwaQwa where people experience water rationing. South Africa Environmental Affairs (2011:61) points out that “South Africa is a water threatened country; and if the current rate of water usage continues, demand is likely to exceed supply at some point in the not-too-distant

future.” South Africa Environmental Affairs (2011:61) further notes that “when compared to the global rainfall average of 870mm per year, South Africa only receives 450mm. This makes South Africa to be the world’s 30th driest country in the world.” Donenfeld, Crookes and Hedden (2018:1) concede that “South Africa is a water scarce country. The drought that South Africa experienced in 2014 to 2016 catalyzed a national conversation, debate and policy making about water security in South.” Although the government has been trying to come up with policies to address water shortages, the problems continue. This research project suggests interfaith dialogue on water theology as an alternative way to address water scarcity in South Africa.

Donenfeld, Crookes and Hedden (2018:1) argue that “the drought did not cause water scarcity, but what the drought did was to highlight the existing vulnerabilities in South Africa’s water system and challenged South Africans to come up with a framework to ensure water security for the country.” This research project has adopted Michael Fitzgerald’s (2000) framework which advocates for dialogue of life, dialogue of action, dialogue of theological exchange and dialogue of experience, as well as Hans Küng’s (2004) concepts of dialogue and responsibility in solving social problems. This study has found that water scarcity is a social problem and applying Fitzgerald’s (2000) framework and Küng’s (2004) concepts could lead to a possible solution to water scarcity which is being experienced in Botshabelo. According to Donenfeld, Crookes and Hedden (2018:2), “more than 60% of South Africa’s rivers are currently being overexploited and only one third of the country’s main rivers are in a good condition.” Mutamba (2019:1) also notes that “water scarcity is becoming a serious issue in South Africa and needs the concern of every citizen of the country.” Donenfeld, Crookes and Hedden (2018:2) point out that “the consequences of overexploitation of rivers may not be evident now but have serious consequences in the long run.” Religions are not exempt from water scarcity. It is in this view that this research project has involved the African Traditional Religion, Christians and Muslims around Botshabelo to get to find a solution to water scarcity using interfaith dialogue on water theology. Donenfeld, Crookes and Hedden (2018:2) describe that “in 2015, South Africa only had 403mm of annual rainfall. The 403mm annual rainfall that the country received in 2015 was the lowest annual total on record since the South African weather service began collecting rainfall data in 1904.” Donenfeld, Crookes and Hedden (2018:2) further add that “the 2015 drought was the most severe and prolonged drought South Africa had experienced since 1940”.

According to Donenfeld, Crookes and Hedden (2018:2), “this caused South Africa’s average dam levels to plunge from around 93% in March 2014 to a low of 48% in November 2016. In the city of Cape Town in the Western Cape province [local government] has twice had to invent new levels of water restrictions.” Donenfeld, Crookes and Hedden (2018) describe that there has been a consistent decline in dam levels around the Cape Town metro area. The province is gravely concerned about the loss of its water supply, with a near panic erupting around a possible ‘Day Zero’, when the province could potentially run out of water completely. Fortunately, Cape Town did not experience ‘Day Zero’ because some measures to conserve water were implemented.

The Joint Research Centre (JRC 2018:18) points out that:

The water scarcity that affected Cape Town could have been avoided if South Africa had the structures to capture the Frequency of Precipitation and the Heat Wave Magnitude Index (HWMI). The HWMI is a simple indicator that takes both the duration and the intensity of the heat wave into account. This index can be classified into different categories from normal, moderate, severe and extreme temperatures.

The Joint Research Centre (2018:19) describes that “observing the rising extreme temperatures must be an indicator for the country to build structures that would conserve water during drought years.” The Joint Research Centre (2018:20) further assesses that “if South Africa had observed the Heat Wave Magnitude Index constantly, the government might have come up with policies of building infrastructure for water conservation. These structures would help the country to mitigate the deficit of water during drought.” However, this research project intends to go beyond what the Joint Research Centre (JRC) suggests. The JCR proposes observing the rising temperatures, while interfaith dialogue on water theology aims at finding the root causes that make the temperatures rise. It is only by finding the root causes that the problem of water scarcity can be addressed. The root causes and how interfaith dialogue can help people to address them will be addressed in the following chapters.

The Joint Research Centre (2018:23) points out that “the South African weather indicator shows that the precipitation for the past 36 years (from 1981 to 2017) varied from year to year. There are years when the country had good rainfall and some years when the temperatures rose due to climate change, causing heat waves.” For instance, states the JRC (2018:25), “the weather

indicator of 2015 to 2017 showed rainfall of below 400 mm in the country, which was below average. In normal rainfall, South Africa receives about 450 mm a year.” Elkington Sibusiso Mnguni (2020:1-2) points out that:

Though the average annual rainfall of South Africa is about 450 mm, this average is low compared to the global annual average of 860 mm. Analyzing the precipitation constantly, it has been revealed that in every 5 years, there was a deficit of rainfall of around 50% to 70%. After 10 years, there was a deficit of rainfall of around 70% to 80%. Understanding the variation of precipitation could have helped policy and decision-makers to come up with plans to construct the infrastructure to support and mitigate these deficits, to ensure that there is enough water during drought years.

This research project argues that understanding the variation as stated by the Joint Research Centre (2018) can help to find a temporary solution. It is a known scientific fact that climate change has caused the temperature to rise. If what causes temperatures to rise is climate change, then what causes climate change? There must be root causes that ignite climate change.

This water crisis poses a serious and immediate risk to the country’s economy and social stability. An urgent collective focus on water efficiency involving all parts of society is the only way to address the risk of water scarcity. The problem of water scarcity is a social problem that needs combined efforts to address it. Anthony Turton et al (2016:8) explain that “the Western Cape was among the provinces with extremely high risks in terms of water scarcity. The Free State Province was ranked among the medium to high risk in terms of water scarcity.” Turton et al (2016:8) add that “between 2015 to 2017, South Africa experienced the worst drought since 1982, which affected 173 of 1, 628 water supply schemes that serve about 2.7 million households.” Due to the drought, Turton et al (2016:9) argue, “out of 120 South African rivers, 82% were threatened, 44% critically low 27% low, 11% vulnerable and only 18% were least threatened.” Turton et al (2016:10) further state that “it is estimated that water usage in South Africa in 2013 was between 15.6 and 16 billion m³ a year and future demand projections are 17.7 billion m³ by 2030.” According to Anja du Plessis (2017:1), “the impact of water levels dropping in most of South African rivers will leave a gap of 17% between water supply and demand. At least six out of nineteen Water Management Areas will not have enough water to meet demand by 2030.” Interfaith dialogue on water theology aims to provide a tool to address water

conservation and usage that will help to address water scarcity in the future. Water, being an essential need of humanity, deserves the attention of everyone, especially those occupying public offices. This research project aims at raising awareness in the community about water scarcity and to introduce conservation methods using interfaith dialogue on water theology as illustrated by the frameworks of Fitzgerald (2000) which advocates for dialogue of life, dialogue of action, dialogue of theological exchange and dialogue of experience, as well as Küng's concepts of dialogue and responsibility in solving social problems (Küng 2004).

1.2 Background to the Study: the need to engage in interfaith dialogue

Water scarcity in Botshabelo is considered to be a social problem. Hans Küng (2004:1) points out that “interfaith dialogue can be used as a tool to resolve social problems.” Daneel (1991:101) concurs with Küng (2004) stating that “religions through interfaith dialogue can play a major role in addressing social problems such as water shortages.” Daneel (1991) demonstrates how Zimbabwe addressed the water scarcity problems during the years of drought by using interfaith dialogue. South Africa has been experiencing water scarcity since 2014 and the water shortages have affected the lives of people in Botshabelo. Following the theories of Küng (2004) and Daneel (1991) on addressing social problems such as water scarcity, this study explores the ways in which water scarcity problems can be addressed in Botshabelo. Different people during the interviews also confirmed the water shortages in South Africa. They stated that the adherents of Christianity, Islam and African Traditionalists in South Africa have yet to express unified concern about water scarcity in the country. This research project suggests a need to engage in interfaith dialogue on water theology to address water scarcity in Botshabelo. The study notes that a few scholars belonging to some of the different faiths under consideration in this study have emphasized the importance of water at individual levels. For example, Steve de Gruchy (2010:1) affirms that “water is life, and its consumption is not just for human beings but for all creation, therefore, water should be conserved.” While aligning with de Gruchy, Isabel Phiri (2018:2) notes that “de Gruchy was worried about the shortage of water particularly in South Africa. He had predicted that by 2025 South Africa would have a shortage of water.” The occasion coincided with the time when the local and international media were speculating about how Cape Town would run out of water. Phiri (2018:2) referred to a BBC report which stated

that “11 other cities may run out of water sooner than later. These cities include Sao Paulo, Bangalore, Beijing, London, Cairo, Istanbul, Moscow, Mexico City, and others.”

This research project argues that although individuals from different faiths have addressed the problem of water scarcity, a unified voice from different religions is missing and it is the intention of this research to suggest interfaith dialogue on water theology as an alternative means of addressing water scarcity in Botshabelo. According to Phiri (2018:3), “water scarcity must be addressed as soon as possible because failure to address this problem will lead to cities experiencing lack of water for home usage.” She adds that water shortage may lead also to lack of food security since crops cannot grow without water; if the cities continue running dry for a weeks, months and years, there will be no food. Phiri (2018:3) stresses that “water scarcity is a serious social problem that needs quick attention.” This research project points out that extended water shortages in homes and the country can be a time-bomb that may destroy the peace of the country if a shortage of water continues. For instance, in 2018 and 2019, in QwaQwa in the Free State Province, people went to the streets to demonstrate dissatisfaction with water shortages in the area. The theory of Hans Küng on dialogue and peace (2004:4) suggests that “the world cannot have peace unless there is dialogue among the world religions.” The study argues that water scarcity in homes and the country doubtless disturbs peace in homes and the intensity of disturbance might increase when water scarcity reaches its climax in the cities. Continuous water scarcity in one area can be a time-bomb for a country. To defuse this potential time-bomb, Küng (2004) proposes interfaith dialogue. Küng (2004) demonstrates how some countries ignored interfaith dialogue and after 20 years ended up in civil war and people regretted not engaging in interfaith dialogue earlier. Therefore, interfaith dialogue on water theology is considered to be necessary to address water scarcity problems and avoid conflicts that might arise because of water shortages.

This research project demonstrates that farmers around Botshabelo cannot produce crops because of water scarcity. The shortage of water, if it persists, will likely lead to food shortages in the area. When there is no food or no money, you face hunger. According to Küng (2004), interfaith dialogue on social, economic, political and spiritual problems could assist in creating the platform to raise awareness in the community to address such problems. In this case, interfaith

dialogue can be used as a tool to address water shortages in the community. By using interfaith dialogue, religious leaders can engage in an awareness campaign and teach people about water conservation. The conservation of water leads to preservation of life. Failure to conserve water means destroying our own lives. This research observes that despite water scarcity being experienced and being discussed on social media, the major religions of South Africa (African Traditional Religion, Christianity and Islam) seem to not be vocal about water scarcity. Lack of cooperation among religions to address water shortages recently is different from what happened in 1980s when different religions came together to address social problems such as theft and gangsterism in Cape Town, and apartheid in the country. According to Farid Esack (1997), in the 1980s, different religions were involved in liberation issues during the time of apartheid. Esack (1997:250) bemoans that “while Christianity and progressive Islam in the 1980s were manifested on the streets, in townships, in church halls, mosques and in a plethora of organisations, it now seems to be in the portals of academia and in a single mosque.” This research has, however, found that currently there are some people from different faiths who have written about water scarcity, not as in interfaith dialogue but as individuals. These individuals include: Bongani Mthembu (2008), Ernst Conradie (2008), Beverley Haddad (2015) and Clive, W. Ayre and Ernst M. Conradie (2016).

Amongst the African Traditional Religion, the people who were invited to participate in interfaith dialogue are those who are active in their practice as traditional healers and have their own followers. Among Christians, the Mainline Churches were invited to take part in interfaith dialogue. Additionally, some Pentecostal Churches like Assemblies of God and the Bread of Life International were considered for participation. Christianity is wide and the researcher admits that not all Christian Churches were considered for participation in interfaith dialogue. With the Islamic religion, three branches were considered namely, the Sufis, Shiites and Sunis. All the participants of interfaith dialogue on water theology were supposed to be the custodian of raising awareness about water conservations in their various religions. The main reason of engaging interfaith groups in addressing water scarcity using interfaith dialogue is that the majority of the people in Botshabelo belong to different religions. The interviewees pointed out that religion and religious leaders play important roles in addressing community problems. Religious leaders have a great influence in addressing social matters of the community. Participants added that religious

leaders have the power to raise awareness about social problems like water shortages and how to conserve it. Adherents of religions listen and obey their religious leaders. Having stayed in Botshabelo for about four years and observing the influence of religion and religious leaders in other social matters, I decided to use interfaith dialogue on water theology as a tool to address water scarcity in Botshabelo. Religious leaders are invited to raise awareness in their religious gatherings.

Raising awareness about water scarcity and sensitizing the community to conserve water, proposing ways on how to conserve water and advocating water conservation, responds to the major question this thesis attempts to address. Interfaith dialogue on water theology would make a difference in matters of water sourcing, water usage and distribution. Daneel (1991) illustrates how Zimbabwe reduced their water scarcity problem by using interfaith dialogue. This research asserts that if the same methods of interfaith dialogue which were applied in Zimbabwe, are applied in South Africa, interfaith dialogue could potentially make a difference in matters of water sourcing, water usage and water distribution. Küng (2004:4) stresses that “the world social, economic, political and religious problems cannot be solved unless people learn to engage in interfaith dialogue.” Daneel (1991:101) points out that, “Interfaith dialogue helped the religions in coming up with the strategies of raising awareness to the community about water scarcity and water conservation.” Daneel’s concepts have been applied in this research to see how awareness about water scarcity can be used in the Free State, South Africa. His ideas have been used to suggest methods on how to utilise interfaith dialogue to make a difference in matters of water sourcing, water usage and water distribution.

1.3 Problem and research question

There is water shortage in Botshabelo, which is an economic problem because when there is water some people are able to make vegetable gardens and bricks to sell and earn money to survive. It is also a social and religious problem because people need water in their households and religious rituals. Yet as critical as it is, the three main religions in the area, namely African Traditional Religion, Christianity and Islam have not had a united voice in terms of finding a solution to the crisis. Furthermore, the majority of the people of Botshabelo claim to belong to

one of the three religions under discussions. What can account for this lack of united advocacy around such an important issue? Is it because of fear that if they engage in interfaith engagement and advocacy, they would each lose their identity? The water crisis is not to be left to the government and technical experts alone. Rather it is everybody's duty given the importance of water to human life. The faith community has played a prominent role in the past, not only in the fight against apartheid, but in the fight against social ills, such as gangsterism and drugs in many communities. What could be the impact of a united interfaith engagement on the water crisis in Botshabelo?

1.3.1 Research question

The central question arising from the problem is: How can the engagement of religious groups in interfaith dialogue assist in mitigating the crisis of water scarcity in Botshabelo?

1.3.1.1 Research sub-questions

1. What was the scenario of water availability in Botshabelo between 2014 and 2019?
2. What are the causes and consequences of a water shortage in Botshabelo?
3. What is the current level of interfaith dialogue on the present water crisis in Botshabelo?
4. What are the emerging theologies of water from interfaith dialogue in Botshabelo?
5. How could religious groups' engagement in interfaith dialogue assist in mitigating water scarcity in Botshabelo?

1.3.2 Objectives

1. To ascertain the nature of water scarcity in Botshabelo between 2014 and 2019.
2. To establish and determine the causes and consequences of water scarcity in Botshabelo.
3. To examine the current level of interfaith dialogue on the present water crisis in Botshabelo.

4. To identify the emerging theologies of water from interfaith dialogue in Botshabelo.
5. To demonstrate how the engagement of religious groups in interfaith dialogue can assist in mitigating the crisis of water scarcity in Botshabelo.

1.4 Motivation for the study

I have read books on water scarcity in South Africa and have observed people lining up for water in some areas of Botshabelo like Botshabelo West, section R and V. I have heard on national television and read newspapers about water scarcity. Yale Environment (2018:1) and the Joint Research Centre (2018:1-2) describe how in recent years the drought hit Cape Town in such a way that there was a looming deadline or Day Zero when all the taps could run dry. Fortunately, the Day Zero did not arrive in Cape Town. Residents of Cape Town averted this catastrophe by embarking on mechanisms of saving water that was taught to all the citizens of Cape Town such as water recycling. Donenfeld, Crookes and Hedden (2018:6) argue that “water scarcity is a serious issue in South Africa and needs the concern of every citizen of the country.” When I visit communities around Botshabelo where I work and live, I see places where water does not come from the taps and in other areas, pipes continuously leak for weeks yet the municipal council does not respond to address the problem. Families who rely on water to make gardens for home usage and to make bricks to sell for a living have been heavily affected because of water scarcity. Religions too have been affected because water is needed for religious practices.

One day, when we were travelling from Bloemfontein to Bethlehem for a funeral of a priest, I was made aware of the seriousness of water scarcity in Free State Province because of what I observed when we arrived at Senekal. As we travelled, one of the priests who was our driver on that journey became sick. He started vomiting while driving and decided to stop the car at Senekal garage to go to the bathroom. The bathroom at the garage had no water. It became more stressful to the sick person when he discovered that there was no water coming from the taps. The sick person told me of the lack of water in the bathroom and I inquired from the garage attendants who told me that it had been months since water stopped running from the taps. They relied on government trucks to bring water. That morning, the truck had not yet come. This

experience provoked my thinking and made me ask questions like: What is going on? What can be done? As we chatted about water scarcity with garage attendants, I discovered that there is another place called QwaQwa in the Free State Province where people have suffered from water rationing. Observing the situation in Botshabelo, Senekal and QwaQwa motivated me to start research on water scarcity. I started to read and investigate to what extent religions around Botshabelo are involved in addressing water scarcity and whether there is a theology that addresses water scarcity.

Küng (2004) and Daneel (1991) illustrate that religions through interfaith dialogue can play a major role in resolving social problems such as water scarcity. This study is prompted by such theories to seek a theology of water informed by an interfaith dialogue approach. According to Küng (2004) and Daneel (1991), religions and religious beliefs are central to people's lives and have a transformative influence in society. The collaboration among religions in the form of dialogue on social problems could probably lead to a positive change in resolving the water shortages in Botshabelo.

I have observed that the adherents of Christianity, Islam and African Traditional Religions in Botshabelo have yet to express a unified concern over water scarcity in the country. Religious groups have not been noticed or vocal in addressing water shortages in the country thereby creating a lack of opinion from a substantial portion of society. Although individual people from different faiths, scholars and academics have been talking about water scarcity, there is no evidence of a collaborative approach to address water shortages as religious groups.

1.5 Limitations of the Study

Investigative research of this nature has some challenges. First, it was not easy to find the participants because of their schedules and other obstacles. Therefore, this research project limited itself to those who could be reached either by personal contact or through Skype and telephone. This research project is also limited to African Traditional Religions, Christianity and Islam which are the major religions in Botshabelo. The area is categorised into urban, peri-urban and rural areas with variations in socio-economic status. One is likely to find some places where

there is water in abundance in the affluent areas and in other places where the taps are dry for weeks, months and years. I have personally experienced water scarcity in the area where people have had to queue for water and experience water rationing.

1.6 Outline of the Chapters

Chapter One.

This is the introductory chapter of the entire study, presenting the background, the scenario of water scarcity and the location of the study. This section contextualizes the debate on interfaith dialogue on water theology and water scarcity in South Africa. Furthermore, the chapter outlines the problem statement, key research question and sub-questions, aims of the study, motivations, scope and limitation of the research project.

Chapter Two.

Chapter Two presents the methodology and theoretical framework.

Chapter Three.

Chapter Three discusses the nature, the causes and effects of water scarcity in South Africa between 2014 and 2019.

Chapter Four.

Chapter Four discusses the definitions of water and theology and the significance of religion in addressing social issues.

Chapter Five.

This chapter focuses on the perspective of interfaith dialogue in the history of humanity. The chapter also illustrates the role of interfaith dialogue in solving social problems. Furthermore, the chapter examines the current level of interfaith dialogue on water scarcity in South Africa by African Traditional Religion, Christianity and Islam.

Chapter Six.

This chapter describes the interviews and the engagement of religious groups in interfaith dialogue.

Chapter Seven.

The chapter discusses the findings and examines the significance of such findings in answering the central research question, how can the engagement of religious groups in interfaith dialogue assist in mitigating water scarcity in Botshabelo?

Chapter Eight.

This chapter proposes strategies on how to mitigate the water crisis in South Africa by using interfaith dialogue related to a theology of water.

Chapter Nine.

This chapter presents the contribution of the study to new knowledge and gives some concluding remarks.

1.7 Conclusion

This chapter has provided a general introduction and an outline of the entire research project. Chapter Two is on the methodology and theoretical framework.

CHAPTER TWO

METHODOLOGY AND THEORETICAL FRAMEWORK OF THE STUDY

2.0 Introduction

The previous chapter presented the background of the research project. The current chapter presents the methodology and the theoretical framework that guides the study. The chapter is divided into two main parts. The first part is the methodology used in conducting the study. Here, attention is given to the nature of this study, research methods, data collection and analysis. The second part of the chapter concentrates on the theoretical framework. It presents the theory and discusses its relationship with the methodology, and its relevance in achieving the key objective of the study.

2.1 Research Method

I chose a qualitative research method for the study and used interviews and desktop research. Interviews were used as an instrument for data collection. After obtaining data from the interviews, I used both content and thematic data analysis procedure in order to examine the data obtained, then explored and identified both overt and covert themes and patterns embedded in the data obtained. The methods of research which were applied permitted the research project to reach its intended goal. The methodology that I used enabled me to understand how interfaith dialogue on water theology can be used as an alternative instrument to reduce the problem of water scarcity in Botshabelo.

Ken Rebeck et al (2001:1) describe research methodology as the “understanding that a researcher has about social reality, the interpretation given to phenomenon, as well as the essential apparatus put in place for designing appropriate research methods comprising of techniques employed in getting to the issues to be investigated within the research.” Specifically, Rebeck, et

al (2001), sum up a methodology as a set of procedures that can be followed for achieving an objective. The objective in this sense was that of exploring the observed phenomenon and getting to the possible causes and effects. I applied the methodology stated above to understand the root causes of water scarcity in Botshabelo and to assess to what extent interfaith dialogue on water theology could be used as a tool to address water scarcity.

For Franzél Du Plooy-Cilliers, Cornél Davis and Rose-Marié Bezuidenhout (2014), research could simply mean asking questions and finding answers to the questions posed or identifying problems and finding solutions to the problems through a systematized procedure adopted by the researcher. In the view of Du Plooy-Cilliers et al (2014), the essence of research is to ensure that the analysis of the generated data for a study forms the basis of the emerging findings, conclusions and recommendations. Accordingly, the present study is in line with this proposition, asking necessary questions to collect data and to assess to what extent interfaith dialogue on water theology can help resolve the problem of water shortages in Botshabelo. This research project applied structured interviews to collect data. A research paradigm can either be qualitative or quantitative or a mixture of both. Roger Sapsford and Victor Jupp (1996:1) note that “while quantitative research yield data in the form of numbers to be analysed by means of comparisons, qualitative studies are essentially concerned with data generated in the form of people’s words or the researcher’s descriptions of what has been observed and experienced.” They add that the choice of a research method is a function of the envisaged nature of the inquiry to be undertaken, and the nature of data upon which the study is intended. The methodology or research design adopted for this study is the qualitative research model.

In the view of Kobus Maree (2007:1), “a qualitative research model is based on a naturalistic approach that seeks to understand phenomena in context (or real-world setting) and, in general, the researcher does not attempt to manipulate the phenomenon of interest. In other words, research is carried out in real-life situations and not in an experimental (test-retest) situation.” Furthermore, Maree (2007) adds that qualitative research methodology is concerned with understanding the processes and social and cultural contexts which underlie various behavioural patterns and is mostly concerned with exploring the ‘why’ questions of research. Singh Sreejesh and Sanja Mohapatra (2014:1) note that “a qualitative research method is a means for exploring

and understanding the meaning individuals or groups ascribe to a human problem.” John Creswell (2009:145) argues that “the role of research involves assessing the emerging questions from data collection and procedures, data typically collected in the participants’ setting, data analysis inductively building from particulars to general themes, and the researcher making interpretations of the meaning of the data.” This position is supported by Louis Cohen, Lawrence Manion, and Keith Morrison (2011) who argue that qualitative research should have both practical and intellectual goals. Practical goals include engaging in collaborative and action research; understanding the meanings attributed to events and situations by participants, understanding processes that contribute to situations, events and actions, while intellectual goals include to understand or explain something. Comparatively, argue Cohen, Manion, and Morrison (2011:1):

What distinguishes qualitative research method from other methods such as the quantitative approach, is that its collectable data are mostly expressed using words. It can also be described as interpretive and humanistic as it seeks to discover the internal meaning from the respondents or interviewees by exploring issues under study, beyond the standard responses such as yes or no, which applies in the case of a questionnaire.

Beverly Hancock (1998:2) states that “qualitative research is concerned with developing explanations of social phenomena. It aims to help us to understand the world in which we live and why things are the way they are. In qualitative research, subjective experiences and meanings of a social phenomenon play a crucial role.” André Strydom and Magda Bezuidenhout (2016:172) note that “one of the advantages of carrying out qualitative research is that it exposes the researcher to richness and depth of data, gathered from complex and multi-faceted phenomena in a specific context.” Furthermore, Lawrence Neuman (2011:424) argues that “a study based on qualitative research design enables the researcher to capture all the details of a social setting in an extremely detailed description and convey an intimate feeling for the setting and the inner lives of the people.” However, argues James Neill (2007:2), “qualitative research has some disadvantages. For instance, data collection tends to be time consuming and has a subjective inclination.” John Creswell (2007:1) concedes that “even though qualitative research exposes the researcher to subjects of research so as to have an understanding of a phenomenon as per their experiences, and is the best way to conduct research, it nevertheless risks the possible

inclusion of the researcher's bias, given the researcher's apparent presence in text and interpretation." In this qualitative research study, I used a purposive sampling method to collect data among the African Traditional Religionists, Christians and Muslims.

2.2 Sampling and Data collection

The sample from which the data was derived was purposefully selected. The selection was informed by the focus of the study, the key research question, objectives and the theoretical frameworks of Fitzgerald (2000) and Küng (2004). This included generating fresh data from the interviews. I used purposive sampling to collect data from the selected interviewees. Secondary data was further obtained from literature relevant to the study.

According to Claire Bless and Higson-Smith Craig (2000:2), "sampling is a subset of a whole population which is investigated by a researcher and the characteristics identified from the study sample can be generalized for the entire population." In the view of Michael Quinn Patton and Michael Cochran (2002:1), "samples in qualitative research are usually purposive. This means that participants are selected because of their ability to generate useful data for the project." They further note that while sample sizes are typically small for qualitative research, one way of identifying how many people are needed to collect enough information, is to keep on interviewing until nothing new comes from data sources, a point called saturation. In deciding the size of the sample to be focused on this study, certain factors had to be considered to provide justification for the target sample for the study. Significantly, the study ensured that the sample was relatively representative enough to permit meaningful generalisation of the findings, by selecting well informed leaders who represented their religions. The other consideration was that the sample drawn from the population was not too large to pose analytical challenges when analysing the data. In the context of this study, it was envisaged that a point of saturation was reached after about 50 religious' leaders from African Traditional Religion, Christianity and Islam were successfully interviewed, covering both primary and secondary data. This position was supported by the principle of enculturation as enunciated by James Spradley (1979), which implies a situation where data required for research is obtained from those who are very familiar with the research focus. During the interview, I interacted with the religious leaders within the

target religions who were well informed about the subject matter. The sample size was distributed in the following order: 10 people from African Traditional Religion, 25 people from Christianity and 15 people from Islam according to the percentage of religions in the area. In choosing which leaders to interview, the purposive sampling method was applied.

2.2.1 Purposive Sampling

In conducting the interview, I used purposive sampling method. Ma Dolores Tongco (2007:147) defines purposive sampling as an “informant selection tool.” Tongco (2007:147) adds that “purposive sampling is also called judgement sampling. It is a deliberate choice of informants because of the qualities the informant possesses.” Kwaku Appiah-Adu and George Kofi Amoako (2016:8) note that “purposive sampling is a non-random technique that does not need underlying theories or a set number of informants. Simply put, a researcher decides what needs to be known and sets out to find people who can and are willing to provide the information by virtue of knowledge or experience.” Tongco (2007:152) points out that: “There is no specific number on how many informants should make up a purposive sample, as long as the needed information is obtained.”

Tongco (2007:153) argues that “purposive sampling is a valid non-random method of doing research.” Though some researchers like Neill (2007) and Creswell (2007) consider it as having some bias because informants may be chosen out of convenience or from recommendations of knowledgeable people. Neill (2007:1) and Creswell (2007:2) maintain that “whenever possible, and if deemed efficient, random or probability sampling is recommended as a means of informant selection because randomization reduces bias and allows for the extension of results to the whole sampling population.” Although Neill and Creswell support random sampling, Tongco (2007) argues that random sampling is not always practical and effective. Tongco wonders why Neill and Creswell claim that random sampling is better than non-random method of conducting research. Tongco (2007:153) argues that “the disadvantage of random sampling is that the higher dispersion of samples may induce higher costs for a researcher. Missing data, which is common in field situations, also renders random samples invalid for traditional probabilistic statistical inference.” Tongco (2007:153) adds that “this often occurs because not everybody is willing to participate, and possibly not be around during sampling.” Tongco (2007:153) emphasises that

“purposive sampling is a good and reliable method of collecting data in research.” Tongco (2007:154) adds that “despite its inherent bias, purposive sampling can provide reliable and robust data. The strength of the method lies in its intentional bias”. Moreover, analyses Tongco (2007), there are different ways of sampling, and non-probability methods can be just as good as probability methods in some situations. To insist on randomized samples every time is to run the risk of losing efficiency and failing to acknowledge the existence of different types of information which can be obtained from a community in more than one way. Ted Palys (2008:697) concurs that “to say that one will engage in purposive sampling signifies that one sees sampling as a series of strategic choices about with whom, where, and how one does research. This statement implies that researchers’ samples must be tied to their objectives.” Palys (2008:697) adds that “a second implication follows from the first that there is no one best sampling strategy because which is best will depend on the context in which researchers are working and the nature of their research objectives.” However, Tongco (2007:154-155) emphasises that “purposive sampling, when used appropriately, is more efficient than random sampling in practical field circumstances.” According to Tongco (2007:155), “purposive sampling is one such skill that needs to be used and practiced being optimal.”

For this research project, purposive sampling was applied. This is because, in the view of Claire Bless, Craig Higson-Smith and Ashraf Kagee, (2006), the sampling procedure is based on the judgement of a researcher and the availability of a sample. A sample is chosen based on what the researcher considers to be typical units within a community or population under focus. According to Bless and Higson-Smith (2000:1), “sampling is a subset of a whole population which is investigated by a researcher, and the characteristics identified from a subset is generalised for the entire population.” According to Bless and Higson-Smith (2000), when the researcher is carrying out research that focuses on a community, relevant information can be obtained from a selected group that represents the community, and not necessarily attempting to sample all the members of the community. Bless and Higson-Smith (2000:1) argue that “the strategy is to select units that are judged to be the most common in the population under investigation.” The relevance of this procedure to this study is that it enabled the researcher to have the choice of selecting the religious leaders. This method of sampling was considered suitable because of the researcher’s judgement was used to choose which respondents would be

the most useful for the study. The foremost criterion for targeting individuals and institutions for this study in the sample was associated with their knowledge and understanding of interfaith dialogue. The criterion of insider-information is considered very important for this study. The sampling method helped the researcher to get the relevant sources to provide data. Spradley (1979:29) points out that “when gathering data in a qualitative paradigm, a crucial question is: where is the source of data which is required for the study?” To answer this question, Spradley (1979) provided the following criteria:

(a) Through enculturation – This refers to a situation in which information is sought from someone who is very familiar with the setting or domain of the needed data. In the case of this study, leaders from the African Traditional Religion, Christianity and Islam in Botshabelo were selected to be the correct people to provide the required data.

(b) Current involvement – This is accessing those with current knowledge about the subject of research. Leaders from the African Traditional Religion, Christianity and Islam are valid sources of information for this study. As leaders in their religions, the data generated from them significantly enriches the study.

(c) Adequate time – In a situation where a target respondent is busy for an interview, for example, the researcher may opt for a multi-person continuous interview. In this case, there is an opportunity to take as much time as possible with the most crucial respondents, and then get them to recommend the next-best snowball sampling who can provide important information, and so on, until enough data is gathered sufficient for the research project.

In a related context, Joseph Hair et al (2016:1) assert that qualitative data analysis needs to ask the following questions:

- (1) What themes and common patterns are emerging that relate to the research objectives? How are these themes and patterns related to the focus of the research?
- (2) Are there examples of responses that are inconsistent with the typical patterns and themes?
- (3) Can these inconsistencies be explained or perhaps be used to expand or redirect the research?
- (4) Do the patterns or themes indicate additional data perhaps in a new area?

Putting these above questions in perspective, Hair et al (2016:1) argue that “the major objective of qualitative data analysis is to identify, examine, compare, and interpret patterns and themes.” This current study engaged the thematic elements contained in the interview in Chapter Six and examined those themes in Chapter Seven. The purposive sampling which was used in the study was beneficial in the sense that the data which was obtained from this method produced significant themes of the research project. The purposive sampling methods utilised in this research project was also accompanied by snowball sampling.

2.2.2 Snowball Sampling

The purposive sampling that I employed was supplemented by snowball sampling. Patrick Biernacki (1981:141) defines snowball sampling as “a chain referral.” Biernacki (1981:163) adds that “snowball or chain referral sampling yields a study sample through referrals made among people who share or know of others who possess some characteristics that are of research interest.” It is a process whereby the researcher interviews someone who is well informed with the subject matter and the participant in the process of interview, refers the researcher to another person who is well informed with the subject. Accordingly, I identified some key leaders of the religions that I was dealing with and interviewed those leaders as first informants. Then, those leaders who were interviewed were asked to propose other people whom they thought would have information required in this research. This is what is known as the snowball sampling technique. In this study, the first step was to identify leaders from African Traditional Religion, Christianity and Islam by using purposive sampling. I contacted those leaders and asked them if they knew some other people who could give the information needed in this research, hence creating a snowball technique of collecting data.

2.2.3 Data Collection Methods

In Botshabelo, the researcher conducted structured interviews as a method of data collection. This method is considered as one of the best to generate first-hand information. A subject such as this demanded that the target participants are primary and significant to the study and could be relied upon for information. To achieve this, the study employed an open-ended and a structured interview guide in order to elicit robust, incisive and illuminating opinions.

Interviews were video and audio recorded with the consent of each participant. At the end of the data collection, the entire data was coded. In instances where some of the target interviewees were not reached physically as a result of either lack of accessibility or availability, the researcher utilised Skype and the telephone to conduct the interviews. Responses were sorted thematically and then categorised based on prevalence of participants' opinions and comments. Data was also obtained using written questions which were given to interviewees to respond by writing. The primary data was extracted from videos that were taken during the interviews, the audio recording and the telephonic discussions with the participants. The interviews were conducted according to the population of religions as indicated above in section 2.2. The people who were interviewed were those deemed to have the necessary information about interfaith dialogue in Botshabelo. The secondary data came from relevant literature.

2.2.4 Primary and Secondary Data

Given the nature of this research, the data used for analysis was obtained from both primary and secondary sources as highlighted below. In the primary sources, the researcher formally requested interviews with leaders from the African Traditional Religions, Christianity and Islam in Botshabelo. These interviewees were considered appropriate to be interviewed because of their expertise, experience and knowledge of interfaith dialogue. The purpose of the interviews was to obtain a balanced opinion from different religions about the need to collaborate in addressing social problems such as water scarcity. Participants signed an 'Informed Consent Form,' designed by the University of KwaZulu Natal. Their participation was voluntary, and they were assured that the report or findings related to the research would be made available to them on request. Participants had freedom to withdraw from the study at any time without any negative consequences and their anonymity was to be respected.

The primary data was drawn from the video and audio recordings that were made during interviews. The videos were not supposed to be shown to the public but were supposed to help the researcher to get the necessary data and to recall who contributed the necessary information. Moreover, the videos were not of dangerous or sensitive nature to put the participants under any risk. The recordings gave first-hand information and helped in enriching this research with

primary information. In qualitative research, data can be drawn from diverse sources, among them video recordings. Dirk vom Lehn and Cleverly Heath (2006:102) state that:

Video recordings can be very good sources of obtaining raw data. They provide the resources through which we can capture the conduct and interactions, actions and activities to detailed, repeated scrutiny, using slow-motion facilities. They expose the fine features of conduct and interaction, details that are unattainable in more conventional forms of data, and yet details that form the very foundation to how people see and experience a phenomenon.

Lehn and Heath (2006:102) point out that “audio-visual recordings are very important in collecting data. Audio-visual recordings provide the researcher with the opportunity to share, present and discuss the raw materials on which observations and analysis are based.” In addition to primary data, this research project also used secondary data. Secondary sources include documents, special publications, periodicals, journals, conference papers on interfaith dialogue accessed online, newspapers and internet sources. Furthermore, other sources included published and unpublished relevant literature. The appropriate literature was searched under key words such as interfaith dialogue, water theology, water scarcity, Botshabelo and South Africa. Both library search engines and online search standards were used. I used different online research engines. Just to mention a few of online research engines, were; Google Scholar, Library Genesis, ATLA Religion Database, JSTOR: Journal Storage, PubMed and World Cat.

2.2.5 Data Analysis Procedure

The videos which were filmed during interviews were watched several times. This was done to get acquainted with the message, the tone of the speakers, and how the message was being conveyed. Christina Silver and Jennifer Patashnick (2011: 8) point out that “to watch the video several times is key for the researcher to succeed in capturing the nuances and subtleties in the data.” Before I started transcribing, I divided the videos into parts to create moments for rest or pauses. According to Thorsten Dresing, Thorsten Pehl and Christian Schieder (2015:40), “the basic rule recommended in transcribing data is to take a break of 5-10 minutes per hour in front of the screen.”

Dresing et al (2015:21) note that “by transcribing audio or audio-visual data, researchers transfer recordings into written forms to make the data accessible for analysis.” The focus of the transcription was based on the key research question: Why and how would interfaith dialogue on the theology of water be relevant to the crises around water sourcing, usage and distribution in Botshabelo? Silver and Patashnick (2011:8) point out that “during the transcription and analysis of audio-visual data, the tools to be used will depend on a variety of factors such as the nature and status of records, disciplinary traditions and individual project dynamics.” In this study, the video recordings were transcribed verbatim. I opted for a detailed verbatim transcript to capture thorough annotations of speakers such as gestures and emphases. This further simplified the understanding of the speakers’ impression and intention on how to engage in interfaith dialogue on water theology to address the problems of water scarcity in Botshabelo. Instead of simple transcription I opted for detailed transcription. Dresing et al (2015:23) state that “in simple transcripts, paraverbal and non-verbal elements of communication are usually omitted and is less time consuming. This is because unlike the detailed transcripts, simple transcripts put much emphasis on the content.” This study, however, chose the detailed transcription approach although it is more time consuming than the simple transcription approach. Furthermore, I used manually generated transcripts other than the computer generated, to allow me to get a deeper familiarization and thorough understanding of the data. Silver and Patashnick (2011:8) describe that “manual ways of transcribing data tend to be more flexible in the sense that detailed nuances and subtleties are easily accessed and captured by the researcher.” In all the transcripts, validity and reliability were checked. Watching and transcribing of the videos was made in a sound-free environment where I could hear and observe well without any external distractions. I used external computer speakers throughout transcribing. While transcribing I used the pause and playback keys on the computer. I controlled the speed at which the video was running to align with my listening, watching and writing ability. Furthermore, the transcripts were exposed to a thorough validity check. This included proof reading of the transcripts aloud, checking and correcting spellings and punctuation errors, while I listened to the video again. I paid attention to all details when transcribing data. Dresing et al (2015:44) state that “it is important to pay attention to all details when transcribing audio-visual data because this is an important stage in data validation. Its importance arises from the fact that every first version of a transcript contains mistakes.” Dresing et al (2015:44) add that “these errors are usually checked and corrected in a

second round in which you read and listen (to the video) at the same time. These errors stem from the listener's natural tendency to complete or correct the speaker's statements while listening." From each video, a final copy of the transcript was generated. The transcript of the first videos focused on the relevance of interfaith dialogue in addressing water scarcity. The transcripts produced the themes that are presented and discussed in Chapter Five. This is the first set of findings. The transcript of the second videos focused on the prevention measures, how interfaith dialogue on water theology can be used to address the water problems in Botshabelo. This is the second set of findings.

In developing the themes, the study was guided by the stages of thematic analysis as proposed by Virginia Braun and Victoria Clarke (2006). According to Braun and Clarke (2006), the researcher must interview people first and write transcripts of findings from which the researcher can create themes by examining the relevant words that emerge from the findings. After a careful and thorough re-reading of the transcripts, categories were generated to which initial themes were assigned. The coding was done manually. After the initial coding, each of the themes with its categories were systematically reviewed to establish if the categories were placed in the right theme. This was also done to establish the coherence and pattern among themes, and to check on possible repetitions of categories. The categories and themes that seemed to have been repeated were accordingly merged to form the final set of categories and themes. It was exhaustively considered that no category relevant to the research question was left out.

In creating themes, the researcher also used the content analysis approach. In specific terms, the content analysis approach identifies and summarises the message content. According to Kobus Maree (2010:10), "content analysis refers to the analysis of such materials as books, brochures, written documents, transcripts, news reports, audio and visual media." Du Plooy-Cilliers, et al (2014:8) claim that "qualitative content analysis is used to explore and identify both overt and covert themes and patterns embedded in a text." In line with Yan Zhang and Barbara Wildemuth (2009) and Du Plooy-Cilliers et al (2014), qualitative content analysis pays attention to unique themes that illustrate the range of the meanings of the event rather than the statistical significance of the incidence of texts or concepts. Scott VanderStoep and Deidre Johnson (2009:1) point out that "textual (content) analysis requires the identification and interpretation of

a set of verbal or non-verbal signs, whereby a sign on itself compels a thought about something other than itself.” They add that the implication of this is that any meaning ascribed to an event, issue or occurrence is at the heart of textual analysis, whereby meaning can be interpreted or deduced from the perspective of the speaker’s intent, the audience’s reaction and the historical or cultural context in which the text is created. VanderStoep and Johnson (2009:2) point out that “content analysis is often applied by researchers especially when analysing responses to open-ended questions on surveys, interviews and questionnaires.” Du Plooy-Cilliers et al (2014:8) argue that “qualitative content analysis is mostly an inductive method which can be used to either develop new theories or evaluate existing ones. The method is considered effective when dealing with narratives in texts, news reports, books, transcripts and written documents.” This method has been utilised to find out to what extent interfaith dialogue on water theology can be used to address the water problems in Botshabelo.

I also used rhetorical analysis in order to understand how communicators made their messages meaningful and influential to the audience. Kaori Miyawaki (2017:1477) describes rhetoric as “a form of communication that includes both the art and practice of effective speaking and writing, often with the intent of persuasion.” Joan Leach (2000:207) states that “rhetoric is the act of persuasion; the analysis of acts of persuasion; a worldview about the persuasive power of discourse.” The data analysis procedure for this study includes also the procedures promoted by Maree (2010) in view of its applicability and usefulness. I considered this procedure apt and fitting for this inquiry in view of its strength. According to Maree (2010:1-3):

- (a) The procedure requires a description of the participants, which comprises how the participants were identified and selected, their relevant background data, involving age, gender, occupation, education, marital status, as well as a detailed description of the situation in which the research was done.
- (b) Data analysis also requires that collected data be organised, and this involve cutting and sorting. It is a good principle to keep the different data sets, such as field notes and interview, separate and to mark each collection of information clearly in terms of identifying the key factors; for instance, when, where, how and why data was generated.
- (c) Analysing data also require that data be collected either electronically or digitally, such as video and audio recordings. At this stage, it should be noted that it is not acceptable to write up summary notes from a video and audio recording as doing so will undoubtedly compromise the validity of the research. This is because the researcher will most certainly be prejudiced in the collation of data.

(d) Once all generated data had been sorted and put into print, the researcher is expected to read through the entire information to have a good grasp and adequate knowledge of the entire content. Let it be stressed that a good analysis often depends on the researcher's adequate and unbiased understanding of the data, which simply means that the data must be read repeatedly. Sometimes it is advised that even if recorded interviews have been transcribed, the researcher is expected to listen to the recordings several times. Additionally, the researcher is further expected to carry out a cautious reading of the transcribed data carefully or line by line and dividing it into meaningful analytical units or thematically. This stage can be referred to as coding. Coding is defined, according to Du-Plooy *et al*, (2014), as a system that makes the process of analysis manageable. Practically, it could mean that whenever a meaningful segment of text in a transcript is found, a sign or code is applied to signify that segment.

(e) After coding transcribed data, the next step is to organise or combine related codes into themes or categories. Each category is further assigned a label or identifying sign. The researcher is expected to properly know what the category stands for so that it will be easy to group each set of codes within the appropriate category.

(f) Finally, the last step in the procedure for analysing qualitative data is to bring some order and structure into the categories identified. This involves identifying how each category is linked or related to other categories. The relevant questions to ask at this stage include: what seems more important; less important; are there exceptions or critical cases that do not seem to fit?

2.3 Summary on Data Analysis and Interpretation

Qualitative Content Analysis (QCA) as illustrated by Du Plooy-Cilliers *et al* (2014) was employed to explore and identify overt and covert themes and patterns embedded in a text. In line with QCA, the study used a thematic inductive approach or what can be described as thematic inductive analysis. This falls under qualitative research methodology that enables the researcher to obtain an adequate understanding of the phenomenon from the perspective of the subjects of the study. It involves a systematic identification, coding and mapping of important categories within the text from which major themes are identified for analysis (Hayes 2000; Braun and Clarke 2006; Fereday and Muir-Cochrane 2006). One of the advantages of thematic analysis is the flexibility it gives the researcher who is interpreting to clearly observe the experiences of people as expressed in the data and in the formulation of themes and codes (Braun and Clarke 2006). However, state Braun and Clarke (2006:5), "researchers using thematic analysis have to be aware of the rigorous check on the validity of what counts to be themes and

codes since the flexibility of the thematic analysis also could easily let in bias.” Apart from using rhetorical analysis, a research paradigm approach was also applied.

2.4 Research Paradigm

Alan Bryman (2012:630) states that “the concept paradigm is used by researchers to represent a cluster of beliefs and dictates which scientist in a particular discipline influence what should be studied, how research should be done, and how results should be interpreted.” Elia Shabani Mligo (2013:90) adds that “as a worldview of beliefs, a paradigm plays a great role in regulating the nature of questions that a researcher asks, the probable answers, explanations and acceptable results.” The paradigm of this study is informed by both the critical and interpretivist approaches. By its nature, this study is critical, which makes some aspects of a critical approach relevant. The interpretivist approach was chosen as it allows the researcher to explore how different contexts and people through experience make sense of the phenomenon of interfaith theology and water scarcity. Du Plooy-Cilliers et al (2014:27) describe that “by drawing from both the critical and interpretivist approaches, the researcher demonstrates that the two approaches offer certain distinct methods in doing research.” Various scholars have shown that although paradigms differ, there is a possibility of employing a multiple paradigm approach while recognising both their contrasts and interplay. Using multiple paradigms may assist in addressing some of the limitations of a single approach for the benefit of research (Hassard 1993; Schultz 2010). Du Plooy-Cilliers et al (2014:27) point out that “from its epistemological approach, the critical approach attempts to challenge the status quo in knowledge production in order to expose possible and alternative ways of addressing social problems.” Du Plooy-Cilliers et al (2014:27) add, “in this case, just like the interpretivist approach, it challenges and scrutinizes knowledge while considering the social context.” Gavin Jack and Bob Westwood (2009:486) point out that “in an interpretivist approach, knowledge of reality is not separated from people’s experiences. In fact, the people in their context are the primary source of knowledge who, through their experience of reality within their context, interpret and understand the world around them.” Du Plooy-Cilliers et al (2014:28) note that “from a phenomenological point of view, it is crucial within the interpretivist paradigm to gain an understanding of human actions in order to understand why they act the way they do.” I used both critical and interpretivist paradigms to

investigate the causes of water shortages in Botshabelo and how religious groups could engage in interfaith dialogue to mitigate water shortages. Having presented the methodology, in the following part, I present the theoretical lens of the study.

2.5 The Theoretical Lens of the study

This research project has adopted the frameworks of Michael Fitzgerald (2000) and Hans Küng (2004). Fitzgerald (2000) talks about the four forms of dialogue, demonstrating how to conduct interfaith dialogue. Küng (2004) talks about interfaith dialogue and responsibility which demonstrates how interfaith dialogue can be used as an alternative instrument to address social problems. These two frameworks are regarded as significant in addressing water shortages. The other supplementary theory used in this study is the concept of Marthinus L. Daneel (1991) who reveals how interfaith dialogue helped to lessen water shortages in Zimbabwe during a drought by planting trees. Fitzgerald's (2000) theory about interfaith dialogue illustrates how interfaith dialogue is conducted by demonstrating the four forms of dialogue, specifically, dialogue of life; action; theological exchange or discourse; and dialogue of religious experience.

2.5.1 The four forms of dialogue

Fitzgerald (2000:8-10) identifies the four forms of dialogue, namely: "dialogue of life; action; theological exchange or discourse; and dialogue of religious experience." The study illustrates how the four forms of dialogue can be applied in addressing water scarcity in Botshabelo.

2.5.1.1 Dialogue of life

Fitzgerald (2000:8) points out that "dialogue of life happens when people meet to celebrate or discuss life events." In Botshabelo, there are adherents of different religions who encounter each other at different events of life such as weddings, funerals, in buses going to work and addressing social problems such as water scarcity together. Dialogue of life can be used to address social problems when the community comes together and discusses problems such as water shortages. In this study, dialogue of life was applied when leaders from different religions which have been mentioned in this study met to discuss water shortages. Fitzgerald (2000:8) states that "the

dialogue of life is not something passive. It is not mere co-existence, nor can one speak of dialogue if it is imposed upon someone. This form of dialogue requires openness and a desire to enter into relations with others.” He adds that the aim of dialogue of life is to establish good neighbourly relations and to ensure that people are living in peace and harmony. How can this be done? Fitzgerald (2000:8) illustrates that “perhaps the first thing is to stimulate an active interest, and a healthy curiosity, in the other. If new neighbours arrive, we observe them, trying to find out what they are like.” He asks whether this can this not be applied to people of a different religion who come and settle in a region, or even if they are only going to be present on a temporary basis. He describes that acquiring knowledge about others helps to overcome prejudices. This knowledge can be made available through booklets, talks and meetings, but it can also be acquired through direct contact between followers of different religious traditions. Jane Idleman Smith (2007:83) asserts that “getting to know the person in front of you is the first step in any kind of dialogue.” Smith (2007:83) adds, “dialogue can be fun and even exciting, but the reality is that for dialogue to be successful, it requires a serious dose of good intention not to dominate the other person.”

Fitzgerald (2000:8) states that:

Paying visits to one another's homes is a normal way of increasing neighbourliness. It could be in sharing joys and sorrows, as in presenting congratulations at the marriage of a son or daughter, or on the birth of a child, or offering condolences at a time of bereavement. It might include giving a helping hand when someone is sick or elderly, or when the car has broken down. Life itself provides occasions for meeting and thus providing an opportunity for dialogue.

Water shortages in the community can provide an opportunity for dialogue of life. In South Africa, a big occasion for the meeting of different people from different religions was during the 2010 FIFA World Cup. Most South Africans ignored their personal differences and focussed on one common goal, which was supporting the South African team at all costs. John de Gruchy (2010:3) in his article called ‘The Beautiful Game’, describes the soccer tournament of 2010 as follows: “Playing games has been central to the human story from the beginning, not just as a physical activity, but as something that characterises our humanity, adding value to life and building community.” Dialogue of life is about a community event or problem that brings people

together, just like games can bring people from different religions together. A recent example is when the Springbok team won the Rugby World Cup in 2019, South Africans became united as a nation to support the team. In the same way, people can be united to address water shortages.

2.5.1.2 Dialogue of action

Fitzgerald (2000:8) states that “dialogue of action brings the people of different religions to act together in addressing a social problem. It is a dialogue for integral development.” He adds that the importance of dialogue for integral development, social justice and human liberation needs to be stressed. In Botshabelo, a region hit by water scarcity, dialogue of action may be needed to address the water crisis. The researcher suggests that the African Traditional Religion, Christianity and Islamic religious groups be called upon to take action to address the water problem, to commit themselves in this respect in an unselfish and impartial manner. Terrence Tilley (2016:1) asserts that “there is a need to stand up for human rights, proclaim the demands of justice and denounce injustice, not only when their own members are victimized but independently of the religious allegiance of the victims.” Fitzgerald (2000) describes that it was encouraging to see, for instance, that in Pakistan where Christians constitute a very small minority of the population, Christians and Muslims protested together against certain issues, such as the proposal to have one’s religious denomination included on one’s identity card and the blasphemy law. Fitzgerald (2000:8) notes that “it is not necessarily religious bodies that stand up for human rights. There are human rights leagues in many countries, including within the Islamic world, whose members have often shown great courage in condemning abuses.” Fitzgerald (2000:8) adds that “one could think of a body such as Amnesty International or the United Nations, whose Secretary-General could be a Muslim.” Such neutral bodies, argues Fitzgerald (2000) can often provide a better opportunity for interreligious co-operation in this field, since they are not dominated by any one religion. Fitzgerald (2000:9) stresses that “there is a need to join efforts in solving the great problems facing society and the world, as well as in education for justice and peace, taking action together although belonging to different religions.” I agree with Fitzgerald (2000) that people from different religions such as the African Traditional Religion, Christianity and Islam should learn to act together as a team in addressing social problems like water shortages.

2.5.1.3 Dialogue of theological exchange or discourse

Fitzgerald (2000:9) states that “dialogue of theological exchange allows different religions to meet and have a discussion on theological matters.” Dialogue of theological exchange or discourse was applied in Botshabelo to bring together the aforementioned religious groups to discuss the role of water in their religions. Fitzgerald (2000) observes that when the word dialogue is mentioned, people immediately think of formal meetings and learned theological discussions of scholars, but this is not the only way of engaging in dialogue, yet it does have its importance. Fitzgerald (2000:9) explains that the “dialogue that takes place in formal exchanges can take many different forms. As regards the number of religions, the dialogue can be bilateral, such as Christian-Jewish, Christian-Muslim, Christian-Buddhist, or trilateral, Jews, Christians and Muslims together, or multilateral, with people of many different religious traditions taking part.” He adds that each of these types has its own special advantages. According to Fitzgerald (2000:9), “bilateral dialogue can allow greater focus, not only on common issues but on divergent elements seeking greater clarity. The trilateral dialogue is in nature referring to the common Abrahamic heritage. Multilateral dialogue can sometimes take away the edge of confrontation which can arise in bilateral meetings.” He adds that meetings will differ in the number of participants, going from large congregations to groups that can meet in people's homes. Fitzgerald (2000:9) explains that “if the first type allows the good news of dialogue to be carried to a larger public, it also runs the danger of becoming theatrical.” He notes that it is often possible for serious discussion to take place in smaller groups. A similar reflection could be made concerning the frequency of meetings. Some are unique experiences. Others may be occasional happenings; yet others may be regular occurrences with a built-in time schedule. Another difference in these meetings regards the topics addressed. These may be theological or social issues.

Fitzgerald (2000:9) states that:

There can be a difference in the quality of the participants. The policy may be to work through institutions, thus leaving it to the dialogue partners to choose their own participants. On the other hand, there may be a preference for issuing direct invitations to persons who are already known. In the first case there is a greater possibility of achieving representation. The second option may offer a greater guarantee of fruitful

dialogue. If the dialogue of discourse is to succeed, then certain conditions need to be fulfilled. The preparation for the meeting should be carried out, if possible, in co-operation with the dialogue partners. This preparation should be serious, but there should not be too great a rigidity in the running of the meeting; it is important to leave openings for spontaneous discussion. Care must be taken to maintain a true dialogical spirit; this means not only avoiding polemics, but also not restricting the exchanges to a purely academic approach. It may be necessary to accept that there will be a certain amount of repetition, if not in the same meeting, at least from one meeting to another. New people are often brought into the dialogue, and though this is a good thing, it also means that the fundamentals must be explained repeatedly.

Clint Le Bruyns (2012:1) stresses that “theological discourse is important.” According to Le Bruyns (2012:2), “the role of theologians in public life is of special importance because of the considered attention given to intellectuals and scientists as crucial role-players in social transformation today.” Parliament of the World’s Religions (1999:16) describes that “in South Africa, people experienced the dialogue of theological exchange during the meeting that took place in Cape Town when different religions met. Many topics were discussed that involved theology and social transformation.” This study argues that one of the topics that could be discussed when African Traditional Religions, Christian and Muslim leaders meet could be the role of water in their religions and how to address water shortages in their community.

2.5.1.4 Dialogue of religious experience

Fitzgerald (2000:10) points out that “dialogue of religious experience occurs when different religions come together to pray.” Daneel (19991) states that in Zimbabwe, African Traditional Religionists, Christians and other religions met to pray for rain when there was a drought. Accordingly, dialogue of religious experience was seen in Botshabelo when different religions also came together to pray for rain. The Parliament of the World’s Religions (1999:16) points out that “during the religious assembly in Cape Town, different prayers were conducted in the evenings, which also enabled people to practise the dialogue of religious experience. Praying together has been a great tool to unite different religions.” According to Fitzgerald (2000:10), “dialogue of religious experience can be a specific form of the dialogue of discourse, when the topics for discussion are selected from the realm of spirituality.” Fitzgerald (2000:10) adds that “one example of this is the Christian-Muslim seminar on holiness, held at the Pontifical Institute of Arabic and Islamic Studies in 1985. During this meeting, papers were read on the concept of

holiness in Christianity and Islam, the teaching of the paths to holiness and concrete examples of holy people.” Fitzgerald (2000:10) points out that “it is the being with one another in prayer, or at one another's worship, that distinguishes the dialogue of religious experience from theological exchange or discourse.” He further points out that, with dialogue of religious experience, emphasis is put on prayer rather than discussion, encountering God through experience. It is a type of dialogue that is being developed among monastics. An international secretariat has been set up to stimulate and co-ordinate this Monastic Interreligious Dialogue (MID).

Fitzgerald (2000:10) states that, “it should not be thought that the dialogue of religious experience is confined to monastic life alone. Interreligious prayer can be conducted at any place suitable.” He adds that the World Day of Prayer for Peace, held in Assisi in October 1986, encouraged many people to come together to pray. Such prayer may take place on civic occasions, national days, or anniversaries. People may come together in times of crisis, or when faced with natural or man-made disasters. He describes that there can also be more private occasions when people of different religions will want to share prayer. According to him, it may not be possible to find formulae of prayers which can be recited together, since different sensibilities must be respected. Yet, provided the participants are attentive, listening with respect to the spiritual riches of another tradition, as expressed in its prayers, can be considered a true form of dialogue of religious experience.

Regarding the dialogue of religious experience, Fitzgerald (2000:10) explains that:

Certain conditions would have to be underlined. First, is integrity, that is, there should be no compromise about one's own religious convictions. Second, is respect, not embarrassing people by inviting them to say words or perform gestures which they are not comfortable with. In addition, people in dialogue of religious experience should practise humility, acknowledging the limitations of human symbols and accepting the signs of God's presence.

In South Africa, during the memorial service of President Nelson Mandela in December 2013, people practiced the dialogue of life and the dialogue of religious experience. They practised the dialogue of life because they had met for the life event, the funeral, to pay their respect to the relatives, friends and the people of South Africa, the African Continent and the whole world,

who were mourning Nelson Mandela. People also practised religious experience because different prayers were conducted to honour the life of Mandela, who respected all religions and used to pray with different religions when he was in prison to obtain spiritual nourishment, as recorded in his autobiography, *'Long Walk to Freedom.'*

Fitzgerald (2000:10) emphasises that:

Dialogue of religious experience can provide mutual enrichment and fruitful co-operation for promoting and preserving the highest values and spiritual ideals. It leads naturally to partners communicating to the others the reasons for their own faith. The sometimes-profound differences between faiths should not prevent this dialogue to take place. These differences, rather, must be referred in humility and confidence to God, who is greater than our hearts (1 Jn 3:20).

Fitzgerald (2000:10) avers that “for dialogue to take place, a good disposition is needed, patience and perseverance.” The four forms of dialogue demonstrated by Fitzgerald (2000) are of great importance in assisting this study to apply interfaith dialogue in water theology to address the water problem in Botshabelo. The other framework used in this study is of Küng (2004) who suggests dialogue and responsibility in addressing social problems that affect people.

2.5.2 Dialogue and responsibility

Küng's (2004) theory is about interfaith dialogue and responsibility. Küng (2004) stresses on the importance of interfaith dialogue and responsibility in addressing social problems. He calls for interfaith dialogue and responsibility, a new religious overview, where people seek new viable ways and strive for a new inter-religious openness, encounter and bond, having interreligious dialogue with all groups to tackle social problems. Küng (2004) challenges religions to take responsibility by getting involved in addressing social problems that affect humanity. Küng (2004:29) points out that “there can be no survival of people in the world without people getting involved in interfaith dialogue and taking responsibility to address social problems.” Küng (2004:29) adds that “responsibility means being active in the society to address community problems. The world cannot survive without dialogue and responsibility.” Taking responsibility and being ethical, according to Küng, leads to peace in individuals, families, religions and the

world. Taking responsibility, according to Küng (2004:29), “enables people to be ethical in their conduct. Being responsible and ethical citizens, is the key for the survival of humanity.” He argues that there can be no world peace without peace between the religions. Furthermore, asserts Küng (2004:30), “there can be no peace between the religions without dialogue between them.” Küng (2004) describes that interfaith dialogue enables people of different religions to come together and find solutions for the problems that affect them. Coming together to address social problems is what Küng refers to taking responsibility. According to him, the leaders of world religions should take responsibility by getting involved in interfaith dialogue to address social problems. The framework of Küng about taking responsibility will be discussed in detail in chapter eight as one of the solutions that religious leaders in Botshabelo could use to address water shortages.

This research project has adopted Küng’s framework (2004) on dialogue and responsibility and the framework of Fitzgerald (2000) about the four forms of dialogue to address the problem of water in Botshabelo. Chapters six, seven and eight illustrate the application of the theories of Fitzgerald (2000) and Küng (2004) in addressing water shortages in Botshabelo. These frameworks of interfaith dialogue have assisted this study in creating a tool to address water shortages. The framework of Daneel (1991) supplements the frameworks of Fitzgerald (2000) and Küng (2004) by giving concrete example of how interfaith dialogue was used in Zimbabwe to address the social problem of water shortages when the country experienced drought. Fitzgerald (2000) and Küng (2004) stress that interfaith dialogue has the capacity to solve social problems.

2.6 Conclusion

This chapter has presented the methodology and theoretical framework upon which the study has been based. The chapter has demonstrated why qualitative research was chosen as the best method in this research. The chapter has also illustrated how qualitative methodology has been applied in this research project to collect data that aims at addressing the problem of water scarcity in Botshabelo. Interviews were used as one of the methods of collecting primary. In cases where interviewees could not be met physically, other electronic means such as Skype and

telephones were utilised. Secondary data was also collected from library books and search engines such as Library Genesis and Google Scholar. The research project found the frameworks of Fitzgerald (2000) and Küng (2004) to be vital in shaping the study. Chapter Three illustrates the scenario of water scarcity in South Africa, and the causes and social effects of this problem in Botshabelo.

CHAPTER THREE

MAPPING THE SCENARIO OF WATER, THE CAUSES AND EFFECTS OF WATER SCARCITY

3.0 Introduction

Chapter Two has illustrated and discussed the methodology and the theoretical lens that underpins the study. This chapter explores the scenario, and the causes and the effects of water scarcity in South Africa. The discussion of the chapter is organised under the following major themes: the scenario, the causes and the effects of water scarcity. It illustrates how serious water scarcity is in the world in general and later addresses South African context. It first illustrates the scenario of world water before going to the South African context. This chapter addresses the first and second sub questions. The first sub question is about the scenario of water scarcity in Botshabelo between 2014 and 2019. The second sub question demands the demonstration of the causes and consequences of water scarcity in South Africa.

3.1 The state of world water

The Organisation for Economic Co-operation and Development (OECD) Water Legacy (2021) describes that the COVID 19 challenged the world to work on water. OECD (2021:2) states that “with an estimated 3 billion people lacking access to basic handwashing facilities, the COVID-19 pandemic underscored the far-reaching impact of mismanaged water.” OECD (2021:2) adds that “it reminded the world that no country, be it developed, emerging or developing, can take water security for granted. Getting freshwater policies right is critical to our well-being now and in the future.” The OECD 2021:2) assesses that “by 2050, over 40% of the global population will live under severe water stress and water demand will increase by 55%.” The OECD (2021:2) describes that:

The UN 2021 report on progress towards SDG 6: Water and Sanitation for All emphasised that the world is not on track, with a 35% increase in water stress in some regions over the last two decades. Gaps in water quality data, development assistance, transboundary co-operation and programme implementation persist, putting billions of people at risk. Because of climate change, demographic pressure, urbanisation and our very consumption and production patterns, the risks of too much, too little, too polluted water and related tensions will intensify in the coming decade.

Turton et al (2016:5) note that “the Earth’s hydrosphere contains about 1.4 million cubic kilometers of water. And not all this water is available or fit for crop production or human consumption as most of it is too salty. Only 2.5% is freshwater and about 69% of this is locked up in glaciers, ice caps and permanent snow cover.” Turton et al (2016:5) add that “about 30% is stored in the ground and the rest is found in river systems, lakes and reservoirs. Each person needs between 50 to 100 liters of water a day in order to stay healthy; and a further 400,000 liters of water a year through food.” Anja du Plessis (2017:1) bemoans that “the role of water firstly as a prerequisite for life on earth and secondly as an economic resource, are often in conflict.” Du Plessis (2017:1) adds that “the exploitation of water as a commodity has put aquatic ecosystems and the life they support at risk. There is an influence also of changing climate on global water resources due to greenhouse gas emissions.” Turton et al (2016:5) claim that “human beings are progressively influencing the earth’s climate systems mainly through accelerating greenhouse gas emissions, which are presently at the highest levels in recorded history. This has led to changes in global, regional and local climate patterns with widespread effects on human and natural systems, including the water cycle.” Turton et al (2016:5) explain that “temperature, rainfall and evaporation rates are the core factors of water availability. A changing climate is thought to be liable for an increase in the occurrence and intensity of environmental disturbances, such as flash floods, droughts, windstorms, fires and pest outbreaks.” Hoegh-Guldberg et al (2019:1) concur that “the greenhouse gas emissions have contributed a lot to climate change in the world. The impacts of climate change include intense storms, collapsing ecosystems and heatwaves, among many others.”

Hoegh-Guldberg et al (2019:1) point out that “there is an increase in Global Mean Surface Temperature (GMST) of about 2.0°C which is higher than the pre-industrial period which

appears to be unmanageable and hence dangerous to natural systems.” Hoegh-Guldberg et al (2019:1) state that “it is imperative to implement control measures on climate change. The costs and benefits associated with acting in response to climate change and restraining average global temperature to 1.5°C above the pre-industrial period would be much less costly than the damage due to inaction on global climate change.” Hoegh-Guldberg et al (2019:5) point out that “many risks for society will increase as environmental conditions change if we don’t act now.” According to them climate change will cause water scarcity. Hoegh-Guldberg et al (2019:5) add that “water, for example, is central to the success or failure of human communities. The projected frequency and scale of floods and droughts in some regions will be smaller under 1.5°C global warming as opposed to 2°C, with risks to water scarcity being greater at 2.0°C than at 1.5°C of global warming for many regions.” According to Hoegh-Guldberg et al (2019), there is a need for the world to stand up and put in measures to control climate change if humanity wants to survive. Rafi Letzter (2019:1) points out that “climate change activists and politicians have been criticized for saying that from 2019, humanity has only 11 to 12 years to stop climate change, if not humanity is heading towards disaster.” Letzter (2019:1) argues that “scientists say that the situation is worse than what the climate activists and politicians think.” According to Letzter (2019:1), “science indicates that humanity has less than 11 years to reverse the death of the earth as a result of climate change. If humanity wants to survive, action must be taken now.” Hoegh-Guldberg et al (2019:6) note that “warming of 1.0°C since the pre-industrial period has fundamentally transformed our planet and its natural systems. Multiple lines of evidence reveal that a 1.5°C world increase of temperature will entail larger risks to both humanity and natural systems.” Hoegh-Guldberg et al (2019:6) add that “the risks of a 2°C world increase is much greater. This places humanity at a critical time in human history where proportionate action taken today will almost certainly minimize the dangerous impacts of a changing climate for hundreds of millions of people.” Hoegh-Guldberg et al (2019:7) point out that “if we do not address climate change now, the future food security of the world will be affected because persistent droughts will cause food shortages.” Park et al (2014) concur that climate change will affect food and water security. Park et al (2014:1) point out that “the persistence of drought not only affects food and water security but also has an impact on health systems of society.” Maria Christina Tirado et al (2010:4) observe that “because of climate and global environmental changes such as land degradation and changes in hydrological resources, essential ecosystem

services, agricultural production systems and access to food are likely to decline drastically particularly in Sub-Saharan Africa and South Asia. This will increase the risk of hunger and malnutrition.” They point out that climate change is expected to exacerbate undernutrition through its effects on illnesses, such as diarrhea and other infectious diseases. Projected increases in the frequency and intensity of droughts and floods and their potential impact on crops and livestock losses are worrisome.

Tirado et al (2010:4) predict that “climate change and variability and the consequent global environmental changes and loss of ecosystem services will have significant impacts on food and water security and eventually on malnutrition, particularly in developing countries.” They point out that heat waves, droughts and heavy precipitation events are expected to continue to be more frequent and future tropical cyclones will become more intense. It is primarily via these impacts on the ecosystems and in water and agriculture systems that climate and global environmental change will have negative effects on water, food, and nutrition security, particularly in vulnerable and poor populations. Tirado et al (2010:5) state that “total temperature increases of 0.76 degrees Celsius have been reported during the 20th century. Continued Green House Gas (GHG) emissions at or above current rates would cause further warming and induce many changes in the global climate system during the 21st century that would very likely be larger than those already observed during the 20th century.” They describe that recent studies on trends and sources of carbon sinks show that these estimations are much worse than expected.

The Intergovernmental Panel on Climate Change (IPCC 2021) concurs with Tirado et al (2010) arguing that human influence has warmed the atmosphere, ocean and land causing the widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere. According to the IPCC, an increase in well-mixed greenhouse gas (GHG) concentrations are caused by human activities. It further describes that each of the last four decades has been successively warmer than any decade that preceded it. The IPCC (2021:4-5) states that:

Global surface temperature in the first two decades of the 21st century (2001–2020) was 0.99 [0.84 to 1.10] °C higher than 1850–1900. Global surface temperature was 1.09 [0.95 to 1.20] °C higher in 2011–2020 than 1850–1900, with larger increases over land 1.59 [1.34 to 1.83] °C than over the ocean 0.88 [0.68 to 1.01] °C. Human influence is very likely the main driver of the global retreat of glaciers since the 1990s

and the decrease in Arctic Sea ice area between 1979–1988 and 2010–2019 (decreases of about 40% in September and about 10% in March). It is virtually certain that the global upper ocean (0–700 m) has warmed since the 1970s and extremely likely that human influence is the main driver. It is virtually certain that human-caused CO₂ emissions are the main driver of current global acidification of the surface open ocean.) There is high confidence that oxygen levels have dropped in many upper ocean regions since the mid-20th century and that human influence contributed to this drop. In 2019, atmospheric CO₂ concentrations were higher than at any time in at least 2 million years and concentrations of CH₄ and N₂O were higher than at any time in at least 800,000 years. Temperatures during the most recent decade (2011–2020) exceed those of the most recent multi-century warm period, around 6500 years ago [0.2°C to 1°C relative to 1850–1900]. In 2011–2020, annual average Arctic Sea ice area reached its lowest level since at least 1850. Late summer Arctic Sea ice area was smaller than at any time in at least the past 1000 years. The global nature of glacier retreat since the 1950s, with almost all of the world’s glaciers retreating synchronously, is unprecedented in at least the last 2000 years. Global mean sea level has risen faster since 1900 than over any preceding century in at least the last 3000 years. The global ocean has warmed faster over the past century than since the end of the last deglacial transition (around 11,000 years ago). Human-induced climate change is already affecting many weather and climate extremes in every region across the globe.

Human induced climate change according to the IPCC (2021:9) “can be observed in the continuous occurrence of extreme heatwaves, heavy precipitation, droughts, and tropical cyclones.” It points out that hot extremes (including heatwaves) have become more frequent and more intense across the world since the 1950s, while cold extremes (including cold waves) have become less frequent and less severe, with high confidence that human-induced climate change is the main driver of these changes. The IPCC (2021:9) argues that “decreases in global land monsoon precipitation from the 1950s to the 1980s are partly attributed to human-caused Northern Hemisphere aerosol emissions.” It notes that over South Asia, East Asia and West Africa, increases in monsoon precipitation due to warming from GHG emissions were counteracted by decreases in monsoon precipitation due to cooling from human-caused aerosol emissions over the 20th century. The IPCC (2021:9) points out that “the increase in West African monsoon precipitation since the 1980s are partly due to the growing influence of GHGs and reductions in the cooling effect of human-caused aerosol emissions over Europe and North America.” The IPCC (2021:9) further states that “it is likely that the global proportion of major tropical cyclone occurrence has increased over the last four decades.” It argues that human influence has likely increased the chance of compound extreme events since the 1950s. This

includes increases in the frequency of concurrent heatwaves and droughts on the global scale, fire weather in some regions around the world and compound flooding in some locations. What the IPCC says about climate change was already predicted in 2010 by Tirado et al.

3.2 Water scarcity and conflicts

Is it possible that water scarcity can cause conflict or even war? The answer could be yes, and no. Water scarcity cannot cause war when there is dialogue among the people affected. The war could easily erupt when people ignore dialogue. Therefore, one cannot affirm categorically that there can be war and one cannot rule out completely that there can never be war because of water scarcity. Aaron T. Wolf (1998:251) illustrates that “if we do not manage water properly, it might cause either tribal wars or international wars to countries that share rivers.” According to Wolf (1998:251), “there are 261 international rivers, covering almost one half of the total land surface of the globe and untold numbers of shared aquifers. Water has been a cause of political tensions between Arabs and Israelis, Indians and Bangladeshis, Americans and Mexicans, and all ten surrounding states of the Nile River.” Wolf (1998:252) adds that “water is the only scarce resource for which there is no substitute, over which there is poorly developed international law and the need for which is overwhelming, constant and immediate.” Wolf (1998:252) points out that “water is a vital resource to many levels of human survival for which there is no substitute; it ignores political boundaries, fluctuates in both space and time and has multiple and conflicting demands on its use. Water is a resource essential to all aspects of a nation's existence, from its inhabitants' ecology to their economy.” Wolf (1998:257) notes that “in March 1965 to July 1966, Israel and Syria exchanged fire, the war that started as a result of competing for the waters of the Jordan River.” Hans Günter Brauch (2000:5) adds that “another war over water was between Senegal and Mauritania. In April 1989 to July 1991, Senegalese peasants were killed over grazing rights along the Senegal River, which forms the boundary between Mauritania and Senegal. That killing of Senegalese peasants sparked a blazing ethnic tension.” Wolf (1998:262) assesses that “there is a large and growing literature warning of future water wars. They point to water not only as a cause of historic armed conflict, but as the resource which will bring combatants to the battlefield in the 21st century.” Wolf (1998:262) however, notes that, “the historic reality has been quite different. In modern times, only seven minor battles have been

waged over international waters. Contrarywise, over 3600 treaties have been signed historically over different aspects of international waters.” Wolf (1998:262) adds, “however, this is not to say that armed conflict has not taken place over water, only that such disputes generally are between tribes, water-use sectors or states.”

Peter J. Ashton (2007:4) argues that “water scarcity can cause conflict among people. For instance, there have been water conflict in Africa. The locations of these water conflict often are in areas where there is absence or scarcity of constant rivers and lakes, and the transition zones where perennial river flows become short-lived or episodic.” In addition, Ashton (2007:4) observes that “in most cases, water conflicts have occurred in the dry Sahel region of West Africa, the arid north-eastern portion of East Africa and the dry south-western portion of southern Africa.” Ashton (2007:4) states that “disputes over water have also occurred in some of the wetter regions of Africa, such as around Lake Victoria in East Africa, and the middle and lower Zambezi River in southern Africa.” Ashton (2007:4) adds that “these water conflicts have usually occurred during drought periods. In those cases where conflicts occurred, the fight was linked to a specific river (such as the Nkomati, Limpopo, Nile, Orange, Pagani, Senegal and Zambezi).” Ashton (2007:4) furthermore observes that “water conflicts usually occur where the river is a ‘transboundary’ or shared river system and the dispute relates most frequently to accusations that the water benefits derived by upstream countries are not equitable when compared to the benefits derived by downstream countries.” According to Ashton (2007:8) “water conflicts in Africa are unavoidable unless suitable and intensive precautionary actions are taken.” Therefore, when we analyse the arguments of Wolf (1998) and Ashton (2007), one cannot firmly state that water scarcity can cause war and one cannot also rule out the possibility of war because of water scarcity. Prevention is better than cure. According to the researcher, people should understand the situation of water availability in order to avoid any possibility of future conflict over water scarcity in South Africa.

3.3 Water situation in South Africa

Some people have argued that South Africa does not have the crisis of water. But the Green Cape (2022:13) maintains that “South Africa is ranked as the 30th driest country in the world and has

been characterised as a water scarce country, with low rainfall and high rainfall variability as a result of climate change.” The Green Cape (2022:13) describes that:

In 2021, the water crisis and social instability were jointly ranked as the third highest risk for doing business in SA, behind unemployment which is at 46.6% at the time of writing (Stats SA 2021) and failure of critical infrastructure for energy generation. In addition to being a water-stressed country, SA is also characterised by an uneven rainfall distribution, and extreme climate resulting in evaporation rates that often exceed precipitation.

Francois Engelbrecht et al (2019:5) point out that “since 2015, South Africa has been experiencing the present drought. In September 2016, the entire summer rainfall region was in a state of mild drought or worse. The Free State, Northern KwaZulu-Natal and eastern Mpumalanga were in a state of severe drought.” The researcher observes the climate change crisis is real and there is a need for urgent action. Engelbrecht et al (2019:9) note that “awareness is needed to mitigate climate change worldwide.” According to interviewees, climate change needs everyone to be involved in reducing global warming. One may therefore want to know to what extent African Traditional Religions, Christianity and Islam are involved in addressing climate change and its impact in South Africa. Based on interviews, the religions mentioned in this study to some extents have talked or written about climate change individually but have not yet worked together as an interfaith group to address the climate change problem. Engelbrecht et al (2019:21) warn that “there is a projected change in annual rainfall over Southern Africa if mitigation measures are not put in place. The general decreases in rainfall are likely to occur over Southern Africa as the world’s climate warms.” In addition, Engelbrecht et al (2019:21) predict that “more frequent strong El Niño effects may occur by mid-century.” Engelbrecht et al (2019:1-2) assess that “temperature increases are projected to range between 4 - 7°C in the interior of the country by the end of the century.” Engelbrecht et al (2019:25) point out that “temperature increases may plausibly reach 3-4 °C by the 2040s, an actionable climate change signal. Severe increases in the number of high fire-danger days, very hot heat-wave days are projected to spread across the African continent under low mitigation.” Engelbrecht et al (2019:25) add that “the southern African region is likely to become generally drier. Multi-year El Niño type droughts may probably occur from the mid-century (2036-2065) onwards with implications for a potential ‘day zero’ in Gauteng.”

Engelbrecht et al (2019:25) point out that “South Africa must embark on water conservation awareness campaign in order to address water shortages. The probability of day zero events in Cape Town could further increase over the next three decades (and beyond, under low mitigation). Over northeastern South Africa, Mozambique and Zimbabwe an increase in extreme rainfall events is likely to happen.” Engelbrecht et al (2019:25) describe that “the probabilities of category 3-5 hurricanes (intense tropical cyclones) making landfall over Maputo or even Richards Bay remain to be quantified.” Engelbrecht et al (2019:25) add that “under the current lower mitigation, the widespread impacts on agriculture, livestock production, water security and human health in Africa will require ambitious adaptation and interventions.” Lani Van Vuuren (2009:31) illustrates that “South Africa is a water scarce country with demand already exceeding supply in certain cities. The water quality is also deteriorating from year to year; municipalities are unable to maintain ageing water and wastewater infrastructures due to lack of personnel with skills.” Stone (2009:46) asserts that “in South Africa, water, like all over the world is becoming a scarce resource, mostly because both people, animals and industries need water for their survival.” There is a need to conserve water. Water is needed for human survival. For some machines to operate, water is needed even if in a small quantity such as in cars. This high demand for water by humans and animals, in industries and agriculture, leads to water shortages in some places because the demand for water exceeds its supply. Van Vuuren (2009:33) points out that “water problems in South Africa are likely to continue because of the decreasing water quality in some provinces.” In Parys, Free State Province, people have been complaining about water quality for years. Botshabelo, Parys, Senekal and QwaQwa are some of the municipalities which experience water shortages because of a dysfunctional municipal water infrastructure.

Van Vuuren (2009:33) illustrates that, “generally, the South African water sector faces several challenges such as increased water deficits, water pollution and decreasing water quality that not only affect availability of water but impact negatively on human health.” South Africa has been hit by drought between 2014 and 2019 causing water scarcity around the country. This water scarcity has been associated with persistent drought. The National Water Security Framework for South Africa (NWSF 2020) describes that South Africa has been experiencing water scarcity for a long time. According to the National Water Security Framework for South Africa (NWSF

2020), water security has always been an issue of concern in South Africa. NWSF (2020:9) comments that “in recent times, water scarcity is increasingly under very serious threat in the country.” NWSF (2020:9) adds that “water security for South Africa not only limits the entire water sector but has far-reaching consequences for the entire economy of the country. It is potentially a significant hurdle for the ongoing and sustainable growth and development of all sectors of our economy.” NWSF (2020) challenges all sectors to come up with the strategies that could help to improve the water shortages in South Africa. According to NWSF (2020), after democratic independence in 1994, the water sector in South Africa made clear progress to substantially advance water supply extension in rural areas and previously under serviced areas of the country. NWSF (2020) states that:

In its 2017 general household survey, Statistics South Africa (Stats SA) reported that an estimated 46.7% of households had access to piped water in their dwellings. A further 27.5% accessed water on site while 12.2% relied on communal taps and 2.1% relied on neighbours’ taps. The report confirmed that the number and percentage of households with access to piped water had increased since 2006, showing that 13.5 million households had access to piped water in 2017 compared to 9.3 million in 2006.

It is true that there are many households with piped water since 1994. But in most cases, even the houses with pipes installed in their homes still experience water shortages. According to the South African National Life Insurance Company (SANLAM 2013:1), “South Africa has only “8% land area that provides 50% of surface water.” It points out that if South Africans wish to meet the public objectives of social and economic development, there is a need to act decisively to prioritise the management of water resources and the ecosystems that provide the country with water. SANLAM (2013:1) points out that “in terms of the supply of water, there is a need to embrace the vital concept that water does not come from a tap, not even a dam; water is provided to the inhabitants by healthy and functioning ecosystems.” Hildegard Rohr and Werner Fourie (2014:1) admit that “South Africa has water problems and people need to learn to conserve water. The availability of fresh water is one of the major limiting factors to South Africa’s development.” According to SANLAM (2013:6), “South Africans must conserve water because water is a rare resource. Water cannot be substituted with anything else. Whilst coal as an energy source can be substituted by solar energy or biofuels, water cannot be replaced.” SANLAM (2013:24) points out that “most of South Africa’s inhabitants live thousands of kilometres from

water sources, therefore most of the people are not aware of water levels at the sources.” Jette Shroder (2016:1) argues that “there is an urgent need for water education. This education would inform people about water conservation and about the causes of water loss such as soil degradation, wildfires, pollution from mines and all causes that come from climate change that sometimes causes floods and droughts.” Daniel Harris, Michelle Kooy and Lindsey Jones (2011:6) state that “political governance of a country plays an important role for water supply of any country. Governments need to analyse how to conserve water and how to supply water to the citizens.” According to Harris, Kooy and Jones (2011:6), “the South African government needs to work together with religious forums in conserving water. Both government and the religious sector are important bodies that can help in the advocacy of water conservation.” Harris, Kooy and Jones (2011:31) comment that, “after analysing the government involvement in water conservation, we also need to analyse the cultural and religious context to understand to what extent religious or cultural values shape public debate around water and sanitation demands.” If South Africa wants to address the problem of water scarcity effectively, it must first address the causes of water scarcity.

3.4 Causes of water scarcity in South Africa

The causes of water scarcity in South Africa vary from place to place. Some of these causes are natural causes while others are human.

3.4.1 Natural causes of water shortage in South Africa

The natural causes of water scarcity include the following: drought, climate change, surface-runoff, earthquakes, water evaporation and transpiration.

3.4.1.2 Drought

Lara Fabrizi (2009:6) states that “drought is a prolonged period of unusually dry weather in an environment due to low rainfall, causing low water in aquifers. The continuous lack of rain, or low rainfall, leads to water levels dropping below average in catchment areas.” Fabrizi (2009:6)

further points out that “an equilibrium must be preserved between the water supplied to communities and the surface run-off to replace the water used or lost.”

3.4.1.3 Climate Change

The African Strategy on Climate Change (ASCC 2014:75) describes that, “climate change is a state of the climate or in its variability, persisting for an extended period (typically decades or longer).” According to Shun-Ze Zhan (2007:2), “climate change is the alteration of environmental conditions that include the distribution of the world’s water. Excessive heat makes water evaporate quickly, making the ground dry and unsuitable for agriculture purposes in some environments.” Zhan (2007:2) adds that “the rising high temperatures and the constant loss of water through evaporation leads to water scarcity.” Tirado et al (2010:4) illustrate that “climate change is manifested in the variations of the traditional patterns of everyday weather, including extreme events such as high or low temperatures, droughts, hailstorms and floods.” According to Siri Eriksen, Karen O’ Brien and Linn Rosentrater (2008:7), “dry land will further increase in Southern Africa due to excessive heat and the extended droughts.” According to Ernst M. Conradie (2020) climate change threatens the survival of humanity. In order to address climate change, the world needs the participation of humanity in all walks of life. A multi-disciplinary approach is what is needed to address the challenges of climate change. The world’s largest economies should lead the way in addressing climate change. Conradie (2020:1) states that “what is needed is nothing less than the transformation of the energy basis of the current global economy from fossil fuels towards more sustainable alternatives.” Conradie (2020:1) adds that “climate change poses a crisis in terms of human hardship and suffering, making life hard in a hostile environment. This typically has to do with either too much water or too little water.” Conradie describes that climate change presents also a cultural, moral and spiritual crisis. Conradie (2020:10) states that “the environmental crisis is a pathological sign of cultural failure and bankruptcy. It indicates that the values underlying the dominant cultural and economic practices in the world today have become bankrupt.” Conradie (2020:10) adds that “the dominant global culture is evidently shaped by consumerism and that affects urban Africa as well.” On moral grounds, Conradie (2020:13) describes that “climate change also calls for moral judgement in terms of at least two moral standards, namely, participatory decision-making and ecological sustainability.” According to Conradie (2020), humanity should be stewards of the

environment. He invites the people to observe the Vancouver Assembly of 1983 which proclaimed that humanity needs to keep the moral values of justice, peace and integrity of creation. Environmental justice is needed if humanity wants to succeed in addressing climate change. Conradie (2020:13) states that “climate change requires attention also to all the three underlying moral problems, namely economic inequalities and injustice, conflict at different levels, and ecological destruction.” Conradie (2020:16) observes that “since moral formation usually takes place within faith communities, this implies that the ecological transformation of religious traditions is critical to the emergence of an ecological ethos.”

I concur with Conradie (2020) that addressing climate change needs the involvement of religious leaders because it is clear that ample scientific knowledge of the crisis caused by climate change is available and numerous political and economic statements have been expressed. However, we seem to lack the political, economic, and scientific leadership to make necessary changes. In addition, what is still lacking is the religious commitment to transform the environmental crisis from an issue on paper to one of effective policy, from rhetoric in print to pragmatism. Climate change needs to be addressed as soon as possible because it has a great impact on peoples’ lives.

Juliane Stork and Philipp Öhlmann (2021:3) state that:

Climate change and environmental degradation are threatening livelihoods in many parts of the world. One of the regions most affected is Southern Africa, where temperatures are predicted to rise by up to 4°C by the end of the century. To develop pathways into a sustainable future and to achieve the Sustainable Development Goals, fundamental socioecological transformations are needed. This process requires not only appropriate policies as well as scientific knowledge, but radical paradigm shifts and changed mindsets and behaviour. Religious communities are crucial stakeholders for achieving these paradigm shifts: religion shapes social imaginaries, and people’s values and religious communities have the ability to act as agents of social, cultural, economic, political and ecological change. By fundamentally shaping people’s world views, religion can be an important source of sustainable development.

Pamela R. MacCarroll (2022) argues that climate change has a great impact on human lives. According to her, climate change affects the emotions of human beings and therefore calls for theologians to engage in matters of how to address climate change. MacCarroll (2022:1) states that “many terms have arisen within and beyond the field of psychology to describe the kinds of

emotions and mental health impacts of the climate crisis on individuals and communities.” In addition, MacCarroll (2022:7) states that “when we bring a theological lens to bear on trauma and the climate crisis, one thing is clear. The cataclysmic reality of the climate crisis signifies in real time our ultimate fragility, finitude and earth-bound vulnerability and raises questions of existential and theological import.” According to her, using the lens of trauma theory allows us to discern a deep-seated fear that lies beneath all the various reactions in response to the devastating threat of the climate catastrophe. Mélisa Kerim-Dikeni (2022) describes that water shortage caused by climate change is a serious problem. Kerim-Dikeni (2022:1) states that:

In Sub-Saharan Africa, 40% of people lack basic access to water supply and 70% to basic sanitation. Over the past 15 years, floods and landslides have affected 38 million people in Africa and caused damage estimated at over \$4 billion. By 2030, 75 to 250 million people in Africa will be living in areas of high-water stress, likely displacing 24 to 700 million people. Every hour, an estimated 115 people die from diseases related to improper hygiene, poor sanitation or contaminated water. Two-thirds of African cities at extreme risk of climate-related shocks including tropical cyclones, flooding, droughts and crop failure.

3.4.1.4 Surface Runoff Water

Juha I Uitto and Asit K Biswas (2000:205) illustrate that “surface runoff water is also a cause of water shortages for cooking and drinking purposes. This is because floods carry objects from the ground into the drinkable water sources. The rivers, fountains and dams that normally provide water to households become polluted and unfit for household consumption.” Uitto and Biswas (2000:205) add that “there can be water scarcity during times of flood.” According to my observation, Botshabelo has experienced water scarcity problems caused by surface runoff water. Allan C. Twort, Don D. Ratnayaka and Malcolm J Brandt (2000:84) assert that, “debris and sediments carried by runoff water render water unusable for households, especially for cooking and drinking.”

3.4.1.5 Earthquakes

Uitto and Biswas (2000:203) demonstrate that “an earthquake may cause water shortages because it destroys the infrastructures of water supply. It might take a long time before those are repaired.” Christopher Hartnady (2002:425) points out that “between 10 and 16 July 2002, three

moderate earthquakes were recorded in KwaZulu-Natal, South.” According to Hartnady (2002:425), “the cities of Durban and Pietermaritzburg are vulnerable to earthquake hazards. Natal is the epicenter of earthquakes in South Africa.” Hartnady (2002:425) adds that “the weather in South Africa can sometimes be severe and accompanied by storms that cause tremors which destroy infrastructure; for instance, at the end of 2019 there were tremors that destroyed houses.” My observation is that Botshabelo also experiences rough weather at times which are accompanied by storms. However, Botshabelo does not experience strong tremors.

3.4.1.6 Evaporation and Transpiration

Another natural cause of water scarcity in South Africa is evaporation and transpiration. These causes, however, are not as high when compared to other causes stated above. Twort, Ratnayaka and Brandt (2000:73) state that “evaporation is the key part of hydrological precipitation because seventy to eighty percent of the annual precipitation returns to the atmosphere due to evaporation and transpiration.” Twort, Ratnayaka and Brandt (2000:73)) point out that “water is lost all the time from any open water sources, for instance dams, reservoirs, rivers and from vegetation.” The causes of water scarcity that have been stated above so far are natural causes. Apart from these causes, there are also human induced causes of water scarcity.

3.4.2 Human causes of water scarcity in South Africa

The human causes include disparity in water supply, illegal tap connection, urbanisation and population growth, contamination of existing water pipes, leaking pipes and deforestation.

3.4.2.1 Disparity in water supply

Tavhanyani Mainganye (2006) illustrates that very often there is an unequal distribution of water in municipalities in South Africa. The percentage of water given to people living in rich suburbs sometimes differs from the percentage given to ‘locations’ (a term used in SA for areas near towns that Blacks were forced to live under apartheid) in poor areas. The locations often experience water shortages. Quentin Grafton et al (2015:1) assert that “South Africa experienced disparities in water distribution in the years before democratic independence. The town areas

where the rich people lived had water in abundance while locations constantly had a shortage.” The White Paper on Water Supply and Sanitation Policy (1994:3-4) affirms that “before democracy, 95% to 100% of areas where Whites lived had piped water in their houses while the poor communities had about 57% of water and often had no piped water in their houses. This kind of disparity in water supply resulted in poor communities experiencing water scarcity.” In Botshabelo there are some places where people have water while in other places the pipes have been dry for years.

3.4.2.2 Unlawful tap connections

Mokoko Sebola (2000:1) points out that “the illegal tap connections may cause water scarcity due to unsupervised pipe leaks and uncontrolled use of water. The municipality unfortunately do not know the quantity of water which is lost through illegal connection of pipes.” During the interviews, I asked the Botshabelo municipality whether they know how much water is lost through unlawful connections and they could not specify how much water is lost. Sebola (2000) gives an example of the community where people suffered from water scarcity due to illegal water connections. Pipes need to be connected by experts who know how to fix leakage problems. Botshabelo has been suffering from water scarcity because some homes called in unskilled plumbers to connect their water pipes. These pipes have been leaking constantly, thus contributing to water scarcity. Leaking pipes are also caused by old infrastructure. The pipes were used in 1979 and have become old and need to be replaced. There are many places around Botshabelo where water pipes do burst along the road and the water leakage may continue for weeks if no one reports to the municipality.

3.4.2.3 Leaking water pipes

Osama Hunaidi and Alex Wang (2006:451) explain that “water passes through pipes from the sources to households. If pipes are not monitored, they may burst and develop leaks, leading to the loss of water and water scarcity in an area.” I have observed several times in Botshabelo that there are places where the pipes have burst and water leaks for two to three weeks without the municipal council fixing them. I took a photo of water leaks which is illustrated below.

Photograph 1. A photo of water leaking along the road.



3.4.2.4 Urbanisation and population growth

The Food and Agricultural Organisation (FAO 2007:2) illustrates that “the world population is growing at an alarming rate. People are constantly moving from rural areas to urban areas.” According to FAO (2007), as people move from rural to urban areas, urban areas might fail to supply enough water for all the people living there. Therefore, urbanisation and population growth contribute to water scarcity in overpopulated areas. The population in Botshabelo is growing fast. Botshabelo Free State Province Population Statistics (2023:1) points out that “there are more than 200, 000 people living in Botshabelo. In 2011, the Population of Botshabelo was about 178,000. From 2011 to 2023, the population has increased by about 22,000 in a period of 12 years.” The increase in population has led to water scarcity in Botshabelo. Due to increase in the population of Botshabelo, there are some sections like R, V and Botshabelo West where people have no piped water.

Photograph 2: The photo below shows people waiting for the truck to bring water to the water tank.



Granny waiting for the truck to bring water to the tank for household usage



3.4.2.5 Pollution of current water sources

FAO (2007:3) states that “normal water supplies can be polluted by a variety of sources such as industrial sewage, agricultural chemical runoff from fields, the casual disposal of human excreta

and also poorly treated sewage from municipal works, all of which may lead to water scarcity.” During the interviews which I conducted (2018 - 2019) around Botshabelo, interviewees mentioned that there are some industries which are built near the water sources. The industries affect the sources of water leading to water scarcity in Botshabelo. One participant during interviews in Botshabelo (2018 - 2019) complained that rivers where he used to catch big fish have run dry because these water sources have been turned to areas for human habitation and industrial areas. George Braunch et al (2011:1) argue that “industries pollute water by disposing unhealthy chemicals in flowing water. Industries causes unhealthy environment.” They note that people cannot drink the contaminated water. Unhygienic environments increase the risk of water problems because contaminated water for health reasons. Christopher Magadza (2000:3) asserts that “pollution is one of the causes of water scarcity. Pollution destroys the freshness of water.” Carlo Giupponi et al (2006:31-32) note that “the use of agricultural fertilizers and pesticides causes water pollution. The chemicals that are disposed of in streams can be life hazards.” Interviewees pointed out that African Traditional Religion, Christianity and Islam should engage in advocacy for water conservation. Continuous loss of water either by natural causes or human causes has many negative effects.

3.5 Effects of water shortage

The effects of water scarcity in the community include the effects on crop yields, health and everyday household water usage as well as community livelihood projects. Communities cannot make even small gardens because of water scarcity. Brick makers have struggled to maintain their families because of the water shortage. When pipes are dry and even grey water is unavailable to those who try to earn a living from washing cars, it becomes a struggle to earn a living. Thus, community livelihood projects are affected too.

3.5.1 Effects on Community livelihood projects

During the research interviews in Botshabelo, I met some people who earn their living through vegetable gardens and brick making. Through gardening and making bricks, these families can send their children to school, pay for their health insurance and other family costs. The lack of water in the community affects these people negatively as they cannot do their gardens or make

bricks. Such projects need water. Indeed, small gardens can help many families to reduce their expenses because they are able to cultivate vegetables for domestic consumption. Water scarcity leads to poor socio-economic status of individuals and communities who rely on water for their survival in terms of gardening and brick making. All agricultural and industrial sectors need water. Small scale farmers as well as large scale farmers need water in order to be sustainable.

3.5.2 Effects on crop yield

When there is a drought, crop yields are low because all crops rely on water. Shortages of rainfall results in low crop production. The negative impact on crop production leads to starvation. Steve De Gruchy (2010:1) notes that “water shortages can affect the crop yields. Once there is drought, crops cannot grow leading to famine.” Muhammad Asif Hanif et al (2020:1) describe “that plants, animals and human beings are negatively affected by water scarcity.” Water shortage leads to poor crop yields, leading to food shortages which in turn affects the health of people.

3.5.3 Effect on health

People need water for cooking, drinking, bathing and for sanitation. Modern toilets which depend on water are badly affected when there is water scarcity. It can provoke the outbreak of diseases such as cholera. Katharine Hall, Annie Leatt and Jo Monson (2006:58) point out that “in South Africa, thirty percent of children’s deaths are caused by poor water and sanitation conditions.” Botshabelo is not pleasant in days when there is water shortage. Some schools and churches are closed when there are lengthy water shortages to avoid people being infected from toilets which cannot be flushed. Wash and COVID 19 (2020:1) illustrates that “the outbreak of the pandemic of COVID 19, demands the constant washing of hands with water as one way of prevention from infection.”

3.5.4 Effects on development

James Blignaut and Jan Van Heerden (2009:2) state that “water scarcity impedes economic growth. All projects that need water come to a standstill because they cannot run without water. Hydro-power plants that produce electricity are affected.” South African Press Association

(SAPA 2010:2) asserts that “water shortages hinder a diversity of developments such as in the construction industry. In order to mix the sand and cement, water must be used. Many development projects get affected when there is no water.” One of the research participants pointed out how they suffered when making bricks for construction of the Roman Catholic Church in Botshabelo in 1989 because there was no water.

Photograph 3. People making bricks to construct a church.



3.5.5 Effects on rivers

Donenfeld, Crookes and Hedden (2018:3) argue that “due to water scarcity, more than 60% of South Africa’s rivers are being overexploited.” Donenfeld, Crookes and Hedden (2018:6) state that:

The consequences of exploitation may not be evident overnight but has serious repercussions in the future. When water is extracted from river systems at unsustainable levels, it reduces the overall amount of water flowing downstream, which affects the ability of the river ecosystem to properly absorb the by-products associated with human life like industrial discharge or fertilizer run-off. This discharged product contaminates the water making it unfit for human usage.

3.6 Conclusion

This chapter has demonstrated the scenery, the causes and effects of water scarcity globally and explained the South African context. By demonstrating the nature, causes and effects of water scarcity, the chapter has addressed the first and second sub questions.

This chapter has asserted that South Africa has limited water resources which need to be conserved. The chapter has also established the causes and effects of water scarcity, such causes being natural and human. Among the natural causes, the following have been pointed out: climate change, drought, surface runoff water, earthquakes, evaporation and transpiration. The human causes are illegal tap connections, urbanisation and population growth, contamination of existing water sources and leaking pipes. These natural and human causes have negative effects on community livelihood projects, crop yields, health and development. Chapter Four defines theology, illustrates the significance of religion in addressing social issues such as water scarcity and the role of water in religious practices.

CHAPTER FOUR

DEFINING THEOLOGY, SIGNIFICANCE OF RELIGION AND THE ROLE OF WATER IN RELIGIOUS PRACTICES

4.0 Introduction

Chapter Three demonstrated the state of water in South Africa. The chapter asserted that South Africa has limited water resources which need to be conserved. Some places in South Africa such as Botshabelo have been experiencing water scarcity. The adherents of African Traditional Religion (ATR), Christianity and Islam argue that despite water shortages that they experience in the community of Botshabelo, the religious leaders of Botshabelo have not addressed such challenges. The members of different religions believe that religion is significant in addressing social issues. According to these believers, religious leaders have influence in the community to address social problems. The believers argue that the average population of Botshabelo belong to the religions mentioned above. These believers are convinced that religious leaders have authority to influence their members and government leaders. What these believers want to see is the religious leaders' engagement in advocacy, to raise awareness in the community about water scarcity and to challenge the community and government leaders to find solutions that could help address water shortages. The devotees of these religions stressed that religious leaders are respected by government leaders and by most of the people, even those who do not belong to their religion. Although theology does teach about the significance of religion in addressing social issues, one would wonder why religion can be significant in addressing social issues such as water shortages. Chapter Four defines theology and examines what theology says about the significance of religion in addressing social issues and the role that water plays in religious practices.

4.1 Definition of theology

Paul Badham (1996:1) defines theology as “thinking about God.” The Encyclopedia Britannica (2006) defines theology as the study of religious faith, practice and experience; especially the study of God and of God’s relation to the world. According to the Encyclopedia Britannica (2006), theology comes from two Latin and Greek words Theo and Logia. Theo meaning God and Logia meaning study. Hence combining the two words Theo and Logia forms one word called theology or study of God. Michael Patton (2005:1) states that the “Webster’s dictionary defines theology as the science of God or religion; the science which treats the existence, character and attributes of God, His laws and government, the doctrines we are to believe and duties we are to practice.” According to him, theology is a set of intellectual and emotional commitments, justified or not, about God and man which dictate one’s beliefs and actions. It is the first pursuit of knowledge and Wisdom. Paul Enns (2014) follows the Encyclopedia Britannica’s definition of theology when he defines theology. He describes that the word theology comes from two Greek words Theo and Logy combined to mean the study of God. Enns (2014:1) points out that “to study theology is to get to know God in order that we may glorify Him through our love and obedience. We must get to know God before we can love Him, and we must love Him before we can desire to obey Him.”

In a Catholic Church and other non-Catholic institutes, usually the students who are enrolled in a seminary or theological institutes for theological studies, go through a 4-year course of specialized training. There are different branches of theology to be covered during the training such as; dogmatic theology, liberation theology, moral theology, natural theology, practical theology and systematic theology. Each branch of theology focuses on particular areas and issues. There are many branches of theology. This section will illustrate a few of them.

4.1.1 Dogmatic Theology

According to the Encyclopedia Britannica (2006), dogmatic theology became famous and was entered in the dictionary in 1846. It is the branch of theology that focuses on dogma or doctrine, canon, beliefs, conviction, persuasion, view and tenet of a particular religion.

4.1.2 Liberation Theology

According to the Encyclopedia Britannica (2006), liberation theology became famous and was entered in the dictionary in 1972. It is a religious movement that originated among the Roman Catholic clergy in Latin America that combines political philosophy usually of a Marxist orientation with theology of salvation as liberation from injustice.

4.1.3 Moral theology

The Encyclopedia Britannica (2006) describes that in 1606, there was a philosophy that focused on human behavior and was given the name moral philosophy or ethics; the study of human conduct and values. Later on, some theologians introduced the study of ethics in theological studies and gave it the name moral theology.

4.1.4 Natural Theology

According to the Encyclopedia Britannica (2006), natural theology became famous and was entered in the dictionary in 1677. It is a theology deriving its knowledge from the scientific study of nature independent of special revelation. In the 21st century, the study of nature and how to protect it was given the name eco-theology. In my research, the care for nature, especially focusing on the care for water is what I have given the name Water Theology.

4.1.5 Practical Theology

According to the Encyclopedia Britannica (2006), practical theology became famous and was entered in the dictionary in 1909. It is the study of the institutional activities of religion such as preaching, church administration, pastoral care and liturgies.

4.1.6 Systematic Theology

According to the Encyclopedia Britannica (2006), systematic theology became famous and was entered in the dictionary in 1836. It is a branch of theology concerned with summarizing the doctrinal traditions of religion (such as Christianity), especially with a view to relating the traditions convincingly to the religion's day setting.

At the University of KwaZulu-Natal (UKZN) in the College of Humanities, School of Religion, Philosophy and Classics (SRPC), there is a branch of theology called Contextual Theology that focuses specifically on the contextual issues. At UKZN, there is also a department of theology called Theology and Development. In this department, the focus is on present issues that affect humanity. The department of Theology and Development seeks to understand how God is involved in present developmental issues and how can the study of God bring transformation in peoples' lives such as; economic transformation, political transformation, religious transformation and social transformation. It is in line with the department of Theology and Development that the researcher approaches the crisis of water scarcity in Botshabelo, assessing to what extent religion and religious leaders can help to address water shortages in the community. The problem of water is a social problem, and this research seeks to explore to what degree religious leaders can be an instrument of change, bringing transformation to address water shortages in Botshabelo. The research question, sub questions and objectives aim at assessing whether the involvement of religious leaders in interfaith dialogue can help to address the issue of water scarcity in Botshabelo. Can religion address social problems?

4.2 The significance of religion to addressing environmental problems

World religions have many times responded to climate change. The major contribution of religions to environmental care is their advocacy. Jame Schaefer (2016) illustrates how different religious leaders responded to the issues of climate change during COP 21 conference in Paris, France between Monday the 30th of November to Saturday the 12th of December 2015. Schaefer (2016:1) points out that “leaders of Judaism, Christianity and Islam have openly advocated for action to alleviate the hostile effects of human-forced climate change.” He describes that particularly prominent religious leader who expressed their concerns about climate change, prior to, during, and after the 21st Conference of the Parties of the United Nations' Framework Convention on Climate Change were Rabbi Arthur Waskow, Pope Francis, and Patriarch Bartholomew. Even though leaders from African Traditional Religion did not participate in the COP 21 assembly, this study is of the view that the African Traditional Religion like any other world religions, can contribute to addressing social problems like water shortages. Dermot Farrell (2021:28) states that “the climate challenge is ultimately a religious challenge.” He argues

that Faith communities all over the world have a contribution to make to the current debate about climate crisis. In confronting this crisis for our planet, all the world's religions have a vital contribution to make. Gregory Hitzhusen and Mary Evelyn Tucker (2013) describe that religions have great potential to address climate change and environmental problems. Hitzhusen and Tucker (2013:368) point out that "given the urgent need to promote a flourishing, sustainable future, the world's religious communities have much to offer because the attitudes and beliefs that shape most people's concept of nature are greatly influenced by their religious worldviews and ethical practices." Hitzhusen and Tucker (2013:368) add that "the moral imperatives and value systems of religions have the potential to mobilize the sensibilities of people toward the goals of Earth Stewardship."

4.2.1 African Traditional Religion's contribution to nature conservation

Ezra Chitando, Ernst Conradie and Susan M Kilonzo (2022:20-23) state that "African perspectives on religion and climate change are heavily shaped by Ubuntu and indigenous knowledge systems (IKS)." They describe that *Ubuntu*, an African concept that emphasizes solidarity, is a powerful resource in the climate change response. Whereas Ubuntu has been mostly associated with deepening social cohesion and reconciliation, it is important to recognize that its value extends to protecting the environment and responding to climate change. Ubuntu can serve as a reminder of the need for human beings to be in solidarity with creation. Central to Ubuntu as a resource in climate discourses in Africa is its opposition to the malicious exploitation of nature by humans, as well as its call to human beings to accept that they human beings are in an intimate relationship with nature. Ubuntu is premised on the equality of all creation. It is a radical philosophy that challenges plundering of African resources. When deployed strategically, Ubuntu has the potential to mobilize the African (and global) community to invest in protecting creation and responding effectively to climate change.

Chitando, Conradie and Kilonzo (2022:20) point out that "Africans have been utilizing IKS to protect the environment and sustainability since time immemorial. African spirituality has regarded all creation as sacred, and this has reverend them to revere nature." A recent systematic review of the literature shows that there is a growing appreciation of the role of IKS in

supporting the development of effective climate change adaptation strategies in Africa. Indigenous spirituality provides the interpretive frame when Africans respond to the impact of climate change. Chitando, Conradie and Kilonzo (2022:21) describe that “alongside the resources offered by Ubuntu and IKS, religious leaders in Africa can contribute towards the climate change response in diverse ways and by utilizing various strategies.” Chitando, Conradie and Kilonzo (2022:21) explain that:

One major contribution of religious actors in responding to the climate emergency is advocacy to pressurize political leaders. For example, continuing with the trend where religious leaders seek to challenge political leaders, on 4 October 2021, religious leaders from diverse faith communities and scientists met at the Vatican, in Rome, to release the statement, Faith and Science: An Appeal for COP26.

It is not only Chitando, Conradie and Kilonzo (2022) who express the concerns for environmental care, there are also other people like Jesse Mugambi who have demonstrated that people should look after nature. Jesse Mugambi (2016) challenges the developed countries, to take responsibility for how they have destroyed nature. He describes the relationship between God and creation and maintains that everything was created by God. He points out that all creatures are attributed to Him. According to him, humans ought to appreciate and respect this divine authority of looking after nature, being stewards. Mugambi (2016:1) states that “human being has continued to destroy the environment.” He challenges humanity to engage in theology of liberation. He invites the African leaders, politicians, church leaders and theologians to start engaging in Eco theology. Newton Cloete (2022:14) describes that “Jesse Mugambi’s theology challenges the world to look after the environment.” According to Cloete, Jesse Mugambi’s eco-theology is shaped by history and experiences of the destitute and deprived African context, followed by an inevitable emphasis on liberation and reconstruction.

Bakanya Mkenda (2018:1) states that “Africa, the embrace of mankind, is home to many cultures across its varied geographic regions that practice a wealth of spiritual and religious belief systems. African Traditional Religion teaches people to conserve nature, hence contribute to environmental conservation.” He bemoans that many of the sacred environments which are believed to be the habitats of nature spirits, or which are sacred places of learning about traditional healing, divination and rites to connect with the ancestors have been polluted or

destroyed by mining, deforestation, dams and commercial cash crops. For Mkenda, nature is very important for African Traditional Religion and needs to be conserved because it is sacred. It is in nature where the spirits reside. He illustrates that nature as a gift from God is used throughout the web of life. In traditional African societies, nature is regarded as a gift by a supreme Creator God for the benefit of humanity who believe that mankind was created and put at the centre of the universe. A crowd of nature spirits associated with specific animal and tree species and sacred forests, rivers, lakes, and mountains remind local communities of their need to respect the environment and to use it sustainably. Mkenda (2018) describes that the fact that God to put humanity at the centre of the universe does not imply that humanity must take advantage and abuse nature, instead, humanity must use nature conservatively. Mkenda (2018:1) states that “water as a source of life and spirituality is another central element of African values. Traditionally, water was recognised as both an essential life force and a source of strong spiritual power.” He points out that skills in healing, sacred knowledge, psychic abilities, and medicinal plants are some of the gifts imparted to those chosen by the water spirits. These healers are the custodians of traditional knowledge. Healers and diviners who follow the calling to become important mediators between the spirit world and their communities. This, however, requires access to and the preservation of sacred rivers, wetlands and the sea as to conduct rituals to aid communication with the spirit world. He points out that African Traditional Religion teaches that water is sacred because it gives life. Human beings must conserve water because they cannot survive without water. In general, African Traditional Religion advocates for environmental conservation. The initiation of African Traditional healers (Sangomas) involves the education about the importance of nature.



Reception of new African Traditional Healers (Sangomas) in South Africa after initiation

The above picture is the reception of new sangomas (including a white initiate or thwasa) by the Tshwane Traditional Faith Healer in Alexandra Township, Johannesburg, South Africa, after an efficacious initiation.

The traditional healers (Sangomas) in African Traditional Religion states Mkenda (2018:1), “are taught to reconnect with nature spirits during their initiation. That means going to the river, sea and the forest. Therefore, destroying nature means to disconnect with the nature spirit.” Mkenda (2018:1) adds that “the traditional Chagga society in Tanzania believes that, when the weather is good, people feel that they are in harmony with nature, their ancestors and God. If there is drought, famine or floods then the Chagga believe that their good relationship with nature, ancestors, God and others had been disturbed.” According to Mkenda, African Traditional Religious leaders advocate for environmental conservation. Mkenda (2018:1) states that “environmental conservation is not a recent phenomenon in indigenous African communities. Past generations knew about the sustainable use of natural resources.” Mkenda (2018:1) adds that “the traditional healers of the past collected bark or roots in a way that did not damage the plants, or if the entire plant was needed, they would not harvest all the plants, but leave some for the future.” Mkenda (2018:1) points out that “a re-visitation of the principles of traditional African religious practices would provide modern conservation programs in Africa and globally

with an insight into the activities of communities that managed to live alongside the rivers and forests and use them sustainably.” Accordingly, adds Mkenda (2018:1) “we could do well to borrow knowledge from traditional African spiritual beliefs to further environmental conservation for the wellbeing of humanity and out of respect for God’s gift of creation.” Mkenda (2018:1) avers that “African religious practices would not destroy rivers or forests in the name of economic development because they knew that destroying nature meant destroying humanity.”

This research project advocates for water conservation in Botshabelo by re-visiting the wisdom which is embedded in the African indigenous knowledge and combining that knowledge with the teaching of Christianity and Islam. During interviews, participants from the African Traditional Religion pointed out that the current generation to some extents have forgotten the importance of the African traditional indigenous wisdom about environmental conservation. Chris-Valentine Ogar Eneji (2012:45) points out that “the stronghold of African traditional religion rests absolutely on the attribution of spiritual powers to the natural environment. The spiritual powers are attributed to the natural environment because it is the habitat of the gods and goddesses.” He describes that the society in African tradition, has the mandate to protect the habitat of gods and goddesses. The protection of these abodes of the gods and goddesses is what gives life to humanity. The protection of the habitats of the gods from exploitation overtly or covertly encourages conservation and management of natural resources. Eneji (2012:45) states that “Forbidden areas associated with worship contribute to natural resource conservation and management in Cross River State.” Eneji (2012:45) adds that “these African traditional religious strategies for natural resource conservation and management have somehow been eroded by acculturation and enculturation of most African communities through the introduction of Christianity as a modern way of worship.”

Eneji (2012:48) states that “in almost every traditional African setting or community, each community has what they revere or hold sacred either as the presence of their gods or their goddesses, or there is a very important symbolic reason attached to such objects in the course of their existence.” He notes that in almost every community in African Tradition, there is hardly any community that exists without a sacred grove, evil forest, sacred pond, evil stream, or

forbidden forest where some part of the environment is demarcated for the worship of the gods. Yaw Adu-Gyamfi (2011:145) concedes that “African religion has practices that conserve the environment. For instance, the Akan people of Ghana have beliefs and practices that are enforced by taboos regarding ecosystem conservation.” Adu-Gyamfi (2011:145) adds that “these practices foster a sustainable use of the environment. Akan beliefs and practices contribute to the preservation of the environment, and protect water sources, the natural vegetation and wildlife and endangered nonhuman species.” Adu-Gyamfi (2011) bemoans that despite African tradition having good theories to conserve the environment, the Western culture and Christianity has not taken the indigenous beliefs, practices and taboos seriously. The decline of these has led to the degradation of the Ghanaian environment. He argues that the indigenous beliefs and practices are more earth-friendly and consistent with biodiversity than modern or Western ways of life and that they represent the best chance for successful ecological practices that enhance ecosystem conservation.

Eneji (2012:51) points out that “the belief in the existence of a Supreme Being as being responsible for the protection of the communities has enabled the traditional African communities to voluntarily take and participate in the management of natural resources seriously.” Eneji (2012:51) further explains that “with all these respects and reverence ascribed to the gods and their abodes, exclusion from entrance into their abode was the key concept to conservation, followed by the rules and sanctions put on offenders.” Adu-Gyamfi (2011:145) agrees, adding that “African Traditional Religion has strict rules and customs to conserve the environment.” He describes that the traditional culture of Akan stresses human beings having a strong relationship with the environment. Thus, the impact of the Akan’s view of the universe is that they have developed deep respect for nature and interact with it. As a result, in the past a culturally acceptable environmental management in the form of restrictions and taboos related to water bodies, land and deep forest was put in place. The cultural practices served the important purpose of conserving nature.

Eneji (2012:51) states that “man in modern times sees the environment as his rightful property where he decides how it should be used, whether the process of exploitation is sustainable or not. This is so because most environmental resources are common pool resources with no well-

defined property rights.” He notes that in traditional days, for the purpose of natural resources conservation and management, community drafted rules, designed policies and executed them to the benefit of the entire community, but this is not the case today. Adu-Gyamfi (2011:145) agrees that “the ecological crisis has become a matter of concern globally. All over the world, attention is drawn to the harm which human beings and their activities have caused to the environment.” According to Adu-Gyamfi (2011:145), “destroying the environment has brought concern about the consequences arising from the environmental destruction. Human life is in danger if the environmental destruction is not controlled.” He explains that there is a need to conserve the environment by using African Traditional methods. He adds that African Tradition Religion can contribute a lot in conserving the environment as it has already done in the past. According to him, environmental conservation is not a recent phenomenon in indigenous Ghanaian communities. Past generations knew about environmental degradation and the need for preservation.

Adu-Gyamfi (2011:147) describes that “African Tradition Religion used taboos to conserve the environment. Taboos were used by our ancestors to protect the ecosystem.” Adu-Gyamfi (2011:147) states that “the word, taboo is derived from the Polynesian term ‘*tabu*’, which means forbidden. The closest equivalents to ‘*tabu*’ in the Akan are ‘*akyiwadee*,’ meaning that which is forbidden or prohibited, and ‘*mmusuo*,’ usually reserved for prohibitions against very grievous evils.” He notes that taboos represent unwritten social rules that regulate human behaviour. Such constraints not only govern human social life, but may also affect, and sometimes even directly manage, many constituents of the local natural environment. He adds that whatever the reason for such constraints, taboos may, at least locally, play a major role in the conservation of natural resources, species, and ecosystems. No matter how trivial or absurd taboos may appear to the modern mind in details, they contain within them root principles of social progress and moral order and so, the cornerstone of the whole social order. Adu-Gyamfi (2011:148) points out that “there was no part of the social system that was not regulated and governed by taboos. The taboo system was the main source of bonding in all human relations and transactions.” Adu-Gyamfi (2011:148) adds that “eventually they were assimilated into the great religions by religious leaders who made obeying such restrictions and obligations religious obligations.”

Adu-Gyamfi (2011:149) points out that “among Ghanaian people, some parts of water bodies are sacred. In some communities it is prohibited to fish in some areas of a river.” According to Adu-Gyamfi (2011), in such areas, fish grow to bigger sizes and in large numbers because most river fish are not caught in sacred rivers, the sacred sections of the river serve as breeding grounds for fishes found elsewhere in the river. Adu-Gyamfi (2011:149) states that “in areas where the entire river or stream is sacred, the river or stream becomes a breeding ground for fish. A good example is a river in ‘Wansamire’. It is forbidden to fish in this river for sale.” According to Adu-Gyamfi (2011), the local people, however, can fish for domestic consumption. As a result of this restriction, the river is full of various fishes. He describes that there may be religious reasons for this restriction; there is certainly an ecological reason by allowing people to fish for domestic consumption only. These restrictions prevent overconsumption that can easily exhaust the fish in this river.

Adu-Gyamfi (2011:149) points out that “our ancestors used a very smart way to protect the water bodies and avoided many waters related diseases. Those parts of the river used for bathing, swimming, or for watering crops and washing domestic animals were located downstream in relation to those used as sources of drinking water.” He notes that to minimize water pollution from household waste and to reduce the quick spread of water-borne diseases, communities were often situated more than half a mile away from rivers and lakes. Since the distance makes the drawing of drinking water a laborious task, water conservation was a common tradition. He adds that there were taboos to prevent the use of metal implements in lakes and rivers. Clay pots rather than metalware were used to fetch water. Metallic elements in rivers could kill fish. Fish such as tuna, that could swallow metal objects could transfer metallic elements to humans on consumption, leading to sickness and even death. Furthermore, it was prohibited to wash clothes in streams. This has conservation purposes. In addition to taboos, special community labours were organized for the clearing of weeds and debris along riverbanks and for deepening sources of drinking water. This was another way of conserving nature. Sarfo Mensah and William Oduro (2007:7) assert that “amongst most ethnic groups in Ghana there exist beliefs that regard most water bodies as deities. Rivers sometimes assume the role of god of the state (*Omanbosom*), ruling over the various functions of the state.” They describe that such designated rivers are very common amongst the Akans and are protected and worshipped at several spots along their

courses. This tradition has been used to protect the headwaters of several river bodies, especially those that served as potable water sources for a community or group of communities. They point out that such rivers are also revered and protected because they are regarded as the source of life and fertility. Mensah and Oduro (2007:7) state that “barren women go to bathe in these waters in the hope of being fertilized. Rivers and their immediate surroundings, especially forests, are protected on the basis that the spirit of the river resided in the area.” Consequently, there are a variety of rules and regulations which prevent human contact with sacred groves as noted earlier. Mensah and Oduro (2007:7) point out that “other regulations and controls are available on the exploitation of fisheries and other aquatic resources, and the use of adjacent lands for farming and logging. For example, there exist taboos against the clearing of vegetation for farming right up to the edges of streams and rivers.” Mensah and Oduro (2007:7) state that “farmers are encouraged to leave a strip of land (*Abasafaaduasa*) that is ‘about 30 metres’, which should not be cleared on both sides of the streams and rivers.” Mensah and Oduro (2007:7) add that “the benefit of this conservation method according to the African traditional environmental wisdom, is to reduce the excessive evaporation of water from the rivers and streams.”

Joram Tarusarira (2017:398) states that “humanity is now changing the composition of the atmosphere at a rate that is very exceptional on the geological time scale, resulting in global warming. Human beings must deal with climate change holistically, including the often-overlooked religion factor.” He notes that with the increasing temperatures caused by climate change, religion can contribute a lot to resolve the problem of climate change. Human-caused climate change has resulted primarily from changes in the amounts of greenhouse gases in the atmosphere. He argues that in Africa, the entire relationship between humans and nature, including activities such as land use, has deep religious and spiritual underpinnings. In general, religion is central to many of the decisions people make about their own communities’ development. According to him, religion is one of the factors that can be used to mitigate the negative effects of climate change.

Tarusarira (2017:401) points out that “African Traditional Religion gives meaning and direction to its adherents. It is expressed in the way the Africans have always regulated their relationship with nature and with fellow human beings.” Tarusarira (2017:401) adds, “as a result of this, in

certain cases some animals may be regarded as sacred to devotees of a divinity; or natural phenomena such as trees, hills, or rivers may be deified.” According to Tarusarira, African religion must not be perceived as a conservative cultural element that works to resist change and hence is a barrier to development. Each community practices religious observances that direct the lives of that community, and in other areas, cults are responsible for different developmental activities. Therefore, religious elements in the African people’s cosmology influence the process of development initiatives. Tarusarira (2017:406) points out that “caring for the environment and the climate is not something foreign to the peoples of Africa. Human motivation in such caring has always had religious and spiritual roots.” Tarusarira (2017:406) adds that “African religion functions in symbiosis with the rest of our human faculties; hence those combating global warming toward sustainable development should incorporate it and not jettison it.”

Tarusarira (2017:407) states that “in African religion, relationships between nature and humans, spirit and nature are not cataloged, but are integrated into an interdependent system of existence that is tied together through spiritual interactions.” He points out that since the epistemology of the African understanding about nature sees the physical and spiritual worlds as integrated, this initiates a profound respect and reverence without exploitation for nature and a commitment to conserve and enrich nature. This means that nature and the environment are part and parcel of life, or one with the people, because there is no separation. He adds that to destroy nature and environment is to destroy oneself. Living in harmony with the natural world translates to living in harmony with the spiritual world, as they are interconnected and inter-reliant. Thus, natural phenomena such as plants, rocks, and bodies of water are respected and revered, acting as vehicles to the spiritual world, and having both visible and invisible powers.

Tarusarira (2017:408) points out that “religion is not an addition to life, but it permeates all aspects of life. It contains the meaning of life and what constitutes good life. It is the matrix, the software of social life, and its symbolic engine.” Tarusarira (2017:408) adds that “the religious awareness of the African people is not an abstraction, but a living component of their way of life. One African proverb states that our world is like a drum; strike any part and the vibration is felt all over. When a borehole is sunk, it rings in the ears of the ancestors, the owners of the land.” He notes that African religion informs the way adherents regulate their relationship with both

nature and fellow human beings. The way an African relates to the soil upon which development agencies erect buildings, sink boreholes, carry out farming, and the way they relate to water and sanitation issues, to health issues, and to other development issues, cannot omit African religion. Tarusarira (2017:409) states that “this way of undertaking activities may seem absurd in the eyes of Christians and Westerners, but it is full of meaning for Africans.” Tarusarira (2017:409) adds that “it not only has the psychological and social functions of integration and equilibrium, but also a numinous constellation with practical implications such as ensuring the protection of the environment, which is desperately needed in the contexts of global warming.” He points out that religion is the guiding influence for political, social, and family life. It is neither an abstract principle nor even a collection of such principles, but a leaven that makes principles work, vitally involved as they are with the religious laws and ceremonies, which give external expression to this vitality. Religion is profoundly integrated into social and technical life.

4.2.2 Christianity’s contribution to environmental stewardship

Pope Francis in his encyclical *Laudato Si, Care for Our Common Home* (2015), addresses air pollution, climate change, clean water availability, and the loss of biological diversity that have profound ramifications for the poor, the vulnerable, and future generations. Jame Schaefer (2016:2) comments that “Pope Francis’ issuing of this encyclical signifies an advancement of Catholic social teaching on the human-Earth relationship.” He adds that encyclicals have been issued by popes since 1891 to provide a Catholic, Christian faith perspective on problematic social issues that Catholics are required to consider and discern a proper response. And the encyclical letter of Pope Francis is one of those encyclical letters that address the environmental issue. According to Pope Francis (2015:1), among the major teachings are: “respecting the dignity of the human person, seeking the common good, and demonstrating preference for poor and vulnerable people.” Schaefer (2016), notes that despite the fact that prior popes had mentioned ecological degradation as a moral concern in their encyclicals and had issued statements alerting the faithful to their moral responsibility for addressing them, *Laudato Si*, the encyclical letter of Pope Francis is the first encyclical dedicated to ecological problems and their resolution through all levels of governance.

Schaefer (2016) describes that in *Laudato Si* (2015), Pope Francis outlines what sciences have discovered about the earth and climate change. Pope Francis points out that the climate is a common good, belonging to all and meant for all. Pope Francis criticises the cutting of forests for agricultural purposes as they further aggravate global warming as scientists have concluded. Pope Francis (2015:3) states that “the rise in Earth’s temperature has adversely affected the availability of drinking water, agricultural production, biological diversity, the acidity of the oceans, and the marine food chain.” He points out that if present trends continue, this century may well witness extraordinary climate change and an unprecedented destruction of ecosystems, with serious consequences for all of us. A rise in the sea level, for example, can create extremely serious situations, if we consider that a quarter of the world’s population lives on the coast or nearby, and that most of our megacities are situated in coastal areas (*Laudato Si* §24). He argues that climate change persists as one of the major challenges facing humanity in our day, and it has grave environmental, social, economic and political implications. If climate change is not controlled, its worst impact will probably be felt by developing countries in coming decades. He adds that climate change should be controlled. Pope Francis (2015:3) states that:

We need only take a frank look at the facts to see that our common home is falling into serious disrepair. Hope would have us recognize that there is always a way out, that we can always redirect our steps, that we can always do something to solve our problems. Still, we can see signs that things are now reaching a breaking point, due to the rapid pace of change and degradation; these are evident in large-scale natural disasters as well as social and even financial crises, for the world’s problems cannot be analysed or explained in isolation. There are regions now at high risk and, aside from all doomsday predictions, the present world system is certainly unsustainable from several points of view (§61).

Pope Francis (2015:4) states that “many perspectives must be brought into the conversation to reach a comprehensive solution about climate change (*Laudato Si* §63).” He offers a religious perspective as an example of one way of interpreting and transforming reality. He points out that if we are truly concerned to develop an ecology capable of remedying the damage we have done, no branch of the sciences and no form of wisdom can be left out, and that includes religion and the language particular to it. Pope Francis (2015:5) states that “the Catholic

Church is open to dialogue with philosophical thought; this has enabled her to produce various syntheses between faith and reason (§64).” He proceeds to show how the Catholic faith motivates Christians to care for nature and for the most vulnerable of their brothers and sisters. He points out that God created out of love (§65), God loves each creature and unites all creatures in fond affection (§92). God’s self-revelation is seen through the visible universe, the book of nature which speaks of God’s love (§84). He adds that the dignity of the human person and the harmonious relationship that each is intended to have with his or her neighbour, earth and God (§§66–67) and human responsibility to care for God’s creation (§68), to cooperate with God in the ongoing work of creation (§80), to praise God for all creatures and to worship God in union with them (§87), to experience God’s presence through the creation (§88), and to experience a sense of deep communion with the rest of nature (§91), a universal communion, and a sense of fraternity that excludes nothing and no one (§92). Pope Francis (2015) concludes the chapter with reflections on Jesus’ recognition of God’s paternal relationship with all creatures (§96), attention to their beauty (§97), living in harmony with them (§98), and directing them toward their fullness (§100).

Pope Francis (2015:5) notes that “this crisis of climate change is complex because there are intertwined ecological and social scopes that must be considered.” Pope Francis (2015) describes that:

The fundamental dignity of the world (*Laudato Si* §115), the inherent value of ecosystems independent of their worth to humans (§140), reconsidering the goals, effects, and overall context and ethical limits of human activity (§132), the complexity of ecosystems and their networks (§134), humans as part of nature and thus in constant interaction with it (§139), consideration of the poor and vulnerable who are most adversely affected by climate change that their activities did not force and special care for indigenous communities and their cultural traditions (§146), seeking the common good of all (§§156–158), the perils to future generations if greenhouse gas emissions are not reduced (§169), the injustice of requiring poor and developing countries to reduce emissions comparable to more industrialized countries that have caused the climate crisis (§170), the need for decision-makers to courageously counter short-term mindsets with long-term responsibility (§181), transparency in decision-making and striving for harmony (§183), and redefining the notion of progress to include value of life (§194).

Schaefer (2016:15) points out that “in addition to the Catholic social teaching on climate change, other denominations also demonstrate their concerns over climate change.” He describes that the Anglican, Baptist, Churches of Christ, Evangelical Lutheran, Methodist, Presbyterian, Quaker, United Church of Christ, Unitarian Universalist, and the churches of Scotland and Sweden are among other Christian denominations that have issued statements on climate change and advocating action. Furthermore, Schaefer (2016:15) observes that:

Many of these religious communities collaborated in issuing interfaith statements, that is, the Statement of Faith and Spiritual Leaders on the United Nations Climate Change Conference, COP 21 that was signed by 154 religious leaders from different faith groups throughout the world and hand delivered to Christiana Figueres, the Executive Secretary of the United Nations Framework Convention on Climate Change, on 20 October 2015 in Bonn when representatives of the nations were drafting the text to be considered at COP 21.

Schaefer (2016:15) points out that “in this statement, the religious leaders urged governments to cut emissions of greenhouse gases and investment in fossil-fuelled energy.” He adds that another is the Interfaith Declaration on Climate Change that had been endorsed by leaders of the world religions and affiliated organizations who stipulated that their religious convictions and cosmological narratives tell us that this earth and the whole universe are gifts that we have received from the spring of life, from God. It is our obligation to respect, protect and sustain these gifts. Schaefer (2016:15) states that:

The question one would like to ask is: Did these religions’ efforts contribute to the positive outcome of COP 21? What was the outcome of this gathering where the representatives of nations flocked to United Nations (UN) headquarters in New York City on 22 April 2016 to sign the Paris Agreement influenced by religious leaders and advocacy efforts by religious communities?

Schaefer (2016:15) points out that “a recent analysis of surveys conducted by the United States suggests that a charismatic religious leader can be highly influential for decision-making on climate change.” He illustrates that when comparing surveys conducted in Spring 2015 before Pope Francis issued *Laudato Si’* in 2015 and after the encyclical became public, followed by his visit to the United States, researchers at the University of Michigan and Meulenber College concluded that the Pope and his call to action contributed to a rise in the acceptance of

the worrisome climate change phenomenon. Schaefer (2016:15) states that “across religions, 15% of the people surveyed were more convinced that climate change is striking and should be addressed than they were in the earlier survey.” Schaefer (2016:15) adds that “60% support the Pope’s call to action on climate change but only 49% believe their religious leaders should discuss environmental issues within the context of their faith.” He argues that apparently, a charismatic leader who articulates and demonstrates a moral purpose that transcends self-interests can be influential. However, followers are essential for action on climate change at all levels of governance from individuals in their homes, work, and recreational activities to increasingly expansive opportunities or decision-making that concludes at the international level. Lynn Whitney and Ellie Whitney (2012:8) stress that “religions have the task to advocate for strategies to conserve nature.” They explain that the Baptist Church in America challenged the Faith based Organisations (FBOs) to take responsibility in looking after God’s creation. Whitney and Whitney (2012:8) point out that “the Baptist Church stated that human beings must care for creation and take responsibility for their contribution to environmental degradation.” They describe that there is undisputable evidence that the earth’s wildlife, water, land and air can be damaged by human activity, and that people suffer as a result. When this happens, it is especially because creation serves as revelation of God’s presence, majesty and provision. They add that though not every person will physically hear God’s revelation found in Scripture, all people have access to God’s cosmic revelation: the heavens, the waters, natural order, the beauty of nature (Psalm 19; Romans 1).

Whitney and Whitney (2012:8) point out that “we believe that human activity is mixed in its impact on creation; sometimes productive and caring, but often reckless, preventable and sinful.” Connor Pitetti (2015:1) argues that “God’s command to tend and keep the earth (Genesis 2) did not pass away with the fall of man; we are still responsible. Lack of concern and failure to act prudently on the part of Christ followers reflects poorly to the rest of the world.” Pitetti (2015:3) adds that “we have to take responsibility for the damage that we have done to God’s cosmic revelation and pledge to take an unwavering stand to preserve and protect the creation over which we have been given responsibility by Almighty God Himself.”

Whitney and Whitney (2012:9) state that “the Baptist Church challenged the Faith Based Organization to be good stewards of the environment.” They point out that Christians must care about environmental and climate issues because of the love for God who is the Creator, Redeemer, Preserver and Ruler of the Universe through whom and for whom the creation was made. Whitney and Whitney (2012:9) state that “this is not our world. It is God’s world. Therefore, any damage we do to this world is an offense against God Himself (Gen. 1; Ps. 24; Col. 1:16).” They describe that we share God’s concern for the abuse of His creation. We must care about environmental issues because of our commitment to God’s Holy Word, which is the supreme standard by which all human conduct, creeds and religious views should be tried. Whitney and Whitney (2012:9) point out that “within these Scriptures, we are reminded that when God made mankind, He commissioned us to exercise stewardship over the earth and its creatures (Gen. 1:26-28). Therefore, our motivation for facing failures to exercise proper stewardship is not primarily political, social or economic but it is primarily biblical.” They point out that we must care about environmental and climate issues because we are called to love our neighbours, to do unto others as we would have them do unto us and to protect and care for the least of these (Mt. 22:34-40; Mt. 7:12; Mt. 25:31-46). Neglecting to look after the environment means the negligence to look after our neighbour. They point out that the consequences of these problems of environmental destruction will most likely hit the poor the hardest because those areas likely to be significantly affected are in the world’s poorest regions. Poor nations and individuals have fewer resources available to cope with major challenges and threats of climate change.

Whitney and Whitney (2012:19) state that “all nations must focus on a rapid transition to renewable energy sources and other strategies to reduce CO₂ emissions.” They note that nations should also avoid removal of carbon sinks by stopping deforestation and should strengthen carbon sinks by reforestation of degraded lands. Nations also need to develop and deploy technologies that draw down excess carbon dioxide in the atmosphere. They state that the world needs to reduce the concentrations of warming air pollutants (dark soot, methane, lower atmosphere ozone, and hydrofluorocarbons) by as much as 50 percent to slow down climate change during this century while preventing millions of premature deaths from respiratory disease and millions of tons of crop damages every year. They add that people

should prepare to adapt to the climatic changes, both chronic and abrupt, that society will be unable to mitigate. They call for a global capacity-building initiative to assess the natural and social impacts of climate change in mountain systems and related watersheds. They argue that these measures illustrated above sound expensive but the fact is that the cost of the recommended measures is cheaper in comparison to the price the world will pay if we fail to act now to address climate change.

Whitney and Whitney (2012:20) point out that “the Bible is the source where Christians base their arguments of taking responsibility to look after creation.” According to them, the Bible provides a clear role for people regarding the rest of God’s creation. Whitney and Whitney (2012:20) state that “we shall have the special responsibility of caring for the earth not only because we depend on a healthy ecosystem, but because we are called by God to care for God’s earth.” They note that global climate change factors such as floods, drought, and changing temperatures will make access to adequate food and clean water even more difficult. They warn that as food and water become scarce, conflict will arise as people fight to get necessities. In many regions of the world people are already in conflict over arable land. They state that in order to avoid future conflicts of water scarcity, the nations, religions and individuals must take responsibility to look after nature. Whitney and Whitney (2012:60) argue that “failing to look after nature is to be irresponsible in the task that God has given people to be stewards of creation.” They describe that the Methodist Church challenged their members to be good stewards of creation. The Methodist Conference agreed that failure to acknowledge the urgent need for radical cuts in greenhouse gas emissions was morally irresponsible in a declaration approved by the Church. Many Christian churches have been responding to environmental issues. Schaefer (2016:21) states that “seeing the world as God’s gift of love is key to understanding the traditional Orthodox Christian theology and spirituality that grounds Patriarch Bartholomew’s commitment to environmental protection.” Having presented Christianity’s contribution in this section, the following section addresses the contribution of the Islamic faith.

4.2.3 Islamic contribution to environmental care

Mufti Abduljalil Sajid (2012) demonstrates that the Holy Quran also emphasises the importance of environment care, by stating that all Muslims must protect the environment. The teaching about the protection and conservation of the environment is based on the Quran and Sunnah (*Sahih Hadith*).¹

Mufti Abduljalil Sajid (2012:3) points out that “it is narrated by Anas (Radi Allahu Anhu) that the Prophet Mohammad stated that if a Muslim plant a tree or cultivates a crop, then whenever a bird or a man or an animal eats from it, it will be considered as a charity for him. (Sahih Al-Muslim).” Sajid (2012:3) adds that “there is a reward for service to every living creature. (Sahih Al-Bukhari, and Sahih Al-Muslim).” He describes that the Prophet Mohammad ordered everyone to plant trees always, even if it is time for judgment or death. According to Sajid (2012:3), the Prophet Mohammad said that “if one of you holds a seed in his hand, then if he can sow it before the Judgement Hour occurs, he should do so. Whoever cultivates a wasteland will be rewarded; whatever is eaten from it (by a living creature) is a charity on his part.”

¹ Rampant corruption and disorder have appeared in the land and in the sea because of what people keep doing. He will let them taste some of their doings, so that they might return to the Right Path. (Al-Quran, Chapter 30, Verse 41). And do not do mischief on the earth, after it has been set in order (Al-Quran, Chapter 7, Verse 56). And when he turns away (from you O Muhammad), his effort in the land is to make mischief therein and to destroy the crops and the cattle, and Allah likes not mischief (Al-Quran, Chapter 2, Verse 205). Behold! In the creation of the heavens and the earth; in the alternation of the night and the day; in the sailing of the ships through the ocean for the profit of mankind; in the rain which God sends down from the skies, and the life which He gives therewith to an earth that is dead; in the beasts of all kinds that He scatters through the earth; in the change of the winds, and the clouds subjugated between the sky and earth; indeed are signs for a people who thinks (Al-Quran, Chapter 2, Verse 164). And you certainly know already the first form of creation: why then do you not celebrate His praises? See you the seed that you sow in the ground? Is it you that cause it to grow, or are We the cause? Was it our will, We could crumble it to dry powder, and you would be left in wonderment? We are indeed left with debts for nothing; Indeed, are we shut out of the fruits of ours? See you the water which you drink? Do you bring it down [in rain] from the cloud or do We? Was it our will, we could make it salt and unpalatable; then why do you not give thanks? See you the fire which you kindle? Is it you who grow the tree which feeds the fire, or do We grow it? It is We Who make it a means to remind you of Us. Then celebrate with praises the name of your Sustainer, the Supreme (Al-Quran, Chapter 56, Verses 62-74).

Sajid (2012) describes that if humanity can learn to care for the environment, then they will learn to care for one another. They will be able to remove obstacles for one another. Sajid (2012:4) points out that “the Prophet Mohammad stated that whoever removes something harmful from the path of Muslims, a good deed will be written for him, and whose good deed is accepted (by Allah) will enter Paradise.” Sajid (2012:4) adds that “the Prophet narrated that a man was passing along a road and found a thorny branch leaning over the road and pushed it away. Allah appreciated his action and forgave his sins.” Sajid (2012:5) illustrates that Prophet Mohammad (peace be upon him) cursed the person who abuses nature when he said: “May Allah’s curse be upon the person who makes a living animal a target for shooting (i.e., for the sake of amusement and sport).” Sajid (2012) describes that Prophet Mohammad emphasised that human beings have the responsibility to look after nature when he talked about the two cursed practices. The first cursed practice according to the Prophet Mohammad is person answering the call of nature in a public place or in a shady place (where people rest, where there are trees providing the shade. No one must answer the call of nature in such places where people sit to rest. Sahih Al-Muslim). The other cursed practice is to urinate in water which people use. The Prophet stated that avoid urinating into still water (in a reservoir or pond, i.e., water that does not flow) which people might use for home use such as bathing or cooking. (Sahih Al-Bukhari, Sahih Al-Muslim).

Gidon Bromberg (2014:10) points out that “the abuse of nature is surely not what was intended when God appointed man as His Vice- Regent (Khalifah) on earth. For the Muslim, mankind’s role on earth is that of a Khalifah – Vice-Regent or trustee of Allah.” Schelwald-van der Kley (2009:1) asserts that “we are Allah’s stewards and agents on Earth. We are not masters of this Earth; it does not belong to us to do what we wish. It belongs to Allah, and He has entrusted us with its safekeeping.” Neal Robinson (2016:15) states that “Allah made people the caretakers of the earth. The Qur’an says: And when your Lord said to the angels: Lo! I am about to place a caliph (vice-regent) on the earth (Qur’an 2:30). It is Allah that has made you caliph (vice-regent), over the earth (Qur’an, 6:165).” Robinson (2016:21) further describes that “Allah gave human beings the role of steward (*caliph*) on earth. *Caliph* translates as steward, deputy or guardian. This role gives the human being responsibility for God’s creation, which includes maintaining and protecting it.” He points out that though human beings have been entrusted to use the resources of the world, they do not have a right to exploit or destroy these resources that have

been given to them by God. The use of the world's resources should be in keeping with the nurturing and sustaining responsibilities of their role as steward. He illustrates that since Muslims believe that all actions are rewarded and punished, there are almost no incidents involving human beings that do not contain responsibility and accountability. Islam teaches that on the Day of Judgment, humanity will be questioned about every action, including how they treat the environment and animals. He describes that Allah states that whoever does good to someone or something as small as an atom, the person will be rewarded with good in return. And whoever does an atom something evil, the person will be punished (Qur'an 99:7-8). Robinson (2016:23) describes that "to be a steward means having authority over Creation, but also accountability over their treatment of the environment. Prophet Muhammad (Peace be upon him) said that the world is beautiful and fertile, and God has appointed people to look after it." He illustrates that to a Muslim; God has created this universe like a majestic palace. Therefore, in Islam, the natural environment and animals are sacred and valuable.

Robinson (2016:25) states that "Islamic environmental ethics teaches that human beings must recognise that all of Creation is created by God, represents God and is therefore sacred." He points out that the Qur'an tells us that human beings are created from an earthly essence and more generally that every living being is created from water. According to Islamic teaching, the heavens and the earth were joined as one united piece, then God parted them.

Robinson (2016:37) explains that "Islam encourages humans to plant trees. There are several teachings about the importance of planting trees, such as when Judgment Day comes, if someone has a palm shoot in his hand, he should plant it." He adds that there is none amongst the Muslim believers who plants a tree, or sows a seed, and then a bird, or a person, or an animal eats whom God will not reward. God rewards anyone who does a charitable work. Planting a tree therefore is highly recommended and is even considered charity when eaten by another living being. He points out that Prophet Muhammad regularly organised the planting of trees and date groves, similar to modern 'Plant a Tree' campaigns. In the forestry region of '*Al Ghaba*', he ordered that when a tree is cut down another must be planted on its place. Robinson (2016:50) states that "Islamic Environmental Ethics incorporates principles of balance, stewardship, trust and justice. Muslims believe they have been entrusted to be God's stewards and are accountable for all

actions, including treatment of all of God's Creation." According to Robinson, Islamic environmental ethics covers areas of waste minimisation, water conservation, animal rights and sustainable land management. Islam is a religion of moderation which stresses environmental stewardship.

Schaefer (2016) describes that Islam has always engaged at different times to address the issue of climate change. For instance, Islamic leaders met with other religions during COP 21. During Cope 21 gathering, some declarations were made. The Islamic Declaration on Global Climate Change came out because of the international Climate Change Symposium. Schaefer (2016) notes that this symposium sought broad unity and ownership from the Islamic community for acting on the climate crisis. He adds that a bigger, broader and stronger citizens' movement was essential to influence the nations' delegates to forge an agreement that will mitigate the climate crisis. The symposium participants dedicated to conveying the Islamic faith perspective in a way that might inspire the COP nations toward a positive outcome of their deliberations. Schaefer (2016:23) reports that "following this statement of faith, the signatories reflected on scientific findings about the gradual fluctuations in the Earth's climate. They demonstrated that our planet has existed for billions of years and climate change is not new." He adds that the earth's climate has gone through phases wet and dry, cold, and warm, in response to many natural factors. Most of these changes have been gradual, so that the forms and communities of life have adjusted accordingly. He points out that the Islamic faith-based rationale for confronting the climate crisis appears succinctly in the preamble of the declaration that says; God, whom we know as Allah, has created the universe in all its diversity, richness and vitality: the stars, the sun and moon, the earth and all its communities of living beings. All these reflect and manifest the boundless glory and mercy of their Creator. He adds that all created beings by nature serve and glorify their Maker, all bow to their Lord's will. We human beings are created to serve the Lord of all beings, to work the greatest good we can for all the species, individuals, and generations of God's creatures. Jennifer Dargin (2017:1) concedes that "Islam teaches people to be good stewards of nature. The Holy Quran and the Hadith teach its followers the principles of social justice and equity which extends into the practice of preserving earth's natural resources, particularly water conservation." According to Islam, water is a community resource and is a right for all humankind. Prophet Muhammad highlights

this in the following hadith: Muslims have common share in three things: grass, water, and fuel (Musnad Vol. 2, Book 22). Dargin (2017:1) points out that “God has instructed humankind not to be wasteful in the following verse: O Children of Adam! Eat and drink but waste not by excess, for God loveth not the wasters (*Surah al Araaf, The Heights 7:31*).” Hussein Amery (2001:481) acknowledges that “Islam offers its followers extensive guidelines on all aspects of life including how they should use and manage the natural environment.” Schaefer (2016:24) notes that “there have been catastrophic climate changes that brought about mass extinctions, but over time, life adjusted even to these impacts, flowering anew in the emergence of balanced ecosystems such as those we treasure today.” He describes that climate change in the past was also instrumental in laying down immense stores of fossil fuels from which we derive benefits today. Paradoxically, they continued, our unwise and short-sighted use of these resources is now resulting in the destruction of the very conditions that have made our life on earth possible. Amery (2001:481) points out that “Islamic religion advises people to consume and utilize natural resources carefully. They should not cruelly use nature in a destructive way that permanently degrades Gods creation which God has entrusted to humanity.” He points out that a practicing Muslim is expected to play a role of being a steward of the earth. The Koran compels believers to avoid destruction of the earth.

Schaefer (2016:25) states that “Muslim leaders during COP 21 when different religious met to discuss climate change, illustrated that human beings have become a force that dominates nature, piloted earth into a new age that is currently described in geological terms as the Anthropocene or Age of Humans”. He explains that this new age is highly problematic for Muslims who are committed to Islam. Humans are supposed to be caretakers of Earth, they are intended by God to savour the gifts of Earth, and they are accountable to God for their actions.

Schaefer (2016) describes that religions share common world view about the care for the environment. For instance, during COP 21, Judaism represented by Rabbi Arthur Waskow, Christianity by Pope Francis of the Roman Catholic Church, the Ecumenical Patriarch Bartholomew of Eastern Orthodoxy, and Islam by the signatories of the *Islamic Declaration on Global Climate Change* shared a basic faith in God as the Creator of the world to whom they believe they are responsible for how they function in relation to one another and to God’s

creation. He points out that these religious leaders pointed out that humans have responsibility to care for and use God's creation. Schaefer (2016) advocates for collaboration among religions in addressing environmental issues. He illustrates that the representative organizations of the Abrahamic religions discussed in this research project through their combined effort, contributed to addressing the problems of climate change during COP 21. He adds that their message brought some impact to the people. There is a need to combine effort and advocate for protection of nature, starting from individuals, homes, governments, denominations and religions.

4.2.4 Collaborative effort among religions to address environmental problems

This section brings forth the theological literature about the collaboration of religions in addressing the environmental problems. Annalet van Schalkwyk (2013) describes that all religions should get involved in addressing the environmental issues. Schalkwyk (2013:1) states that "a global responsibility for the earth community and a global ethics of care for humanity and the earth may indeed form the basis for interreligious dialogue."

Schalkwyk (2013:3) adds that:

The consequences of ecological destruction challenges Christianity and other religions to turn inside out, to turn out of its narrow self-understanding, and to re-orientate themselves within the rapidly changing context of the earth. This also means that Christianity and other religions need to re-orientate themselves towards each other, so as to take joint responsibility for the suffering of all living beings and for the ecological crisis which the earth faces.

There is a need for people to collaborate in being stewards of nature. Jannie du Preez (1991:122) states that "people have to collaborate and take stewardship of the earth seriously by examining what is referred to as enthronement psalms, namely psalm 93, 94 and 96. These psalms talk about giving glory to God who is the creator of nature." Du Preez (1991:122) states that "justice towards the earth (and for that matter, towards the whole cosmos) forms an integral part of the mission of the church." Len Hulley (1991:132) points out that "in most cases, people talk about climate change in an abstract way." The main problem, according to Hulley (1991) is the lack of action among people to address social problems. Organisations and churches hold conferences on issues that they face but the main problem is lack of implementation. Hulley (1991) suggests

that the problem can be tackled at different levels: on the structural level, which needs the concerted effort of the whole group or community, or on the personal level where each individual can make an immediate contribution. Hulley (1991:132) states that “the church has a relatively significant influence on public opinion; widespread convictions within the church regarding certain aspects of society. The church could make an important contribution to a general change of attitude.” Hulley (1991:133) notes that “working together as a community of believers on issues that affect the community can lead to massive action.” He also realises that working as individuals can also lead to positive change because individuals can also catch a vision and act as catalysts, setting things in motion which eventually involve the whole community. If one individual can bring some changes in the way we look after the environment, then religions can do more when they join efforts to look after the environment. If one religion can bring some changes in addressing environmental problems, what will happen if two or three religions combine their efforts and work together to address the common problem? This research project encourages interfaith dialogue as a way of a community coming together to tackle social issues. Through caring for the environment, earth keeping, being good stewards, the community of Botshabelo will be practicing Justice, Peace and Integrity of Creation. Hulley (1991:133), talks about Justice, Peace and the Integrity of Creation (JPIC) by stressing that “human beings are all called to look after the environment because human beings and the environment are meant to support each other.” Reena Patra (2014) describes that humanity should work together on promoting ethical values that can sustain the environment. Patra (2014:36) states that “history has shown that those cultures, which are not respectful to nature, do not last long; they bring about their own downfall. Vedic culture on the other hand, has lasted for many thousands of years and is still visible as self-perpetuating and regenerating.”

Hulley (1991:134) points out that “we are in symbiotic relationship with our environment; if it suffers, we suffer. And conversely, if it prospers, we flourish. In this context, it also serves to remind us of our stewardship of the earth and that we should preserve that which is entrusted to us by God and pass it on to the next generation.” Van Elderen cited in Hulley (1991:139) asserts that “human beings must commit themselves to work and build the culture to live in harmony with creation’s integrity, preserve the gifts of the earth’s atmosphere, nurture and sustain the world’s life and combat the causes of destructive changes to the atmosphere which threaten to

disrupt the earth's climate and create widespread suffering." Hulley (1991:141) points out that that "disturbing the balance of nature is against the invitation to respect the integrity of creation. Instead of taking care of nature, human beings continue to disturb the environment." He describes that if this kind of behaviour continues, humanity will reach the stage where because of the constant destruction of nature, they experience a catastrophe with tragic results. In persisting with such behaviour, we can seriously endanger our own survival.

Godfrey Museka and Manasa Madondo (2012:258) describe that "the quest for environmental sustainability and sustainable use of natural resources has to become mandatory if humanity is to successfully manage the environmental fall-out." They explain that there is need to ground environmental pedagogy in philosophies on indigenous cosmology and eco-wisdom. Robinson (1991) challenges human beings to ask themselves whether they are killing God's earth or not. Robinson (1991:144) states that "we aggravate things daily by our use and abuse of earth's resources. The natural resources like fossil fuels which took millions of years to be formed and therefore cannot be regenerated are being depleted at an accelerating rate." Robinson (1991:144) adds that "this also predicts a dark future for the vast technological industry which developed alongside the exploiting of fossil fuel." Robinson (1991:144) states that "industrial and economic growth produces pollution of the water resources (inland and sea), the air and fertile top layer of soil." Robinson (1991:145) points out that "human beings need to get rid of their ignorance to understand the fact that they are part of nature; they cannot exist without it."

Robinson (1991:145) points out that "humanity lives in and is part of an enormous ecological system which in turn is made up of myriads of systems of living creatures and life sustaining organisms. These are the so-called ecosystems. With their large variety of forms and sizes, they coexist in a way that creates a delicate equilibrium." He describes that it is precisely this equilibrium that permits and guarantees life. Disturbance of the equilibrium has detrimental effects on life. Robinson (1991:146) states that "human beings need to practice stewardship towards creation. The integrity of creation is needed." According to Robinson (1991:146), "integrity of creation means soundness, wholeness, completeness, unity and unimpaired state." All human beings need to care for creation. Ernst Conradie (2014) suggests for the ecumenical theology that focuses on the care for nature. Conradie (2014:433) states that "the need for an

adequate theology of creation is typically taken for granted given the familiarity of the theme in terms of the Christian confession.” Clive Ayre and Ernst Conradie (2016:3), assert that, “stewardship for creation is a task entrusted to all humanity.” They point out that an ecological reformation of Christianity would need to become deeply rooted in every Christian tradition. Earth keeping efforts are required in each local context. However, add Ayre and Conradie (2016:3), “some ecological problems also require global networking because the threats are of a global nature. Examples include most obviously climate change, deforestation, ozone depletion and many others.” Ayre and Conradie (2016) are in other words encouraging world religions to come together and dialogue on some burning issues. Some issues are global, they affect everyone and, therefore, it needs a combined effort in tackling them. McDongal cited in Ayre and Conradie (2016:3) avers that “we simply have to work together in order to address common problems. There is no other way. In the context of climate change, there are no Muslim forests, Catholic rivers, Protestant hills or Protestant fires.” Indeed, if there is water scarcity in the country, it affects everyone across religions. Conradie (2008:25) further argues that “climate change is a task that has to be addressed through a global effort. Politicians, business leaders, scientists, analysts, educators, community leaders and religious alike will all have to contribute.” I agree with Conradie (2008) that different religions have to work together in order to address the global issues such as water scarcity. Adherents of religions in Botshabelo explained that water is significant to human life and religions should get involved in advocacy for water conservation. Is water significant in religious practices? How is water defined and what is the role of water in religious practice.

Conradie (2020:17) points out that “world religions have the potential to offer the necessary inspiration, spiritual vision, ecological wisdom, ethical discernment, moral power, and hope to sustain an ecological transformation.” Accordingly, adds Conradie (2017:3), “religious traditions can offer the mystic motivation and enthusiasm for earth keeping projects that no other secular or government initiatives can assemble on such a wide scale.” In agreement with Conradie, I support that religion has the potential to address climate change. What is needed is to continuously monitor that religion does not also fall into the trap of consumerism such as prosperity gospel and start to engage seriously on ecological issues. Religious leaders should be bringing the prophetic voice against environmental destruction.

4.3 Defining water, its role and significance in religious practices

This section illustrates the definition of water, its role and significance in religious practices. Lee K Lerner and Brenda Wilmoth Lerner (2005:1) define water as “a substance composed of two chemical elements, hydrogen and oxygen and existing in gaseous, liquid, and solid states.” According to Lerner and Lerner (2005), water is one of the most abundant and essential of composites. It is very important to life, contributing to almost every process that occurs in plants and animals. They describe that although the molecules of water are simple in structure (H₂O), the physical and chemical properties of the compound are very complex. Lerner and Lerner (2005) describe that the combination of hydrogen and oxygen is so important because it is what forms water, and it is water that gives life to plants and animals. Oxygen is the air that living creatures use to breathe. Without oxygen, there can be no life. Since there is oxygen in water, it follows automatically that without water, there can be no life since water contains oxygen and absence of oxygen means no life. Water is needed for living creatures to survive. When scientists are searching in the universe for habitats, the first question they probably ask is whether the place has oxygen for breathing and water for living creatures to survive. James Wimpenny (2012) describes that water is life and needs to be conserved. Wimpenny (2012:3) states that:

Water makes a critical contribution to all aspects of personal welfare and economic life. It is widely recognized that over the next few decades global drivers such as climate change, population growth and improving living standards will increase pressure on the availability, quality and distribution of water resources. Managing the impacts of these drivers to maximize social and economic welfare will require intelligent policy and management responses at all levels of collection, production and distribution of water.

The National Water Resource Strategy (NWRS 2013:24) describes that “water plays a central role in all sectors, including agriculture, energy, mining, industry, tourism, urban growth and rural development.” The NWRS (2013:24) adds that “the allocation, development and protection of water is an essential prerequisite for inclusive economic growth, poverty reduction and the significant reduction of inequality in South Africa.” NWRS (2013:27) points out that “most national sector strategies now acknowledge the importance of water, and that development cannot happen without water planning and development or corresponding budget allocations.”

NWRS (2013) argues that though some people say that South Africa is not experiencing a water crisis, it is good to acknowledge that South Africa is a water-stressed country and is facing a number of water challenges and concerns, which include security of supply, environmental degradation and resource pollution, and the inefficient use of water. Therefore, South Africa as a country should come up with strategies that will conserve water. NWRS (2013:9) states that “the management and implementation of water strategies requires competent and accountable management.” Titus Mobie and Maake Masango (2009), challenge governments that want to privatise water systems. Mobie and Masango (2009):1) describe that “water is essential for various reasons: for drinking, for personal hygiene, for cooking, for watering crops, for cleaning our homes etc.” Mobie and Masango (2009):1) add that “one can therefore conclude that, without this vital resource, there is no life. It is for this reason that God, giver of life, gave water as a free gift, both to humanity and to the rest of creation, so that we may all achieve fullness of life.” Jeremiah Mutamba (2019:1) describes that “water is a critical input to domestic, agricultural and several production activities; it is a source of life and catalysis for prosperity to many. Notably, there is a symbiotic relationship between water and society, with water influencing agriculture, industry, transport, energy, and health.” Mutamba points out that given its pivotal and influential role, it is essential that countries carefully and sustainably manage their water resources. This is particularly essential in areas where water is scarce, as is the case in South Africa. Notably, it is well documented that the country is water scarce and experiences frequent drought spells. Paradoxically, some posit that South Africa does not have a water crisis. Mutamba (2019) assess that despite the varying views that South Africa has about water, it needs to manage its limited water resources carefully and prudently to ensure sustainable water security going forward. He points out that one of the life-threatening questions South Africa faces is whether it is keeping pace with developments and measures to safeguard the country’s water security. Mutamba (2019:1) states that “it is important to note that the security of a country’s water resources is found in its infrastructure, institutions and regulatory frameworks that guide the management of water delivery.” Larry Swatuk (2008:34) describes that “given that water is at the centre of all human activities, the ways in which it has been accessed, allocated and managed throughout southern Africa reflects the difficult history of the region: water has served under development.”

Swatuk (2008) encourages the leaders of African countries to come up with the strategies that will lead to water conservation. Swatuk (2008:26) states that “water reforms throughout the world are being undertaken on the basis of Integrated Water Resources Management (IWRM).” According to Swatuk (2008), in order to develop, Southern African countries need to come up with the reforms on water management. Larry Swatuk (2017) describes that water plays an important role in the lives of the people. For instance, in Agriculture and other sectors, water is needed if the South African economy has to expand. The government should plan well and implement their plans especially in water sectors. Swatuk challenges government leaders who fail to implement policies. He wonders why such policies are not turned into action. Swatuk (2017:3) states that “if you are always planning but fail to implement what you have been planning, there can be no development.” Sandra Postel (2001:40-41) points out that “water is life. All living organisms are made mainly of water: human beings about 60 %, fish about 80 %, and plants between 80 % and 90 %. Water is necessary for all chemical reactions that occur in living cells and is also the medium through which information is exchanged between cells.” Paula Antunes et al (2009:931-932) explain that “the sustainability of human development depends on the hydrological cycle, since water is essential for food production and all living ecosystems.” Dieminger Walter, Hartmann Gerd and Leitinger Reinhart (1996:1) note that “seventy percent of the earth's surface is covered by water.” Postel (2001:40-41) concurs, adding that “ninety-seven percent of this water is confined in oceans and is therefore salty and unfit for drinking or irrigation. Of the remaining 3 % of freshwater, only 0,3 % is found in rivers and lakes, the rest being frozen.” Postel (2001:42-43) also points out that “water is a renewable reserve, made continuously available through solar energy, which enables it to evaporate from oceans and land and get reallocated around the world. This water runs off in rivers and refills our aquifers.” Postel (2001:44-45) describes that “on an annual basis, rainfall exceeds evaporation on continents by 44 000 km³. This amount of water returns to the oceans as river and groundwater runoff; this is known as the Water Cycle.” The following section illustrates the role and the significance of water in religious practices.

4.3.1 The role of water and its significance in religious practices

Vuyisile Zenani and Asha Mistri (2018:8) state that “water plays a central role in many religions and beliefs in South Africa, and there are often rules regarding the use of water based on the

religious teachings and principles.” They further demonstrate that, water is a source of life; and when it is used, it represents birth or re-birth. It also signifies purity. And these qualities confer a highly symbolic and even sacred status to water. They add that water is therefore a key element in ceremonies and religious rites. Religion provides a variety of examples of how water has been regarded as part of the sacred life process not simply another product for consumption. Zenani and Mistri (2018:9) state that “almost all Christian and African traditional churches in South Africa perform initiation ceremonies (e.g., baptism) which use water. Fresh water sources such as rivers, streams, lakes and dams are preferred sites for Baptism.” It has been stated above that water plays a significant role in baptism. Either baptising by taking someone to the river or using baptism fonts water must be there in order for baptism to take place. For Catholics and many other Christian churches, water is among the two essential substances that must be there in order for baptism to be valid; that is water and the pronouncing of words: Peter or Martha, I baptise you, in the name of the Father, and of the Son and of the Holy Spirit by the baptising minister while pouring water on the head or dipping someone in water in the case where the baptism is taking place at the river. There is no way baptism can be considered valid if the two elements are missing, water and the pronouncing of words.

A Catholic Priest (Fr. Michael Mapulanga) during Eucharistic Celebration (Mass), performs the ritual of Baptism in Botshabelo. Water is used during the baptism ritual



Zenani and Mistri (2018:10) explain that “the symbolism of water is very significant in the Christian tradition. It is biblically referred to as the living water, water of life because it represents the spirit of God eternal life. Living water refers to rivers, seas or any moving water. Water is linked to salvation. Water is also used as a cleansing and healing agent.” They further state that in the Zionist practice, water plays a crucial role in the expulsion of evil spirits and to cure illnesses, to remove ‘*isimnyama*’ (the dark cloud that envelopes a person and attracts bad luck and attacks by witches). The person must wash where there is flowing water. All the above-mentioned properties of water make it a powerful symbol. Not only African traditional religionists and Christians use water for their religious practices, but Muslims also. Zenani and Mistri (2018:11) state that “water is important for cleansing and purification for Muslims (the ablution practice). All Muslims must wash before approaching God for prayer. Some mosques have a courtyard with a pool of clean water in the centre, but most ablutions are found outside the walls.” Zenani and Mistri (2018:11) explain that:

There are two types of ablutions practised by the Islamic community. The first is ‘*ghusi*,’ a major ablution. This must be done for the deceased before they are buried. Water is used also after sexual intercourse and before any main feast. The second type is ‘*wudu*’, a minor ablution. This must be done before each 5 times cycle daily prayer. Pure water (not necessarily from a river) is used to wash face, rub head, hands, elbows and feet up to the ankles. In some instances, Muslims are obliged to wash the whole body. This means that they must have access to water.

Zenani and Mistri (2018) have illustrated in the above paragraph that water plays a fundamental role such as baptism. Water is a foundation of life; and when it is used, it represents birth or re-birth. It also signifies purity. And these qualities present an extreme symbolic and even sacred status to water. Water is therefore a vital element in ceremonies and religious rites. Religion provides a variety of examples of how water has been regarded as part of the sacred life process. In most cases during baptism ceremonies, religions use water because water is considered to be the sacrament.

4.3.2 Sacramental approach to water

Most of the religions believe in the sacramentality of water and yet in Botshabelo, the voice of religions in addressing water shortages has not been loud. The act of baptism requires water.

Daneel (1991:107) notes that “the Shona people have a great connection with nature. The African Independent Churches (AICs) and the Zionist Catholic Church (ZCC) of Zimbabwe demonstrate that the sacrament of baptism must be conducted in places where there is running water.” Daneel illustrates that, in Zimbabwe, one needs only to spend one day beside a Jordan river with ZCC or a Ndanza Zionist prophet who is preparing neophytes for baptism to appreciate the close interaction between human spirituality and nature symbolism. He adds that the baptismal water of Jordan symbolises not only the new or eternal life of the initiate, but also the life giving and healing powers of the Holy Spirit which bring wellbeing, prosperity and peace in this existence. Daneel (1991:107) demonstrates that “nature is very important in Shona culture and major celebrations involve going back to nature. For instance, the ‘vaPostori’ one of the largest groups of AICs, spend seventeen days in an open space to pray, have spiritual renewal and re-connect with nature during the preparation of Holy Communion (Eucharist).” According to Daneel, God is met on mountains, rivers and under trees, away from human-made roads, houses and cities. Daneel (1991:110) states that “the sacraments of baptism and the Eucharist are all linked to water. Human beings are renewed and recreated through these sacraments. In baptism, water is used symbolically to represent the cleansing of the person to be baptised.” He further notes that in the Eucharist, for most Christian Churches, bread and wine are used to represent Jesus Christ who offered himself to nourish human beings, giving them life by using bread and wine. He adds that human beings are recreated by receiving baptism and the Eucharist. Jesus used bread and wine to show human beings the importance of nature: bread comes from wheat and wine comes from grapes. These plants, wheat and grapes, cannot grow when there is no water. Daneel (1991:111) states that “water conservation must be promoted by all religions because water scarcity will affect the growth of plants that provide bread and wine. Moreover, the ritual of baptism might become practically impossible in places where water is unavailable.”

4.3.3 African Traditional Religion’s teaching on water

African Traditional Religion teaches that water is significant because it plays an important role of bringing life to human beings and all nature. Zenani and Mistri (2018) as mentioned above in section 4.3.1 paragraph two, in the Zionist practice, water plays a vital role in the dismissal of evil spirits and to cure illnesses, to remove *isimnyama* (the dark cloud that envelopes the person and attracts bad luck and attacks by witches). The person must wash where there is flowing

water. All the above-mentioned properties of water make it a powerful symbol. Zenani and Mistri (2018:10) state that “the use of water is fundamental in the rites and rituals performed by most African Traditional Religion in South Africa.” According to them, the African Traditional Religion has attempted to induce rain through the performance of certain water related rituals. For instance, state Zenani and Mistri (2018), lake *Fundudzi* in the Northern Province of South Africa is sacred to the Vha-Venda people. It is South Africa’s largest inland lake and situated along the *Mutale* River. Several beliefs are upheld about Lake *Fundudzi*, one of them is that it is inhabited by the god of fertility in the form of a python. It is also symbolic of the Vha-Venda ancestors and treated like a holy shrine. Deceased members of the tribe are first buried in the grave by the kraal, after several years their bones are exhumed and then cremated and thrown into the lake. The lake therefore has become the final resting place for the ancestors. Zenani and Mistri (2018:13) point out that “the African Traditional Religion uses water also for medicinal purposes, known as water animism; this is based on a belief that natural objects (such as river water, lakes and springs) are living and possess souls.” Zenani and Mistri (2018:13) add that “African traditional healers collect water from rivers and streams since they are believed to possess healing powers from the spirits residing in them. Those suffering from illnesses would go to a traditional healer, who in turn, uses this water when preparing their medicine.” Water is not only significant and plays an important role in the African Traditional Religion but also in Christianity.

4.3.4 Christianity’s teaching on water

Zenani and Mistri (2018:9-10) point out that “almost all churches in South Africa perform initiation ceremonies (Baptism) which involve the use of water. Fresh water sources such as rivers, streams, lakes and dams are preferred sites for Baptism.” They describe that the symbol of water is very significant in the Christian tradition. It is biblically referred to as ‘the living water, water of life’ because it represents the spirit of God, eternal life. Living water refers to the river, sea or any moving water. Water is linked to salvation. Water is also used as a cleansing and healing agent.

In the Bible, water is also mentioned from the first book (Genesis) to the last book (Revelation). Bible Works (2011:1) states that “water is mentioned 373 times in the Bible. It is mentioned

from the first book of the Bible which is Genesis 1:2 and appears in different books up to the end of the Bible where it is mentioned in Revelation 22:17.” Bible Works (2011:1) adds that “water is mentioned 300 times in the Old Testament and 73 times in the New Testament.” Bible Works (2011) further avers that the Bible points out how water can give life if it is used properly. From the beginning of creation, we are told that the Spirit of God was hovering on water (Genesis 1:2). The earth was without form and void; and darkness was on the face of the deep. And the Spirit of God was hovering over the face of the waters.

Water is essential to our physical living just as Jesus is essential to our spiritual living. Genesis 1:2 in the Bible describes how at the beginning of creation the Spirit of God was hovering over the waters. According to Genesis 1:2, water was a resting place for God before everything came into being, it means that water was created first before anything else was created. For God to create water first, it must have been a special consideration knowing that creation will depend on it for survival. Destruction of water means destroying the resting place of God; destroying where the Spirit of God rests; tampering with the holy bed, the basic element of life.

Walter de Gruyter (2020:1) describes that there are so many verses in the Bible that talk about the significance of water, such as:

John 7:37-39 illustrates that Jesus stood and said in a loud voice, let anyone who is thirsty come to me and drink. Whoever believes in me, as scripture has said, rivers of living water will flow within them. By this Jesus meant the Holy Spirit, whom those who believed in him were later to receive. Up to that time the Holy Spirit had not been given since Jesus had not yet been glorified. We see here the link between water and the Spirit as in Genesis 1:2, where we have been told that the Spirit of God was hovering on water, making water a special element of God’s creation. In Matthew 3:11, John the Baptist says that I baptise you with water for repentance. But after me comes one who is more powerful than I, whose sandals I am not worthy to carry. He will baptise you with the Holy Spirit. Furthermore, in Matthew 10:42, Jesus says that; If anyone gives even a cup of cold water to one of these little ones who is my disciple, truly I tell you, that person will certainly not lose their reward. Hebrews 10:22 states: Let us draw near to God with a sincere heart and with the full assurance that faith brings, having our hearts sprinkled to cleanse us from a guilty conscience and having our bodies washed with pure water. Revelation 22:1-2 states that: Then the angel showed me the river of the water of life, as clear as crystal, flowing from the throne of God and the Lamb. On each side of the river stood the tree of life, bearing twelve crops of fruit, yielding its fruit every month. And the leaves of the tree are for the healing of the nations. Furthermore, Revelation 21:6 tells us that the

Lord said: It is done. I am the Alpha and the Omega, the Beginning, and the End. To the thirsty I will give water without cost from the spring of the water of life. In addition, in Revelation 22:17, it is stated that the Spirit and the bride say, come! And let the one who is thirsty come; and let the one who wishes would take the gift of water of life. We therefore see clearly that the Bible points out the importance of water. Muslims also have great reverence for water and there are Islamic teachings that stresses on the role of water and its significance.

4.3.5 Islamic teaching on water

Jennifer Dargin (2017:1) comments that “Islam teaches people to look after creation such as plants, animals and water. Water occupies a pivotal role in Islam and is recognized by Muslims as a blessing that gives and sustains life and purifies humankind and the earth.” She describes that the Arabic word for water, *ma’a*, is referenced exactly 63 times throughout the Holy Qur’an and is a recurring topic in many of the sayings of the Prophet Mohammed (peace be upon him). Dargin (2017:2) points out that “in Islam, water is not only praised for its life providing and sustaining properties, but it is essential in the daily life of a Muslim. A follower is required to complete ablution prior to the performance of the prayer, five times a day. This ritual cleansing before the prayer signifies the attainment of cleanliness and purification of the body and soul.” She points out that according to a Hadith narrated by Hazrat Abu Huraira, no prayer is accepted without ablution (Sahih al Bukhari, Vol. 1, Book 4). The Holy Qur’an has set down the foundations of water conservation and demand management by making it known to humankind that earth’s water resources are finite. Dargin (2017:2) describes that “in verse 23:18 of *Surah Al Mu’minun (The Believers)* it states that: And We sent down from the sky water (rain) in (due) measure, and We gave it lodging in the earth, and verily, We are Able to take it away.”

Dargin (2017:3) points out that, “Prophet Mohammed (peace be upon him) exemplifies the logical approach to sustainable water use through the way he performed the ritual ablution.” Dargin (2017:3) adds that “the theory of water conservation is well illustrated by the rule which says that while making ablutions (wudu) we should be self-disciplined in the use of water even if we have a river at our disposal.” She explains that Prophet Mohammed stated that Muslim believers must not waste water even if performing ablution on the bank of a fast-flowing large river where water is abundant (Al Thirmidhi). The Prophet himself would perform ablution with just one *mud* of water (equivalent to 2/3 of a liter) and take bath with one *saa* of water

(equivalent to around 3 liters in modern volume measurements). Abu Amina Elias (2013:1) agrees that “Abdullah ibn Amr reported: The Messenger of Allah, peace and blessings be upon him (PBUH), passed by ‘Sa’d’ while he was performing ablution. ‘Sa’d’ was probably using water wastefully while taking ablutions before prayer and the Prophet challenged him.” According to Elias (2013:1):

Prophet asked Sa’d: what is this excessive use of water? ‘Sa’d’ responded to the Prophet: Is there excessive use of water in ablution? The Prophet said, yes, some people can use water uneconomically. But this is wrong stressed Prophet. Even if you were on the banks of a flowing river, do not use water extravagantly. You must conserve water always no matter how abundant it may be (Sunan Ibn Mājah 425).

Fatima Karim (2018) asserts that Prophet Mohammad emphasised water conservation. Karim (2018:3) describes that “the Prophet said that do not waste water even if you are at a running stream (Sunan Ibn Mājah 425).” Karim (2018:4) points out that:

Allah says: Just think if all your water were to sink deep into the earth, who could give you flowing water in its place (Quran 67:3)? Allah asks: Can you imagine life without water? Have they not seen that We drive the water to the barren land and produce crops of which their cattle and themselves eat? Will they not then see (Quran 32:27)? We send down from the sky pure water (Quran 25:48). Have those who disbelieved not considered that the heavens and the earth were a joined entity of water, and We separated them and made from water every living thing? Then will they not believe (Quran 21:30)? Why do they continue to waste water?

Dargin (2017:5) points out that “the Holy Qur’an has set down the foundations of water conservation and demand management by making it known to humankind that earth’s water resources are finite and, therefore, all Muslim believers must use water cautiously.” Muhammad Ridwan Gallant (2015:2) agrees with Dargin stating that “water is supposed to be conserved. Allah speaks about the importance of water in the Quran when Allah says: And we send down water from the sky (rain) in (due) measure, and We gave it lodging in the earth, and verily, We are able to take it away (Surah al-Mu’minun 23:18).” Gallant (2015:3) describes that “life on earth will not be possible without the presence of water. People only realize the value of water when there is a shortage. The Quran describes how water resuscitates the earth. Allah sends down water from the skies, and gives life to creation (Qur'an, 16:65).” He points out that without

the rain, if drought can persist for a long time, there will be no life on earth. The participants of the interviews agree with Gallant that when the earth receives the rain, the earth becomes alive; plants start to grow, flowers begin to bloom, and human beings and animals quench their thirst and benefits from the plants. A whole life cycle starts to bloom. Gallant (2015:4) describes that: “Man does not appreciate the preciousness and the benefits of water. If the water would have been salty, sour, bitter it would have been unfitting for drinking purposes as well as for the growing of plants.” He points out that the Dead Sea in the Middle East is a good example where no plant or animal life is possible due to its high salt content. Gallant (2015:4) points out that “in the life of a Muslim, water also has a socio-religious function in that it is used for ritual purification.” He describes that every living species on the earth must have a right to water. The supply and preservation of fresh water was always regarded as of fundamental importance since the time of the Prophet. This can be deduced from the following hadith: All Muslims are partners in three things: water, herbage and fire and to sell it is prohibited.

Gallant (2015:5) points out that “in Islam it is not permissible to withhold excess water where there are others who have need of it. Prophet Mohammed declared: Excess water should not be withheld so that the growth of herbage may be hindered.” He describes that if water is withheld then it will hinder the growth of herbage which is important for the fodder of animals. He bemoans that unfortunately, despite the value of this great blessing, we seldom express our gratitude but rather take it for granted and overuse, pollute and waste this precious resource. He adds that Prophet challenged the extravagance in using water; this applies to private use as well as public, and whether the water is scarce or abundant. The Prophet stressed on the proper use of water without wasting it. Hussein Amery (2001:485) concedes that “Islam teaches the believers to adapt a holistic view of the natural environmental conservation.” According to Amery, Islam lists down the rights of animals, plants, and water resources. Muslims are instructed to avoid violating the sanctity of the symbols of God. Water and the rest of creation are described as the symbols of God’s presence. Amery (2001:487) notes that “a Muslim is instructed to correct environmental failures by abstaining from behaviours that waste or pollute water. At the same time, in periods of water surplus at the households, farm, community or provincial levels, one is expected to let others benefit from it.” Gallant (2015:8) lists the practical ways for Muslims to conserve water. These ways are:

1. Use water sparingly.
2. Check for leaks and dripping taps.
3. Water the gardens in the cool of the evening or early morning to reduce evaporation.
4. Recycled washing water to be used in your garden.
5. Turn off the tap while brushing your teeth.
6. Have shallow baths or a quick shower.
7. Install water-saving devices or simply place a brick in your cistern to reduce the amount of water (toilets flush away about 11 litres of water).
8. If possible, plant indigenous plants which are adapted to the local environment as these require less water.
9. Use water sparingly when performing wudhu (ablution) or ghusl (purification).
10. Encourage mosques in your area to install water-saving taps or to investigate ways of recycling wudhu water e.g., for use in gardens.
11. Report any signs of leakages or pollution to your local authority.
12. And never dump waste in rivers, seas, and wells.

Gallant (2015:8) suggests that “we need to teach our children to use water sparingly. The rivers, streams and dams in our country cannot continue to supply us with water if we continue to have unconcerned attitudes about water and to think only of ourselves and not of the people dying of thirst across the world.” Ahmed and Mohammed (2018:1) concur with Gallant that “water is an integral part of Islam and has been embedded in Islamic beliefs and scriptures.” Husna Ahmad (2015:8) points out that “as Muslims, it is important to acknowledge water as one of the immense kindnesses that Allah has bestowed upon human beings. Using the blessing of water as a source of growth, sustenance and purification, Muslims are required to perform wudhu and ghusl (ablution rituals) using water before prayer.” Ahmad (2015:8) adds that “with descriptions of paradise, Muslims believe that water will also benefit them in the afterlife, thus reinforcing its importance to mankind.” Ahmad (2015:8) explains that “the mention of rain, fountains and rivers pour through the Qur’an as a symbol of Allah’s benevolence to mankind, this signifies how important water is.” He points out that in the Qur’an, Muslims are encouraged to constantly contemplate and reflect upon nature and their surroundings so that they may cultivate

thankfulness for the blessings they receive. Allah calls upon the believers to consider the sweet taste that water is made up of and warns mankind that they are no more than guardians on Earth.

Saffet Catovic (2019) points out that water, its purposes, usages and the principles of water conservation, are covered throughout Islam's teachings as found in its primary source texts, the *Holy Qur'an* (which Muslims hold to be the uncreated spoken word of God) and the *Sunnah* (Divinely guided sayings and doings of the Prophet Muhammed) which are both considered as legally binding precedents on the believers. Catovic (2019:88) states that "water is a major theme in Islamic cosmology and iconography as well as a recurrent topic in liturgy and daily life." Catovic (2019:88) further states that "each of the '*An-biyyah*' (Prophets) and '*Rasool*' (Messengers) mentioned in the Qur'an from Adam to Muhammed (Peace Be Upon them all) including *Nuh* (Noah), *Ibrahim* (Abraham), *Musa* (Moses) and *Isa* (Jesus) has an intimate story connected with water." According to Catovic (2019:88), "this is not surprising since Islam and its backgrounds originated in and around the Arabian Peninsula, a desert area, and it spread mainly to other arid or semi-arid territories." He points out that water scarcity has always influenced and continues to influence the perception of water by Muslims, and it has, accordingly, shaped (and continues to shape) their behaviours and customs. He adds that given this reality coupled with the fact that in general, religion and religious teachings still exert significant influence on Muslims and Muslim society. Developing religion-based awareness campaigns on water conservation and management programs is a critical component in strategies to develop effective policies and campaigns for the conservation of water resources. Catovic (2019:88) points out that "the word water appears several times in the *Qur'an*. Islam attributes the most sacred qualities to water such as a life-giving, sustaining and purifying." Catovic (2019:88) adds that "the Arabic word for water, '*ma'aa*,' appears not less than sixty times (60) throughout the *Qur'an*. Water is often mentioned when the '*Qur'an*' talks about rivers, seas, fountains, springs, rain, hail, clouds and winds, etc. as signs and evidence of Allah's Benevolence and Mercy." Catovic (2019:92) states that:

Water is so important in Islam that even the root of Islamic Law is associated with water. The linguistic meaning and etymological roots of the word *Shariah* (Sacred Law) actually means the watering source or the path that leads down to a source of water with the intent to show that Divine law will quench the thirst of knowledge and that it is the path leading to the source of truth.

Dargin (2017:1) concurs with Catovic by stating that “water is significant in Islam. The shariah encourages people to share water so that no one is deprived. As per Islamic law (shariah), there is a responsibility placed on upstream farms to be considerate of downstream users.” She describes that a farm beside a stream is forbidden to monopolize using its water. After withholding a reasonable amount of water for his crops, the farmer must release the rest to those downstream. Sajid (2012:1) adds that “water is held in high regard by most societies as it is considered as a blessing, a gift, and something which must be protected for the benefit of all humankind.” He points out that Islam permits utilization of the environment, but this should not lead to the abuse of nature. Wastefulness and extravagance are prohibited by Allah. Sajid (2012:2) states that “the Quran tells mankind that they should care for the precious resources and limit wastage. There is evidence in the SUNNAH (Sahih Ahadith) which states that the Prophet Mohammad (PBUH) used just 2/3 of a litre of water to perform his ablutions.” Sajid (2012:2) points out that “the Prophet spoke of not wasting water even when it was found in abundance.” Allah the ‘Most High’ says in the Quran that human beings are permitted to use water but not to waste it.²

Sajid (2012:2) states that “Muslims must follow the example of the Prophet Mohammad (PBUH) who used to perform ablution with water just equivalent to 2/3 of a litre and used to take a bath with water equivalent to 3 litres.”

² O Children of Adam, Eat and drink: But waste not by excess, for God loveth not the wasters (Al-Quran, Chapter 7, Verse 31). We made from water every living thing; will they not then believe? (Al-Quran, Chapter 21, Verse 30). It is He Who has created man from water (Al-Quran, Chapter 25, Verse 54). And Allah has created every animal from water (Al-Quran, Chapter 24, Verse 45). Then He made his offspring from a quintessence of despised water coming out of parents (Al-Quran, Chapter 32, Verse 8). Who has laid out the earth as a carpet for you and has traced highways on it for you and sent down water from the sky? We have brought forth every sort of plant with it, of various types (Al-Quran, Chapter 20, Verse 53). Thus, He caused drowsiness to overcome you as an assurance from Him and sent down water from the sky on you to cleanse or with and to remove Satan’s Blight from you, and to bind up your hearts and brace your feet with it (Al-Quran, Chapter 8, Verse 11). We have sent down blessed water from the sky and We grow gardens with it as well as grain to be harvested, and soaring palms which have compact clusters, as sustenance for worshippers (Al-Quran, Chapter 50, Verse 9). And we send down water from the sky (rain) in (due) measure, and We gave it lodging in the earth, and verily, we can take it away (Al-Quran, Chapter 23, Verse 18).

According to Sajid, the Prophet Mohammad (PBUH) instructed Muslims not to waste water. To demonstrate to Muslims that they need to conserve water, the Prophet used to take a bath with water from a single pot called a *Faraq*, the equivalent to 3 litres (Sahih Al-Bukhari, Chp.5, Book of Ghusl, Hadith 250).

Sajid (2012) explains a Narration by Abu Hurairah (Radi Allahu Anhu) that Allah's Apostle Mohammad (PBUH) stressed water conservation by teaching people not to use water superfluously. Sajid (2012:3) states that "while I and my father were with Jabir bin Abdullah, some people asked him about the quantity of water to use when taking a bath and he replied that using *Sa'a* which is equivalent to 3 litres of water is sufficient for a bath." Sajid (2012) illustrates how the Prophet Mohammad (PBUH) took the conservation of water seriously. Some of his followers could not understand how he could manage to take a bath with only 3 litres of water. Sajid (2012:3) adds that "one man said, only 3 litres *Sa'a* is not sufficient for me. Another man responded to that man; how can you say that 3 litres of water is not sufficient for you to take a bath?" Sajid (2012:3) adds, "it is illustrated in the book called *Sahih Al-Bukhari Hadith (252)* that a *Sa'a*, the equivalent of 3 litres was sufficient for one who had more hair than you and was better than you, referring to the Prophet Mohammad (PBUH)."

4.4 Conclusion

Chapter Four has illustrated the significance and the role of water. It pointed out that different religions have contributed to environmental conservation. If religion has contributed to addressing environmental problems, it makes sense when the adherents of different religions wonder why the religious leaders in Botshabelo are not active in speaking out and advocating for water conservation. According to what has been illustrated above, religion has the potential to address social problems such as water shortages. If water is significant in African Traditional Religion, Christianity and Islam, there is a need for religious leaders in Botshabelo to come together through interfaith dialogue and address water scarcity. Some authors like Küng (2004) agree with what the people of Botshabelo say about the engagement in interfaith dialogue to address social problems. Chapter Five demonstrates how interfaith dialogue works.

CHAPTER FIVE

INTERFAITH DIALOGUE IN HUMAN HISTORY

5.0 Introduction

Chapter Four defined theology and demonstrated the significance of religion and the role water plays in religious practices. The chapter concluded that different religions have played significant roles in addressing social problems. The chapter also suggested that there is a need for religions to collaborate through interfaith dialogue to address social issues. This chapter addresses the role of interfaith dialogue in the history of humanity. The chapter illustrates that interfaith dialogue has played major roles in the history of humanity to address social problems around the world. In Chapter Two, I discussed Fitzgerald's (2000) theory which suggests that interfaith dialogue has four forms: the dialogue of life, action, theological exchange and experience. These forms of interfaith dialogue have taken place in the history of humanity to address social problems. Küng (2004) similarly in Chapter Two, illustrates that interfaith dialogue and responsibility has been a cornerstone in communities to address social problems. This chapter discusses the function of interfaith dialogue to address social problems. The chapter also illustrates the current levels of interfaith dialogue. The chapter addresses the research sub question three which investigates the current level of interfaith dialogue on the present environmental crisis in South Africa. The chapter points out that world religions have on occasions worked together to address common problems that affect humanity. This chapter defines what interfaith dialogue is and discusses its theories. The chapter explores how interfaith dialogue is understood by different thinkers; those who are for it and those who are against it. The chapter also illustrates the place of interfaith dialogue in a rapidly secularizing society by presenting the two opposing sides. The two opposing sides of interfaith dialogue shows that it cannot be taken for granted that interfaith dialogue will be accepted by all people because some people do not understand what interfaith dialogue is, its views, goals and outcomes.

5.1 Understanding interfaith dialogue

In this study, interfaith dialogue and interreligious dialogue are used interchangeably meaning the same thing.

5.1.1 Defining interfaith dialogue

Dialogue, according to Fitzgerald (2000:4), means “a two-way communication between persons who hold significantly differing views on a subject, with the purpose of learning more true facts about the subject from the other.” He defines interfaith dialogue as all positive and beneficial interreligious ‘relations’ with individuals and communities of other faiths which are directed at reciprocal understanding and enrichment in obedience to truth and respect for autonomy. Interreligious dialogue is a response to religious plurality. He adds that as mobility increases and communications become easier and more rapid, so our world becomes more marked by religious plurality which makes dialogue a greater imperative. Fitzgerald (2000:6) points out that “in recent years, the awareness of diversity and the desire for dialogue have increased. People have become aware of the importance of creating good relations in the community.” He adds that the term chosen to define dialogue is relations. This indicates something much wider than verbal exchange. Not only formal exchanges are intended, but also gestures of solidarity, action together and even silent presence. The importance of non-verbal communication should not be underestimated. Fitzgerald (2000:6) articulates that “such relations, which do merit being called dialogue, must be positive and constructive and must exist between individual believers at an informal level, or between representatives of communities at a formal level.” He adds that the range is extremely wide and it must be stressed that whether at the level of individuals or communities, dialogue takes place between people, not between systems, and dialogue can exist either as formal or informal, both leading to the same goal.

5.1.2 The views, possible goals, theories and outcomes of interfaith dialogue

The views of interfaith dialogue according to Michael Fitzgerald (2000:7), are “to create communication. and enhance the relationship among people.” He points out that sometimes people meet to build good relationships and at other times, people come together to address the

common social problems. The coming together of people has great impact in addressing the social problems. Dialogue can go well when there is good communication and good relationship among people. Good communication and relationship can help to reach the goals of dialogue.

The first goal of dialogue, according to Fitzgerald (2000:7), “is mutual understanding, to try to understand the other as that other wants to be understood.” He adds that if this goal of mutual understanding is to be achieved, openness is required, a willingness to listen to the other, a readiness to overcome prejudice, if necessary, and a desire to learn. This openness must be two-way, allowing on each side the possibility of self-expression. Fitzgerald (2000:7) describes that “another goal of dialogue is mutual enrichment.” Fitzgerald (2000:7) adds that “it is not easy to achieve the goals of dialogue, because sometimes relations with people of other religions could degenerate into rivalry or be contaminated by a polemical (controversial) spirit”. He points out that where the relationship is positive, it will lead to admiration for what is good in the other religion. Furthermore, where the relationship between religions is positive, one can find development taking place. For dialogue to be successful, it should be built on good theories.

According to Fitzgerald (2000), interfaith dialogue is built on four theories namely forms of dialogue. Fitzgerald (2000:7) states that “there are four forms of dialogue namely, the dialogue of life, action, theological exchange and religious experience.” According to Fitzgerald (2000), dialogue of life, is a concept that encourages people to meet and celebrate life as a community despite coming from different religions. It is a theory of unity, where life situation brings people together across religions such as weddings, funerals and other life events. According to Fitzgerald (2000) dialogue of action refers to engagement to address the common problem by everyone in the community, putting aside the differences that may arise because of religious beliefs. It is a philosophy of unity to combat the common enemy whereby something causes the community to act together irrespective of religions one belongs to. For instance, the World Health Organisation (WHO 2020:1) stresses that “now that we have the COVID 19 pandemic, people across the world are called to act together to tackle this pandemic.” In this case, the pandemic becomes the common enemy that calls for united effort of people across religions to act by combating it. According to Fitzgerald (2000), dialogue of theological exchange is a theory of enrichment, the humility to understand that people can learn something about God from a

different religion. Fitzgerald (2000:8) states that “dialogue of theological exchange is a principle whereby people from different religions, the scholars, academics meet to discuss theological issues coming from different religions in order to enrich each other.” Fitzgerald (2000:8) points out that “dialogue of religious experience is a theory of encountering God through prayer when people from different religions decide to go and worship in the other religion in order to experience the presence of God in that particular religion.”

Fitzgerald (2000:9) states that “in order to be successful in carrying out the theories of interfaith dialogue, participants of interfaith dialogue must develop some strategies.” These strategies according to him, are openness to approach the other person and acceptance of the other person. Openness and acceptance of the other person helps in creating the positive relationship among people. He avers that a positive relationship among people helps people to address problems that affect the community. Good relationships in the community have positive outcomes. He points out that the first positive outcome of interfaith dialogue is peace in the community. Another positive outcome of interfaith dialogue according to Fitzgerald (2000) is the establishment of solutions to social problems that affect people in a community. The aim of these theories and strategies is to bring people together, enhance mutual enrichment, to create positive relationships among people in the community and also to create peace in the community. Life experience unfolds the platform for different religions to meet and apply different theories. He describes that in order to employ these theories, some stages must be followed, and participants have the role to play in making interfaith dialogue successful.

5.1.3 Stages of interfaith dialogue and the role of participants in interfaith dialogue

Fitzgerald (2000:11) states that “there are two stages of interfaith dialogue namely, creation of good relationships and creation of religious forum.” He points out that the first stage is to create good relationships among people. Good relationships allow people to live in peace and to work together in addressing social problems. The second stage according to Fitzgerald (2000) of creating the religious forum enables religious leaders to meet and discuss issues that affect the community. Each participant of the forum of interfaith dialogue has a role to play.

The role of the participants of interfaith dialogue forum according to Fitzgerald (2000) is to be attentive and to take responsibility in identifying the social problems that affects the community. Once problems are identified, the forum must have a year plan which has the dates of meetings for participants to share what has been identified as social problems. He describes that the forum discusses the problems and produce policies and solutions on how to address such social problems. Once policies are structured, the participants have another role of making sure that those policies are implemented in their religion. Fitzgerald (2000) encourages interfaith dialogue in addressing social problems in the community. However, there are some people who criticise interfaith dialogue to be the means of tackling social problems. The following section presents two views of interfaith dialogue, those who support it like Fitzgerald (2000) and Küng (2004) and those who criticise it like Markey (2016).

5.1.4 Critics and supporters of interfaith dialogue

Some scholars argue that interfaith dialogue cannot be used to solve social problems. Andrew Markey (2016:1) points out that, “we currently live in a world where the threat of religious conflict heavily weighs on our everyday lives.” Markey (2016:1) points out that:

Whether this threat is perceived or drummed up by a corporate media cycle and conservative warmongering, violently extreme attacks across both the Western and Eastern world suggests that a real war between cultures is being waged; it is right to critique our modern approach to attempted interfaith dialogues. The contemporary zeitgeist (the defining spirit or mood of a particular period of history as shown by the ideas and beliefs of the time) very regularly paints the Muslim in a picture of incivility, worthy of receiving Western interventionist democracy at the end of a drone strike.

Markey (2016:2) describes that “the contemporary approach to interfaith dialogue within the discipline of international relations fails to acknowledge that Western imperialism relies as much on militarism abroad as it does liberal, market democracy at home.” Markey (2016:2) adds that “this militarism is the option placed as the centerpiece on any table dealing with an interfaith peace process, it is the threat that is meant to ‘motivate’ (some would say ‘terrorise’) the other to participate in good faith.” Markey (2016:3) describes that “the power dynamics inherent to contemporary international relations implicitly affect the effectiveness of interreligious dialogue as a mechanism towards conflict reduction and peace.” Markey (2016:3) states that “while

religious actors, and some political actors, may approach these processes in good faith and while the international community may have successfully integrated all three major approaches to interfaith dialogue into a workable model, Western hegemonic actors fail in their ability to accommodate diverse religious identities.” Markey (2016:4) states that “this is a failure contingent on hegemony’s direct opposition to the social justice model. The drive for white, Western, Anglo-Christian imperialism to assert its supremacy and primacy in world affairs is inherently at odds with the interfaith imperatives of common values, and common good.”

Hans Kessler (2006:1) admits that “there are times when interfaith dialogue can become difficult.” According to Hans Kessler (2006:1), “interfaith dialogue becomes difficult where there is no good relationship among different religions. There are times when people cannot meet and address common problems due to religious differences.” Kessler (2006:1) points out that “the major problem that makes interfaith dialogue difficult is the idea of salvation. Each religion stressing on their founder of religion to be the only source of salvation.” Indeed, religious doctrines sometimes can bring rival among different religions. But there are some situations where people should strive at working together to address social problems despite belonging to different religions. For instance, the COVID 19 pandemic which has taught humanity that though people might have different religions and different opinions about each other, sometimes there are common problems that people should address as a community or as a globe. The disunity among people to address the common problems can be the beginning of self-destruction of the entire community. Fitzgerald (2000:13) argues that “people should learn to use the four forms of dialogue to address social problems. The role of religion and interfaith dialogue is to advocate for life saving theories such as, dialogue of life, action, theological exchange and religious experience.” Though there are some people who argue that religion or interfaith dialogue is not relevant in the modern world in addressing world problems, Fitzgerald contends that interfaith dialogue is vital in addressing social problems. Küng (2004:71) concurs stressing that “there can be no world peace without religious peace.” He invites people to have constant dialogue, even when there is no war. Paulo Freire (2005:128) agrees with Küng that “dialogue with the people is radically necessary to every authentic revolution. This is what makes it a revolution, as distinguished from a military coup. One does not expect dialogue from a coup, only force.”

Küng gives the example of what happened in Lebanon in 1967, when Muslim theologians refused to meet Christian theologians for interfaith dialogue. Küng (2004:72) describes that, “in April 1967, Christians called for a meeting at the American University of Beirut and invited Muslims to come and have interfaith dialogue. The Muslim leaders refused to send their theologians to the meeting.” Küng (2004:72) further adds that “when one of the Christian leaders asked the Muslim leader why their theologians did not attend the meeting, the answer from the Muslim leader was that it was too early to have interfaith dialogue. By that time Lebanon was experiencing peace.” Küng who was attending the meeting as a theologian from the Christian side, speculates that, although the Muslim leaders refused to send their theologians for dialogue in 1967, already at that time, whispers could be heard in Lebanon that the situation was explosive, that the political balance between Christians and Muslims was fluid, that the Christian predominance was endangered by the rapid growth of the Muslim population and that the present constitution could not be maintained in the long term (Küng 2004). No one could really suspect that things will turn out badly soon, after two decades.

Küng (2004:72) records that “after 25 years of civil war, most Lebanese put the blame on the Christians and Muslims, saying that, had they started the interfaith dialogue in 1967, that is, 25 years ago, Lebanon would have been spared from experiencing the catastrophe of civil war.” Küng (2004:72) adds, “most Lebanese admit that a religious understanding could have served as a basis for a reasonable and just political solution. A fanaticism of violence, murder and destruction fed by the religions could have been mitigated. In short, the civil war and immeasurable bloodshed could have been avoided.” Küng (2004:73) notes that “like Lebanon, so too the state of Israel and the city of Jerusalem can find peace and continued existence only through religious and political dialogue between the Jews and Muslims, Israelis and Palestinians.” He argues that though, at times, religions have contributed negatively and have caused negative consequences like partly getting involved in the two world wars, one cannot deny that religions have contributed positively to many different circumstances all over the world. There are a lot of examples that are contrary to the negativity one may link religions with. Küng (2004:74) points out that “religion can contribute positively towards building up world peace and have done so in the past.”

Jenny Lunn (2009:937) maintains that “though nowadays, some people claim that religion is not relevant in addressing developmental and social issues, this is not true because religion plays an important role in addressing social problems.” Lunn (2009:937) describes that “religion, spirituality and faith have suffered from long term and systematic neglect in development theory, policy making and practice, although there has been a noticeable turn over the past 10 years.” According to Lunn (2009), religion, spirituality and faith have a role to play in development and in addressing the world problems in the past, present and future by applying three core concepts from critical theory, grounding of knowledge in historical context, critique through a dialectical process, and identification of future potentialities for emancipation and self-determination. Lunn (2009:938) opposes all those who criticise religion, spirituality and faith, people who claim that “religion is not important in the modern world, arguing that religion cannot be used to address the world problems.” Sigvard von Sicard and Ingo Wulfhorst (2003:1) concur and stress that “religion is the foundation of morality though the critics of religion do not agree that religion is the basis of morality and they question whether there can be no morality if there is no religion.” Assessing the arguments of the critics of interfaith dialogue, the researcher admits that those critics of interfaith dialogue probably are talking from what they have experienced. The researcher acknowledges that sometimes, religion can be the source of conflict in places where religions have bad relations and fail to engage in interfaith dialogue. However, the researcher encourages world religions to engage in interfaith dialogue to address social problems. Küng (2004:73) states that “religion has the capacity to address social problems such as moral issues.”

5.1.4.1 Why no morality without religion?

The critics of interfaith dialogue claim that religion cannot address moral issues, instead, religion is seen as the source of conflicts. Indeed, religion can sometimes be the source of conflicts. Yet religion has the potential to address moral issues. Observing the current level of violence in South Africa, hearing that young innocent children are being killed, women being raped and killed, electric cables being stolen and people illegally connecting water pipes to dodge paying water bills, one may speculate that the situation in South Africa is explosive. People who are committing such crimes have lost their morality and there is a need for religions to engage in moral regeneration. Interfaith dialogue has the capacity to address social problems. Sigvard von Sicard and Ingo Wulfhorst (2003:41) argue that “there cannot be human beings without morality,

because the essence of humanity is basically morality. As morality distinguishes human beings from animals, it should be emphasized that humans are moral beings and that the core of all religions is morality. Besides, religions have been the main providers of ethics.” They describe that for religious peoples, moral values such as liberty, equality, humanity, and responsibility cannot be properly applied to society unless they are based on religious teachings. Thus, morality without religion is unacceptable to most human beings. Since mere morality can be non-religious, or can derive from any tradition, for religious people, religion is as necessary as morality itself. This research project is aware that no one can deny that religion has contributed both positively and negatively to the world, for better and for worse. Küng (2004:36) states that, “we must acknowledge that religions have contributed a great deal to the spiritual and moral progress of human beings.” However, admits Küng (2004:36), “there are some catastrophes that religions have caused in the world.” He avers that it is equally impossible to deny that religions have also often hindered and prevented progress.

The question remains: if religions have also contributed negatively when we follow history, can people not live moral lives without religion? It is true that people can live moral lives without religion. Even believers should admit that a moral life is possible without religion. Küng (2004:37) illustrates that “biographically and psychologically, there are sufficient reasons why enlightened contemporaries want to renounce religion which had deteriorated into obscurantism, superstition, stultification and opium of the people”. He further states that empirically, it is indisputable that non-religious people in fact have a basic ethical orientation and lead a moral life even without religion. In history there have been religious non-believers who pioneered a new sense of human worth and did more for freedom of conscience, freedom of religion and other human rights than their religious allies. He illustrates that anthropologically, it cannot be denied that many non-religious people, in principle, have developed and possess goals and priorities, values and norms, ideals and models and criteria for truth and falsehood. According to him, it cannot be denied that men and women as rational beings have real human autonomy, which allows them to have a basic trust, even without belief in God. Their trust leads them to perceive their responsibility in the world. In modern times, people are advocating for the freedom to decide for or against religion. He states that it is beyond dispute that many non-religious people nowadays are pioneering for a morality which takes its bearings from the human

dignity of all men and women. This human dignity includes reason and responsibility, freedom of conscience, freedom of religion and other human rights which have become established over the course of a long history.

After explaining that people can live ethically without belonging to any religion, Küng (2004) recommends that there is a need for a coalition between believers and non-believers. People need a shared responsibility, with mutual respect. Küng (2004:39) explains that “a coalition of believers and non-believers in creating ethics and mutual respect is recommended for the world because the danger of living in the world without values and norms threatens both believers and non-believers.” He adds that ethics is therefore needed for both believers and non-believers, because there can be no survival for human society without ethics. If such a coalition between believers and non-believers is necessary in creating a world ethic, both should join hands in making sure that moral values are observed. Both believers and non-believers should make sure that basic human rights are observed. He points out that, the gap between the rich and the poor must be reduced. A world society without war should become possible, in which the material imbalances are slowly remedied by raising the standard of living of poor people. Despite some non-believers living morally, Küng argues that religion still plays an important role in enabling people to observe ethics.

Küng (2004:43) illustrates that “philosophy and science have their limitations when it comes to some human actions. Some human actions can be demanding and may require going against human interest, actions that, in the extreme case may call for the sacrifice of one’s own life in order to save others.” Küng (2004:43) adds that “in such situations, reason, philosophy and science may not comprehend why one can act in a self-sacrificing manner.” He explains that philosophy quickly ends with the appeal to reason whereby ethical appeal to reason cannot get the answer. Philosophy may not have an answer in some instances when people continue to ask why? For example, asking why some people always behave honourably, ready to spare others and to be kind whenever possible; and why they do not give up doing what is right, despite observing that by doing right, one harms oneself and becomes a victim, because other people are brutal and unkind. He asks whether or not one can experience any danger of spiritual homelessness and moral arbitrariness if they rely purely on reason and concedes that, of course,

philosophy, science and technology sometimes have no answer to the reality that affects people such as political, economic and moral problems.

Küng (2004:44) points out that “the great economic and technological problems of our time have increasingly become political problems which transcend and make excessive demands on any science: psychology, sociology and even philosophy.” Küng (2004:44) adds, “then questions arise when people try to find out who can tell us today where we can do more than before and what we should do.” He suggests that perhaps, religions can be the answer to today’s problems; religion can give us direction, where science and philosophy have failed. Indeed, in some countries, people are trying to get away from religion, but what they forget is that religion is at the centre of human life and if people want to survive, religion should be applied in today’s world. Küng (2004:45) observes that “nowadays, people talk of modern, postmodern and post-ideological era, but hardly talk about a post-religious era. This shows that people cannot do away with religion, no matter what happens.” Küng (2004:45) adds that “it is true that people are now confronted with the problem of secularization. But a secular world does not conclude in any way, automatically, that the world is becoming non-religious.” Küng (2004:46) asserts that “in the past, it has been observed that religion can contribute not only to human oppression but also to human liberation; not only in psychologically and psychotherapeutically, but also politically and socially”. He argues that it has been proven in the past that religions can contribute positively in terms of social psychology to the furthering of freedom, to the observance of human rights and to the establishment of democracy.

Küng (2004:46) admits that “certainly, religions sometimes can be authoritarian, tyrannical and reactionary, as happened in the past, producing anxiety, narrow-mindedness, intolerance, injustice, frustration and social isolation.” Religion can cause division. People can use scriptures to oppress others if religion lacks interfaith dialogue. If we have no interfaith dialogue at any level, divisions will perpetuate in our religions, churches and the country. It is necessary for some theologians to get involved in reflections on issues of interfaith dialogue. Using the Bible or Quran in a literal sense can sometimes lead to conflict and division, for example the issue of same sex marriage if taken literally from the scripture; it can lead to oppression and division of some people who practice it in certain religions and churches. Raymond Simangaliso Kumalo

(2011:186) when reacting to the divisions that have hit the Methodist Church of Southern Africa, observes that “theologically, the issue of same-sex marriage is inconclusive. There are as many theologies as there are theologians. The biblical text is not a monolith, and consequently there are several traditions of understanding regarding same-sex marriage.” Kumalo points out that we cannot use scripture in order to oppress others. Instead, our reading of scripture should help to bring peace, justice, unity and love. Kumalo (2011:187) states that “God’s call in the church is for people to sit at a roundtable as equal members of the body of Christ.” Küng (2004:47) points out that “religion can also authenticate and inspire immorality, social abuses and wars between people.” Küng (2004) after giving the negative side of religion, disputes the negative side of religion by saying that religion is at the centre of morality and has liberating effects, orientated on the future and beneficial to human beings. Religions can disseminate trust and hope in life, generosity, tolerance, solidarity, creativity and social commitment; encourage spiritual renewal, social forms and bring peace. Küng (2004:47) adds that “religion can become the foundation of psychological identity, human maturity, and a healthy self-awareness. Religion can become a decisive stimulant and the motive force for social change.” According to Küng (2004:71), “religion often contributes to bringing peace in the world. The world cannot have peace without religious peace.”

5.1.4.2 No world peace without religious peace

Küng (2004:75) contends that “there can be no world peace without religious peace.” He invites religions to have constant dialogue, even when there is no war. He points out that religion can contribute positively towards building up world peace. He adds that there can be no world peace without religious peace. Religion can propagate and activate peace. He explains that the world can be a better place to live if all world religions propagated peace, if they decided today to take full responsibility of bringing peace, of loving their neighbours and calling for constant reconciliation by applying non-violent means. He suggests that all the religions of the world today must recognise their share in responsibility for world peace. Küng (2004:76) points out that “constructive engagement with the other religions of this world for the sake of peace in the world is vitally important for human survival.” Sudarsan Raghavan (2014), in the *Daily News*, agrees with Küng that interfaith dialogue is needed all the time if society is to avoid violence. Raghavan wonders how marriage can become a casualty of war in the Central African Republic

(CAR), where Muslims started fighting with Christians. Raghavan (2014:9) writes that “Muslims and Christians once lived peacefully side by side in the CAR. People never expected that at one time civil war was going to break out between Muslims and Christians and were wondering why suddenly war started.” When Raghavan interviewed one of the elderly people affected by the civil war, the response was: “I have lived in this place for 40 years and all my children were born here. I never expected this. None of us expected that there will be war between Christians and Muslims” (Raghavan 2014:9). But if one follows the history of the (CAR), one can trace some minor conflicts that might have happened before the war broke out. Raghavan (2014:9) reports that “Marriages between Christians and Muslims have survived the chaotic upheavals that the CAR has endured since gaining independence from former colonial power, France. But now it is strange to hear Christians shouting slogans like renounce Islam or else we will kill you.” Raghavan (2014:9) adds that “people who are living in mixed marriages between a Christian and a Muslim are commanded to separate, or renounce Islam before the Christian kills the Muslim partner.” If people in the CAR had engaged in interfaith dialogue before the civil war broke out, many lives which were lost through violence could have been spared. It is a lesson to all countries that they should get involved in dialogue all the time and not wait until war breaks out. Gil Bailie (1995:4) points out that “the world needs peace. Religious values are needed in our communities to create peace.” Bailie (1995:4) adds that “our world is now convulsing with disorder and violence, vivid scenes of which are beamed into our living rooms and bend into our sensibilities every day.” Bailie (1995:4) further states that “the reassuring sense that progress is being made in social and political affairs are being replaced by an increasingly anxious concern for a minimum level of social decorum.” According to Bailie (1995:4), “essential social institutions are reeling in the face of cultural meltdown, the real nature of which remains a mystery. Neglecting religious values has contributed to world disorder and violence.”

Thobani Ngqulunga (2014:6) worries why there is so much violence in South Africa, when he states that “South Africa celebrated 20 years of its hard-earned democracy in 2014, but the violent nature of our society continues to baffle me. It worries me so much that I’m beginning to wonder if this will ever end.” This study argues that the on-going violence can be an opportunity for religions to engage in interfaith dialogue so that they can discuss and find out the root causes to see how religions can work together to combat crime. Ngqulunga notes that some time back

before 1994, Stanford University, through its International Development Education Committee (IDEC), invited Professor Jonathan Jansen to address the issue of violence in South Africa. Jansen asked the assembly why South Africa was experiencing violence. Though there were various answers given, the most obvious was the political situation, caused by the demonic apartheid system. Now the big question remains: on what do we blame today's violent behaviour after having achieved democratic independence? Janet Trisk (2012:112), when talking about the life of Steve de Gruchy, points out that "my concerns with violence, especially violence in South Africa, are of course by no means new or unique. Steve de Gruchy in both his life and writing expressed a concern for violence in South Africa and sought alternatives of addressing it."

The violence happening in South Africa is an indication that dialogue is needed. The capacity for dialogue can be the solution for a peaceful South Africa. It is the violence which is in people's hearts that makes them not care about God's creation, destroying each other and also destroying nature and infrastructure, leading to water scarcity. To some extent, even climate change may be related to the violence within the communities; lack of responsibility and the negligence of people to get involved in the stewardship of God's creation. Instead of looking after creation, people tend to destroy it violently, and that leads to climate change. Cutting down trees may lead to creating a desert which leads to drought, experiencing no rain for a long time. There is a need for interfaith dialogue to address the violence in the community; violence against each other and violence against God's creation. The capacity for dialogue could lead to looking after God's creation, conserving water and creating peace in the community because human beings cannot have peace when there is water scarcity. As I write this research project, people in QwaQwa have been embarking on protests and calling for a total shut down of the area because they have been experiencing water scarcity for more than four years. People have demonstrated that they have no peace in their homes because they do not have clean water. The demonstrations that have been happening in QwaQwa are a clear indication that there is a serious need for dialogue.

5.1.4.3 Capacity for dialogue

Küng (2004:104) argues that "capacity for dialogue is ultimately a capacity for peace. Where dialogues failed to take root, wars emerged both in private and in public. Where dialogue failed, repressions began, the law of the jungle, the law of the more powerful, the superior, and the

cleverer prevailed. Those who observe dialogue prevent wars from taking place.” He adds that it follows analogically to the world religions that those who carry out dialogue will bring out peace to the world. Küng (2004:205) stresses that “there can be no peace among the nations without peace among the religions; there can be no peace among the religions without dialogue between the religions and there can be no dialogue between the religions without research into theological foundations”. There is a need to develop the theology that facilitates the capacity for dialogue which will lead to creating peace and respecting human dignity. Nico Koopman (2012:129) suggests that “we need to develop a theology of respecting human dignity.” Writing to honour the life of Steve de Gruchy, Koopman mentioned that Steve de Gruchy had developed the theology of respecting human dignity in his life. Koopman (2012:129) states that “the theology of Steve de Gruchy was especially apparent in the hermeneutic that he had developed. He developed a hermeneutic that advanced the actualisation and fulfilment of human dignity, justice, freedom and love for all God’s people and creation.” African Traditional Religion, Christianity and Islam need to engage on regular basis in dialogue in order to create peace and the respect of human dignity.

5.1.4.4 No religious peace without religious dialogue

According to Küng (2004:135), “interfaith dialogue brings religious peace. And religious peace brings peace in the world. When religions are living in harmony, it becomes easier for them to address social problems. Religions cannot have peace if they do not have interfaith dialogue.” I agree with Küng that social problems such as water shortages in Botshabelo cannot be addressed if religions do not have peace among themselves. Küng (2004) calls for a new religious overview, where people seek new viable ways and strive for a new inter-religious openness, encounter, and bond, having interreligious dialogue with all groups. Indeed, one can find different religions in each country and if these religions can learn to have interfaith dialogue, then the world can have peace and the survival of human beings can be assured. *Nostra Aetate* (NS 2), a Vatican II document which was edited by Flannery (2004), clearly states that all Christians are urged to bring peace in the world through dialogue and collaboration with the followers of the other religions; and in witness of faith and life, to acknowledge, preserve and promote the spiritual and moral goods of other religions. In my opinion, if religions can have dialogue, the rest of society are likely also to learn to dialogue. Dialogue must include

politicians, businessmen and other sectors. Küng (2004:136) suggests that “politicians, businessmen and scientists should be involved in dialogue.” According to Küng, the world needs people in all continents who make themselves better informed and orientated about the people of other cultures and religions and, at the same time, deepen the understanding and practice of their religion.

Küng (2004:136) states that “we need people in politics who do not just see the problems of world politics which have newly arisen from the perspective of the strategic supreme commanders or the world market, and just stay without counter-acting, to bring peace.” Küng (2004) argues that the world needs people in business who avoid exploitation of others, people who can go beyond their selfish motives in business and begin to consider other people in order to uplift their living standards. Küng (2004:137) explains that “we need dialogue in all sectors of life; whether unofficial or official dialogue.” He suggests that people need not only religious conferences and gatherings on the model of the world conference of the world religions, but dialogue that will take place in any form, even at a non-formal level. What Küng is trying to explain here is related to what Fitzgerald (2000:8-10) states when he talks about the four forms of dialogue. Küng (2004:138) observes that “the world needs local and regional inter-religious base groups and working parties which discuss and remove problems where they arise and investigate and realise possibilities for practical collaboration.” Küng (2004:138) further illustrates that “we also need a more intensive philosophical and theological dialogue of theologians and specialists in religion which takes religious plurality seriously in theological terms, accepts the challenge of the other religions and investigates their significance for each person’s own religion.” At the same time, Küng (2004) notes that the world needs the spiritual dialogue of religious communities, where people can come together and meditate and reflect together, allowing themselves to deepen their spiritual life.

Küng (2004:138) avers that “dialogue must be carried out every day. People need everyday dialogue among different religions who meet and discuss daily and hourly all over the world, on all possible occasions; in mixed marriages and shared social projects, at religious festivals or in political initiatives.” He adds that all over the place where different religions can find an opportunity to interact, dialogue should be practised. According to Küng, dialogue can exist

externally and internally. He explains that external dialogue can be practised for those people who live in the same street or in the same village, work in the same factory or study at the same university, while internal dialogue can happen in individuals through the discussion that people have internally. Küng gives an example of what happens in people's heads and hearts whenever they encounter strangers or whenever Christians hear something from the Qur'an or Muslims hear something from the Bible. Küng (2004:138) notes that "people experience different forms of dialogue." The implication of many levels of interreligious dialogue, according to Küng (2004:138), is that "they bring out the solid knowledge of different religions." Küng (2004:138) stresses that "if we want the world to survive, we need all levels of dialogue. Dialogue is necessary for human survival." He concludes that no human life can survive without a world ethic for the nations; no peace among the nations without peace among the religions; no peace among the religions without dialogue among the religions. I agree with Küng (2004) that we need interfaith dialogue in order to maintain peace and avoid the possible water scarcity conflicts in Botshabelo in the future. The African Traditional Religion, Christianity and Islam should embark on interfaith dialogue to address social problems such as water scarcity in Botshabelo. Interfaith dialogue can play an important role in addressing social problems.

5.1.5 The role of interfaith dialogue in addressing social problems in the world

Some people may wonder whether interfaith dialogue has played any role in the world in addressing social problems. This section aims at illustrating how interfaith dialogue has played a vital role in addressing the world's social problems. One concrete example where interfaith dialogue played an important role is in Zimbabwe when that country experienced droughts. Daneel (1991) illustrates how different religions came together to dialogue on water scarcity and to propose ways of mitigating the problem. One of the ways was to create an awareness campaign to inform people about the problem and to suggest measures to alleviate the problem, such as planting trees. People were cutting down trees to make charcoal before the drought, Chiefs and traditional leaders introduced a law to forbid the cutting of trees. They encouraged people to plant trees instead of cutting them. Every elderly person had to plant a tree. Even children in schools were encouraged by their teachers to plant trees. Another way that helped Zimbabweans to mitigate water scarcity was to raise awareness about repairing leaking taps and to create dams and reservoirs to keep water when they received rain. People planted trees and

within two years people had rain in abundance. Interfaith dialogue to embark on planting trees to conserve water helped the people in Zimbabwe to mitigate water scarcity.

Daneel (1991:104) points out that “in Zimbabwe, traditionalist Africans formed the Association of Zimbabwean Traditional Ecologists (AZTREC) to look after the environment. This association engaged in the liberation of Zimbabwe from ecological destruction through earth keeping.” Daneel (1991:104) states that “the very composition of AZTREC triggered interfaith dialogue at all meetings and ceremonies because once different religions met to discuss how to prevent the environment from destruction, the Christians opened the Bible reading and prayer, then the traditional group performed rituals to address the ancestors in a traditional manner.” Daneel (1991:104) explains that “interfaith dialogue helped to reduce the drought conditions in Zimbabwe, water was restored and there was peace. Interfaith dialogue played an important role to restore rain.” There are some Zimbabweans whom I asked whether what Daneel (1991) states is true or not because Zimbabwe now seems to be having difficulties in the agricultural sector. They asserted that what Daneel wrote is true. According to them, Zimbabwe in the 1980s was the breadbasket of southern Africa before the policy of land grabbing was introduced by Robert Mugabe’s government. They explained that interfaith dialogue cannot be blamed on the recent poverty of Zimbabwe because it is probably not caused by drought but by political and economic mismanagement.

Water scarcity in homes and the country doubtless disturbs peace and will disturb more peace when the shortage of water increases. To defuse this future time-bomb of water scarcity, the researcher is proposing interfaith dialogue. A thesis on interfaith dialogue on water is necessary to mitigate societal unrest over water scarcity in the Free State. The mitigation of water scarcity using interfaith dialogue might bring peace in places like QwaQwa where people have gone on rampages. Water scarcity affects peace and the economy of the country.

Interfaith dialogue is one of the domains that might remind people to be good stewards of the environment. Zimbabweans at one time had forgotten the importance of being good stewards of the environment. According to Daneel (1991:105), “interfaith dialogue played an important role in Zimbabwe by making the people aware of their responsibility, to be good stewards of the

environment.” He observes that most of the time, human beings ignore the stewardship given to them by God to look after the environment. Most theologians, according to Daneel (1991:105), “rarely talk about eco-theology and the concern for the liberation of creation.” He claims that there seems to be a general assumption that human beings have the power to do anything they want with the environment, that the environment is secondary, subordinate to human beings who have legitimacy to exploit it. Daneel (1991:105) notes that “to override the importance of stewardship which is assigned to human beings to look after nature promotes the attitude of carelessness in nature conservation; no proper attention is paid to ecological liberation.” Daneel (1991:106) describes that “failure to liberate nature also goes hand in hand with the failure to liberate other human beings who struggle with life.” He argues that such an attitude leads to the destruction of the environment and it is a wrong interpretation and the abuse of the God-given stewardship over nature. Human beings have tended to destroy the environment on which their very existence depends. Timberlake cited in Daneel (1991:106) asserts that “woodlands throughout tropical Africa are diminishing by an estimated 2.3 million hectares of open forest annually. Continent -wide, only one tree is being planted for every eighteen chopped down, and of those planted only a small percentage mature.” Timberlake cited in Daneel (1991:106) points out that “deforestation in the long run leads to the loss of rain and water in places where they have been cutting trees. Once flourishing areas have become deserts. To look after trees and the environment means to look after water and to care about climate change and our own human existence.”

Daneel (1991:107) notes that “in Zimbabwe, the Association of Zimbabwean Traditional Ecologists (AZTREC) prevented Zimbabwe from ecological destruction through earth guardianship.” Daneel (1991) argues that forming AZTREC prompted interfaith dialogue at all meetings and ceremonies. Daneel (1991:107) notes that “during gatherings of AZTREC he always tried to explain to the people that it is possible for people of different religious traditions to participate in joint action in an environmental crisis which affects all Zimbabweans; people can meet together to address common social problems without losing their religious identities.” What happened in Zimbabwe, the joint tree planting by people of different religious backgrounds, speeches and celebrations of life in nature represent an ecumenical encounter in which people of different faiths experienced a harmony and the importance of interfaith

dialogue. Daneel (1991:108) stresses that “the churches simply cannot ignore the call to develop a theology of the liberation of nature. This theology of nature includes the planting of trees to bring back the rain and restore water.” He describes that where there are trees and water, there will be animals in the forests and fish in the rivers, lakes and dams; plants will grow, and there will be food for both humans and animals. He bemoans that most of the churches and world religions in Africa have not yet engaged fully in an African theological response to the challenge of earth-keeping. Daneel (1991:108) demonstrates that “it is evident that the Justice and Peace and the Integrity of Creation (JPIC) and the programme of the World Council of Churches (WCC) is not yet having much impact at the grassroots level.” Daneel (1991:108) describes that “the majority of African Independent Churches (AICs) also have not yet extended their community development work to include a selfless ecological thrust on any significant scale.” However, he also admits that there are some churches or individuals who are trying now to talk about earth-keeping and he is hoping that one day their efforts might move from handling this matter as individuals and move towards interfaith engagement so that a greater impact can be felt. Daneel (1991:109) suggests that what is required, both in terms of African church praxis and theological reflection (in other words, in both enacted and written African theology), is the following:

- (a) Vigorous programmes of afforestation which become integral to church life through ecology-related sacraments.
- (b) A reinterpretation of the ecologically inspirational role of ancestors in a church context.
- (c) An understanding of the triune God which highlights God’s mandate to humanity to liberate or sanctify creation.

Daneel (1991) challenges people to look after nature. People need to understand that if we do not look after nature, nature will not look after us. And if we are serious about earth-stewardship which God entrusted to us as illustrated in the Bible in the book of Genesis (Gen 1:28), destroying nature in any form must be considered a sin. Any Christian involved in destroying nature must confess. Surprisingly, very few churches consider the destruction of nature as a sin which needs confession like any other sin. In my opinion, sin is the breaking of the connection between God and the offender (sinner) caused by disobeying the commandments from God. The destruction of nature means that humanity disobeys God’s orders which God gave them to be

stewards of nature. This disobedience brings disconnection between human beings and God. Through nature, God is present and comes closer to human beings, offering himself through bread, water and wine, coming from nature. Daneel (1991:110) suggests that “churches need to develop a theology of the environment.” He describes that once a new theology of the environment is translated into tree planting as an integral, sacramentally inspired part of African Independent Churches (AICs)’s life, a massive contribution towards ecological reform, sanity and hope can be made on this continent. In this research project, interfaith dialogue on water theology is similar to the theology of the environment that Daneel suggests. Once African Traditional Religionists, Christians and Muslims begin to engage in water scarcity discussions and become witnesses in water scarcity awareness campaigns, sensitizing and advocating for water conservation methods as pointed out by Daneel (1991), there is a probability that the problems of water scarcity might be resolved. All religions must come together to address water scarcity because the shortage of water in a community affects all religions.

To what extent do the African Traditional Religion, Christianity and Islam engage in interfaith dialogue to look after nature, especially water in Botshabelo? This study observes that the involvement of faith-based organizations in South Africa to come together as a group and address water shortages has not been noticed, or they have not been vociferous, thereby creating a vacuum of opinion in a sizeable segment of society. Prolonged water shortages in homes may provoke community unrest and riots. Community protests over water shortages have already started in South Africa. On Monday the 20th of January 2020, the South African Broadcasting Cooperation’s FM Radio, reported on riots concerning water shortages in QwaQwa. The community of QwaQwa went on a rampage over their water scarcity problem because a girl child from QwaQwa aged 8 years of age drowned in a river when she had gone to fetch water. It has been more than 5 years since QwaQwa started experiencing water scarcity. The water pipes have gone dry, and people wait in long queues for water tanks to deliver water, or they walk long distances to the river to fetch water. People are asking questions about the ability of the government to address the problem of water scarcity. Daneel (1991) suggests interfaith dialogue to be a tool that can help to address social problems like water shortages.

5.1.6 How to conduct interfaith dialogue

In order to conduct interfaith dialogue successfully, there must be respect and understanding of each other, being aware that when people meet, they come from different religious backgrounds. The people conducting dialogue should avoid the attitude of dominance and suppressing others. Fitzgerald (2000:4) states that, “In the context of religious plurality, interfaith dialogue means all positive and constructive interreligious ‘relations’ with individuals and communities of other faiths which are directed at mutual understanding and enrichment in obedience to truth and respect for freedom.” Dialogue can assist by addressing the crisis of water scarcity when African Traditional Religionists, Christians and Muslims learn to create good relationships among themselves and come together to discuss social problems. When there is unity among religions to discuss matters affecting society, solutions can be found, and the implementation of the solutions can be achieved because leaders of different religions have the platforms to meet their members. The solidarity among religions to come together as a family to discuss matters affecting the community, has greater impact on addressing social problems like water scarcity. It is good to also mention that sometimes interfaith dialogue can be difficult among religions.

5.2 What makes interfaith dialogue difficult?

According to Hans Kessler (2006) the major problem that makes interfaith dialogue difficult is the idea of salvation. Each religion wants to stress their founder as the only source of salvation.³ Other problems are as a result of basic attitudes towards other religions.

³ Concerning the question of which is the correct path to salvation, the Gospel according to St. John has Jesus give the following answer: I am the way, the truth and the life, no one comes to the Father, except through me (Jn 14:6) and similar ideas can be found in Acts (4:12 and 1 Tim. 2:5). That sounds highly exclusive. Is Jesus Christ the only path to salvation? And what about the other religions, can they be saved without Jesus Christ? Other religions consider also their way to be the true path. Many Christians, including myself, may have difficulties with accepting that people from other religions can be saved without passing through Jesus Christ. There are competing claims on truth, on absoluteness and on finality. Must we abandon them all for the sake of peaceful co-existence? Moslems, Buddhists and many other religions would not accept that. And what about we Christians; can we abandon the conviction that God has truly revealed God-self in the life, death and resurrection of Jesus the Jew, as the love meant for all people? Is this universal love not the final truth? Is it not the true path to justice, peace and salvation? Where people of different religions are willing to talk and co-exist, worlds collide, worlds founded on different basic experiences of reality and the final ground on which it rests. How can people find a way to co-existence in this situation? (Kessler 2006:1).

Kessler (2006) describes that broadly speaking, there are (regardless of whether seen from a Christian perspective, or from the perspectives of other faiths) three possible attitudes to other religions. Below are examples of such basic attitudes as demonstrated by Kessler (2006:1):

5.2.1 Exclusivism

This is the case in which some religions exclude others. Only one religion according to the adherents of that religion has the true knowledge about God. Kessler (2006:1) points out that, “in exclusivism, the believers claim that their religion is the only true religion and all other religions are mistaken and are not paths to salvation. Therefore, Christ (or the Koran) is the only way as some believers would utter.” Kessler (2006:1) adds, “to be precise, there is no redemption exclusive of the church, according to some Roman Catholics.” Chris Grzelak (2010:51) describes that “an exclusivist standpoint of this kind has been, and still is in all religions, often is the source of intolerance and violence against persons of other faiths.”

5.2.2 Inclusivism

Kessler (2006:2) points out that “in inclusivism, some religions develop the tendency of including other religions not as equals.” According to Kessler (2006:2), “some religions state that other religions may be paths to revelation and salvation, but Jesus Christ (or the Koran) is the unsurpassable revelation of God, the way and the standard by which all religions are to be measured.” Inclusivism can be further grouped in two categories, namely: crude, condescending inclusivism, and self-critical, open inclusivism.

(a) Crude, condescending inclusivism: Kessler (2006:2) explains that this is about the mentality among believers who express that their religion is absolute. Such believers say that “everything that is good and is true in other religions is more perfectly present in our religion, Christianity or Islam. So, we have nothing to learn from the others, because we are in possession of God’s complete revelation in Christ (or the Koran). Other religions are preparation for the absolute religion.” Kessler explains that though such believers try to include other religions, still there is the mentality of little respect for other religions, because they consider other religions just as a preparation for theirs.

(b) Self-critical, open inclusivism: Kessler (2006:3) states that “in self-critical, open inclusivism, no religion is absolute. Only God is absolute, God has revealed God-self, historically, once and for all, in Jesus.” Kessler (2006:3) adds, “God’s revelation of God-self is concentrated in Jesus but is not confined to Him; in other religions there may also be witnesses of the spirit of God and of the Logos, which was made flesh and is embodied in Jesus.”

5.2.3 Pluralism

The idea behind pluralism according to Grzelak (2010:76) is that “religions, at least several of them, are equally valid. There are different paths leading to one salvation, one God, the same God who reveals the God-self in many ways.” He adds that each one should therefore walk one’s own path as devotedly as possible in order to be saved. Salvation is possible through different and various religious traditions. Pluralism can be divided into two parts, namely moderate and radical pluralism.

(a) Moderate pluralism: Kessler (2006:4) illustrates that, “moderate pluralism claims that different religions have different approaches to the divine. At least some of the religions have equally valid paths to salvation.” Kessler (2006:4) further states that “none of these religions may consider themselves superior to the others. Jesus Christ is therefore one amongst many bringers of salvation and revelation which is equally valid in other religions.”

(b) Radical pluralism or relativism: Kessler (2006:5) points out that “radical pluralism or relativism, claims that God is only one God and is a construct of the human mind. All religions and their founders are therefore equally true and equally untrue, the difference being inconsequential.” Kessler (2006:5) describes that “each man or woman should achieve salvation in their own way. It is of no importance whether one follows Jesus, Buddha, Mohammed or whoever.” Kessler (2006) talks only about moderate pluralism and radical pluralism. He does not add other forms of pluralism such as prescriptive pluralism; which is the situation where pluralism becomes the only way. Grzelak (2010:130) observes that “it is difficult for Christians to accept the pluralistic ideas, because these ideas stress that the centre of salvation is achieved not only in Jesus Christ but also through other means.” According to Grzelak (2010), some scholars, like Jacques Dupuis, have presented another theory of inclusive pluralism. This

inclusive pluralism is about putting Jesus at the centre of salvation, but also respecting other religions. William Dickens (2006) bemoans the idea of pluralism when speaking about encountering the other.

5.2.4 Challenges that arise from pluralism

According to Dickens (2006:203), “participation in interreligious dialogue means to encounter persons who are, in some respects, radically different.” Dickens (2006:203) adds that, “appreciating the diversity among, and within, the world’s religions requires that we abandon the attempt to see others as culturally variant expressions of ourselves.”

It is true that many people would like to say that salvation lies not only in Jesus, but people can also be saved through other means. The God Christians worship is the same as the God of Muslims, Hindus and other religions. It is also true that, sometimes, Christians think that some of the terms they use should be understood by other religions, like salvation and redemption. Dickens (2006) is against this mentality of thinking that we as Christians are the same as other religions, worshipping the same God. Dickens (2006) gives an example of a Muslim theologian, Riffat Hassan, who was vexed by Christians when they asked her to explain the Islamic view of salvation or redemption. Dickens (2006:207) describes that “since salvation and redemption have no meaning in the Islamic tradition, the asking of such questions points to either an ignorance of Islam or an assumption that concepts which are important in the Christian tradition must necessarily be so in the Jewish and Islamic traditions.”

Dickens (2006:208) states that “the irony of pluralists views of otherness as sameness differently expressed is compounded by an untenable presupposition, namely, that respect for others must rest on a foundational affinity.” He argues that surely, we do not want to insist that we can honour and respect only what is essentially like us. Different religions can provide their own warrants for ensuring respect for their dialogue partners. Dickens (2006:209) argues that “the differences among the world’s major living religions are, in some cases, irreducible to a basic commonality.” Dickens (2006:209) adds that “genuine respect for the diversity among, and within, the world’s religions requires that we abandon the narcissistic tendency to see others as culturally distinctive expressions of ourselves.”

Dickens (2006) encourages participants in interreligious dialogue to be frank about disagreements. He voices suspicion about those Christians who do not acknowledge their disagreements with Jews. Dickens (2006:210) questions, “If Christianity did not come into the world to bring something better than Judaism, then why should not anyone who wants a concrete relationship with the God of Abraham, Isaac, Jacob and their descendants either remain within normative Judaism or convert to it?” Dickens (2006) is suspicious of Christians like Hick, who appear eager to set aside long-held convictions about the centrality of Jesus Christ in creation and salvation of the world in order to avoid, they suppose, offending their conversation partners. Dickens (2006:211) says that “the dialogical consequences of one’s convictions is a matter of being truthful with oneself, one’s dialogue partners and one’s tradition.” Dickens has a different way of looking at interfaith dialogue, when he says that the motives with which participants approach dialogue are complex: Some people come expecting conversion, others mutual understanding and respect, still others the resolution of needless disagreements grown stale, and others with the hope of fostering peace and justice. Indeed, states Dickens (2006:212), “obstacles for formal dialogue will always be there, but people should not be afraid of that in order to bring pluralism in dialogue.” The purpose of interfaith dialogue on the theology of water is to establish unity among African Traditional Religionists, Christians and Muslims on how to address the social problems caused by water scarcity in Botshabelo. I informed the participants during interviews that they should be aware of the differences that can make interfaith dialogue difficult. The aim of this research project is to sensitise the adherents of different religions in Botshabelo that although there could be different beliefs arising from the teaching of different religions, different religions can still work together to address common social problems by applying interfaith dialogue.

5.3 State of interfaith dialogue in South Africa

According to Grzelak (2013:78), “obstacles for formal dialogue among different religions continue to prevail in South Africa.” He adds that it would be overoptimistic to say that in South Africa at the present moment there are joint initiatives among religions which concentrate on addressing social issues. However, states Grzelak (2013:78), “in an informal way, one can find

dialogue taking place at grassroots level; this occurs rather in common involvement in issues of human liberation and development, social justice and the reconstruction of society.”

Grzelak (2013:78) points out that “in South Africa, Roman Catholics have an organisation called the Damietta Initiative in Pretoria, which deals with issues of justice and peace and many other social issues like HIV/AIDS while Muslims have the Gift of the Givers.” These organisations, according Grzelak (2013), do not engage in any direct collaboration, where one can see formal dialogue taking place. Any involvement of members of other religions is certainly not at an institutional level. Rather, representatives of other religions co-operate with the organisations, or serve as experts and professionals in their fields. Whoever participates in these organisations does it on humanitarian grounds. Such support is neutral with respect to religious affiliation. Grzelak (2013:80) points out that “the foundation of Damietta and the Gift of the Givers creates a platform for them for participation which crosses cultural, political, ethnic, social and religious boundaries.” He adds that these two organisations are true examples of dialogue of life, action and practical co-operation between Christians and Muslims. Therefore, we can say that at present there is no formal dialogue among religions, but informal dialogue exists.

The researcher observes that matters of unemployment, lack of clean water, health and many other issues are humanitarian in nature and that all religions have a moral responsibility to respond to such issues, whether at a formal or informal level. Farid Esack (1999:180) says that “people need to respond to the issues that affect humanity because at a deeply personal level, we need to be aware that much of our self-respect is measured by the extent to which we own our responses to all life’s situation.” Even at an informal level, if different religions could learn to be actively involved in certain issues, maybe their participation could speed up development.

Le Bruyns (2012:6) points out that “the church in South Africa has been trying to redefine its activities in the democratic South Africa.” According to Le Bruyns, in 2010, the Church met and presented a letter to the African National Congress (ANC), the governing party, during the celebration of its centenary. Le Bruyns (2012:6) notes that “at the time of its submission, the letter was endorsed by about 100 church leaders, theologians and concerned people, including those beyond the Christian religious realm, who identified themselves with the message of the

Kairos South Africa.” Renier Koegelenberg (2001:105) points out that “democratic South Africa has developed some networks that foster the role of religious communities in social development projects. One of the networks is the National Religious Association for Social Development (NRASD) which was founded in 1997.” According to Koegelenberg (2001:105), “the NRASD creates an effective platform to liaise with the South African government and other role- players. The leadership of NRASD represents religious and academic leaders.” Another example of the church’s involvement in developmental issues which are related to the dialogue of action has been pointed out by Ernst Conradie (2008:21) who states that “the church in democratic South Africa is involved in developmental issues.” Conradie (2008:21) adds, “one excellent example in the Cape Town metropolitan area is *Abalimi Bezekaya* (Planters of Home) which was started by the Roman Catholic Church to help the poor in their daily struggles.” According to Conradie (2008), the group is well-known for its work towards urban greening, tree planting projects, urban agriculture and providing sustenance for the impoverished. The work of this group not only helps the poor, but also helps to counter climate change. Conradie (2008:23) argues that “the challenge posed by climate change is not something that any one institution can address singlehandedly but demands the action of different sectors at all levels of life; starting from the community, national and international level.” Fitzgerald (2000:9) points out that “it must not be thought that all interfaith dialogue can only take place at the international level.” According to him, work for justice and peace is an integral part of the church's evangelizing mission and is part of interfaith dialogue that can happen at all levels. Justice and peace must be carried out at all levels. He adds that the commitment to education, to medical work, to social action, is not confined to the church's members. These services are offered to all. They will continue to exist in a multi-religious environment, even when Christians are in the minority. Fitzgerald (2000:9) states that:

There can, of course, be different situations. There are those situations in which the church is in control. The church has its own institutions: schools, universities, hospitals, dispensaries, training centres and so on. There must be much reflection when dealing with the pupils, students, patients or staff belonging to another religion. What is to be the ethos of the establishment? How are the followers of other religious traditions to be made to feel at ease? Such situations offer many opportunities for serious dialogue.

Fitzgerald (2000) argues that interfaith dialogue can be created anywhere, even in places where the church does not have its own institutions, but members of the church, either as individuals or as recognized religious bodies, work within already existing structures. These may be under state control or belong to the private sector. According to Fitzgerald (2000), a case in point would be Libya, where a request was made to have religious women work in hospitals. Fitzgerald (2000:9) states that “it can happen, in these circumstances, that co-operation is strictly professional and that there is little opportunity for real dialogue. Yet, in the long run, dialogue can be built up, helped by the generous witness of those who are engaged in this work.” Fitzgerald (2000:9) adds that:

There are also private initiatives bringing together people of different religions, even though religion may not be the decisive factor for the enterprise. There are areas of health care or social services where governments find it difficult to meet people's needs. Care of the handicapped is a case in point. This has led, in the countries of the Maghreb, for instance, to the formation of private associations in which Christians are involved alongside Muslims.

Fitzgerald (2000:9) points out that “it is obvious that in some circumstances, much dialogue is needed to determine the aims of the association, to ensure the right spirit and to agree on the financial basis.” He adds that a great deal of confidence is needed to be able to work harmoniously together as people of different faiths who aim at bringing life to the community despite belonging to different religious groups. Places where people practice interfaith dialogue despite belonging to different religions, social problems are easily resolved. The researcher has the opinion that although the people of Botshabelo belong to different religions, they should come together to address social problems such as water scarcity.

Bongani Mthembu (2008) wrote that South African cities were going to face major water shortages if they did not implement drastic measures to conserve this most precious liquid. The researcher is of the opinion that one of the measures that could be implemented is the introduction of interfaith dialogue on water shortages. Care must be taken to conserve water because water is life. All religions should work together, have interfaith dialogue for water conservation and address the current problem of water scarcity. Beverley Haddad (2015:308) asserts that “water binds us to all living creatures and plants. We share the same water cycle as

Christian, Muslim, Hindu, Rastafarian and atheist.” Haddad (2015:308) adds that “we need to develop an aqua-centric theology that is a theology that is willing to listen to those traditions which speak of the sacredness of water.” Margaret Ferris cited in Beverly Haddad (2015:309) notes that “communities are called to action, to develop or discover.” In 2007, in Uganda the World Council of Churches (WCC 2007) released the *Entebbe* statement which affirmed water as the foundation and source of life. The WCC (2007) promised to take responsibility for stewards of water, to preserve and share it for the benefit of humanity and creation. Furthermore, the WCC (2007) agreed that access to clean water is a fundamental human right and that the protection and control of water resources is a central public responsibility; and that water must not be treated as a commodity but as an essential social good for present and future generations. They also recognised that water is a sacred gift of God that needs to be cared for. Many religions recognise water as a sacred substance that gives life and therefore needs to be conserved.

5.4 Conclusion

This chapter has demonstrated that interfaith dialogue can play a role in solving social problems. The chapter has illustrated the views and theories of interfaith dialogue, the stages and the role of participants in interfaith dialogue. In addition, the chapter has described the goals and the outcome of interfaith dialogue. To show that interfaith dialogue has been used in other countries and it yielded positive results, the chapter illustrated how Zimbabwe implemented interfaith dialogue to address a drought. The chapter also pointed out how interfaith dialogue is conducted and how sometimes it can be difficult to conduct it. The chapter illustrated the current level of interfaith dialogue in South Africa. By illustrating the current level of interfaith dialogue, the chapter addressed the research sub question three. Accordingly, the chapter shows that although interfaith dialogue has been present in South Africa to address some social issues, religions have not been vociferous on the present environmental issue (water crisis). The following chapter illustrates the data that was collected and the findings during the interviews. The chapter demonstrates the voice of religious leaders on how interfaith dialogue could be used in addressing the water shortage in Botshabelo.

CHAPTER SIX

PRESENTATION OF DATA AND FINDINGS OF INTERVIEWS ON HOW TO ADDRESS WATER SCARCITY IN BOTSHABELO

6.0 Introduction

Chapter Five illustrated the perspective and the role of interfaith dialogue. The chapter pointed out that interfaith dialogue in South Africa has been taking place. The chapter also highlighted that although some people support interfaith dialogues to be a tool to resolve social problems, other people do criticise it, stating that interfaith dialogue cannot resolve social problems in the secular world. To disagree with the critics of interfaith dialogue, the chapter illustrated how interfaith dialogue was used as a tool to address drought in Zimbabwe. In order to find out whether interfaith dialogue can be used as a working tool to resolve related environmental issues such as water shortages in Botshabelo, the study embarked on interviews. This chapter presents the data and the findings of the interviews. The chapter deals with the presentation of the generated and collated data for the study. The findings that emerged from the collated data are highlighted thematically for purposes of analysis and dissemination. This chapter aims at answering the research sub question four. To answer sub question four, the chapter essentially relied on and applied the data collection methods, as well as the procedure for presentation as detailed in Chapter Two of the study. This chapter also highlights the experiences against which the study contended, and the measures taken to overcome what could be regarded as field work challenges. It must be mentioned that the participants provided the logistics and channels by which the field work in Botshabelo became possible for data collection.

6.1 Data collection method

As indicated in Chapter Two, the study employed the interviews as a method of data collection, and this was obtained through face-to-face interview sessions in Botshabelo. The use of telephone, Skype and textual responses was applied to participants who could not be met physically. The target group was religious leaders and other participants who through referral by religious leaders were identified as having important information necessary for this topic. The questions and answers illustrated in the next paragraphs give a glimpse of views and reactions of participants to the interview questions for this study. All the recorded interviews and the textual responses were transcribed and organised into themes for qualitative analysis. This chapter is organised around the central and sub research questions as given in Chapter One.

The central question arising from the problem is: **How can the engagement of religious groups in interfaith dialogue assist in mitigating the crisis of water scarcity in Botshabelo?**

The sub questions arising from the main question are as follows:

1. What was the scenario of water availability in Botshabelo between 2014 and 2019?
2. What are the causes and consequences of water shortage in Botshabelo?
3. What is the current level of interfaith dialogue on the present water crisis in Botshabelo?
4. What are the emerging theologies of water from interfaith dialogue in Botshabelo?
5. How could religious groups' engagement in interfaith dialogue assist in mitigating water scarcity in Botshabelo?

Below are tables and a chat that shows data collation, the proposed number of participants of religious groups and data coding.

Table 1, shows the proposed and targeted participating religious groups

African Tradition Religion	Christianity	Islam
Traditional Healers	Catholics	Sufis
	Ecumenical Churches	Shiites
		Sunnis

Table 2, shows the religious groups which were represented in the study and the respective participants coded

CODE	African Tradition Religion	Christianity	Islam
	Traditional Healers	Catholics	Sufis
		Ecumenical Churches	Shiites
			Sunnis
CODE	P01-08	01-30	01-22

P = Participants/Respondents

Codes = Showing the number of active participants per religious group

At the proposal stage of this study, it was determined that a total of fifty (50) religious leaders would be interviewed and relevant data generated. The distribution at the beginning was to be as follows: 10 people from African Traditional Religion, 25 from Christianity and 15 from Islam. The study project targeted these people following their knowledge of the subject matter. However, the final number of participants were 8 participants from African Tradition Religion, 30 from Christianity and 22 from Islam. For the African Traditional Religion group, the number of participants was less than what was anticipated while for Christian and Islamic groups, the number were more than the projected number. Some African Traditional leaders proposed that I must go also to other districts of Free State like Parys, QwaQwa and Senekal to get more information from African Traditional leaders there. However, this research project focused on Botshabelo and interviewed only the participants from Botshabelo.

Table 3, shows the location of participants, methods of data collection, timing of interview sessions and the total number of the participants

NO	PARTICIPATING RELIGIONS	BOTSHABELO LOCATION	METHODS OF DATA COLLECTION
1	African Tradition Religion	Sections A, B, C1, D, E1, E2, F, J, R, V, W and Botshabelo West.	Interviews (face to face and telephonic) From June 2018 – September 2018. 8 African Traditional leaders were interviewed. Total = 8.
2	Christianity	Sections C1, C2, E, F, G, H1, H2, and H3, J, K, L, M, N, T, U and Botshabelo West.	Interview (Face to face, telephonic, Skype and textual response) October 2018 to April 2019. 20 religious leaders and 10 other participants were interviewed. Total = 30
3	Islam	Sections A, B, C1, E, F, G, H2, H3, L, M, N, R, T, V and W.	Interview (Face to Face, telephonic and textual response) May 2019 to October 2019. 15 religious leaders and 7 other participants were interviewed. Total = 22.

6.2 Methods of contacting participants and their response rate

Initially, a total fifty (50) participants were proposed for this study. The faith-based groups were formally contacted through a letter, accompanied by a copy of the interview schedule. A copy of the letter to participate in the study and interview questions are attached as appendices. Obtaining replies and acceptances was not easy at first as the researcher had to write several letters explaining in detail what was needed and the purpose of the contact. The researcher's experiences which pass as limitations and challenges, is given below to illustrate how many questionnaires were distributed and how many came back.

6.3 Fieldwork experience and challenges

While interview sessions were conducted with little or no interruptions, it was very difficult to get back all the 10 questionnaires from African Traditional Religion which were distributed. The study ended up getting back only 8 questionnaires out of 10. After getting back the questionnaires, I met the 8 participants at different times and had face to face interviews to clarify some of the answers which I could not understand by just reading the responses on the questionnaires. There was also another challenge in getting permission from the participants from Christianity and Islam to allow me to go ahead with the interviews. However, despite all the challenges at the beginning, the result was good as the research project ended up having more participants from Christianity and Islam. While in the field, a snowball effect was created, and the study ended up with more than 50 participants. The initial plan was to distribute 50 questionnaires as illustrated below in Table 4. I distributed 10 questionnaires to the African Traditional Religion of which 2 participants did not respond and I only ended up getting 8 responses back. I struggled at first to get the response from the Christian and Muslim leaders. I managed to distribute 25 questionnaires to Christians as an initial plan. Amazingly, at the end, there was a snowball system as more people were willing to be interviewed. Therefore, I ended up interviewing 5 more participants that made the number to increase to 30. The same with Muslim participants, 15 questionnaires were distributed and ended up getting 7 more participants making the total number 22. The field work became rewarding as more people from Christianity and Islam were willing to be interviewed. As a result, the total number of participants from the

three religions reached 60 instead of the initial 50. Below is both a tabular and chart representation of the participating religions and the applicable response rates in percentages.

Table 4, shows religions, number of participants and response rates

NO	Religious Institutions	Proposed Participants	Active Participants	Representation in %
1	African Tradition Religion	10	8	13
2	Christianity	25	30	50
3	Islam	15	22	37
	Total	50	60	100

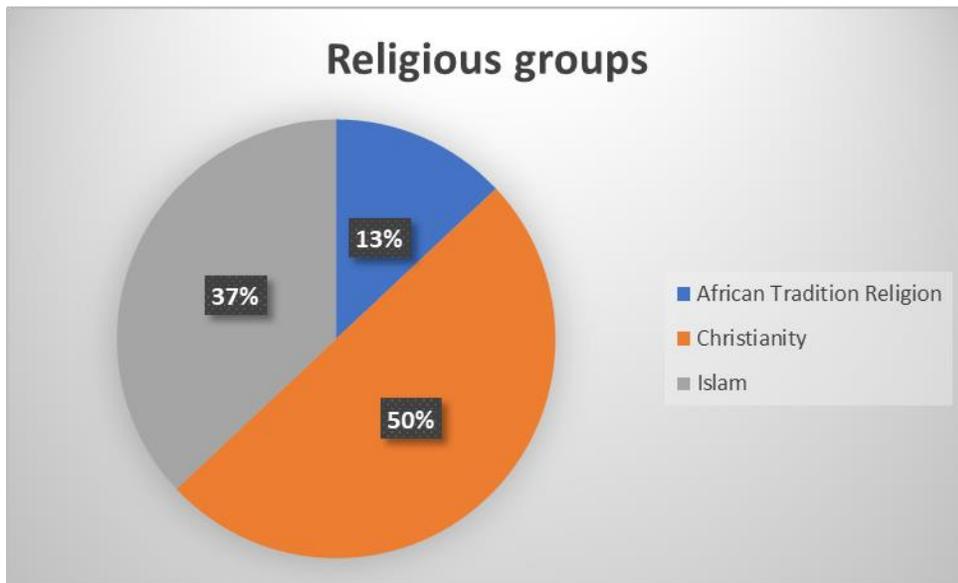


Fig 1, a Pie Chart showing actual participation in percentage (%)

As depicted in Fig 1, the response rate show that African Tradition Religion recorded 13%; Christianity recorded 50%; while Islam recorded 37% of the total number of participants. The researcher discovered through the interviews, that each of the participants willingly participated in the study, thus reinforcing the perception of reliability of the data generated. Their overall

responses to the interview guide also gave the impression that they understood the focus of the study and therefore provided relevant information.

In line with Spradley's (1979) criteria of selecting qualified participants for interviews, the participants who were selected from different religious groups in this study can be said to be clearly eligible in the sense that their responses as insiders reflect their understanding. The above figures show how religious leaders participated in interviews. The following paragraphs show how religious leaders responded, providing the summary of questions and responses of all religious groups. In order to answer sub question four and five, this study used the interview method to collect data. Interview questions were organised around the central and sub research questions as illustrated above. The interview questions were coded as **Q1, Q2 and Q3** as given below.

6.4 Interview questions

Q1. On the assessment of the current level of dialogue by African Traditionalists, Christians and Muslims on climate change and water scarcity in Botshabelo

- a. There have been water shortages for the past few years in South Africa, how has this water scarcity affected your religious practices?
- b. Would you agree with the argument that South African religions as a unified body have not yet been active or written substantial information to address water scarcity?
- c. What are the challenges that result in religious groups in Botshabelo to not engage in interfaith dialogue to address water issues (crises)?
- d. What role does water play in the spiritual practices of your religion?
- e. What is the function and the significance of interfaith dialogue in addressing water shortages in Botshabelo?
- f. How can dialogue by African Traditionalists, Christians and Muslims be strengthened for effective combating of water scarcity?

Q2. On the religious leaders' engagement in interfaith dialogue; why and how could the engagement be relevant to the crises around water sourcing, usage and distribution in Botshabelo?

- a. What could be the unique contribution of religious engagements in interfaith dialogue on water scarcity?
- b. What doctrine does your religion have about water that could address water scarcity?
- c. What is the value of religious doctrine and teaching in addressing water shortages?
- d. What is the new theology and ideology arising from religions' doctrine and teaching that could be used to address water shortages?
- e. How could religious ideology, theology, convictions and doctrines contribute to change attitudes of people towards the use of water?

Q3 On religions' role in influencing the government to implement policies and strategies that address water scarcity in the country

- a. How would you assess the existing government policy declarations aimed at enhancing water management for the socio-economic development of the country?
- b. Some scholars have argued that lack of commitment to policy implementation by the government brings annoyance to the citizens in most African countries, what role should religion play in the area of government policy implementation?
- c. In your own opinion, to what extent can religious leaders influence their community members and the municipality to address water scarcity?
- d. What innovative policy or strategies would you suggest for religions that could create a water theology for interfaith dialogue to address water scarcity?
- e. How could interfaith dialogue make South Africa a water abundant country?

6.5 Responses from interview questions

The participants of interview gave different responses. The following is a summary of the responses from interviewees.

6.5.1 On the assessment of the current level of dialogue by African Traditionalists, Christians and Muslims on climate change and water scarcity in Botshabelo (Q1)

The participants explained that there have been water shortages in Botshabelo since 2014. People have experienced water scarcity in their homes and their religious practices. The interviewees added that, in the past years, despite this serious problem of water scarcity in Botshabelo, religions of Botshabelo as a unified body have not been vociferous in addressing the water shortage. Religious leaders however pointed out that individuals from different religions in Botshabelo had expressed their concern over water scarcity at personal levels and not as an interfaith group. According to the religious leaders, there are some challenges that make interfaith dialogue difficult.

The religious leaders explained that in the past, religions of Botshabelo used to meet to discuss and find solutions to criminal activities such as theft and gangsterism in the community. When asked why this religious forum does not engage in interfaith dialogue to discuss water shortages, they pointed out some of the challenges that makes interfaith dialogue addressing water shortages in Botshabelo difficult. Such challenges are:

- 1- Inadequate formation in one's religion.
- 2- Lacking knowledge and consideration of another's religion.
- 3- Cultural dissimilarities and the lack of tools for dialogue across cultural confines.
- 4- A poor understanding of the meaning of dialogue.
- 5- A self-sufficiency, lack of openness and putting aside of one's own religious position.
- 6- A lack of eagerness for dialogue and appreciation of the value of interfaith dialogue.
- 7- Mistrust about the motives of the other religion in dialogue.
- 8- Stumbling block from defensive position when expressing one's own religion.

Other participants of the interview pointed out three other challenges which are related to the above. According to them: The first challenge is a lack of focus. The second challenge is when people feel that they should ignore or abandon their religious beliefs in order to fit in interfaith dialogue. The third challenge is converting or trying to convert others.

The participants said that religions are aware that water plays a significant role in religions and there is a need for religions to come together to address water scarcity in the community. They added that water can play a role in healing the sick. They also mentioned that God has given spiritual powers to pastors who when they pray over water, the water is filled with the power to heal the sick and to chase away evil spirits. Christian leaders further pointed out that another religious role that water plays is baptism. In the Christian religion, members are integrated into the Christian community through baptism which symbolises the embracing of Christ and Christian values. Through baptismal water, God purifies human beings from spiritual contamination caused by humanity's fallen nature. One would wonder why religions had not yet engaged in interfaith dialogue to address water shortages. What the African Traditional and Christian leaders said about the role of water is similar to what is demonstrated in Chapter Four, section 4.3.1 by Zenani and Mistri (2018:9). And what the leaders said about the sacramental approach to water is like what is illustrated is in Chapter Four section 4.3.2 by Daneel (1991:107).

6.5.2 On the religious leaders' engagement in interfaith dialogue; why and how could the engagement be relevant to the crises around water sourcing, usage and distribution in Botshabelo? (Q2)

The participants stated that religious leaders in the community when they speak to address certain community issues, they have authority to influence the community members. Therefore, said the interviewees, it is relevant for the religious leaders to engage in interfaith dialogue and advocate for water conservation. Interviewees pointed out that religious leaders are respected in society and people listen to them when it comes to addressing the matters that affect the community. The respect emerges from the sacredness of the office that religious leaders hold. The participants described that the theology behind water is that water is sacred, water gives life and religions uses water in their religious practices and their homes. Therefore, it is fitting that religious leaders engage in advocacy for water conservation. The continuous water shortages in Botshabelo have had a negative impact on the lives of community members. According to the participants, the unique contribution that religious leaders can render to the community in Botshabelo is to engage in interfaith dialogue and address water scarcity.

African Traditional Religious leaders who participated in interviews stated that water plays a religious role of healing sick people because water is sacred. They added that there are some sicknesses that need a traditional healer to take the patients to the river to invoke the spirits residing in the water to heal the patients. According to the participants, water restores life. African Traditional Religious leaders further explained that traditional healers use holy water to mix with herbs in order to heal the patients. The herbs also need water to grow. Water scarcity has a negative impact on their religious practices. According to the religions' ideology, water is sacred and must be conserved.

6.5.3 On the role of religions in influencing government to implement policies and strategies that addresses water scarcity in the country (Q3)

Elkington Sibusiso Mnguni (2020:1) states that “the policies about having sufficient water are not yet implemented everywhere in the country.” Mnguni (2020:1) adds that “Chapter 2 of the Constitution of South Africa (1996) states that everyone has the right to sufficient food and water. Such policies need to be implemented.” African Traditional Religionists, Christians and Muslims during the interviews also pointed out that the South African government has good policies for water rights and environmental conservation; however, the problem lies in their implementation. Some participants mentioned that despite the government having good policies, still there are some places like Botshabelo, Parys, Senekal and QwaQwa in the Free State Province that have been experiencing water scarcity for more than 3 years. In QwaQwa, water taps are dry, and people have often protested over service delivery, complaining about not having clean water. The participants of the interviews added that there are some people who were trained to monitor water losses during the leadership of President Jacob Zuma; unfortunately, although such people are qualified to monitor water losses and to conserve water, they were never employed. In Botshabelo, in the past years, the municipality could not fix the broken pipes quickly, sometimes it could take weeks before the municipal workers fixed the leaks and water was just wasted. The church leaders in the interviews illustrated their frustration by government's lack of policy implementation. They stated that it is annoying to see that government has good policies which are not implemented. Religious leaders pointed out that

interfaith dialogue must play a role of whistle blowing, to remind the government about the good policies which lie under the carpet. Some interviewees stated that religious leaders have the authority to influence the government to implement policies. Church leaders are respected by government leaders and community members. Religious leaders' roles therefore are to recognize the power they have and use such powers to influence government to implement those policies. Some church leaders in the interviews also mentioned that interfaith dialogue on water theology can influence their community members to address water scarcity because religions have the forums to meet people and advocate for water conservation. They pointed out that the forums that religions have should be used to sensitize the people about water conservation. According to the analysis of religious leaders, religions have forums where they meet their congregations in larger numbers every week on Friday, Saturday and Sundays which most of the organisations and political parties do not have. Thus, such forums can be used to bring awareness to the members about water shortages and influence the people to conserve water.

The religious leaders in the interviews explained that the innovative policies that religion can suggest to the government to address water scarcity are attentiveness, responsibility and solidarity. The religious leaders pointed out that government leaders and the community members must be attentive to quickly identify the social problems that affect a society before it worsens. Once the social problem is identified, then an awareness campaign should be implemented in order to curb it. I agree with religious leaders who suggest that the government, business, religious and other sectors must have the policy of attentiveness. For instance, currently, during the COVID 19 pandemic, government leaders were attentive in quickly identifying the problem and putting measures in place to engage in awareness campaigns sensitising the community to the dangers of the virus and implementing measures to control it. Though the level of awareness has not been as effective according to some critics of the government, the government to some extent has engaged in awareness campaigns to address the pandemic. The same engagement in awareness campaigns about the pandemic, is the same engagement that one could expect in addressing water shortages around the country. If water pipes age and start to burst, the government should be attentive and replace them before they start to burst. Replacing the aging water pipes would prevent the loss of water through the broken pipes. Community members should also be attentive to observe in their area if there are

leaking pipes and report immediately to the municipality. Attentiveness is not only the responsibility of government leaders but is for every citizen of the country and every member of the community. The religious leaders further stated that government leaders also need to be aware that they should take responsibility to address social problems. The government should take responsibility and undertake awareness campaigns to sensitize the community about water scarcity and water conservation. The community members should take responsibility also to report any water problems. There is a need of solidarity in addressing water scarcity problems. The government leaders, religious leaders and the community should see the importance of working together in addressing social problems like a water shortage.

The religious leaders pointed out that interfaith dialogue should strive at making South Africa a water abundant country. Interfaith dialogue should influence the government and the community to promote policies such as attentiveness, responsibility and solidarity. Religions should engage in an awareness campaign and encourage the government and the community to work together in addressing water shortages. Following the responses from the interviews, the study developed some findings which will be demonstrated below.

6.6 Presentation of Findings

This section presents a summary of the findings of the research about the current level of interfaith dialogue and the engagements of religious leaders in interfaith dialogue in Botshabelo.

6.6.1 On the assessment of the current level of dialogue by African Traditionalists, Christians and Muslims on climate change and water scarcity in Botshabelo (Q1)

In the process of interviews, the following are some of the points that this study considered to be relevant in responding to the research questions:

1. Water scarcity has had a negative impact on the religious practices of religions in Botshabelo.
2. Religions were not engaging in interfaith dialogue in the past to address water shortages due to some challenges that makes interfaith dialogue difficult. However, currently, they

have started to engage in interfaith dialogue to address the water scarcity problem in Botshabelo.

3. Water is sacred because it was created by God.
4. Water gives life.
5. Religions have the obligation to come together to address the water shortages.
6. Religions have the responsibility to advocate for water conservation.

6.6.2 On the religious leaders' engagement in interfaith dialogue; why and how could the engagement be relevant to the crises around water sourcing, usage and distribution in Botshabelo? (Q2)

During the interviews, the following emerged as significant points for religious engagements in interfaith dialogue to address water shortages:

1. Religious leaders have the authority to influence the society and the government to address economic, social, political and religious problems. Engagement of religious leaders in interfaith dialogue to address water shortages in Botshabelo is bearing positive results. The positive outcome becomes a tool in addressing other social, economic, political and religious problems.
2. Water is essential in the rites and rituals performed by religions.
3. Water is the final resting place for the ancestors.
4. Water is used as medicine to heal the sick.
5. Water theology stresses the significance of looking after nature.
6. Water theology challenges and invites the people to look after the environment.
7. Water conservation means humanity taking responsibility for the environment.
8. Human beings are connected to God through creation. Therefore, destruction of nature leads to destruction of relationship between God and humanity.
9. People are invited to reflect on what the scriptures say about nature.
10. There is a need for advocacy on water conservation. Advocacy for water conservation has started recently in Botshabelo by the religious forum and is bearing fruits.
11. Theological advocacy is about bringing awareness to issues affecting humanity.

6.6.3 On the role of religions in influencing government to implement policies and strategies that addresses water scarcity in the country (Q3)

Some of the views from the participants on how to influence the government to implement strategies and policies are as follows:

1. The South African Constitution has provisions on water distribution, but the government does not implement such policies in some places.
2. Not everyone has clean water for house usage in South Africa.
3. People are frustrated by government failure to implement policies on water.
4. Religious leaders have the authority to influence the government in policy implementation.
5. Religious leaders have the capacity to influence the government to address water shortages in Botshabelo.
6. Religious leaders have started to get involved in awareness campaigns and sensitising the community about water conservation.
7. Religious leaders have the capacity to advocate for innovative policies such as attentiveness, responsibility and solidarity.

6.7 Emerging themes from responses

Following a critical review of the responses to the interview questions upon which this study is based, the researcher noted that the following themes emerged in the overall positions of the participants: Promotion of interfaith dialogue to engage in water conservation (theology of water), working in solidarity, taking responsibility for water conservation, promoting awareness campaign which is the advocacy for water conservation and influencing the government to implement policies.

On interview question one (Q1): The major theme is the sacramentality of water. Water is considered to be sacred. Water gives life and must be conserved. Religious leaders in Botshabelo in the past were not engaging in interfaith dialogue. Currently, they have started to engage in interfaith dialogue to conserve water.

On research question two (Q2): The major theme is the contribution of religions engagements in conservation of water. This engagement is what is known as water theology or the theology that cares for the environment. The other theme is ‘theological advocacy on water conservation, that is the theology that sensitises people on how to conserve water.

On research question three (Q3): The major them is influence of religious leaders in policy implementation. It emerged that religious leaders have the authority to influence government to implement policies. It was mentioned that government has good policies that could help to mitigate water scarcity in Botshabelo. The problem with the government is lack of policy implementation. The following are some of the policies that were illustrated that religious leaders could remind the government to implement. Such policies are:

- (1) Decentralisation of cities.
- (2) Improving the water management systems.
- (3) Advocating for ways and strategies that responds to water shortages. Such strategies are:
 - (a) Promoting water security by integrating the wider resource perspectives.
 - (b) Promoting mainstream water in broader city resilience exercises.
 - (c) Promoting transboundary cooperation between cities and countries.

The above mentioned policies are some of the few policies that were mentioned during the interviews that religious leaders could influence the government to implement in order to address water scarcity in Botshabelo. Chapter Eight will illustrate how the implementation of these policies could address water shortages in Botshabelo. Chapter Eight will also point out other policies which were mentioned and are not listed in this chapter.

In view of the findings emanating from the responses to the research questions as outlined above, the researcher strongly suggests that there is a need for religious leaders to engage in interfaith dialogue to address the problems related to water scarcity in Botshabelo and the Free State Province. In the next chapter, which discusses the findings, a critical evaluation of the findings

will be made while drawing inferences and strengths from the literature and theoretical frameworks which underpinned this research. It is hoped that the data generated for this study, analysed and presented in this chapter will reinforce the justification for this study. In the early part of this chapter, section 6.3 paragraph 3, Spradley (1979) advice on the question of the sources of data for a qualitative study was highlighted and will now be revisited.

6.8 Conclusion

The chapter highlighted the data generated from the study. These include the research method employed, the study sample size and sampling method, data collection and analysis procedure, data collation and presentation method. In the course of presentation of the study findings, the chapter noted the common themes which came out prominently from the participants' responses, and these will be critically considered in the next chapter to demonstrate how the various findings address the study's research questions. The chapter addressed research sub question four by demonstrating the emerging theologies of water from interfaith dialogue on the present environmental crises. The central finding of Chapter Six is that water is sacred, gives life and interfaith dialogue on the theology of water is relevant to address water shortages. One of the findings of the interviews was that the religious forum of Botshabelo has started recently to engage in advocacy for water conservation using interfaith dialogue and its advocacy is bearing positive results in addressing water shortages. The other finding is that religious leaders have the authority to influence policy implementation which could help in addressing water shortages. A fourth finding is that interfaith dialogue can contribute a lot in addressing social problems such as water scarcity. The following chapter discusses the findings of Chapter Six about the contribution of interfaith dialogue to the theology of water.

CHAPTER SEVEN

DISCUSSION OF THE FINDINGS ON RELIGIONS' SIGNIFICANCE TO ADDRESS WATER SHORTAGES

7.0 Introduction

In Chapter Six, the participants pointed out the relevance of interfaith dialogue in addressing water scarcity problems. Chapter Seven is an assessment of the findings. This chapter examines the results of the interviews and assesses the significance of such findings. The discussion on the findings aims at evaluating how such findings addresses the central research question: how religious groups' engagement in interfaith dialogue might assist in mitigating the issues around water sourcing, usage and distribution in Botshabelo?

7.1 Discussion of Findings

According to Dean R Hess (2004:1), "the chapter dealing with the discussion of findings in a doctoral thesis is intended at clarifying the meaning of the results of the study. It includes the discussion of the main findings, significance of the findings and how the findings relate to those of similar studies." Sara Cotterall (2011:1) states that "the purpose of the discussion of findings' chapter, especially in a doctoral thesis, may also be to collate the research findings and demonstrate the researchers' ability to think critically about issues for advancing creative solutions to the research problems". Brian Paltridge and Sue Starfield (2007:1) concur by stating that "research findings are important as they create the foundation for the researcher to check if the research has responded to the central research question." According to Paul D Leedy and Jean Ellis Ormond (2005:2), "discussing and interpreting data means linking the findings to the original research problem, specific research objectives and questions, the literature and theories." Accordingly, this chapter shall examine the findings or results that emerged from the collation and presentation of data generated from the participants in this study. Gopalakrishnan Chennat,

Tortajada Cecilia and Asit Biswas (2005:1) point out that “it is vital for the researcher to create a section that assesses the finding.”

The aim of this section is to assess the findings in order to determine to what extent the findings and emerging themes respond to the central research question. This section discusses the findings and the themes that emerged from the data. Regarding the current state of dialogue among the African Traditional Religions, Christianity and Islam on water scarcity, the study found that the three religions in the past years did not engage in water conservation discussions. The religious leaders who participated in the interviews claim that interfaith dialogue can contribute to addressing problems of water shortages when church leaders engage in water conservation advocacy. The community also needs to take full responsibility to conserve water.

Water is one of the basic needs for human beings to survive. One of the participants who is a medical doctor pointed out that human beings can survive for 40 days without food if they are able to drink water. That makes water only second in the line of most important basic needs of life. The religious leaders in Botshabelo pointed out that there is a need to start engaging in water shortage discussions because it is a problem that affects all the religions despite their differences. The religious leaders described that water is needed for their human survival and their religious practices. They admitted that working together as a body of religions in addressing water scarcity can bear more fruit than tackling the problem in isolation. They also pointed out that interfaith dialogue in Botshabelo must be strengthened. According to them, interfaith dialogue can be strengthened once religions begin to come together to discuss the issues that affect humanity. Water scarcity is a social problem that needs the involvement of all religions in addressing it. The Muslim participants stated that water is important to humanity because even people who do not belong to any religion need it for their survival. The religious leaders stressed that in order to strengthen interfaith dialogue for effective combating of water scarcity, there is a need to put aside their religious differences and attack the common enemy.

Assessing the current level of interfaith dialogue and the challenges that hinder religious leaders from engaging in interfaith dialogue, the researcher and the interviewees reached the conclusion

that these challenges can be addressed if there is tolerance and respect. The dialogue between religious traditions is necessary to address water shortages in Botshabelo.

Chapter Six pointed out that the religious forum of Botshabelo recently started to engage in advocacy for water conservation and demonstrates that their awareness campaign on water conservation is bearing positive fruits. Through interfaith dialogue, the community of Botshabelo came to learn about the existence of other groups that promote environmental conservation, the groups that were not known in Botshabelo such as the Southern African Faith Communities Environment Institute (SAFCEI). SAFCEI supports faith-based organisations to engage in matters of environmental conservation. SAFCEI is a multi-faith organisation committed to supporting faith leaders and their communities in Southern Africa to grow awareness, understanding and action on eco-justice, sustainable living and climate change. SAFCEI was launched in 2005 after a multi-faith environment conference that called for the establishment of a faith-based environment initiative. According to SAFCEI (2019), religious leaders should work hand in hand with other organisations in raising awareness to address environmental issues. SAFCEI (2019) challenges the world leaders to pay attention in addressing climate change.

The religious leaders argue that world religions can help to address social problems like water shortages. They draw their argument from what they have observed happening in Botshabelo from the time they began to engage in water conservation sensitisation and reporting of leaking pipes. From the positive outcome of interfaith dialogue in Botshabelo, the researcher affirms that interfaith dialogue on water theology could be used as a tool in addressing social problems such as water scarcity. This affirmation from the religious leaders is backed by the literature from Chapter Four that demonstrates the significance of religion in addressing environmental problems and social problems. Chapter Six also illustrated the relevance of religious leaders in engaging in interfaith dialogue when the participants mentioned that religious leaders have influence in the community due to their religious authority. According to the participants of the interviews, religious leaders through water conservation advocacy, can influence the community and government to implement policies that addresses water shortages in the community.

Surrounding the contribution of interfaith dialogue and its relevance in issues around water sourcing, usage and distribution in Botshabelo, the central finding of the research project is that religious leaders' engagement in interfaith dialogue has assisted the community to take responsibility of water conservation in Botshabelo. The positive outcome of interfaith dialogue in Botshabelo proves that religions could play a role in the community to address social, economic, political and religious problems. Religious leaders in Botshabelo speak from their own experience because the outcome of their engagement in interfaith dialogue to address water shortages has positive results.

About religion's role in influencing the government to implement policies and strategies that addresses water scarcity, the study discovered that the South African government has good policies about water which are not implemented in some places. Chapter Six noted that religious leaders have the authority to influence the government to implement policies. What gives authority to religious leaders to influence government is the office which they hold. Moreover, the majority of the people in Botshabelo belong to a religion, therefore, religious leaders' engagement in interfaith dialogue has the potential to influence policy implementation.

The themes that emerged from the findings are attentiveness, responsibility and solidarity. The findings of Chapter Six suggested that religious leaders and the government should advocate for attentiveness, responsibility and solidarity as the strategies to conserve water. It was stated that people should be attentive to identifying the leaking pipes and any other problems that might lead to water shortages. In addition, communities should take responsibility for reporting leaking pipes to the municipality. Chapter Six stressed that there is a need for solidarity among religions, government and other groups in addressing water scarcity. There is a need for water theology, that is, the theology that advocates for the care of water.

The new theology and ideology arising from the research is water theology, that focuses on the care for water and the environment. Participants pointed out that, according to the teaching of religions, water is sacred and it gives life. Therefore, religious leaders should engage in interfaith dialogue to advocate for water conservation. Advocacy for water conservation according to the participants, means saving life. The religious leaders who participated in the interview pointed

out that the ideology, theology, convictions and doctrines around water can contribute to change the attitudes of people towards the use of water. They said that advocacy for water conservation is needed.

7.2 What is advocacy and why advocate for water conservation?

Learn Tearfund organisation (2007:6) defines advocacy as “concerned with influencing people, policies, structures and systems in order to bring about change. It is about influencing those in power to act more fairly.” Tearfund (2007) describes that advocacy is about seeking with, and on behalf of poor people to address the underlying causes of poverty, bring justice and support good development through influencing the policies and practices of the powerful. The person who is involved in advocacy is called an advocate. Elwell Walter (1997:1) defines advocate in a spiritual sense as “one who pleads another's cause, who supports another by defending or comforting him.” Walter (1997:1) notes that “advocate is a name given by Christ three times to the Holy Ghost (John 14:16; 15:26; 16:7, where the Greek word is rendered as Comforter.” Matt Slick (2015:1) opines that “an advocate is someone who pleads the case or the cause of another person usually in a judicial court. The term advocate occurs five times in the New Testament: John 14:16, John 14:26, John 15:26, John 16:7 and 1 John 2:1.”

In the process of conducting the research, encouraging the religious leaders to start engaging in interfaith dialogue on water scarcity and advocating for water conservation, the researcher observed that the advocacy for water conservation is bearing fruits in Botshabelo. This section demonstrates how advocacy for interfaith dialogue on water theology is being implemented in Botshabelo and its outcome. The importance of interfaith dialogue and advocacy in water conservation is observed in the way it is helping to address the water shortage in Botshabelo. The first time I undertook interviews in 2018, some religious leaders stated that interfaith dialogue cannot work to address the social problems while others were positive and were adamant that interfaith dialogue is vital in society and can help to resolve social problems if all religions unite in addressing common problems that affect the community. Against the two opposing sides, I presented both arguments to the Religious Forum of Botshabelo who decided to try it and see whether it could work or not. I had to explain how interreligious dialogue works, that is; when

different religious groups meet, members must meet as equals and each religion must put its religious supremacy aside. I stressed that we meet to address the common problem that affects all of us as a community, the problem of a water shortage. After explaining how interreligious dialogue works, the first role of religious leaders in the forum was to embark on advocacy for water conservation in their religions. These religious leaders also took the task to report any water leakages to the municipality and also invited their members to do the same, that is, to report water leakages. And after every after three months, we had to meet as a forum to do a quarterly evaluation of how we were progressing with advocacy of water conservation and reporting of water leakages. The first report we had was that religious leaders of different religions had started to sensitise their congregation about water conservation during their religious gatherings.

In March 2020 after two years of sensitization, I decided to go to the offices of the municipality to find out if there was any improvement about water conservation. The officer responsible for the department of water at the municipality admitted that they have been receiving reports almost every day that the water pipe had broken on the road and water was being wasted. The officer appreciated the effort and initiative of the community to take responsibility in reporting the water leakages. Through the reports that the municipality received from the members of the community, the municipality was able to fix the leaking pipes. In this way, water was conserved. The officer pointed out that the municipality appreciated that people had taken the responsibility to report water leakages and that the challenge remained with the provincial government to help the municipality with money so that they can buy new pipes because the old pipes seemed not to hold the water pressure, giving the municipality a lot of work to fix the broken aging pipes.

The continuous reports from members of the community in Botshabelo, some of whom who report the water leakages who come from different religious groups has helped the municipality to be aware of the problem and the need to find a permanent solution to conserve water. One can imagine if no one reported water leakages to the municipality, how many litres of water could have been wasted by the leaking pipes. Thus, interfaith dialogue has yielded a positive outcome in addressing water shortages in Botshabelo. The positive outcome of interfaith dialogue in Botshabelo is that people are becoming more aware of the need to conserve water. Through

interfaith dialogue, the continuous engagement of religious leaders in sensitisation and awareness campaigns for water conservation by encouraging their congregation to report the leaking pipes and fixing the broken pipes is bearing positive results. Following the positive results in Botshabelo about water conservation, this chapter suggests that religious leaders' engagement in interfaith dialogue appears to be an alternative tool to address water problems in South Africa. The religious leaders pointed out that the engagement of interfaith groups to embark on advocacy for water conservation, working together as religious team through interfaith dialogue to bring awareness to the community about the need to conserve water in Botshabelo, has helped to address the problem of water scarcity to some extent. Different religions were using their religious platforms to sensitise their congregants to conserve water. The religious leaders mentioned that theological advocacy is needed in Botshabelo to address further water shortages. This project of water conservation advocacy should be taken as a religious forum initiative to address water shortages through theological advocacy.

7.2.1 Theological advocacy

Seth E Bouvier (2013:1) states that “theological advocacy is the advocacy that theologians use to analyse the context and to assess how the context can be transformed by using God’s presence in different situations.” Bouvier (2013:1) notes that “any advocacy is rooted in some major themes like theology, sociology and many others. The science that studies God is theology. Theological advocacy is the one which is rooted in God and responds to God’s call.” According to Bouvier's (2013:1), “God calls people to faith, ministry and service. It is up to an individual to reflect on God’s personal call.” The person who discovers God’s call and acts on it does advocacy with passion and does not fear anything; for instance, the prophets who challenges any injustices in the society exercises the prophetic voice of God. God can also call people as a community. Bouvier (2013:1) states that “when one talks about theological advocacy, the main question to ask is whether that advocacy is rooted in God or not.” Jame Schaaf (2015:3) argues that “even our mental advocacy needs to be intertwined with the call to ministry if we are doing theology. And if any theological advocacy is not intertwined with God’s ministry, then that advocacy needs to be critiqued and challenged.” Le Bruyns (2007:1) points out that “the advocacy that is needed in the society is the one that brings social transformation. Sometimes, in bringing social transformation, confrontations arise. Engaging in social transformation is part of the ministry that

God has called theologians to engage in prophetic liberation.” Le Bruyns (2007:2) describes that “advocacy for economic justice confronts ecumenical and civil society networks with a meaningful and strategic opportunity to contribute both critically and creatively to socio-economic transformation in contemporary society through a ministry of presence.” Religions have doctrines that demonstrate the sacredness of water.

7.2.2. Advocacy for water conservation

The response arising from the interview in Chapter Six points out that religions should engage in water conservation using interfaith dialogue, this is what is referred to as the doctrine of water theology or the theology of water. The words theology of water according to the research focuses on water and nature conservation. Water is part of nature and is connected to many living things in nature. Plants and animals all need water to survive. Theology of water puts emphasis on caring for water. In the late 20th Century, the term eco-theology emerged which refers to looking after the environment. Failure to advocate for water conservation might lead to the destruction of humanity. If humanity refuses to look after nature, there is no way nature will look after humanity. There is an interdependency between nature and humanity and thus there is a need for a theology of water.

7.3 Water theology

In the research, it has been illustrated that water theology is a new term standing for a religious doctrine that focuses on water conservation. It is a term that arises from this research. Water is part of nature and to conserve water means to conserve nature. The fundamental principle of water theology is the human stewardship towards nature, taking responsibility to conserve water. The value of this religious doctrine of environmental care is to emphasise water conservation. Eneida Jacobsen, Rudolf von Sinner and Robert Zwetsch (2012:1) state that “water has a symbolic meaning in many religious groups.” They argue that water has been one of the most extremely frightening natural elements; and the aggressions it suffers will inevitably have catastrophic consequences for humankind. Jacobsen, Sinner and Zwetsch (2012) challenge people to look after water. Looking after water is linked to looking after the environment. Jacobsen, Sinner and Zwetsch (2012:1) describe that “lack of care for nature is what causes

catastrophes like floods, tornadoes and water scarcity.” Society should learn to care for the environment while religions need to advocate for eco-theology.

7.4 Eco-theology

Celia Deane-Drummond (2008:7) defines eco-theology as: “a reflection on different facets of theology in as much as they take their bearings from cultural concerns about the environment and humanity’s relationship with the natural world.” It is, in other words, broadly speaking an expression of contextual theology that emerges in the contemporary context of environmental awareness that has characterized the late twentieth and early twenty-first centuries. Conradie (2020:2) describes that: “Eco theology could be equated with renewed attention to the doctrine of creation, anthropology and environmental ethics.” Conradie (2020:3) explains that “the World Council of Churches has taken the lead in addressing environmental issues.” Conradie (2020:3) adds that “this has helped to ensure that environmental issues are framed as matters of justice and not merely nature conservation or wilderness preservation.” The participants pointed out that water is significant and needs to be conserved. Water is part of the environment. Willis Jenkins and Christopher Key Chapple (2011) state that religions have the obligation to educate people on environmental care. Jenkins and Chapple (2011:441) point out that “understanding the interaction of human and environmental systems requires understanding the religious dimensions to the integration of ecology and society.” According to Jenkins and Chapple (2011:446), “theology is all about the study of God and eco-theology therefore is about the study of God, the divine relation to the world, a relation in which all creatures in our eco-social lives and are called to participate.”

Conradie (2020:7) argues that “there is a need of more practical task of exercising responsibility regarding earth keeping at the micro- and macro-levels (the so-called royal task of believers). This requires critical reflection on ethos, praxis and wisdom.” According to Conradie (2020:7), “this constructive task in society can only come to fruition if it is indeed based on a contribution to Christian authenticity. From a theological perspective this may be the most important of the three responsibilities (prophetic, priestly and royal) given that Christianity is not an aim in itself but is aimed at the coming reign of God.” Conradie (2020:7) adds that “this task clearly requires

constant engagement in the public sphere between churches, faith-based organisations, various levels of government, business and industry on a range of concrete issues but also on moral visions, rights, values, middle axioms, policies and programmes. It requires critical engagement with the sustainable development goals (SDGs) as proposed by the United Nations.” Deane-Drummond (200:7) asserts that “the widespread secular engagement with environmental issues at global, national and local levels, is highly significant. This development is not simply the concern of a minority interest group but reaches out to include all those who are aware of global and local environmental problems.” Deane-Drummond (2008:7) points out that, “considering that the environmental problems affect human survival as well as the survival of all creatures on our planet, such issues deeply touch our sense of meaning and purpose.” In other words, it is hard to talk meaningfully about ecology in such a context, without also speaking about religion and theology as well. He adds that this is also true the other way around, so that for theology to be meaningful, it must also encompass an awareness that is beyond the human, inclusive of the natural world in which humanity is embedded. Ecology here means the broader context of ecological concerns, as well as that described by ecological science as such. According to Deane-Drummond (2008:9), “eco-theology seeks to uncover the theological basis for a proper relationship between God, humanity and the cosmos. Humans are understood in Christian tradition to be created but alienated from the natural world through their own tendencies towards domination.” He adds that many approaches to eco-theology are those that seek to recover our sense of place on the earth, a reminder that the earth is our common home, that the story of the earth and that of humans are one. This may also be broadened out to include the economy, the ‘*oikos*’ or household of God.

Human beings are called to care for the environment because human survival depends on the way we look after the environment. Though world religions have addressed environmental problems, the impact is minimal. The theology of water aims at addressing environmental problems by putting emphasis on water conservation. John Barnett et al (2010:1) claim that “throughout most of human history, the constraints imposed by local environmental conditions and their natural variability were powerful determinants of the security of individuals and societies: animals, droughts, floods, frosts, storms, and other environmental perturbations have been the significant causes of mortality, morbidity, and social disruption.” Barnett et al (2008:1)

point out that “in today’s modern societies technology, trade, industrialization, the use of fossil fuels, occupational specialization, and higher levels of social organization have all weakened the constraints that local environments place on human security.” They add that, since the Industrial Revolution and the consolidation of the modern trading nation-state, there have been thousand-fold increases in the production of goods and the use of energy, and hundredfold increases in international trade in goods and services. Barnett et al (2008:1) describe that “over the same period, the global population has increased from one billion to over seven billion people, and most people now live longer, consume more, and are better educated than in previous generations. Yet the risks that environmental change poses to human security have not been eliminated.” Barnett et al (2010:3) state that “the scale of consumption and pollution in modern, high-energy societies has caused large decreases in primary forest cover; biodiversity losses; depletion of fish stocks; land degradation; water pollution and scarcity.” They add that environmental changes pose a threat to coastal and marine degradation; the contamination of people, plants, and animals by chemicals and radioactive substances; and climate change and sea-level rise. These environmental changes are global because they are universal and because some pollutants such as greenhouse gases and radioactive wastes have global consequences.

Patxi Álvarez and Suguna Ramanathan (2011:7) point out that:

The deterioration of the environment because of human activity has taken on a decisive importance for the future of our planet and for the living conditions of coming generations. We are witnessing a growing moral consciousness regarding this reality. The Catholic Church has been in the forefront of talking about the care of the environment. In the Catholic Church, the three most recent Popes (John Paul II, Benedict XVI and Francis) have insisted on the need for humanity to join forces in their efforts to preserve the environment, and thus to protect creation and the poorest populations who are those most threatened by the consequences of environmental degradation.

Álvarez and Ramanathan (2011:7) describe that “the environment is crying, and we need to preserve it. And in order to preserve the environment, we need to change our hearts.” They add that people need to confront our inner resistances and cast a grateful look on creation, letting our heart be touched by its wounded reality and make a strong personal and communal commitment

to heal it. They argue that in order to effectively address the problem which the environment is facing, people need to apply the teaching of the Catholic Church: See, Judge and Act.

Álvarez and Ramanathan (2011:32) point out that “in order to tackle the problem of environmental abuses, we need to reflect on what the Bible states about the environment.” They describe that according to the Old Testament tradition; creation is always an object of praise (Ps 104: 24). Concerning nature, the work of God’s creative action, when God created nature, God saw that nature was very good (Gen 1:4, 10, 12, 18, 21, 25). Creation is the gift of God to us humanity, wounded by sin. Álvarez and Ramanathan (2011:32) state that “the entire world is called to undergo a radical purification (2 Pet 3:10).” They further illustrate that the mystery of the *Incarnation*, the entry of Jesus Christ into the history of the world, culminates in the Paschal mystery, where Christ creates afresh the relationship between God, human beings and the created world. Álvarez and Ramanathan (2011:32) argue that “neither the pretension of exercising unconditional dominion over things, nor a reductionist and practical ideology that views the natural world as an object of endless consumption, nor a conception of the environment based on eradicating the ontological and axiological difference among people and other living beings can be accepted.”

Álvarez and Ramanathan (2011:33) claim that “many human beings, at all levels, have continued to abuse nature and destroy God’s beautiful world. There is a reckless degradation and senseless destruction of the Earth which is our mother.” They argue that looking at the signs of the times is one way of experiencing the need for this reconciliation. It is ultimately through our faith that we feel a deep sorrow when we see the destruction of God’s gift and the suffering of people. We are led to ask ourselves: Could we not have acted differently? They further point out that while Biblical cosmology is a continuous source of inspiration in matters regarding creation, a moral imperative which we acknowledge is not by itself enough to make us act to sustain the human endeavor of caring for creation. They add that recognizing the integrity of creation, its existence as given by God, the inter-relations between God, human beings and other creatures as good and as valued by God, is not enough to overcome the part we play in its widespread destruction. Such are the limits of the human will, of mind and memory.

Álvarez and Ramanathan (2011:34) state that “people often recognize that more is needed; how the environment is deteriorating and yet we continue to abuse it.” They describe that what is needed is (*metanoia*) change of heart. Álvarez and Ramanathan (2011:34) point out that:

People need to search for the right action beyond our selfishness and sinfulness; we must search in Christ where meaning and power unite. It is from a belief in the God of the cosmos, in the suffering of Christ who was obedient unto death to redeem the fallen nature, and in the indwelling Spirit, that we are called to undergo a *metanoia*, and to become agents of change ourselves. From the goodness of nature and the ethical vision of right relations we gain the spiritual energy to live lives of reconciliation between God, his creatures and ourselves.

Álvarez and Ramanathan (2011:35) state that “the justice dimension of our mission must be a reconciliation between humanity and nature.” They describe that term reconciliation means literally a call to be again together; a call addressed to two parties in conflict, to two enemies, to develop a new relationship. They add that reconciliation theologically is the restoration of broken relationships between God and people. God initiates this process of restoration, humans respond to God's initiative through faith, and the outcome is the reconstruction of the human community as a new creation. They explain that for Christians, therefore, hope for reconciliation is closely linked with faith in Christ's saving work among people. Álvarez and Ramanathan (2011:36) point out that “it is to be noted that an excessively spiritual interpretation of reconciliation with God has often led to an individualistic and subjective approach to life. The term establishing right relationships is equivalent to establishing relationships based on justice.” They argue that to understand the relationship between the terms reconciliation and justice, the term justice should be understood in its widest sense. Álvarez and Ramanathan (2011:36) state that:

The word justice includes the three dimensions of justice: commutative justice requiring reciprocal relations among individuals or private groups established on a basis of equality; retributive justice requiring compensation for injustices committed; and finally, restorative justice which involves expanding the relationship between reconciliation and justice, mean that reconciliation cannot be strictly reduced to a spiritual reality without any change in the actual hard realities.

In order to address ecological problems, Álvarez and Ramanathan (2011:37) suggest that “people need to apply mitigation, adaptation and social construct as a transformative agenda.” Álvarez

and Ramanathan (2011:37) add that “in dealing with restorative ecological justice, we need to take up the concepts of mitigation, adaptation and social construct.” They argue that in the global North, mitigation is the primary and much needed approach to addressing climate change. Mitigation is dependent upon technological responses that reduce the sources of carbon production, particularly from the energy sector, and on finding alternatives that are less ecologically damaging. Álvarez and Ramanathan (2011:38) point out that “deliberate or unintentional adaptation is the adjustment of natural or human systems to make them less harmful, or the creation of opportunities that are beneficial in response to actual or expected climatic events and their effects.” They add that adaptation of natural systems includes management of forests, watersheds, habitats, agriculture, fisheries and marine culture options. Adaptation of human systems includes energy and communications, pollution and waste management, infrastructure and transport, micro-finance and social security, early warning systems and disaster response.

Álvarez and Ramanathan (2011:39) point out that “African religious traditions teach us that we are directly connected to creation. In their religious practices, African religious traditions experience life as a continuum that includes creation, ancestors, human beings and God.” Álvarez and Ramanathan (2011:39) describe that “*Bomaswa* hill in Tanzania is described as sacred. People have greater respect for this hill. They may have stripped the surrounding wooded areas of their trees, for charcoal and house building, but they have never touched *Bomaswa* hill.” Álvarez and Ramanathan (2011:39) add that “when land developers pressed the Kunda people of the Mambwe District in Eastern Zambia to sell their land, they declined to leave their present semi-arid and unproductive land because they could not grasp life separated from their ancestral land.” Álvarez and Ramanathan (2011:40) also demonstrate that “Hindu culture believes in a partnership and stewardship ethic which requires holding the land in trust for God and the general benefit of mankind. In this context, abuse and exploitation of creation are unjust and irreligious.”

According to Álvarez and Ramanathan (2011:40), “nature is a gift and is sacred. On a more cultural level, trees and plants are treated as sacred, especially where the gods and goddesses have made their domicile.” Álvarez and Ramanathan (2011:40) point out that “among religions,

there is a deep-rooted attitude of *ahimsa* or non-injury in all relations and towards all living creatures.” Günter Brauch (2000:1) concurs by stating that “religions believe that there is a close connection between human morality and the natural environment.” Álvarez and Ramanathan (2011:40) describe that “human beings are delegated with the sole responsibility of promoting environmental ethics and non-violence, while concern for all creatures and compassion are deep values.” According to Islam, states Álvarez and Ramanathan (2011:40), “the relationship with creation and the Creator forms the ethical basis (respect and responsibility) to sustain all life. Tao religion nourishes, sustains and transforms beings.” Álvarez and Ramanathan (2011:40), add that “human beings, as part of the universe, are internally linked to Tao as well as to everything else.” They bemoan that in recent years, humanity is losing the connection with the environment due to technology and the culture of not taking responsibility to look after the environment. They add that indigenous people and traditional societies are not given the attention needed which might help towards being good stewards for the environment. Álvarez and Ramanathan (2011:41) comment that “indigenous identities and knowledge may have lost power in a global world, but they embody some of the responses that modern culture must heed in its continuing re-evaluation of the world.” Álvarez and Ramanathan (2011:41) add that “indigenous peoples remind us of the need for a restructuring of values and the importance for all to participate on different and reasonable terms if we are to talk of all life.” Álvarez and Ramanathan (2011:41) state that:

To reconcile ourselves with creation we need all paths of communication, all cultures to reflect and speak. When indigenous people nurture a tree, they create a sacred space, and the tree in the community will nurture life as it belongs in the ecosystem and will come to maturity long after that generation dies. The tree gives something to future generations and creates space allowing for diversity of life, the presence of spirit and God.

Álvarez and Ramanathan (2011:41) describe that “many native communities are bound to the land, as was Adam who was *adama* of the soil; the soil is always understood in close relationship to water, and both are seen as sustaining life and the community.” They add that the land is the promise of life (of security and of peace), of sharing as in giving and receiving freely something that needs to be learned again from those who live closest to the land. Álvarez and Ramanathan (2011:42-43) finally suggest the following recommendations that interfaith dialogue can consider in addressing the crisis of land degradation and water scarcity around the world:

(1) Our faith in God's love and fidelity manifested in the gift of life calls us immediately to change our attitudes, and practices, to be steadfast and caring towards creation. The call for reconciliation draws us to create right relationships with God, neighbor and creation, opening for us opportunities to explore deeper in our faith and challenging us to find ways of healing our damaged world.

(2) Our commitment to follow Jesus Christ in poverty, the seriousness of the ecological crisis and the cry of the poor who suffer the effects of environmental dilapidation calls us all to stop and reflect. Humanity and especially those involved in world religions are all invited to reflect seriously on the way in which our functional values driving our everyday decisions and actions remain consumerist at the core. Creation 's groans, growing louder and louder as nature is destroyed, challenge us to adopt simpler lifestyles. In the fulfilment of this task, we are inspired by many people worldwide who want to create a new world based on a just relationship with creation.

(3) We need a deep change of heart. This is the only radical way to face the present ecological challenge. We must, therefore, rekindle the sources of our spirituality; a spirituality that invites us to admit, give thanks and commit ourselves to the life present in creation. In that renovation we will find ourselves affectively connected with other religious traditions, which also contain very valuable spiritual experiences for the protection of creation.

(4) This challenge goes far beyond our capabilities, but we are not alone. There are many social, cultural and religious movements that are already committed to ecology. We are invited to join forces with them, learning from them while contributing our own resources.

(5) All the recommendations outlined are considered important and many are already in practice. They are proposed as invitations to be discerned in community and in our apostolic works, according to the richness of local identities and contexts rather than as peripheral rules to be embraced. The recommendations are meant to remind world religions to respond to issues of ecology, caring for God's creation. Caring for God's creation involves also addressing the causes that leads to earth's degradation such as climate change.

African Traditional Religionists, Christians and Muslims pointed out that there is a need to advocate for water conservation.

7.5 Conclusion

Chapter Seven has examined the major findings of Chapter Six to assess how these findings can assist to address the central research question. The major finding of Chapter Six was that interfaith dialogue is significant in addressing environmental problems. After the scrutiny of the findings of Chapter Six using the available literature on the matter at hand as presented from Chapter Four that talks about the significance of religions in addressing social issues, Chapter

Seven asserts that the engagement of religions in interfaith dialogue to address water shortages can assist in addressing environmental problems. Chapter Five, Six and Seven pointed out that the engagement of religious leaders in interfaith dialogue is significant in addressing environmental problems such as water scarcity.

Through the examination of the findings of Chapter Six and by applying the relevant literature, Chapter Seven asserts that religious groups' engagement in interfaith dialogue can assist in mitigating water scarcity. Chapter Four has demonstrated through literature the contribution of religions in addressing environmental problems. This demonstration affirms the relevance of the themes that emerged from the interviews in Chapter Six and Seven and endorses Fitzgerald's (2000) and Küng's (2004) theories. Interfaith dialogue as illustrated in Chapter Four can be one of the great means of addressing social problems. Religions should collaborate through dialogue to address social problems. According to the findings, religions in Botshabelo have started to collaborate in addressing the water shortages problems. The interfaith collaboration in Botshabelo is bearing fruits and proves that interfaith dialogue could be used as an alternative tool to address social problems. Chapter Six and Seven has discovered that the major contribution of interfaith dialogue in addressing social problems is advocacy. Chapter Six and Seven further illustrated that the religious leaders through their advocacy, have the authority to influence a society to address social problems. The engagements of religious leaders in addressing social, political, economic and religious problems can bear positive results. Chapter Seven pointed out that through advocacy, religious leaders can influence adherents of their various groups to conserve water. The chapter also illustrated that by means of advocacy, religious leaders have authority to influence the government leaders to implement strategies and policies. The following chapter illustrates how religious leaders through interfaith dialogue can influence a society and government leaders to implement policies that leads to water conservation.

CHAPTER EIGHT

RELIGIOUS STRATEGIES TO MITIGATE WATER SCARCITY IN BOTSHABELO

8.0 Introduction

Chapters Four, Five, Six and Seven pointed out that religions through interfaith dialogue have the capacity to influence a society and the government in addressing social problems. Chapter Seven illustrated the relevance of interfaith dialogue. According to Chapter Seven, religion through interfaith dialogue has the power to influence the community and the government to implement policies, which can lead to mitigation of a water crisis in Botshabelo. Engaging in interfaith dialogue and influencing the community and the government to implement the policies is the main strategy that religious groups can use to mitigate water scarcity in Botshabelo. Chapter Eight illustrates some of the key policies that need to be implemented, the areas where religion and religious leaders needs to put more effort and make sure that they influence the society and the government to implement strategies. Engaging in interfaith dialogue and influencing a society and the government to implement those identified key areas answers sub question five. To address water scarcity, religion and religious leaders should engage in interfaith dialogue. In order for religions to become more influential, there is a need for interfaith collaboration.

8.1 Interfaith collaboration

The most important strategy in addressing water scarcity in Botshabelo is to influence the leaders to start interfaith collaboration. Farid Esack (1997:14) states that “it is possible to live in faithfulness to both the Qur’an and to one’s present context alongside people of other faiths, working with them to establish a more humane society.” He adds that the matters of

unemployment, lack of clean water, health and many other issues are on a humanitarian level and all religions have a moral responsibility to respond to such issues, whether at formal or informal level. Esack (1999:180) stresses that “it is important to respond to issues that affect humanity because, at a deeply personal level, we need to be aware that much of our self-respect is measured by the extent to which we own our responses to all life’s situation.” John de Gruchy (1995:210) points out that “the church should take the responsibility for spearheading development by meeting political parties just as they did during the time of apartheid.” In addition, de Gruchy (1995:210) describes that “in 1986, for example, the executive of the United Congregational Church met ANC leaders in Bulawayo, Zimbabwe, and the same year the Catholic bishops sent a delegation to meet with ANC leaders in Lusaka, the Zambian capital.” There is a need for critical solidarity among faiths in social, economic, political and spiritual issues that affect humanity. According to de Gruchy (1995:222), “critical solidarity means giving support to those initiatives which may lead to the establishment not only of a new, but also a just, social order.” Furthermore, de Gruchy (1995:222), states that “it means that the church remains prophetic in its stance towards a new democratically elected government that it must continue to stand for the truth based on a shared commitment to the realization of national reconstruction.” De Gruchy (1995:222) adds, “being in critical solidarity means continued resistance to what is unjust and false, and continued protest on behalf of what is just and true.” De Gruchy (1995:223) describes that “critical solidarity also means taking sides with all who remain oppressed in one form or another in a new democratic society and participating with them in their never-ending struggle for justice, human dignity and liberation.” According to de Gruchy (1995:223), “critical solidarity is an important tool in the issues of development and in addressing the issues that affect humanity.” Critical solidarity in this study means collaboration. There is a need for collaboration through interfaith dialogue among African Traditionalists, Christians and Muslims, especially in addressing the water problem in Botshabelo. Once there is a foundation for dialogue, strategies will be developed.

The World Bank Group (2015:16) state that “water shortage in South Africa is a mixture of many factors: limited and highly polluted watercourses, low rainfall, fast growing population and high evaporation rates.” The World Bank Group (2015:16) add that “many studies on watercourses have shown a decline on quality due to the ongoing pollution caused by

urbanization, mining, industry, power generation, afforestation and agriculture.” Joseph Kapuku Bwapwa (2018:1) points out that “given the current forecasts based on population growth versus the country’s limited water resources, it is unlikely to keep existing patterns regarding the use of water and the discharge of waste.” Bwapwa (2018:1) adds that “predictions indicate that pollutants will continue to accumulate in freshwater resources if no measures are taken, hence influencing the deterioration of water quality in South Africa.” The causes of water scarcity must be addressed for the society to have water. Collaboration among religions is needed to address such problems. Emotional stress caused by water scarcity has made some communities like QwaQwa embark on violent protests. Religions should collaborate with the government in finding the solution to address the perpetual water problems in the areas which are affected to relieve people’s anxieties. One of the solutions that religion could propose to the government is to decentralise the cities.

8.2 Decentralisation of cities

Larry Swatuk, Gregg Brill and Charon Büchner-Marais (2021) illustrate about the need to build urban water resilient cities. The population is continuously growing in cities, and the cities are failing to cop up with the high demand of clean water. Swatuk, Brill and Büchner-Marais (2021:1) state that “water lies at the heart of urban well-being, prosperity, sustainability and survival. The most significant urban challenges are a function of water availability.” They add that ensuring that a diverse set of users have access to the right amount of water of the right quality delivered at the right time in an affordable and sustainable way is no small feat even for the most well-resourced municipality.

Religion has the capacity to influence the society and the government to work on decentralisation of cities. The World Bank Group (2015:17) point out that: “Population and economic growth are jerking up against a finite and increasingly degraded water resource, and this is particularly evident in urban areas.” Muhammad Asif Hanif et al (2020:1) state that “although the extent and nature of this stress varies from area to area and from city to city, many parts of the world will need to manage their water resources much more effectively to sustain their growth, and in some cases, prevent a major regression in water derived safety.” The World Bank Group (2015:17)

state that “with higher rates of urbanization, competition between agricultural, industrial, and municipal water uses will increase, putting stress on existing water sources, and this will excessively impact the poor.” As the population grows and the economy expands against the increasingly degraded water sources, interfaith groups could address the problems by challenging governments to develop rural areas so that people do not leave rural areas to go to towns and increase populations in urban areas. The World Bank Group (WGB 2015:17) point out that “the increasing number of people living in urban areas has contributed to water scarcity in cities. Addressing urbanisation will reduce water stress in cities.” The World Bank Group (2015:18) state that “currently, 54% of the world’s population (i.e., 3.9 billion people) resides in urban areas; by 2050, it is estimated that 66% of the world’s population will be living in urban areas, with nearly 90% of this increase concentrated in Asia and Africa.” The World Bank Group (2015:18) add that the “growing cities will need to provide services to 70 million more people each year over the next 20 years, further increasing the already massive challenge of providing universal access to water supply and sanitation (WSS) services by 2030.” The World Bank Group (2015:19) note that “in this context, growing demand for water supply and sanitation (WSS) services, accompanied by unplanned land use in urban areas, will likely lead to unchecked contamination of surface and groundwater sources. This poses a threat to the security of water supplies and affects the quality of life of urban residents.” The World Bank Group (2015:20) observe that “in the context of today’s urbanization process and growing economic importance of urban systems, the governance framework of cities will determine the impact cities will have on the welfare of nations.” The World Bank Group (WGB 2015:20) add that “cities in Southern Africa must work on having greater decentralized powers. Importantly, the level of decentralization is a critical determinant of how accountable city policy makers are to urban citizens.” The World Bank Group (2015:21) describe that “policies to build resilient cities will therefore be sharply influenced by the governance structure of cities and their level of decentralization in an intergovernmental system.” The World Bank Group (2015:21) point out that “building resilient cities is equally a national responsibility and, therefore, the fiscal and policy relationship between upper tier governments and city governments become equally important in the governance of cities and supporting programs that strengthen resilience.”

8.3 Improving the water management systems

Religious leaders should influence the government to improve the water management systems which are inefficient. The World Bank Group (2015:23) point out that “current approaches to urban water management remain sector-specific, lacking scope to address cross-cutting water-related challenges. Watershed approaches to urban water management, where they exist, are rarely well coordinated with urban planning or with the provision of other urban services.” The World Bank Group (2015:24) state that “local authorities may also lack the information and experience about available technical options. Thus, approaches to urban water management remain fragmented.” World Bank Group (2015:24) add that “consequently, variations in the quantity and quality of water available to cities for drinking water, agriculture, energy, industry, and the environment led to growing water insecurity”. Places like Botshabelo are affected by water scarcity because the local government did not plan their infrastructure well. The poor planning and management of the already deteriorating water infrastructure is the main cause of water scarcity in Free State. Religious leaders should challenge the government to come up with proper planning and to take responsibility to look after the infrastructure. The World Bank Group (2015:25) assert that “urban water management must also consider the increased variability in water resource availability stemming from the effects of climate change; including rising temperatures, changes in precipitation patterns, and climate variability.” The World Bank Group (2015:25) point out that “an estimated 150 million people currently live in cities with perennial water shortage; population growth and climate variability may increase this number to 1 billion by 2050.” Furthermore, observe World Bank Group (2015:25), “most of the key climate risks are concentrated in urban areas, as high urbanization, and rapid growth of large cities are accompanied by an increase in highly vulnerable urban communities living in informal settlements, many of which are on coastal land at high risk from sea-level rise, extreme weather, and climate events.” The World Bank Group (2015:26) say that “the level of vulnerability to the effects of increasing water insecurity and climate change differs across and within cities, and differences in adaptive capacity are determined by poverty and inequality, as well by access to infrastructure, institutions, and information.” The World Bank Group (2015:27) avow that “the urban poor are most vulnerable to these challenges, because they have less access to resources to cope with extreme weather events and are often marginalized from decision making, particularly

in the informal settlements of growing urban areas in developing countries.” The World Bank Group (2015:27) add that “the poor people experience a lot of challenges when there is water scarcity. The voice of the poor is often not heard when they complain to the government. Religious leaders should stand up on behalf of the people and advocate for ways that will address the social problems.” Religious leaders should challenge the government to come up with proper strategies to address water shortages.

8.4 Advocating for ways and strategies that responds to water shortages

Religious leaders have great influence in society. When they collaborate and work together as an interfaith group, they can influence the community and the government to come up with ways and strategies that would respond to challenges of water scarcity. In Botshabelo, some members of faith communities work in the government and are directly involved with the water sector. Once these members hear their religious leaders challenging the congregation to come up with the ways and strategies to address water shortages, there is a probability that some of them might stand up and engage in finding the solution such as building water resilient cities. The World Bank Group (WBG 2015:28) assert that “addressing these increasingly urgent challenges requires an array of interventions and services at the city level to build resilience not only in physical infrastructure but also in cities’ social architecture, governance structures, financial systems and ecosystems.” The World Bank Group (WBG 2015:28) note that “increasing uncertainties coupled with sudden shocks or accumulating stresses could lead to infrastructure failure, economic decline, or social breakdown.” The World Bank Group (WBG 2015:28) add that “a resilient city can adapt to a variety of changing conditions and withstand shocks while still providing essential services to its residents. Such a city will have a series of systems in place capable of absorbing the stresses imposed by climate change as well as those resulting from non-climate risks.”

8.4.1 Promote water security integration

Religious leaders should influence the government to promote water security integration. The World Bank Group (2015:28) point out that “promoting water security integration entails broadening the scope of analysis that includes understanding the availability of water resources,

both surface and groundwater, the quantity and quality available, and the existing competing uses.” The World Bank Group (2015:28) add that “it also includes helping clients to navigate the risks and uncertainties from climate and non-climatic risks, incorporate robustness in system design and operations, and strengthen utilities.”

8.4.2 Promote resilient cities

Religious leaders can play a major role to influence the government to work on such policies like promoting resilient cities. The World Bank Group (2015:29) note that “several global initiatives on building resilient cities focus on many sectors and services. The Water Global Practice (WGP) collaborates with these broader initiatives to ensure that resilience is built into water systems, and thus providing proper service and protection of the most vulnerable.”

8.4.3 Promote transboundary cooperation

Transboundary cooperation is the collaboration that is created between cities and countries across boundaries for mutual cooperation. Religious leaders should influence a society and the government to work on transboundary cooperation. The interfaith collaboration among religions can be used as one of the strategies to be adopted by the South African government when dealing with transboundary water systems. South Africa being a water scarce country can utilize transboundary cooperation with other countries which have water in abundance within the Southern African Development Cooperation (SADC). The World Bank Group (2015:32) point out that “transboundary cooperation helps to build climate resilience cities and nations between cities and nations.” The World Bank Group (2015:33) observe that “despite its complexities, transboundary cooperation on information, infrastructure, and institutions presents countries with an important opportunity to build climate resilience effectively and efficiently.” The World Bank Group is supporting its client countries in building climate resilience through transboundary cooperation; by focusing on three major responses namely promoting cooperation and data sharing, promoting basin-wide planning and development of strategic natural and manmade infrastructures and to strengthen the range of institutions needed to implement effective

cooperative adaptation.⁴ There is also a need to incorporate water and gender as one of the strategies to address water shortages.

8.5 Water and gender incorporation

Religious leaders should influence society and the government to work on incorporating water and gender. Women should be involved in finding a solution to water scarcity because water crisis affects women and children more as they who walk long distances to look water. Women must be integrated in water management. Interfaith dialogue should advocate for women empowerment in the water sector. The World Bank Group (2015:34) point out that “women lack voice and representation in water management. Since the Beijing Platform of Action for the Advancement of Women 20 years ago, international policy declarations have stressed the importance of addressing gender differences in water management. It has emphasized the central role women could play in water management to achieve sector goals.” The World Bank Group (2015:35) note that “although sector policy and strategies at country and institutional level have registered modest success in consistently channelling women’s contribution, women continue to be disproportionately underrepresented in sector decision making at many levels.” The World Bank Group (2015:36) point out that “despite the progress realized in the global Millennial Development Goals 2015 milestone for water, 70% of households in 45 developing countries still do experience domestic water collection which is done by women and girls.” The World Bank Group (2015:37) state that “women and girls in India spend an approximated 150 workdays fetching water per year. And in Tanzania, school attendance levels are 12% lower for girls in homes which are at a walking distance of more than an hour away from safe water supply than those girls who are at a distance of 15 minutes away from the safe water supply.”

⁴Promote cooperation in information and data sharing to reduce uncertainty, manage climate risks, and strengthen livelihoods in the face of a changing climate. Information needed for resilience-building interventions exceeds geopolitical and sectoral boundaries, and transboundary cooperation allows: expansion of the information and knowledge base, improving understanding of weather and climate phenomena, and increasing predictive accuracy; use of available information by countries to collaborate and coordinate in making strategic regional and national decisions in the face of extreme climate variability and unclear long-term climate change; and effective and efficient dissemination of processed information to populations vulnerable to climate disaster.

Religious leaders should influence society and the government to work on creating equal opportunities between men and women. The World Bank Group (2015:38) note that “women have unequal economic opportunities. The water sector continues to reflect unequal economic opportunities despite growth. For example, in patriarchal societies the membership requirement for water user associations is often tied to land ownership, which reduces women’s chances to participate in decisions on water resource management.” The World Bank Group (2015:38) add that “women benefit disproportionately from economic opportunities generated by the capital-intensive nature of water development and management.” The World Bank Group further (2015:38) point out that “women and girls have specific sanitation needs. Globally, 52% of the female population is of reproductive age. Managing menstruation requires several essential elements, including clean materials to absorb or collect menstrual blood, a private place to change these materials as often as necessary, soap and water for washing, and access to safe and convenient facilities to dispose of used materials.” The World Bank Group (2015:39) note that “taboos around menstruation have rendered these needs invisible, but without such facilities or unisex facilities with no privacy, girls have been known to lose school days or even drop out of school at puberty. Moreover, walking to communal toilets in urban informal settlements or humanitarian camps, or, in the absence of facilities, for open defecation, has been associated with gender-based violence.” The World Bank Group (2015:39) assert that “water plays an important role in economic development and poverty reduction; addressing gender is essential for achieving quality results. Substantial evidence shows that a gender-inclusive approach increases sustainability.” The World Bank Group (2015:40) state that “data from a 2001 World Bank study of 15 countries shows that water supply projects that used gender and demand-responsive approaches, such as separate meetings for women and men, capacity building, and quotas for women’s participation, sustained their results better and used the services more effectively to promote better health outcomes.” The World Bank Group (2015:40) argue that “to respond to the challenges, gender-inclusive water programs need to reflect the integral roles of women and girls as providers, users, and managers of water.” The World Bank Group (2015:40) add that “more analysis of qualitative and quantitative data is required. Finally, collaborations with other sectors such as health and education as well as stakeholder engagement need to be promoted.” The World Bank Group (2015:41) maintain that “there is a need to increase space for gender in government institutions.” World Bank Group (2015:42) suggest the following:

(a) Increase the institutional space for gender

The World Bank Group (2015:42) point out that “sector actors can address gender inequality when sector objectives, strategies, institutional arrangements, and resources are in alignment with international and national gender goals and commitments.” The World Bank Group (2015:42) state that “to explore the barriers that prevent, as well as the positive factors that lead to effective implementation, the Water Global Practice is undertaking a global study to determine if countries have gender-informed water policies and strategies, and to assess to what extent they are implemented.” The World Bank Group (2015:42) add that “the findings will be used to support the development of gender action plans in water for selected countries, and at a global level to promote knowledge on creating the institutional space to address gender gaps as part of regular water sector development.” The World Bank Group (2015:43) state that “recently, the government of Papua New Guinea with the partnership of the World Bank developed and adopted a gender-informed national water, sanitation, and hygiene (WASH) policy that addresses gender dimensions of access, voice, and gender-based violence.” The World Bank Group (2015:43) add that “built on broad stakeholder engagement with civil society, academia, and government, the policy was enacted in January 2015.” The World Bank Group (2015:44) add that “the Water Global Practice reviewed the portfolio for trends and good practices in addressing gender in the 2000 to 2014 period. The findings are being used to increase women’s presence in all aspects of water sector decision making.” The World Bank Group (2015:44) further point out that “building on the review, the Water Global Practice is also preparing new tools and checklists to guide staff, clients, and partners to address gender as part of sector reform and project design. Governments should therefore create equal economic opportunities for women to be involved in the water sector.”

(b) Promote equal economic chances in the water sector

The World Bank Group (2015:45) state that “analysis, monitoring and evaluation, and special interventions are required to ensure that women benefit from the economic opportunities that water generates.” The World Bank Group (2015:45) point out that “Peru’s Sierra Irrigation Project discovered that 75% of the water managers were men, land titles were almost exclusively in men’s names, participation in the Water User Organization (WUO), linked to land ownership.” The World Bank Group (2015:46) note that “meetings that were held at times

manifested that women were unavailable and were conducted in Spanish rather than the local languages that most women knew.” The World Bank Group (2015:46) add that “overcoming the challenges required removing the land title requirement for WUO membership and irrigation access, setting aside a portion of irrigated land for women and through exposure and training to men and women, and raising awareness of women’s role in irrigation management.” The World Bank Group (2015:47) further point out that “by the end of the project, all the WUOs had at least one-woman leader and participation in WUO meetings registered at least 30% women.” The World Bank Group (2015:47) further add that “Vietnam’s Red River Delta Water and Sanitation Project incorporated training for women on financial literacy, management, and business development training, and provided access to credit through rotating funds and credit cooperatives.” According to the World Bank Group (2015:47), “the intervention enabled women to make increased decisions on and investments in sanitation. Women’s capacity to be actively involved in states’ water service providers should be advocated in government institutions.”

(c) Increase women’s capacity in governance of the state and water service providers

There is a need to increase the capacity of women in the governance of the state and water service providers to address the gender issue in the water sector. The World Bank Group (2015:48) state that “Kenya’s Water and Sanitation Service Improvement Project (WASSIP) built capacity within government water boards and 24 urban water utilities to address gender in sector policy and operations.” The World Bank Group (2015) add that results included new gender action plans that were implemented with the institutions’ own resources; other things were the reform of access policies such as social connections and adoption of alternatives to land title requirements for water and sewer connections; increased in women’s opportunities for paid work; and enhanced women’s visibility in utility management. A compilation of lessons was created which is now being used to guide utilities beyond the project investment area in Kenya.

(d) The decentralization of the state and formation of local governments

Women’s empowerment works well in decentralised governments. The World Bank Group (2015:49) stress that “there is a need to offer a space to increase the capacity of the state to address the linkage between gender and water. As India has shown, ensuring that local councils have a dedicated portion of seats for women councillors has enabled women to leverage their

voice into service delivery decisions.” The World Bank Group (2015:50) describe that, “States such as Kerala and West Bengal have seen this voice reflected in greater demand for water services. In Bangladesh, this has translated into greater demand for sanitation services.” The World Bank Group (2015:51) observe that “water service delivery innovations can also strengthen the voice of women in state management. Again, in India, evidence has shown that community-based service delivery mechanisms like the community driven development needs the involvement of women.” The World Bank Group (2015:51) comment that “the linkage of service delivery with the system of the state and mechanisms of voice that make a state inclusive are therefore critical to ensuring that the state is able and can be held accountable to address the policy nexus defined by gender and water.”

8.6 Attract commercial financing into the water and sanitation sector

Religious leaders should influence the society and the government to work on attracting the commercial financing into the water sanitation sector. Risky and uncertain revenues impede the water and sanitation sector from accessing commercial financing. Delivering good quality water and sanitation services requires that service providers be accountable to their customers and have financial and managerial autonomy to maintain assets and expand investments. The World Bank Group (2015:52) point out that “long-term commercial financing is required to support infrastructure development while short and medium-term commercial financing is needed to support short- and medium-term rehabilitation, operating expenses, and bridge financing.” The World Bank Group (2015:52) describe that “although both sources of financing are crucial, access to long-term financing is particularly difficult in developing countries where risks are high and future revenue streams more uncertain.” The World Bank Group (2015:53) observe that “occurrence of weak enabling environment and effective resource mobilization essentially imply that governments need to bring to market projects that are of interest to commercial financiers and create regulatory certainty.” The World Bank Group (2015:54) add that “this requires interventions across several fronts, lowering risks, creating deeper local financial markets, and mobilizing international capital markets and institutional investors.” Indeed, state the World Bank Group (2015:54), “financing for projects would be hard to come by if governments do not have a facilitating regulatory and institutional framework in place.” The World Bank Group

(2015:55) note that “many utilities in developing countries do not yet meet these thresholds and this poor governance is reflected in poor operational performance with high levels of leakage, endemic inefficiency, and low quality of service.” The World Bank Group (2015:56) point out that “it is critical to look at sector governance as well as the enabling environment for private financing both of which tend to be very weak in the water sector.” Lack of financing and monitoring of infrastructure is one of the problems that the Free State Province experiences that leads to water scarcity. Botshabelo, as illustrated in data gathered from interviews, has been facing a water scarcity problem for more than five years because the government has not applied the measures of monitoring, maintaining and building new structures for water and sanitation. Apart from financing the water project sectors, there are also other measures that can be applied to conserve water.

8.7 Measures for saving water

Religion and religious leaders should influence society and the government to work on some of the measures that can help the country to conserve water. South Africa Environmental Affairs (2011) suggests certain measures that can be used to conserve water: Such measures are green goal, surface water capture, and storage, ground water exploitation, long distance conveyance, desalination and pollution control and using water sparingly in households (water usage control). The duty of interfaith communities is to influence the government and the communities to implement such measures that are suitable for conserving water such as:

8.7.1 Green goal

South Africa Environmental Affairs (2011:61) points out that “South Africa needs to develop strategies such as the green goal for conserving water.” South Africa Environmental Affairs (2011:61) states that “Green goal is a term that refers to anything that tries not to be environmentally harmful. This strategy includes water recycling, rainwater harvesting and grey water use and controlled irrigation methods.” South Africa Environmental Affairs (2011:61) observes that “in the absence of significant sources of rainwater or recycled water, drinking water ends up being used for non-portable purposes, such as the irrigation of pitches and stadiums”.

Apart from practising recycling, there are also other measures that can be taken to conserve water. Donenfeld, Crookes and Hedden (2018:2) suggest that “South Africa needs to implement water conservation and demand measures. There is a need to repair the structure, install water efficient appliances and a tiered pricing structure.” Donenfeld, Crookes and Hedden (2018:2) point out that “policy measures should be supplemented with campaigns to raise awareness about water use and conservation. There is a need to increase the amount of wastewater that is treated and reused and to increase ground water extraction that can be used for agricultural purposes.” Donenfeld, Crookes and Hedden (2018:2) add that “there is a need also to introduce renewable energy as South Africa depends on coal for its energy which requires a large amount of water for its cooling. South Africans can also use the surface water capture method to conserve water as one of the strategies.”

8.7.2 Surface water capture and storage

The Food and Agricultural Organisation (FAO 2007:7) points out that “surface water runoff may be moderated by creating structures such as dams, river side-tracks to store water as reservoirs.” Many houses in Botshabelo do not have roof run-off water tanks (JOJOs; the word JOJO is a brand name and is often used as a generic term to apply to any household storage tanks), therefore, rainwater is wasted. Though Botshabelo as well as many parts of Africa have rain almost every year, the capture of rainwater during rainy seasons that can be stored into dams or reservoirs is neglected. During the rainy season, water can be captured if people are encouraged to harvest water from their roofs. People lack the sense of storing water year to year as an insurance to rely on during the times of drought.

8.7.3 Ground water exploitation

The FAO (2007:7) points out that “ground water is another avenue that can be utilised in order to supplement river water”. The FAO (2007:7) adds that “the aquifers may be artificially recharged by irrigation schemes and leakages from conveyance channels; this helps to recharge the ground and reduce over exploitation of ground water, though the recharging is often unintentional.”

8.7.4 Monitoring water pipes

The FAO (2007:7) states that “many cities, towns and villages are located far from the river basins and governments have to use pipes to convey water for long distances to cities or areas where people reside.” The FAO (2007:7) adds that “long distance conveyance of water using pipes may be unavoidable, however what is needed is to monitor those pipes constantly to avoid leakages and waste of water.”

8.7.5 Desalination and pollution control

The responsibility of interfaith communities is to influence governments to exploit some measures that have been outlined by the Food and Agricultural Organisation (FAO 2007) that can help the community to access drinkable water. The measures which the FAO talks about were also highlighted by some of the participants during the interview who pointed out that although the Free State Province is inland, there are cities like Durban and Cape Town which are along the coast where the government can apply desalination and get water to supply the inland provinces like the Free State. The FAO (2007:8) points out that “wealthy communities in dry regions have no other alternative but to treat salty water and make it drinkable and utilisable for household activities. Desalination is generally used in the Middle East in oil-producing countries.”

8.7.6 Households water usage control

Some participants during interviews said that some homes misuse water and they proposed that the government should introduce household water usage control. They lamented how they had observed some homes wasting water. They pointed out that some people who own a car wash businesses misuse water when washing cars. They stated that washing a car does not need a lot of water. The religious leaders committed to raise awareness among their members about water conservation and to challenge some people who waste water such as washing cars with a lot of water. Another method that can be proposed to conserve water is to use containers when washing plates or vegetables instead of running taps. The FAO (2007:9) points out that “there are many ways of conserving water in households. Washing machines should only be used when there is a full load and the water from the washing machine can be used in the garden instead of wasting

it.” Fabrizi (2009:8) states that “in order to conserve water, lawns should be left to grow a bit longer during dry seasons. Households should be aware that there is no need to constantly water the well-established shrubs and trees.” In the gardens also, people should use watering cans instead of using hosepipes or sprinklers. To wash cars, people should learn to use containers instead of using hosepipes.

8.7.7 Reducing demand

The other measure which was suggested during the interviews was by reducing demand. Hedden and Cilliers (2014:8) state that “one way of conserving water is to reduce demand.” According to Hedden and Cilliers (2014:8), “the average per capita water consumption in South Africa is higher than in most other countries, so behavioural changes in municipal consumption are particularly important.” Hedden and Cilliers (2014:8) add that “fundamental to this, the required change in attitude of demand is the emerging global concept of responsibility and stewardship, which is based on the ethos of sustainable custodianship rather than on consumption.” Hedden and Cilliers (2014:8) further point out that “sustainable custodianship and social responsibility are needed to address social problems of water scarcity.”

Only when people learn to take social responsibility will the culture of demanding everything to be done by the government end. Indeed, there are things that require government intervention while some things can be done by individuals. For instance, fixing leaking pipes at home can be done by homeowners if the pipe is in the house. Unfortunately, one can find even educated people leaving pipes to leak for months without attending to such simple problems. It does not require government intervention to fix a leaking pipe in a home. To be stewards to control the use of water in homes and places of work, is an individual’s responsibility. Hedden and Cilliers (2014:8) state that “South Africans currently use 27% more municipal water than we would expect given the size of the urban population.” Turton et al (2016:30) point out that “South Africa must find ways of conserving water in all sectors such as agriculture, industrial, domestic and many different sectors.”

8.7.8 Sector measures on water conservation

Du Plessis, Walker and Swanepoel (2016) suggest that different sectors in the country such as the domestic, municipal, industrial, mining and the agricultural sectors must get involved in water conservation.

8.7.8.1 Agriculture sector

Turton et al (2016:30) claim that “making agricultural irrigation systems more efficient could save between 30-40% of the current water use.” According to Turton et al (2016), the agricultural sector could make a dramatic contribution to water saving efforts in South Africa. To save water through agriculture involves a focus on making irrigation systems more efficient, planting appropriate crops in terms of soil type and micro-climate. Turton et al (2016:30) point out that “it also includes the reallocating of water to higher-value users through intersectoral or intersectoral transfers and limiting the integrated harvested areas under a crop.” Turton et al (2016:30) aver that “such practices that reduce the amount of water that is transferred from the land to the atmosphere by evaporation from the soil and other surfaces and by transpiration from plants, called evapotranspiration, or diverting water to higher-value crops could all contribute significantly to saving water.” According to Turton et al (2016), a shift in thinking is required in the agricultural sector in order to improve water productivity, broaden access to water for the poor and manage water resources in an integrated way that considers the need to preserve the natural reserve and enhance ecosystem health. Turton et al (2016:30-31) suggest the following;

- (1) Use Water Balance Approach Modelling to assess and understand the status and trends in water availability in a specific region over a specific period.
- (2) Fix leaks in distribution pipes and reduce inefficient use of water through better control measures, land management and agronomic practices, including conservation farming. This can improve water efficiency levels by up to 40%.
- (3) Implement more efficient irrigation practices, such as use of sprinkler (with a centre pivot, permanent sprinklers or flood-piped) or micro-irrigation, including drip irrigation, which has an efficiency rating of 95%.
- (4) There are plenty of innovations in the irrigation market suitable for implementation in South African conditions, including precision irrigation, which can be operated using drums and drips, or treadle pumps. Improving the efficiency of irrigation systems can generate water savings of up to 10%.

- (5) Invest in irrigation timing mechanisms and investigate alternative ways of irrigating, such as flood irrigation, which has been used successfully in the Eastern Cape.
- (6) Invest in low-cost technologies, such as tanks for harvesting rainwater and runoff, small storage dams and underground tanks to catch underground runoff.
- (7) Pay attention to minimising seepage from irrigation canals, limiting large-scale percolation, and scheduling to avoid large evaporative losses.
- (8) Remove alien invasive plant species and move towards agro-ecological cultivation systems.

8.7.8.2 Industrial and mining sector

Turton et al (2016:32) argue that “if the natural resource intensive industry reduced its water usage by 10%, 624,000 households (about 2.7 million people) would gain access to 30 kiloliters a day or 3.1 million households (about 13.7 million people) would access a basic supply of 6 kiloliters a day.” Turton et al (2016:32) add that “industry can lead South Africa’s drive to become more water-efficient by focusing on two fronts: reduce own consumption and encouraging others to do the same and tackling pollution to improve the quality of water systems.” Turton et al (2016:32-33) recommend the following for the industrial and mining sector;

- (1) Conduct water audits of primary and secondary operations as a key efficiency tool to identify areas for improvement and significant reduction in water usage as the first step to setting targets and developing strategies.
- (2) Begin to invest in research and development that supports water efficiency and good water practices. This bears fruit in terms of reduced financial losses.
- (3) Use the Water Footprint Network assessment to understand how water is used within operations, where water is sourced from, how much is used, what the return flows are, and the quality thereof. This allows for benchmarking against international best practice guidelines. It also allows companies to quantify environmental impact and identify strategies to reduce that impact.
- (4) Investigate non-potable use of partially treated effluent as described in the Water for Growth and Development Framework; improve the efficiency of effluent treatment plants using reverse osmosis technologies; retrofit with more efficient parts where possible.
- (5) Get involved with innovative public and private sector partnerships and projects that aim to set standards and guidelines for different sectors to close the projected water gap.
- (6) Focus on lowering pollution levels in wastewater and halting any discharge of waste into water bodies. Cleaning contaminated water must be a priority.

(7) Energy generation companies, in South Africa's case Eskom, should explore less water intensive ways of generating energy. Eskom should also explore the merits of transitioning to decentralised, local electricity production and distribution centres. This would offer additional social and economic benefits to local communities.

(8) Participate in debates and engage with stakeholders on water issues (at all levels) to benefit from and add to the growing body of knowledge on the subject.

8.7.8.3 Domestic and municipal sectors

There is a need for combined efforts to conserve water by the government, municipalities and households. Turton et al (2016:34) claim that: "The domestic and municipal sectors can reduce their consumption by 12-30% by addressing physical losses (leaks) and increasing household water efficiency." They make recommendations for the government, municipalities and households:

(a) *Actions at the Government level*

Turton et al (2016:35) suggest some actions that can be taken at the government level such as:

- (1) Develop an appropriate policy to address natural disasters, such as floods and droughts, in a cohesive and interdepartmental manner.
- (2) Set water efficiency targets for all water users in stressed catchments.
- (3) Provide incentives for good performance and penalties for malpractice.
- (4) Develop a regulatory framework to monitor and enforce compliance.
- (5) Roll out further grant incentives schemes for water efficiency measures.
- (6) Start visibly enforcing the 'polluter pays' principle as regards illegal consumption and water contamination using the Blue Scorpions, Green Scorpions and the Compliance, Monitoring and Enforcement Task Team.
- (7) Seriously investigate and consider investing in large-scale desalinisation plants.

(b) *Actions at the municipal level*

Turton et al (2016) describe that municipalities can contribute significantly to saving water by implementing the measures outlined below; particularly as they are also often responsible for managing industrial water provision from their systems, including proper metering and billing and specifying and monitoring quality and volume of industrial effluent disposed in domestic

wastewater (sewage) disposal systems. Turton et al (2016:36) state that “Government should make municipal infrastructure grants available to smaller, rural municipalities to obtain basic meter-reading equipment to decrease the levels of unbilled, authorised consumption.” Turton et al (2016:36) add that “implementing accurate metering and billing will not only reduce financial losses, but also help with intermittent supply.” Turton et al (2016:37) observe that “the amount of water lost through leaking pipes, theft and bad billing in one year in Johannesburg alone would fill 87, 743 Olympic sized swimming pools.” In order to avoid this kind of water loss, Turton et al (2016:37-38) make the following recommendations:

- (1) Repair all visible and reported leaks in water connection network and distribution systems, replacing pipes where necessary and rehabilitating the pipe network. Reticulation networks have an average lifespan of 50 years.
- (2) Install leak detection and repair systems. This could provide savings of 15% on total demand and reduce water not accounted for to 11%.
- (3) Implement technically correct operating and maintenance measures. This could include protecting corrosion of a metal surface by applying protection techniques of pipelines, meter and pressure management programmes, and unauthorised connection programmes. Ensure correct zoning of water processes are followed.
- (4) Introduce a programme to reduce plumbing leaks in households. An estimated 20% of water is lost through these leaks, including from taps, toilets and hot-water geysers. The following procedure must be followed;
 - (a) Sponsored leak repair initiatives, particularly for council houses.
 - (b) Communication and educational campaigns.
 - (c) Credit-control measures to ensure payment for services.
- (5) Replace existing plumbing fittings with more efficient ones within municipal buildings and serviced location and in schools.
- (6) Provide grant incentive schemes to motivate consumers who replace lawns with water friendly alternatives like native shrubs and reduce garden watering. This should be supported by communication and educational initiatives and could be enforced through regulations and by-law amendments.
- (7) Research new technologies that would reduce consumer water use, such as soil moisture monitors that link to automatic garden irrigation systems.
- (8) Select appropriate service levels for different communities to reduce new demand enforcing the use of efficient plumbing fittings, reticulation design practices and installation of pre-payment meters. Incentives should be offered to housing developers using the aforementioned items.

(c) *Actions to be taken by households*

Turton et al (2016:38) point out that “swapping to low flow aerated taps (about R220 per tap) will save 9 litres of water a minute. Changing to efficient showerheads (between R400 and R1,000) saves 23 litres of water a minute.” Turton et al (2016:38) add that “changing to a dual flush toilet (about R1,500) saves 5 litres a flush.” Turton et al (2016:38) describe that “if average household water consumption was cut by 20% today it would contribute significantly to building the 10-year water reserve needed to avoid future water cuts.” Turton et al (2016:38) state that “water leaks cost for the Government was approximately R7.2 billion in 2015.” Turton et al (2016:38) further point out that “consumers could also contribute to saving water by switching their buying preferences to food and beverages with low levels of embedded water.” In addition, Turton et al. (2016:38-39), suggest the following for domestic water usage:

- (1) Complete a water audit to find out what devices and activities use the most water.
- (2) Report all leaks to the relevant water service provider immediately.
- (3) Replace existing plumbing fittings with more efficient ones, including fitting dual-flush or interruptible toilets, user-activated urinals, low-flow shower heads, thermostatically controlled mixer taps and tap controllers and aerators. This could reduce household and commercial water consumption by an estimated 40%.
- (4) Insulate all geysers and water pipes.
- (5) Reduce water used in the garden by sweeping instead of spraying paved areas, irrigating early in the morning or late in the evening to reduce evaporation, irrigating less often but for longer periods, planting indigenous plants, using a trigger gun on a hose pipe to control flow and avoiding over fertilising of lawns as they will need more water. Install water-efficient irrigation systems. Introduce water-wise plants and start mulching. Design water features to move gutter water or runoff into ponds.
- (6) Investigate grey water recycling systems and rainwater harvesting options. This can reduce water usage by 50% for gardens. Greywater recycling systems cost between R1,000 and R4,500 for a simple system and advanced recycling systems, which can cost up to R45,000, can recycle up to 10,000 litres of water a day.
- (7) Keep swimming pools covered when not in use to reduce evaporation and do not over fill them. Check and fix pool leaks and design, if possible, pools with smaller surface areas.
- (8) Load the washing machine to full capacity to avoid wasting water and wash with cold water. The average machine uses 11 litres to wash 1 kilogramme of cotton. Find more efficient brands of washing powder that require less water. Choose the most efficient cycle for washing.
- (9) Load the dishwasher to full capacity and scrape off excess food instead of rinsing. A dishwasher uses between 10 and 21 litres a cycle. Time sensors can be used to shut down industrial machines when not in use.

(10) Do not pour toxic paint, solvents, chemicals, poisons or pesticides into stormwater, sewer drains or rubbish bins. Dispose of pollutants at hazardous waste sites.

(11) Change behaviour patterns: Turn off the tap when brushing teeth, wash vegetables in a bowl and not under running water, do not use hot water to defrost food, take shorter showers and bathe less or in less water.

(11) Get informed about the water footprint of the products you buy, from food consumption to clothes and energy sources.

8.7.9 Places involved in water conservation measures

Turton et al (2016:40) note that “there are some places in South Africa and outside South Africa that have implemented strategies of water conservation as in Ekurhuleni and Kleinmond in South Africa.”

8.7.9.1 Ekurhuleni: Metering of non-revenue water in South Africa

Turton et al (2016:40-41) illustrate how water was conserved in Ekurhuleni when they say that:

Ekurhuleni Metropolitan Municipality in Gauteng province provides about 314 million m³ of water to 800,000 households each year. In the past, the municipality of Ekurhuleni did not prioritise metering of top consumers in the region and many meters were broken or not reliable. Non-revenue water was estimated to account for about 50% of all water supplied. In 2010 the municipality launched a campaign to replace meters and consolidate multiple connections into single metered supplies, to be able to measure the water use of the top 500 consumers. Other components of the project included conducting a full water audit and testing to identify illegal connections and find and fix leaks, as well as testing the capacity of fire hydrants. In 2012, the project won the Government’s 2012 Water Conservation Award. It is being extended to a further 25,000 bulk user individuals or entities who extract directly from source in the region. The municipality ran an extensive and highly effective educational campaign to raise awareness about the benefits of the project: even though about 75% of users faced increased water bills, they offered no resistance to the project and were broadly supportive of its goals. The project cost close to R38 million but generated additional revenue of approximately R82 million for the municipality in the first year. It also lowered non-revenue water levels significantly. In the first year, an additional 5.8 million m³ of water was billed for. In addition, the project created 20 full-time jobs and a further 4,660 of employment opportunities over two years.

8.7.9.2 Kleinmond rainfall collecting systems in South Africa

Turton et al (2016:41) point out that “another way of conserving water is to install tanks. These tanks help to harvest water during rainy seasons.” They illustrate that:

In the small town of Kleinmond, in the Western Cape, domestic scale rainwater harvesting systems were implemented alongside the municipal water distribution system. The collected water serves as either a primary source or as a supplementary source of water that can be used, if clean, for drinking and laundry. Nonportable water can still be used for irrigating gardens, cleaning, and flushing toilets. These systems can save 30–50% of water normally drawn from the distribution network and up to 80% in businesses or commercial buildings. Rainwater harvesting is the most widespread water management strategy in South Africa but is yet to reach its full potential and commercial and institutional acceptance. There is a cost to installation, which could act as a deterrent, and the tanks might be viewed as being unsightly. It is more commonly used in rural areas, where it is viewed as a reliable source of water. The Government has developed an incentive to implement rainwater harvesting to reduce overall demand on the system. This water source can provide at least 50% of allocated system demand when used appropriately, such as for flushing toilets, and could supply 62% of household’s irrigation requirements. It also reduces stormwater discharge.

This section has demonstrated some of the measures that the religious leaders can focus on and influence the government to implement. Another strategy is that of planting trees. This strategy is not from South Africa but comes from Zimbabwe.

8.7.9.3 Zimbabwe tree planting strategy

During interviews, some participants suggested the planting of trees as one of the methods that could help to conserve water. The interviewees suggested that religious leaders can influence communities to plant trees in their gardens. In many cases, people cut trees and do not replant them. Constant cutting of trees may lead to droughts in the long run. This happened in Zimbabwe as pointed out in Chapter One. Daneel (1991) has illustrated how Zimbabwe at one time experienced drought that resulted in water scarcity in some districts. He demonstrates how different religions came together to have interfaith dialogue on water scarcity and to propose the ways of mitigating the problem. One of the ways was to create awareness campaigns to inform people about the problem and to suggest solutions of alleviating it. The solution was to plant

trees in the districts. People used to cut trees to make charcoal before the drought. To prevent the drought from continuing, chiefs and traditional leaders introduced a law that prohibited the cutting of trees. Instead, they encouraged people to plant trees. Every adult had to plant a tree and children in schools were also encouraged to plant trees by their teachers.

All possible measures that can be taken to curb water scarcity need to be implemented around Botshabelo. Having strategies without implementation cannot lead to the achievement of the intended goal. In order to achieve the intended goal, there is a need to advocate for the measures that will lead to water conservation. Indeed, once the religions engage in active advocacy, some strategies might be implemented. The leaders of these religions should use their platforms to reach out to their members and to challenge the government to implement the strategies of water conservation. Constant advocacy is needed to remind communities about the importance of conserving water. Communities must be educated to take responsibility to conserve water. If individuals are not responsible in looking after the environment, then no matter how religious leaders advocate for water conservation, their efforts might not bear fruit.

Interfaith dialogue is needed in Botshabelo. The religious leaders in Botshabelo should aim at strengthening the religious forum so as to address social problems such as water scarcity. During interfaith meetings, the theoretical framework of Fitzgerald (2000) can be used as a tool to help religious leaders to learn how to engage in interfaith dialogue in addressing social problems like water scarcity. The theory of Küng (2004) about interfaith dialogue and responsibility can also be used as a tool by religious leaders to understand the significance of interfaith dialogue and responsibility in a society. The first thing that different religions should learn is how to conduct interfaith dialogue to address social problems. Without a proper understanding of how interfaith dialogue works, it might be difficult to work together as people of different faiths. The task of religious leaders should be to teach people about being attentive to social problems, advocate for means of addressing social problems and to take full responsibility for social problems that affect the community.

8.8 Attentiveness, advocacy and responsibility for water conservation

Religious leaders should advocate for attentiveness and responsibility in conserving water. Adherents of religions need to be attentive to water conservation measures. Communities should be observant and report to the municipality the cases of water leakages. Every member of the community should be an advocate for water conservation. The households should take responsibility in their homes and apply measures that conserve water.

Chapter Three addressed some of the causes of water scarcity in South Africa that arise from human negligence and people not taking responsibility for water conservation. Such causes are illegal connections, leaking pipes and contamination of existing water bodies. Communities need to be educated about the need to take responsibility for water conservation. There is a need for advocacy on water conservation in communities. Religions should advocate for responsibility. Some religious people are sometimes part of the problem wasting water and not realising that water is irreplaceable. The people of Botshabelo should take full responsibility for water conservation. The participants in this research pointed out that although recently some people in Botshabelo have started taking responsibility for water conservation, there are many who have not yet started practising water conservation. They may see the water pipes leaking for weeks and months and without fixing the problem or at least reporting the problem to the relevant authorities to fix it. Küng (2004) talks about global responsibility as a solution to social, economic and political issues. Taking responsibility according to Küng can help the community to address social problems. Küng (2004) points out that to take responsibility means to be ethical. The survival of the world depends on world ethics.

Küng (2004: xv) states that “there can be no survival of people in the world without having a world ethic. And there can be no world peace without peace between the religions. And no peace between the religions without dialogue between religions.” Now the questions that might be necessary to ask are why are ethics important in the lives of people? Is there any relationship between Küng’s theory of global responsibility and ethics, and interfaith dialogue and development? What is the importance of ethics? This section illustrates some of the reasons why people need ethics, why they should avoid evil and why people should do good; why it is

important to have a minimum of common values, norms and attitudes and why it is important to have an ethic of responsibility instead of an ethic of success.

8.8.1 Responsibility in environmental conservation

Küng (2004:25) argues that “at least on negative grounds, the catastrophic economic, social, political and ecological developments of the present century necessitate a world ethos of responsibility in environmental care if humankind is to survive on this earth.” In other words, people should take responsibility to conserve the environment. Religious leaders should influence communities to reflect on their responsibility for the environment. Society needs an ethical system, a philosophical or theological theory of values and norms, to direct the decisions and actions in conserving nature. Michael Sandel (2005:147) opines that “the world needs ethics because people cannot be left free to do what they want. If everyone is left to do as they please, without the consideration of ethical values, then the world cannot be at peace.” The crisis of water which the people of Botshabelo are experiencing must be an opportunity to respond ethically. Jan Heitmann (2012:41) concurs with Sandel that “the task of public theology is to ascertain what the public relevance of the Gospel is. Public theology has to do with humanising people, socialising of humanity, restoring justice and peace for all creation.” Justice and peace are needed to resolve the problem of water scarcity. People who do illegal connections of water pipes do not understand that what they do is a crime against humanity. As pointed out by Sandel (2005), the world needs doctrines to guide humanity. These tenets will also assist companies who pollute the sources of water and all those people who practice illegal water connections, to learn that what they are doing is criminal.

The issue of religion influencing communities to take responsibility is vital in addressing the causes of water scarcity in Botshabelo such as theft of water pipes and illegal connections. According to Sandel (2005), religions should also address the issue of morality. The church leaders need to advocate for morality in the community because without that, people can sometimes take the law into their own hands and use violent means to combat crime. Sandel challenges the community not to take the law into their hands. For instance, the act of community policing called *Mpakati*, being heavy-handed on people who steal water pipes in Botshabelo is not the right way to address crime according to Sandel. Esack concurs with Sandel

that being heavy handed on criminals, morally speaking is not the best way to address crime. Esack (1997) gives an example of what happened in 1996, when some Muslims took the law into their own hands to combat crime which was escalating in the new democratic South Africa. According to Esack, Muslims formed a group called People Against Gangsterism and Drugs (PAGAD). The group saw the need to fight the crimes which were taking place in the community. Esack (1997:226) states that “PAGAD inspired an initiative against drugs and gangsterism, organised a series of marches to the homes of drug dealers. And during one such march, one of the notorious gang leaders was doused with petrol and burnt to death.” Though PAGAD, was fighting crime, the means used were violent. Fighting violence with violence is not the best way to fight crime. For people to steal water pipes in Botshabelo is wrong and must be condemned. But also, to beat someone terribly because of stealing a water pipe must be condemned by religious leaders. Esack (1999:180) notes that “the majority of South Africans are resorting to a questionable and sometimes literally self-defeating responses to the problem of the cheapening of human life.” Furthermore, Esack (1999:180) points out that “in South Africa, there is a culture of Arm yourself to the teeth. Current estimates suggest that there are seven million guns in the hands of civilians. In 1997, eleven thousand people were murdered with guns and 24 700 attempted murders involved guns.” Esack (1999:180) wonders if this is what South Africans fought for during the time of apartheid when he says that: “Is this what so many of our martyrs laid down their lives for? A society where everyone is armed to the teeth, and ready to exact the ultimate penalty at the slightest provocation?” Indeed, in the world, we need ethics. The culture of violence should be addressed. People are so violent with each other and violent against the environment, violent against infrastructure like destroying or stealing water pipes and vandalism of buildings. People in communities should be challenged to keep ethical values.

John Lewis (2005:51) notes that “Paul confronted the Christians for not engaging in the Theo-ethical reasoning and for failure to interpret their thinking and acting.” Lewis (2005:83) states that “combining our reasoning and practice is essential because that is what it means to be a good Christian. Paul consistently practised spiritual discernment by engaging in Theo-ethical reasoning.” Indeed, there is a need to practise Theo-ethical reasoning to bring hope to the people who are in despair. Albert Nolan (2009:3) concedes that “what is needed in theology is to reflect on the signs of the time and try to bring hope to people who are in despair.” Nolan (2009:3)

observes that “the context today is different; it is far more complex and not easy to analyse and define. One great characteristic of our times, however, throughout the world and particularly in South Africa, is despair.” Nolan (2009:3) adds that “we live in an age of despair: After centuries, South Africans after the democratic independence in 1994, experienced hopefulness and optimism of one kind or another in different situations like: political, economic, scientific and religious.” Nolan (2009:3) further points out that “now suddenly almost everyone has been plunged into a state of despair, this is a new context.” Nolan (2009) challenges Christians by using the words of the First Letter of Peter to give an account of the hope that they have. Though stealing of water pipes must be condemned, maybe people who steal the water pipes have been experiencing the hardships of life and need to be given hope as sometimes they live in a hopeless situation and just resort to stealing water pipes and selling those pipes in order to survive. Religion should give hope to those people living in hopeless situations. Clint Le Bruyns and Selina Palm (2013:116) suggest that “people should live in hope. For Christians to live in hope is also to act hopefully, to give hope to others. Giving hope to others is one way of taking responsibility in giving life to others. The incarnated God expects people to take responsibility by responding to life issues.” Helmut Richard Niebuhr (1999:56) says “what is implicit in the idea of responsibility is the image of man-the-answerer, man engaged in dialogue, man acting in response to social problems.”

Responsibility in this study means to avoid doing evil like stealing water pipes and also to avoid punishing severely or acting violently when we catch thieves who steal pipes. Responsibility would mean to look after the environment. The next question that people should be asking is the basic one: why do we need ethics in responding to certain issues that confront human beings? Why should people be morally upright in their lives? According to Küng (2004:25), “our ethics should go beyond good and evil. What the society needs is people to take responsibility for their actions. People should be asking questions like: why should we not do evil?”

8.8.2 Why should people avoid evil?

In Botshabelo, there is an evil practice of stealing water pipes and illegally connecting water pipes to avoid paying water bills. Küng (2004:26) questions; “why should people do good and not evil? Why should the politicians resist corruption if they are sure of the discretion of the one

who offers the bribe?” Colin Gardner (2013:8), in *The Witness* newspaper warned that “in South Africa, corruption is becoming a big problem.” Corruption, according to Gardner, “is one of the most obvious evils at work in contemporary South Africa.” He suggests that there is a need for all people to get involved in fighting corruption. He emphasises that corruption is the one evil existing in South Africa that should be fought at all levels. Even in the humblest worker, indeed in anyone, a refusal to act in a corrupt way is an enrichment of society and a contribution to the common good. The major thing is to avoid anything unethical. When people learn to do all things ethically, this will contribute to safeguarding human principles that lead to the common good. Closing leaking taps is one way also of contributing to the common good as argued by Gardner. Connecting water pipes illegally is also an evil act that must be avoided because it might lead to water scarcity, affecting the lives of innocent people in the community. Avoiding evil should be in all sectors of life. Küng (2004:26) illustrates that “people should ask simple questions like, why should unwanted (male/female) offspring, whose sex has been determined before birth, not be liquidated right away if they are not desired? Why should people not hate, harass and kill one another if it is to their advantage? Why should people be advised to do good?” Similarly, one can ask in this study, why should people avoid connecting water pipes illegally if by connecting water illegally, they can escape paying water bills? Why should not someone steal water pipes if the person has no job but wants to feed his family?

8.8.3 Why should people do good?

Why should people in the community take responsibility for water conservation? Why should people fix leaking pipes in their homes? Why should they get involved in environmental care? Why should they do good for the environment? Why should one religion accommodate the other religion which has different beliefs? Why be friendly with people of different faiths? Küng (2004:26) challenges people to reflect on their goodness by asking the ‘why’ question like:

Why do good? Here, too, questions arise first for individuals: why should people be friendly, compassionate and even ready to help instead of being heedless and brutal; why should men renounce the use of force and in principle opt for non-violence in marriages; why should a businessman behave with absolute correctness even when there are no controls; why should a trade union official fight not only for an organisation but also for the common good, even if it damages his or her own career?

Peter Ulrich and Charles Sarasin (1995:1) concur with Küng and asks:

Why should human beings never be the object of commercialisation and industrialisation (e.g., the embryo as a marketable article and an object of trade). Why should people show tolerance, respect and even appreciate one another, despite being different or belonging to different religions? Why should one religion show respect for and tolerance of another religion? Why should those in authority in the nation and religions in all circumstances commit themselves to peace and never to war? Why should human beings act in a truly human way? And why should they do this unconditionally, that is, in every case? Why should all people do this, and no class or group be exempted?

Robert McAfee Brown (1990:65) states that “none of us can simply sit back and wait to be told what to do by our Church leaders or by anyone else. We must all accept responsibility for acting and living out our faith.” Brown (1990:65) adds that “we should pray that God will help all of us to translate the challenge of our times into action. All citizens of the country have an obligation to do good. There is a need for ethics that will lead people to do good.” Küng (2004:28) concurs that “people need ethics in any society. Each society should set a minimum of common values, norms and attitudes that should help to guide society.”

Interfaith dialogue should give a direction to human life by teaching people to act responsibly. Küng (2004:29) argues that “human beings need a direction in life. The fundamental principle to human life is to have a commitment and a direction in life, to have some values and norms that give meaning to human life.” Robert P. George (1993:175) observes that “some people emphasise autonomy too much and end up neglecting being responsible.” George (1993:175) states that “autonomy is something intrinsically good, but it must be examined always to see if it carries out good moral values.” George (1993:175) adds that “it can be concluded that something valuable is realised in autonomous but wicked choices, namely the intrinsic value of autonomy as such, or wicked choices are by definition never autonomous.” Le Bruyns (2012:3) points out that “in South Africa, the good in political life is reflected in our moral consensus document called the constitution, which includes the Bills of Rights”. Le Bruyns (2012:3) adds that “the constitution includes the themes of social justice in diversity, human rights, culture, improved quality of life for all, human dignity, equality and freedom. Therefore, the need for an ethics of responsibility remains a pressing task.” Sue Rakoczy (2012:45) concurs with Le Bruyns stating

that “people need to build a spirituality founded on good principles.” Rowan Williams (1990:2) asserts that “it is important to create spirituality that facilitates peace and development.” Williams (1990:2) adds that “spirituality must now touch every area of human experience, the public and social, the painful, negative, even pathological pathways of mind, the moral and relational world. Spirituality is the way of life in the society.” The task of interfaith dialogue is to advocate for the spirituality of responsibility. The people in the community should embrace moral values that bring life to the community. De Gruchy (1995:222) emphasises that “people need moral values that give meaning to life.” De Gruchy (1995:222) adds that “religions must teach the society to embrace moral values. This was emphasised by Mr. Mandela on several occasions before the elections and was symbolically affirmed later at his inauguration as president.” De Gruchy (1995:222) further states that “Mr. Mandela suggested that churches and religious communities should play a role in government to ensure that moral values are respected in the new administration, to foster national reconciliation, and to help implement the ANC programme of national reconstruction.”

Küng (2004:29) points out that “usually, people have a longing to hold on to something, to rely on something, to have a standpoint in the bewildering complex, technological world and in the errors and confusions of their private life, to follow some guideline, to have some standards, to have a goal.” Küng (2004:29) describes that “in short, people feel the longing to possess something like a basic ethical orientation to environmental care.” Küng (2004:29) adds that “to live peacefully in the world, people should develop the ethics of responsibility, instead of having the ethics of success that destroys the environment.” The duty of religious leaders is to teach people responsibility in acting ethically.

8.8.4 An ethic of responsibility in place of an ethic of success

Küng (2004:29) describes that “calling for global ethics of responsibility is first and foremost the opposite of calling for what is a mere ethic of success. It is the opposite of an action for which the end justifies the means and for which whatever functions, brings profit, power or enjoyment is good”. Küng (2004:30) points out that “people need the ethics of responsibility because without the ethics of responsibility, success or dispositional ethics would decline into the fostering of self-righteousness.” Küng (2004:30) adds that “the world needs global responsibility

if it is to survive. This includes self-imposed limitations by human beings on their freedom in the present, for the sake of their survival in the future.” Therefore, a new kind of ethic is called for, out of concern for the future. A new theology is needed. Le Bruyns (2010:10) notes that “an ethic of public responsibility demands a prophetic solidarity in response to the economic challenges we are confronting in and beyond South Africa.”

Küng (2004:30) points out that “people must learn to take responsibility for their neighbours and the environment.” According to Küng (2004), the world is responsible for its future. Those people who are responsible in various regions, religions and ideologies of the world are called on to learn to think and act in a global context. Whatever people do should aim at bringing universal goodness to humanity. What is good for human beings is what preserves and furthers their humanity. Küng (2004:30) notes that “human beings must exhaust their human potential in an unprecedented way to produce the most humane society possible and create an intact environment.” Sigvard von Sicard and Ingo Wulfhorst (2003:47) bemoan that “if we look at ourselves and at the condition of our societies critically, we must recognize that we are not in fact worthy to stand before God. We have fallen short in our moral growth and in our human responsibility to be the representatives of God.” von Sicard and Wulfhorst (2003:47) add that “whether as individuals or as groups, we have failed to prohibit evil and commend the good in adequate ways. Instead of human growth, we see decline; instead of human responsibility, we see immaturity and recklessness.” von Sicard and Wulfhorst (2003:47) state that “we go from crisis to crisis as global survivors rather than as a confident humanity, moving forward and upward and able to take responsibility to look after the environment which God entrusted to us.” von Sicard and Wulfhorst (2003:47) describe that “we have plenty of teachers, institutions, programs and consultants on every subject. We have leaders, politicians and bureaucrats, all of whom claim to have a measure of wisdom. Nevertheless, as we strive to climb higher on the ladder of human development, we slip on its rungs and fall back.”

The responsibility that this study is advocating is to conserve water. The water scarcity that Botshabelo has been experiencing needs a good response. Esack (1999:180) points out that “at a deeply personal level we need to be aware that much of our self-respect is measured by the extent to which we own our responses to all life’s situations.” Esack challenges those people who

have no respect for human life such as gangsters, drug dealers and those who have taken the law into their own hands and are ready to kill someone at the slightest provocation. Respect for human life, according to Esack, should be the concern of everyone. All the means that people use to survive should be assessed according to whether they lead towards respect for human life or not. Respect for human life includes the respect for the environment. If people do not respect nature, then nature will not respect them and the end result is self-destruction.

8.9 Conclusion

Chapter Eight has demonstrated the role that religion could play in addressing social problems such as water scarcity. The chapter illustrated that the biggest role that religion and religious leaders could play in addressing social problems such as water scarcity is to engage in interfaith dialogue and influence the government to implement policies. The research sub question five has been answered. The chapter has discussed the policies that religion and religious leaders could focus on and influence the society and the government to implement. Engaging in interfaith dialogue and influencing the government to implement those policies could assist in mitigating water shortages in Botshabelo. The chapter has noted that water stress is growing and suggests some of the measures that could help to address the problem such as ground water and surface water capture, household usage and control and planting of trees. The chapter has illustrated how Zimbabwe used interfaith dialogue to plant trees when they experienced drought and that the practice of planting trees helped to bring back the rain. Chapter Eight has exemplified how interfaith dialogue and responsibility could be applied to addressing water scarcity by applying different strategies such as attentiveness, advocacy and responsibility to address water shortages. The chapter has suggested that people should be encouraged to be attentive in identifying leaking pipes and report them to the authorities. The chapter has proposed that religious leaders should engage in constant advocacy for water conservation and influence the community to take full responsibility for water conservation. Responsibility should be taken seriously not only for water conservation but also in everyday life. Responsibility also should not be left only in the hands of the leaders but every member of the community should be responsible for their behaviour and for the wellbeing of the community. Every member of the society should take the role of leadership in taking responsibility for the community welfare. Leaving responsibility in the hands of the

leaders alone, either in the family, church, school and government could be the sign of irresponsible behaviour to the members. And the community where responsibility is left only in the hands of leaders, cannot achieve or reach its intended goal. One concrete example of everyone taking responsibility could be in the school set up. The teacher gives the learner an assignment. The learner has to take responsibility and do the assignment if the school has to excel and produce good results for both the teacher and the learner. Therefore, regarding the conservation of water, religious leaders should take full responsibility for water conservation advocacy and influence the government and community members. And it is up to the government and community members to implement what religious leaders suggests. Whoever fails to take responsibility should be the one to be blamed. The adherents of religion in Botshabelo blamed the religious leaders for not being vociferous in advocating for water conservation, now suppose religious leaders take responsibility and start to engage in advocacy for water conservation, will the members of such religions and the community at large take the full responsibility of implementing what the religious leaders advocate for? The research assesses that in Botshabelo, when religious leaders and the community members worked together in taking responsibility, the outcome of water conservation was positive. The success of the project of water conservation through interfaith dialogue, therefore, depends on the different participants taking full responsibility all the time. Once some members relaxes, such as the religious leaders, the congregants, the community and the government, then the project of water conservation cannot succeed. Each member is invited to play his or her role by taking responsibility to conserve water. The following chapter sums up the research project and suggests some recommendations for the way forward.

CHAPTER NINE

RÉSUMÉ OF THE STUDY

9.0 Introduction

This chapter presents a summary of the findings of the study. As suggested by the Hamilton College Writing Centre (2015), the purpose of the concluding chapter in doctoral research is to bring a researcher's argument to a logical close, by justifying the argument to the reader(s). It includes a description of key points of the study and the consequences of the argument, by answering the (so what?) question. Accordingly, this chapter provides a summary of all the previous chapters. The chapter ends with recommendations for future studies on themes that arose during the research.

9.1 Summary of the findings

The research project confirmed that there are water scarcity problems in Botshabelo and in other parts of the Free State Province. The problem of water scarcity has affected people in their households and religious practices. Despite water shortages problems, the study discovered that the adherents of the three religions have not been vociferous in the past in addressing water shortage in South Africa.

The study found that water plays an important role in religious practices. The three religions use water in their religious practices such as healing, baptism, and ablution before prayers. Water is sacred, gives life and needs to be conserved.

The researcher found that interfaith dialogue is relevant in addressing water shortages and other problems that the society experience because its introduction in Botshabelo is bearing fruits. Religious leaders had hitherto not been engaging in interfaith dialogue about water shortages. In 2016, the researcher met with religious leaders and introduced interfaith dialogue as a tool that

can be used to address water shortages. In 2017, religious leaders adopted the theories of Fitzgerald (2000) and Küng (2004) that talks about interfaith dialogue. They began interfaith dialogue to address water scarcity in the community and the results were positive.

9.2 Overview conclusion of chapters

Chapter One was on the general introduction of the thesis. It began by providing a brief overview of the location of the study and the scenario of water scarcity in Botshabelo. It demonstrated the background to the study in which it pointed out that South Africa is a water scarce country and yet the adherents of the three religions in South Africa have yet to express their unified concerns about water scarcity in the country. Chapter One also provided the motivation that led to conducting the study. It provided the problem, the key research question, the sub questions and the objectives of the study. The chapter presented the scope, limitations and outlined the chapters of the thesis. It supplied the precis of the entire research project, in which the existing debates on water scarcity were underscored. The chapter also pointed out that the research project is informed by both personal and academic motivations.

Chapter Two presented the methodology and theoretical framework of the study. The study used qualitative content analysis (QCA). In line with QCA, the study used a thematic inductive approach in developing the themes upon which the findings, discussions and analysis were done. The chapter also illustrated how qualitative methodology has been applied in this research project to collect data that aims at addressing the problem of water scarcity in Botshabelo. The study used both primary and secondary sources of data. Interviews were used to collect primary data and literature was used for secondary data. The intention was to provide academic justification for this study through an examination of accessible literature on interfaith dialogue, with a view to contextualizing the study. The theories of Fitzgerald (2000) and Küng (2004) on interfaith dialogue were considered in this chapter to be the foundation on which the research project was built in order to address the social problems of water scarcity in Botshabelo. These theories assisted the study in creating an alternative tool called interfaith dialogue and water theology, which is proposed as a possible means to address water scarcity in Botshabelo.

Chapter Three surveyed the scenario of water scarcity, its causes and effects globally and illustrated the South African context. The chapter also defined water according to science. The discussion of the chapter was organised under three major themes; the scenario, the causes, and effects of water scarcity. The scenario demonstrated how serious water scarcity is in South Africa. By demonstrating the nature, the causes and effects of water scarcity, the chapter tackled the first and second sub questions that demands the exposition of the scenario as well as the causes and effects of water scarcity. Among the natural causes, the following have been pointed out; climate change, drought, surface runoff water, earthquakes, evaporation and transpiration. The human causes were identified as illegal tap connections, urbanisation and population growth, contamination of existing water sources and leaking pipes. These natural and human causes have negative effects on community livelihood projects, crop yields, health and development. This chapter established that South Africa has limited water resources which need to be conserved. The chapter proposed interfaith dialogue to be the tool that could address water shortages in Botshabelo.

Chapter Four defined theology and illustrated the significance of religions in addressing social problems. The chapter also demonstrated the role of water in religious practices. It pointed out that different religions have contributed to environmental conservation. If religion has contributed to addressing environmental problems, it makes sense when the adherents of different religions wonder why their religious leaders in Botshabelo are not active in speaking out and advocating for water conservation. According to what has been illustrated above, religion has the potential to address social problems such as water shortages.

Chapter Five discussed the role that interfaith dialogue has played in the history of humanity. The chapter demonstrated that interfaith dialogue could play a role in solving social problems. The chapter illustrated the views and theories of interfaith dialogue, the stages and the role of participants in interfaith dialogue. The chapter discussed the goals and the outcome of interfaith dialogue. In addition, the chapter pointed out what makes interfaith dialogue a complex issue at times. Chapter Four showed that the world religions have sometimes worked together to address common problems that affect humanity. Furthermore, the chapter demonstrated the current level of interfaith dialogue in South Africa. By illustrating the current level of interfaith dialogue, the

chapter addressed the research sub question three on the current level of interfaith dialogue on the present environmental crisis in South Africa. Accordingly, the chapter showed that though interfaith dialogue has been there in South Africa to address social issues, religions have not been vociferous on the issue of water scarcity.

Chapter Six presented the data, the findings made and the themes that emerged from the data from the participants. Chapter Six addressed research sub question four by demonstrating through interviews the emerging theologies of water from interfaith dialogue. The central finding of Chapter Six is that religious groups have the influence to address social, economic, political and spiritual problems. Their influence comes from the office which they occupy of being servants of God. The other finding is that water is sacred, gives life and interfaith dialogue on the theology of water is relevant. The chapter pointed out that religious leaders claimed that interfaith dialogue could contribute to addressing social problems in Botshabelo. The claim arises from the observation of the positive outcome on what the religious forum of Botshabelo are doing. The religious forum of Botshabelo started recently to engage in advocacy for water conservation and seemingly, the advocacy is bearing positive results. The outcome of the findings of Chapter Five needed to be examined before endorsing interfaith dialogue to be a tool necessary for resolving water shortages in Botshabelo.

Chapter Seven scrutinised the major findings of Chapter Six to assess how these findings assist in addressing the central research question. The central research question is: **How can the engagement of religious groups in interfaith dialogue assist in mitigating the crisis of water scarcity in Botshabelo?** The first major theme and finding of Chapter Six was that religious leaders can influence the community to address social problems. Their engagement in interfaith dialogue and advocacy for water conservation can assist in mitigating water shortages. The second finding was that water is sacred, it gives life and interfaith dialogue on the theology of water is relevant. The second major finding of Chapter Six was that interfaith dialogue is significant in addressing environmental problems. Through interviews, Chapter Six illustrated the relevance of interfaith dialogue on the theology of water. After the examination of the findings of Chapter Six, Chapter Seven asserted that interfaith dialogue can assist in addressing

environmental problems. Chapter Seven discussed how interfaith dialogue on water theology can be an instrument to address water scarcity in Botshabelo.

Chapter Seven pointed out that that religious leaders' engagement in interfaith dialogue and advocacy for water conservation can bear positive results. Chapter seven approved that interfaith dialogue is substantial in addressing environmental problems. The seventh chapter answered the central research question by demonstrating the involvement of religions in addressing environmental problems. The role of religion in addressing environmental problems has been illustrated through the examination of the outcome of the findings. The theories of Fitzgerald (2000) and Küng (2004) that suggests that religions through interfaith dialogue can play a significant role in resolving social, economic, political and religious problems have been confirmed through the outcome of the findings of the interview. Chapter Seven pointed out that the major input of interfaith dialogue in addressing social problems is advocacy. The chapter pointed out that through advocacy, religious leaders can influence adherents of their various groups to conserve water. The chapter also illustrated that by means of advocacy, religious leaders have authority to influence the government leaders to implement strategies and policies.

Chapter Eight demonstrated the strategies that religious leaders through interfaith dialogue could use to influence the community and the government to address water scarcity. The research sub question five which investigates why and how interfaith theology on water can contribute to the resolution of water scarcity in Botshabelo was answered. The chapter pointed out that one of the strategies to address water scarcity is to address gender inequality because often when there is water shortage, women are the ones who are the most affected. Most of the time in different places, women and children walk long distances to fetch water for the household. The chapter proposed some of the measures that could be applied to address the problem of water scarcity. Such measures are ground water and surface water capture, household usage and control and planting of trees.

9.3 Concluding Remarks

The study has investigated how interfaith dialogue could be used as an answer to address water problems in Botshabelo. To be able to facilitate the answering of the key research question, the study used interviews to obtain primary information and combined interviews with the literature that demonstrated how interfaith dialogue could be used as a tool to address social problems. The study has demonstrated that water is sacred, and it gives life.

9.4 Value of the Study and its contribution to new knowledge

- I. The study has added to the wide knowledge of resolving the water scarcity problems using interfaith dialogue. Interfaith dialogue and water theology are proposed as tools that the people of Botshabelo could use to address water problems.
- II. The study has introduced the notion of water theology that could be used to address social problems in society such as water shortages.
- III. The study shows that religious forums can utilize the findings of this research project on how to conduct interfaith dialogue to address social problems.
- IV. The research project reveals that through interfaith dialogue and theological advocacy, religions have the ability to influence communities and the government to implement strategies of water conservation.

9.5 General Recommendations

The research project recommends that interfaith dialogue be encouraged where the adherents of religions can discuss social problems. World religions should create interfaith forums to discuss social issues. Religions should make sure that what they discuss as a forum is implemented. Religions should focus on what unites them and learn to work together to build peaceful communities. The research project also recommends that religions utilise the notion of water theology to address water scarcity. The research project endorses that the religions in the study

should involve business, agricultural and industrial sectors in addressing the social problems that affect their community.

9.6 Potential areas for future research

This study sought to evaluate the potential of interfaith dialogue and water theology in addressing the scarcity of water in Botshabelo. The researcher considers that this study has provided considerable justification, through its literature survey and fieldwork findings for this thesis and hopes that it will enrich existing studies in related research. However, during the study, the researcher observed that many scholars, [particularly in Theology, Philosophy and Classics and in the Social Sciences generally] exhibited a lack of awareness about the significance of interfaith dialogue and water theology in addressing social, economic, political and spiritual problems. The seeming lack of understanding of interfaith dialogue and water theology requires some consideration in the form of research not only among scholars in South Africa, but also on the African continent and globally. More research should be conducted on matters related to interfaith dialogue to demonstrate how interfaith dialogue could help to address social problems and enhance peace and development on the African Continent and the whole world.

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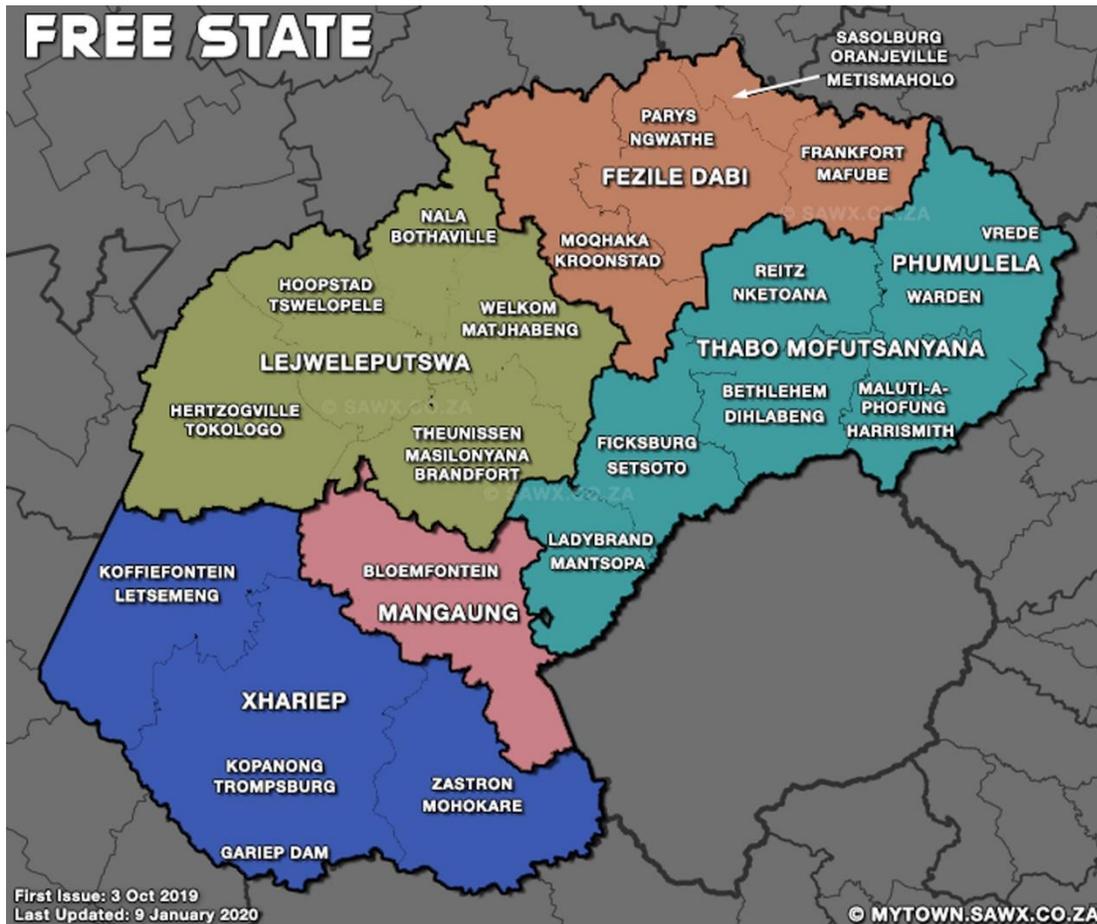
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Appendix 2

Map of Free State Province and Map of Botshabelo



Botshabelo is in Bloemfontein or Mangaung Municipality as indicated above in the map of Free State Province. Below is a map of Botshabelo. It is 45 kilometres East of Bloemfontein

Appendix 3



**School of Religion, Philosophy & Classics
Pietermaritzburg Campus,
Private bag X01, Scottsville, 3209**

Ref: Informed Consent Request Letter

Dear Participant,

My name is Fr. Michael Mapulanga (213573334). I am a PhD student studying at the University of KwaZulu-Natal, Pietermaritzburg Campus. The title of my research is:

A QUEST FOR AN INTERFAITH WATER THEOLOGY IN THE CONTEXT OF CLIMATE CHANGE AND WATER SCARCITY IN SOUTH AFRICA

I am interested in interviewing you so as to share your experiences and observations on the subject matter.

Please note that:

- The information that you provide will be used for scholarly research only.
- Your participation is entirely voluntary. You have a choice to participate, not to participate or stop participating in the research. You will not be penalized for taking such an action.
- Your views in this interview will be presented anonymously. Neither your name nor identity will be disclosed in any form in the study.
- The interview will take about an hour
- The record as well as other items associated with the interview will be held in a password-protected file accessible only to myself and my supervisors. After a period of 5 years, in line with the rules of the university, it will be disposed by shredding and burning.
- If you agree to participate, please sign the declaration attached to this statement (a separate sheet will be provided for signatures)

I can be contacted at: School of Religion, Philosophy and Classics. University of KwaZulu-Natal, Pietermaritzburg Campus, Scottsville, Pietermaritzburg.

Email: 213573334@stu.ukzn.ac.za or mapulangamic@yahoo.co.uk or mapulangamic2@gmail.com

Cell: +27715591040

Thank you for your contribution to this research.

DECLARATION

I..... *(full names of participant)* hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

I understand the intention of the research. I hereby agree to participate.

I consent / do not consent to have this interview recorded (if applicable)

SIGNATURE OF PARTICIPANT

DATE

.....

Appendix 4



School of Religion, Philosophy & Classics
Pietermaritzburg Campus,
Private bag X01, Scottsville, 3209
21st March 2019

Ref: Supervisor's Consent Support Letter

TO WHOM IT MAY CONCERN;

GREETINGS;

RE: Fr. Michael Mapulanga – PhD Student at University of KwaZulu Natal-Stu. No. 213573334

This letter serves to introduce and confirm that Fr. Michael Mapulanga is a duly registered PhD student at the University of KwaZulu-Natal, Pietermaritzburg Campus. The title of his PhD research is: *“A QUEST FOR AN INTERFAITH WATER THEOLOGY IN THE CONTEXT OF CLIMATE CHANGE AND WATER SCARCITY IN SOUTH AFRICA”*.

As part of the requirements for the award of a PhD degree he is expected to undertake original research in an environment and place of his choice. The UKZN ethical compliance regulations require him to provide proof that the relevant authority where the research is to be undertaken has given approval.

We appreciate your support and understanding to grant Fr. Michael Mapulanga permission to carry out research in your institution. Should you need any further clarification, do not hesitate to contact me. Thank you in advance for your understanding.

Research Supervisor: Prof. R. Simangaliso Kumalo (Ph.D.)

Director: Institute for Religion, Governance & the Environment in South Africa

School of Religion, Philosophy & Classics

Tel. 033 260 6437. Cell: 082 343 0693

Appendix 5

Interview questions

Q1. On the assessment of the current level of dialogue by African Traditionalists, Christians and Muslims on climate change and water scarcity in South Africa.

- (a) There have been water shortages for the past few years in South Africa, how has this water scarcity affected your religious practices?
- (b) Would you agree with the argument that South African religions as a unified body have not yet been vocal or written substantial information to address water scarcity?
- (c) What role does water play in the spiritual practices of your religion?
- (d) What is the function and the significance of interfaith dialogue in addressing water shortage problems in Botshabelo?
- (e) How can dialogue by African Traditionalists, Christians and Muslims be strengthened for effective combating of water scarcity?

Q2. On the contribution of interfaith dialogue, why and how religious groups engagement's in interfaith dialogue assist in mitigating the issues (crisis) around water sourcing, usage and distribution in South Africa?

- (a) What could be the unique contribution of interfaith dialogue on water scarcity?
- (b) What doctrine do religion have about water that would address water scarcity?
- (c) What is the value of religious doctrine and teaching in addressing water shortages?
- (d) What is the new theology and ideology arising from religions' doctrine and teaching that could be used to address water shortages?
- (e) How would religions' ideology, theology, convictions and doctrines contribute to change attitudes of people towards the use of water?

Q3 On religions' role in influencing the government to implement the policy and strategies that addresses water scarcity in the country.

- (a) How would you assess the existing government policy declarations aimed at enhancing water management “for the social-economic development of the country?”
- (b) Some scholars have argued that lack of commitment to policy implementation by the government brings annoyance to the citizens in most African countries, what role should religion play in the area of government policy implementation?
- (c) In your own opinion, to what extent can religious leaders influence their community members and the municipality to address water scarcity?
- (d) What innovative policy or strategies would you suggest for religions that could create the new water theology for interfaith dialogue to address water scarcity?
- (e) How would interfaith dialogue make South Africa a water abundant country?

Appendix 6

Ethical Clearance



Mr Michael Mapulanga (213573334)
School Of Rel Phil & Classics
Pietermaritzburg

Dear Mr Michael Mapulanga,

Protocol reference number: 00003050

Project title: A QUEST FOR AN INTERFAITH DIALOGUE ON WATER THEOLOGY IN THE CONTEXT OF CLIMATE CHANGE AND WATER SCARCITY IN BOTSHABELO, FREE STATE PROVINCE, SOUTH AFRICA

Exemption from Ethics Review

In response to your application received on 1 August 2019, your school has indicated that the protocol has been granted **EXEMPTION FROM ETHICS REVIEW**.

Any alteration/s to the exempted research protocol, e.g., Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through an amendment/modification prior to its implementation. The original exemption number must be cited.

For any changes that could result in potential risk, an ethics application including the proposed amendments must be submitted to the relevant UKZN Research Ethics Committee. The original exemption number must be cited.

In case you have further queries, please quote the above reference number.

PLEASE NOTE:

Research data should be securely stored in the discipline/department for a period of 5 years.

I take this opportunity of wishing you everything of the best with your study.

Yours sincerely,



Prof Philippe Marie Berthe Raoul Denis
Academic Leader Research
School Of Rel Phil & Classics

UKZN Research Ethics Office
Westville Campus, Govan Mbeki Building
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