

**Distributive justice: Water allocation reform in the Greater Tzaneen  
Municipality**

By

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Doctor of Philosophy in the Faculty of Humanities  
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## Declaration

I, Beatrice Dube (nee Maphosa), student number 16405821, hereby declare that the thesis entitled *Distributive justice: Water allocation reform in the Greater Tzaneen Municipality*, which I hereby submit for the degree of Doctor of Philosophy at the University of Pretoria, is a result of my own work and has not been submitted previously by me for a degree at another university.

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B Dube

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Date

## **Ethics statement**

I, **Beatrice Dube**, declare that I observed the ethical standards required in terms of the University of Pretoria's Code of ethics for researchers and the Policy guidelines for responsible research.

## Abstract

The thesis investigates deliberateness in water allocation to historically disadvantaged individuals (HDIs) through a water infrastructure development project, the Great Letaba River Water Development Project (GleWaP) within a context of water allocation reform (WAR). WAR is a programme set to redress past discriminatory laws and practices in the allocation of water in South Africa and seeks to address racial and gender inequalities inherited from past political epochs. The study interrogates the concept of individual water rights for women in a context where the collective is prioritised over the individual. The qualitative study uses data collected from 73 participants using interviews, two focus group discussions and surveys. John Rawls' theory of distributive justice and Jacques Derrida's deconstruction theory are applied to interrogate water allocation discourses and processes to understand whether genuine justice can be achieved through water allocation reform. The study is set within the critical social theory paradigm where the interlinkages between power, politics, race and gender are interrogated in search of social justice. Study findings reveal that the intentions of WAR as articulated in the goals are far from achievable with other variables such as land ownership still to be addressed. After several years, WAR remains steeped in theoretical rhetoric while lacking in practicality, as victims of past discriminatory practices still have no access to water resources, while legislation continues to protect and benefit a minority. The study identifies deficit thinking as one of the challenges in the implementation of the reform strategy. It concludes that the water allocation reform strategy does not break away from colonial and apartheid concerns for white beneficiaries as there does not seem to be a deliberate attempt to allocate water to predominantly black historically disadvantaged individuals. The thesis thus recommends measurable outcomes for water allocation reform, development of a vibrant black rural water economy, and the use of expropriation of water as a measure to speed up water reform.

**Key words:** deficit thinking, deliberateness, equity, historically disadvantaged individuals, individual water rights, inequality, justice, South Africa, water allocation reform, women

## **Dedication**

To my parents, may their souls rest in peace.

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## Acronyms

AFASA:	African Farmers' Association of South Africa
ANC:	African National Congress
AsgiSA:	Accelerated and Shared Growth Initiative for South Africa
AWARD:	Association for Water and Rural Development
BBBEE:	Broad Based Black Economic Empowerment
BUSA:	Business Unity South Africa
CDA:	Critical Discourse Analysis
CMAs:	Catchment Management Agencies
CODESA:	Convention for a Democratic South Africa
CoGTA:	Cooperative Governance and Traditional Affairs
CSIR:	Council for Scientific and Industrial Research
CST:	Critical Social Theory
DAFF:	Department of Forestry and Fisheries
DEA:	Department of Environmental Affairs
DFID:	Department for International Development
DLA:	Department of Land Affairs
DoA:	Department of Agriculture
DRDLR:	Department of Rural Development and Land Reform
DWA:	Department of Water Affairs
DWAF:	Department of Water Affairs and Forestry
DWS:	Department of Water and Sanitation
ELUs:	Existing Lawful Users

FAO:	Food and Agriculture Organisation
GAs:	General Authorisations
GDP:	Gross Domestic Product
GEAR:	Growth, Employment and Redistribution
GLeWaP:	Great Letaba River Water Development Project
HAIs:	Historically Advantaged Individuals
HDIs:	Historically Disadvantaged Individuals
IMF:	International Monetary Fund
IWRM:	Integrated Water Resource Management
KSA:	Key Strategic Area
LBPL:	Lower-bound Poverty Line
LWUA:	Letaba Water User Association
MISA:	Municipal Infrastructure Support Agent
NARBO:	Network of Asian River Basin Organizations
NDP:	National Development Plan
NWA:	National Water Act
NWRS:	National Water Resource Strategy
NWRS2:	National Water Resource Strategy 2
NW&SMP:	National Water and Sanitation Master Plan
OECD:	Organisation for Economic Co-operation and Development
RDP:	Reconstruction and Development Programme
RSA:	Republic of South Africa
SAHO:	South Africa History Online
SALGA:	South African Local Government Association

SANBI:	South African National Biodiversity Institute
SFRA:	Stream Flow Reduction Activities
StatsSA:	Statistics South Africa
TCTA:	Trans-Caledon Tunnel Authority
UN:	United Nations
UN-Water:	United Nations Water
V&V:	Verification and Validation
WAR:	Water Allocation Reform
WCD:	World Commission on Dams
WMAs:	Water Management Areas
WRC:	Water Research Commission
WTO:	World Trade Organisation
WUAs:	Water User Associations

# Chapter 1

## 1 INTRODUCTION AND BACKGROUND

### 1.1 Introduction

The low level of access to productive resources such as water by the black majority and the increasing number of blacks among the poor is a major concern in South Africa (Mbeki, 1998). Coming from a colonial and apartheid past, South Africa's water resources have, however, not been shared fairly and the skewed access to water resources continues to be an issue of concern (Kemerink, Ahler & van der Zaag, 2011) even after a new Act, the National Water Act, Number 36 of 1998, which sought to redress the unbalanced water allocation from the past governing systems, came into place (cf. Tewari, 2002; Movik, 2009).

The study focuses on a water infrastructure development project in the Greater Tzaneen Municipality in the Limpopo Province in South Africa. The South African national government is said to have moved from a water supply focus of water resource development to water resource management, which presents itself as conflictual in a context of resource scarcity and water allocation reform. With current water resources being said to be fully committed in most catchments in the country, the study investigates if there was deliberateness<sup>1</sup> of intent to have some of the water from the raising of the Tzaneen Dam and the construction of the new dam at

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<sup>1</sup> Deliberateness in strategies is explained by Mintzberg and Waters (1985) who indicate the need for at least three conditions to be satisfied for its realisation. They list the following: "First, there must have existed precise intentions in the organization, articulated in a relatively concrete level of detail, so that there can be no doubt about what was desired before any actions were taken. Secondly, because organization means collective action, to dispel any possible doubt about whether or not the intentions were organizational, they must have been common to virtually all the actors: either shared as their own or else accepted from leaders, probably in response to some sort of controls. Thirdly, these collective intentions must have been realized exactly as intended, which means that no external force (market, technological, political, etc.) could have interfered with them" (Mintzberg & Waters, 1985:258)

Nwamitwa allocated to historically disadvantaged individuals requiring water for productive uses.

The study is situated in development studies discourses whose primary focus is the understanding of poverty and how it can be alleviated (see Summer, 2006; Fischer and Hödl, 2007). Its focus is thus the understanding of Water Allocation Reform as a vehicle to alleviate poverty. It seeks to also understand the idea of justice in the allocation of scarce resources, water in particular, in a South Africa that has gone through more than 300 years of colonial and apartheid rule. The study uses the theory of distributive justice which has predominantly been used in the political and some social science disciplines (see Tyler, 1984). Issues regarding principles and guidelines of allocation, institutional responsibilities in allocation, availability of water resources and justice in the allocation of water will be analysed. Zwartveen and Boelens (2014:144) have also pointed out the need for creative analysis of multi-disciplinary issues such as climate, socio-technical and legal-cultural “determinants of how water flows are accessed and allocated” when one wants to understand water justice.

## **1.2 Emergence of reform processes**

The adoption of economic and social policies for better distributive outcomes has been attributed by Cornia (2014) to democratisation after many years of authoritarian rule as well as the coming into power of regimes that are more sensitive towards social equity. Monye-Emina (2012:12) has added that reform in less developed countries comes as a means of finding alternative ways of public administration, while for countries that are in heavy debt reform is used to respond to external pressure from aid donors and creditor nations. In South Africa, coming from a past where the minority ‘conquered and expanded’ their interests at the expense of the majority, the democratic government set to reverse and redress past discriminatory laws and practices. As part of this transition to a democracy, several policies were put into place, some of which being the Reconstruction and Development Programme (RDP) of 1994; the Growth, Employment and Redistribution (GEAR) strategy of 1996 and the Accelerated and Shared Growth Initiative for South Africa (AsgiSA) of 2006. It has, however, been noted that these policies were strongly economic development policies (Gelb, 2010; Koma, 2013).

Popularity of these economic policies via the media did not, however, mean that the democratic government was giving attention to only the economy. Other spheres of development, specifically those pertaining to resource access, were also on the agenda and land and water reforms are mentioned in the RDP framework as areas that needed redress (RSA, 1994a) as the division of land remained similar to what it had been during minority rule (Andrew, 2007:138). Sihlongonyane (2005:150) also suggested that the government had not been ‘sleeping’ on the land issue but rather was concerned about scaring away investors. It has, however, been argued that the African National Congress (ANC) was challenge in coming up with policies that simultaneously promoted economic growth and job creation, alleviated “white fears” and boosted business confidence while supporting redistribution at the same time (Nattrass, 1994 in Movik, 2012:23; Gelb, 2010:39). The RDP in 1994 and the Constitution of 1996, however, do declare commitment to land and water reform as well as to reforms to bring about equitable access to all South Africa’s natural resources (RSA 1994a; RSA 1996). The Promotion of Equality and Prevention of Unfair Discrimination Act of 2000 (RSA 2000:1) also makes a declaration of the need to eradicate “social and economic inequalities, especially those that are systemic in nature, which were generated in our history by colonialism, apartheid and patriarchy, and which brought pain and suffering to the great majority of our people”.

The build up to the Water Allocation Reform is attributed to several other policies that came before it. Tewari (2002) and Movik (2012) detail the historical journey from a precolonial state, rule by the Dutch, the British, the Afrikaners through to democratic South Africa. Several changes to land and water policies and legislation took place in those epochs. Below are some of the policies that were put in place to address the legacy of unequal resource access.

### **1.2.1 Land policies**

#### **Reconstruction and Development Programme (RSA 1994a)**

The RDP was described by the ANC as an integrated, coherent socio-economic policy framework that sought to mobilise South Africans and the country's resources toward the final eradication of apartheid (RSA 1994a). One of its objectives was to redress land and water access through a process of land and water reform. The following are key sections that address the issues of land and water reform:

- Section 2.4 addressed issues of land reform in which two options were suggested: land redistribution and land restitution.
- Section 2.6.1 of the RDP recognised the skewed water services and stated that water should be available to all South Africans.
- Section 2.6.11.2 stated that “water resource management must be founded on catchment-based institutions to ensure effective control over and supply of water resources”.
- Section 2.6.12 called for the RDP to undertake a process of updating the Water Act to ensure the right to water security for all

### **Development Facilitation Act 67 of 1995 (RSA 1995)**

The Act was put in place to among other things; speed up the implementation process of the RDP in relation to land (RSA 1995).

### **White Paper on Land Policy (RSA 1997)**

The White Paper on South African land policy document stresses the need for redress in land ownership while also reflecting on issues affecting the policy. The land reform programme and its three aspects: land restitution, land redistribution and tenure reform are at the crux of the White paper. Of concern are clauses contained in the Constitution pertaining to land as well as other constraints to the implementation of the policy. The White paper recognises land and water as a package when it expresses that “Physical planners use the term land development to describe the process of identifying, acquiring and releasing land and water resources for development” (RSA 1997:101). It also recognizes viability and sustainability of projects being dependent on among other things, access to water (RSA 1997:67).

### **Land reform**

Land reform is viewed as one of the policies put in place to reduce inequalities and work on socio-economic transformation (Moyo, 2014). The Department of Rural Development and Land Reform stated the purpose of the land reform programme as being that of initiating a sustainable land reform programme in South Africa (Department of Rural Development and Land Reform [nd]). As part of its implementation, the DWA (2013a) was of the opinion that land reform had to be aligned with water allocation reform. Land reform also had sub-

programmes, namely, land restitution, land redistribution, land tenure reform and land redistribution for agricultural development.

### **Restitution of Land Rights Act, 22 of 1994 (RSA 1994b)**

The Restitution of Land Rights Act is said to be one of the first pieces of legislation to be passed in the democratic dispensation (RSA, 2013:3). It informs the Constitution as well as acts on the constitutional mandate of providing for the rights of those persons or communities dispossessed of their land rights after 19 June 1913 as a result of discriminatory laws and practices (RSA, 1994b). It has, however, been argued that the cut-off date of 1913 excludes many potential claimants who may have been dispossessed before that date (Rugege, 2004).

*Land Redistribution Programme:* Was meant to enable the poor and disadvantaged people to buy land through the Settlement/Land Acquisition Grants availed by the government (Msibi & Dlamini, 2011:7). Rugege (2004:7) adds that this was a provision made for by the Constitution's clause 25(5), which stated that "The state must take reasonable legislative and other measures, within its available resources, to foster conditions which enable citizens to gain access to land on an equitable basis."

*Land Tenure Reform:* Was aimed at improving security of tenure and for solving any tenure conflicts (Msibi & Dlamini, 2011). Security of tenure is meant to prevent any evictions as well as fulfil the constitutional requirement (Viljoen, 2006; Strydom & Viljoen, 2014). Clause 25(6) of the Constitution states that "A person or community whose tenure of land is legally insecure as a result of past racially discriminatory laws or practices is entitled, to the extent provided by an Act of Parliament, either to tenure which is legally secure or to comparable redress" (RSA 1996).

Land tenure is, however, considered by some to be a very costly process and something that cannot be achieved within a short space of time (cf. Adams, Sibanda and Turner, 1999). Its importance cannot be downplayed, as argued by Adams, Cousins and Manono (1999) that "legal confirmation of people's land rights" is indeed beneficial. In South Africa, security of tenure is said to be rooted in Roman Dutch law, which does not recognise "the historical rights of indigenous South Africans" but is favourable for the wealthy (Phuhlisani NPC 2017:48). As



such, urban and peri-urban land rights are dealt with easily compared to those of the former homelands (Phuhlisani NPC 2017). Lack of progress and failure to recognise the urgency in tenure processes is seen as one of the reasons why empty spaces are being ‘reclaimed’ and ‘illegally’ occupied and shacks constructed (Sauti & Lo Thiam, 2018).

### **Land Redistribution for Agricultural Development**

The Land Redistribution for Agricultural Development has two specific purposes, namely, transfer of agricultural land to specific individuals or groups or commonage projects that deal with access to municipal or tribal land for grazing purposes (Ministry for Agriculture and Land Affairs 2009). Some of the projects under the programme were concerned that the land should also have access to water. In the procedures for implementation they thus stated that “The land should have the necessary water rights if irrigation is contemplated, and the rights should be specified in the sale contract and reflected in the land price” (Ministry for Agriculture and Land Affairs 2009:9). This land reform sub-programme is particularly important as it has the potential to address the skewed state of agricultural land access as StatsSA (2018:58) reports that 92.7% of the country's agricultural households “created backyard gardens”.

The Department of Rural Development and Land Reform published a land audit report which shows land ownership by race, gender and nationality in order to reveal who owns land in the country while at the same time tracking the progress of the land reform. Table 1.1 below shows the number of individual land owners by race with white landowners owning far above the national average hectare.

**Table 1.1: Number of individual land owners by race**

Province	White		African		Coloured		Indian		Other		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	
<b>EC</b>	6 047	52	2 747	23	1 492	13	895	8	499	4	11 680
<b>FS</b>	10 034	66	1 684	11	1 977	13	833	5	649	4	15 177

<b>GP</b>	26 622	56	8 887	19	6 220	13	3 640	8	2222	5	47 591
<b>KZN</b>	8 748	29	11 215	37	2 711	9	5 960	20	1 358	4	29 992
<b>LP</b>	8 225	52	4 690	29	1 679	10	777	5	542	3	15 913
<b>MP</b>	7 375	57	2 891	22	1 575	12	722	5	457	3	13 020
<b>NW</b>	12 265	51	7 652	32	2 400	10	1 040	4	764	3	24 121
<b>NC</b>	5 247	73	170	2	1 175	16	404	6	191	3	7 187
<b>WC</b>	11 110	66	558	3	2 898	17	1 330	8	955	6	16 851
<b>Total</b>	<b>95 673</b>	<b>53</b>	<b>40 494</b>	<b>22</b>	<b>22 127</b>	<b>12</b>	<b>15 601</b>	<b>9</b>	<b>7 637</b>	<b>4</b>	<b>181 532</b>

*Source: Department of Rural Development and Land Reform (DRDLR) (2017a:9)*

## **1.2.2 Water policies and legislation**

### **White Paper on a National Water Policy (DWAF 1997)**

The White Paper expresses the intent to review the past water law and use policy as part of the constitutional mandate. Its main objective was to set out policy for the management of the quality and quantity of the country's scarce resources (DWAF 1997). The White Paper also recognises the inextricable link between the land reform programme with programmes for equitable water access to realise land productivity (DWAF 1997; Msibi & Dlamini, 2011). The White Paper is understood as having set out principles for water reform (Movik, Mehta, van Koppen & Denby, 2016:458). Furthermore, it embraces the IWRM approach (Movik et al., 457), an approach that brought the idea of an ecological reserve (Mehta, Alba, Bolding, Denby, Derman, et al., 2014), thus framing water allocation within discourses of environmental protection.

### **Water Services Act (Act 108 of 1997)**

The Act deals with the supply of drinking water and sanitation services, a responsibility bestowed on the municipality as local government (DWA 2014). The Act also deals with rules on how the municipality should provide water services and regulates the roles of other water service providers (Inkomati Catchment Management Agency, 2008). The Act also spells out the rights of all to access to basic water and sanitation (RSA 1997). Mtisi and Nicol (2015) pointed out that the Water Services Act was based on preceding water policy documents prepared in response to South Africa's adoption of the Integrated Water Resources Management approaches. The preceding water policy documents were the Water Law Principles (1996), Resource Pricing Policy for South Africa (1997) and the White Paper on a National Water Policy (1997), (Mtisi & Nicol, 2015:87).

### **National Water Act (Act 36 of 1998)**

The National Water Act provides for reform of water law with regard to water resources. It informs of water scarcity and its uneven distribution in the country at the same time realising water as a basic need and right for all (RSA 1998). The Act serves as a legal framework "for the effective and sustainable management of ... water resources" (Kasrils, in DWAF 2002). The NWA recognises the different water resource needs and rights and prioritises the needs starting with basic human needs and ecological needs (the Reserve) and states the need for licenses for the rest of the needs (Tapela, 2015:16).

The NWA differs from the Water Services Act in that it deals with water resources as a national responsibility while the latter deals with services at local level (Tapela, 2015). The DWA (2014:3) pointed out that a decision has since been made to combine the NWA and the Water Services Act so as to have a "seamless piece of legislation governing the entire water chain".

Available literature on the NWA does not deal with the absence of land-water linkages in the Act. Although the Act deals with resources that have to be used on land, its focus is on pollution, other land-based activities and their impacts on water but not the relevance of land ownership as an essential component of fundamental reform that the Act sets out to achieve.

### 1.3 Background and motivation

Water issues in contemporary South Africa have to be understood in the context of historical water laws and policies that sought to conquer and expand the interests of a minority (DWAF 1995; Movik, 2012). The many challenges in the water policies, legislation and implementation together with the current state of water resource ownership are to a great extent the results of the events that shaped South Africa's history (DWAF 1995; van Koppen, 2008). Past water allocation, and accompanying laws and policies in South Africa have tended to favour the minority at the expense of the majority blacks who did not and continue to struggle to have access to both productive and basic water access. For instance, the Department of Water and Sanitation (DWS) (2018a:13) reported that of the 5 000 dams registered with the DWS, only 320 are controlled by the government and the rest are privately owned and controlled.

Before the arrival of the European settlers in the 1650s, land in South Africa as in the rest of Africa was "relatively plentiful" and there were multiple rights to land (Mamdani, 1996:138-141). This type of landholding or 'ownership' was not understood by the settlers who assumed the land was communally owned and went on to express that, that which belonged to everyman was no man's (Liversage, 1945). The settlers annexed and dispossessed the indigenous people of both their land and livestock (Sihlongonyane, 2005:143; SAHO, 2013). This was followed by trading of the land on the international market, which started towards the end of the 1800s when some of South Africa's land was being sold and bought on the London Stock Exchange (Davenport, 1983). Davenport (1983:24) reported that in the 1870s, land became increasingly difficult to buy and blacks were prohibited from buying land in certain areas, for example, the Orange Free State.

When the Natives Land Act No. 27 was passed in 1913, it sealed the fate of black people who were already being excluded from land ownership structures as evidenced from the report on the South African Native Affairs Commission of 1905 (Lagden, 1905:14). In the report, Lagden (1905) gives details of how the different parts of the country became British 'possessions' on which the place of the indigenous people had to be decided by a commission of enquiry. After the partitioning of the land, the 1956 Water Act (RSA 1956) formalised the water access by giving water rights to those that had land riparian to water sources. New principles of public

water governance were introduced through nine different acts, which gave the state control over sources of water (Tewari, 2002). Through these water rights, whites received privileged water access while black Africans increasingly became totally excluded (Tewari, 2002:22;-Schreiner, 2013:240).

In the new and democratic dispensation, the country had a new constitution that sought equitable access to all natural resources (RSA, 1996), albeit built on political compromises that left land ownership in the hands of the minority whites (Sihlongonyane, 2005; Lahiff, 2006:3). The National Water Act (NWA), (No. 36 of 1998), which was developed in alignment with the new Constitution, heralded a new era in terms of water governance. It sought to provide reform of the practices and laws pertaining to water resources (RSA 1998). The Act sought redress by stressing the importance of ‘sustainability and equity’ as central guiding principles for the “protection, use, development, conservation, management and control of water resources”, (RSA 1998; DWA 2013a). The NWA is said to have progressed from some of the prescripts of the 1956 Act in many ways, but equity issues had also been a concern in the 1956 Water Act. Writing on the evolution of water use in South Africa, DWA (1986) noted that the 1956 Water Act (54 of 1956) had also aimed to achieve equitable distribution for competing water users. This was after the realisation of the need for water in other sectors other than irrigated agriculture, sectors such as mining, industry and urban domestic water use.

The use of equity in the new Act presents itself as an apartheid heritage that cannot be accepted without further interrogation in redress and transformation discourses. Provisions made by the National Water Act of 1998 to allocate water equitably and seek sustainability did not bring about transformation. As Matji (2003) wrote, many areas that fall in the former homelands continued to struggle even after the then Department of Water Affairs and Forestry took control of water governance in the democratic dispensation. DWS (2018a:11) reports that in the agricultural sector where water use volumes are the most, 95% of the water remains in the hands of white commercial farmers. Further to that, the Constitution, through its ‘property clause’, section 25, also protects private property for economic growth, a position that stifles land reform (Andrew, 2007:140; Movik, 2009:4; Ntsebeza, 2007). Land reform is a necessary process to redress land ownership as access to land also directly affects one's access to water and amounts

thereof. Land ownership also affects the different interpretations around the understanding of what equity in water allocation means.

The NWA (RSA 1998) stipulates a licensing system for water users that in turn gave effect to the need for a targeted process that unpacks the licensing process in order to implement the allocation process. What came out of this is a Water Allocation Reform (WAR) strategy. The WAR programme is set on paper to redress past water allocation imbalances for the historically disadvantaged individuals (HDIs).

The WAR strategy arose out of the need to unpack an implementation process for water allocation following the specifications of the new National Water Act (No. 36 of 1998) (Movik, 2009). Although at the core of the strategy is the need to redress skewed water allocation and access, conditions in South Africa, economic, hydrological and social, do not seem to allow the process to take effect. Tewari (2002) points out that the climatic conditions of South Africa have not “changed at least within the last ten thousand years” (cf. DWA 1986: 1.13) and this means that South Africa’s state of water scarcity is not likely to improve to suit any new water allocation arrangements. Many catchments in South Africa are said to be over-allocated, which makes it difficult to comprehend where water for new allocations will come from.

Some studies have shown that the implementation of the WAR strategy seems to be entangled with many issues and much of the water resource continues to be in the hands of the minority in spite of the Act and strategy favouring its equitable distribution. Discourses on water in South Africa stress three main issues: the importance of efficiency in water use, sustainability of the resource and scarcity of water in the country. This context of efficiency and scarcity makes it difficult to picture how water allocation may play out in practice. The WAR strategy exists in a context where allocation, equity, efficiency and sustainability are in conflict with each other thus begging the question of whether the strategy is indeed capable of addressing skewed water access. While the idea of efficiency is supported by the government, which does not wish to scare away current and potential investors, it creates an in-built limitation for the WAR programme to effectively support or implement water allocation for inexperienced historically disadvantaged individuals. This is further complicated by WAR’s specific focus on women given that the experiences of the historically disadvantaged are most likely to be similar or

worse for women and experience that brings efficiency is most likely to be lacking or limited. DWAF (2005a) points out that redress through WAR was going to take place via a process that gave historically disadvantaged individuals (HDIs) access to the resource or access to the benefits of its use. The exclusion of what the Department of Water and Sanitation vaguely describes as “certain sectors from access to water for productive purposes” leads to the promotion of inequalities by the water sector (DWS 2019:14), which the reform process and the NWA is set out to remove.

It was hoped that the reform process would achieve equitable social and economic impact and a special focus was given to women and blacks (DWAF 2005a). The strategy, however, came with in-built limitations. In a 2005 water reform draft position paper, the then minister of Water Affairs and Forestry indicated that “... allocating water without ensuring that all users have the capacity to use this water productively will limit ... benefits” (DWAF 2005a). The minister also added the need to minimise impacts on existing lawful users (ELUs) of water that were already making contributions to the development of the country (DWAF 2005a). These views by the minister create limitations to the thinking behind how water reform is supposed to take place. One would like to assume that given the banishment of blacks into homelands, capacity for use of water in ways that can be considered economically productive may have been lacking or even unknown due to their lack of participation as producers in the economy. Secondly, an impression is given that ‘allocating out’ those privileged under other constellations of political forces is cautioned against “as they contribute most substantially to economic growth” (Swatuk, 2010).

With regards to WAR’s particular focus on gender, Seetal (2006) argues that

Current water use patterns in South Africa show not only a racial bias, but also a gender bias. Even though in many rural households women are the primary decision makers and have the responsibility for raising crops to feed the family, land ownership is often in the hands of the male members of the household. Gender inequality may therefore be further entrenched by linking water use to property rights over land. The water reform process must recognise and correct these gender inequities in water use.

The above statement by Seetal (2006) echoes western feminist thought on the state of women (cf. Mohanty, 1995) in which women have limited or no access to productive assets because of men. Gender equality or equity processes, however, need to be contextualised and not be taken for granted as simply male versus female (cf. Wittmann, 2012). Viewed through the lens of history, the historical context from whence the inequality came to exist needs to be unpacked. Gendered equity processes should not seek to further entrench the gender divide between men and women without situating the issues within a context.

It holds legitimacy to want to bring equity on racial grounds based on current inequalities, but it is not clear why women are viewed as a separate entity of the historically disadvantaged. At face value this seems to be because of the global movements for gender equality, yet still only scratches the surface if the real issue regarding the relegated position of women in the South African context is not addressed. Without that, gendered water reform pits black males (HDIs) firstly, against white ELUs and then secondly, against their black female counterparts, which perpetuates inequality and inequity. Viewing male and female HDIs as two separate entities, furthermore, plays into radical feminist views that see the freedom of women as lying outside of family units (Brown & Moorer, 2015), hence the agenda for individual water rights for women irrespective of their individual choices and/or capacities. The gender dimension of WAR required investigation especially given the fact that allocated water must ensure benefits and black women, like their black male counterparts, have not been active in the economic uses of water (DWAF 2008). Statistics on current water ratios clearly show racial inequalities and the specific needs of the women in question are unknown. The question then arises as to why gender? As Barkan (2006:1) has also queried, “how are universal rights integrated with group identity, diversity and cultural plurality?” The study sought to find answers to these questions using a bottom-up approach where the historically disadvantaged individuals, male and female, were the primary source of information.

## **1.4 Research problem**

The WAR programme is set to reverse the skewed water allocation resulting from previous discriminatory policies of the colonial and apartheid eras in South Africa. The problem is that



water allocation for productive use remains skewed along racial lines with white commercial farmers remaining the biggest water users, and riparian water rights from past legislations continue to proscribe re-allocation of water.

WAR's successful implementation is also shrouded in many issues. The National Water Act and subsequent literature reveal that South Africa is a water scarce country, which limits the amounts of water that can be allocated from the existing sources to achieve reasonable equity. There is limited land ownership by the HDIs and those currently with water rights are viewed as deserving of the rights compared to newcomers into the water economy who could derail the country's economy. Furthermore, the water sources in South Africa are suffering from high levels of pollution and this again reduces the amount of water available for allocation. Additionally, the idea of an ecological reserve, introduced by the Integrated Water Resource Management (IWRM), framed water allocation within discourses of environmental protection. These issues, coupled with the need to use water efficiently, while also adding climate change into the mix, may affect how the strategy is rolled out to benefit the previously disadvantaged.

Essentially, the scarcity of water resources warrants a study such as this one. Better understanding of water allocation and related issues would have both scientific and policy benefits. From a research/scientific point of view, the study attempts to provide clarity on the research questions that the study is dealing with and it suggests further important research areas as well as contributes to theoretical insights. From a policy perspective, the study is useful in informing necessary policy interventions or reforms in the water sector.

## **1.5 Research questions**

The main research question guiding the study is:

To what extent is Greater Letaba River Water Development Project a deliberate strategy for the realisation of water resources redistribution to the HDIs in the context of water allocation reforms? This will be interrogated further using these specific questions:

- How are equity arguments constructed in the WAR strategy?

- In what ways does South Africa's history affect how WAR strategy is implemented?
- What constitutes fairness and justice in water allocation from the perspective of HDIs and ELUs?
- What are the priority water allocations for the Great Letaba River Water Development Project?
- Why are women given special allocation focus and what are women's views on that?

## **1.6 Research objectives**

1. To examine the contextual background of the WAR strategy, particularly the institutions that influence(d) its conceptualisation
2. To expand the applicability of distributive justice theory to the context of WAR as a strategy for redress
3. To critique WAR's special focus on women as a separate entity among the HDIs.

## **1.7 Study's central idea**

The study is premised on the idea that water allocation reform came at a time when land reform is still an ongoing debate with no clear picture as to how it is going to unfold. Land reform is a necessary precursor to water reform as land is required if any substantive water reforms are to include the historically disadvantaged groups. The study sees the water reform strategy as a theoretical solution to real life problems as structural inequalities that make it impossible for the historically disadvantaged to access water through the reform strategy remain. The study thus seeks to engage with practical stories from the communities in order to add a practical perspective to the reform discourse. There is need to observe and engage with communities in order to be able to proffer recommendations that can inform policy.

The study also seeks to engage with the issue of gender in the allocation of individual water rights. While the reform strategy employs the principle of equity to deal with racial

discrimination in the allocation of water, equality is used as the principle for allocation between black men and women. There is no clarity on why racial equality is not an objective on its own and why individual water rights are pushed on black men and women who may want to work together as a collective. There seems to be maleficence in the judgement of black households as sites of gender inequality where equality has to be enforced through policy. The individual water rights approach is viewed as divisive with potential to further the gender divide.

## **1.8 Scope of the research**

The study confined itself to the Greater Tzaneen Municipality and the Olifants Catchment. According to a Department of Water Affairs report, beneficiaries for the Great Letaba project would be from two municipalities, namely, Greater Tzaneen Municipality and Greater Letaba Municipality (DWA 2012a), both in the Mopani District Municipality in the Limpopo Province. More details about the study area and how the case study area was chosen are detailed in Chapter 2.

The study will give specific focus to a Department of Water Affairs water resources infrastructure project, the Great Letaba River Water Development Project (GLWaP) in Greater Tzaneen. The project includes raising of the Tzaneen Dam as well as construction of another dam at Nwamitwa, a water project which is hoped to benefit irrigation farmers as well as providing for the ‘establishment of resource-poor farmers’ (DWA 2013a).

## **1.9 Research method and design**

### **1.9.1 Methodology**

The methodology was guided by the questions that need to be answered for the study and the need to gain in-depth understanding from key stakeholders. The study thus adopted a qualitative approach essentially to allow the researcher to answer the “what, how, when and where of a thing”, (Berg, 2001: 3). Qualitative methods are often viewed as subject to bias and invalidity (Oakley, 1998). For this study, the qualitative method was the best option as it gives the

researcher an opportunity for in-depth and first-hand interviews with stakeholders. Qualitative research studies are more concerned with meaning rather than generalisability of findings (Mason, 2010) as qualitative sample sizes often limit application to study cases. In support of the qualitative method, Oakley (1998:714) also argues that “the insights gained are likely to reflect the social world of research participants”.

### **1.9.2 Research design**

Hofstee (2006:113) describes a research design as an approach used to test a thesis statement. This study used a case study to test the thesis statement. A case study approach alone, however, has limitations in that a researcher may lose objectivity and results may not necessarily be generalisable. A broad review of literature was thus used to fill in gaps that a case study method might create. Triangulation was also used in the data collection process in order to establish validity and trustworthiness of data collected (Bernard, 2000). Neuman (2014:166) observes that triangulation is often used in social research “to learn more by observing from multiple perspectives”. A number of data collection methods, interviews, focus group discussions and questionnaires were used to gather different perspectives on research questions of the study.

### **1.9.3 Significance of the study**

A number of studies on reform policies in South Africa have tended to focus on land reform with little attention being paid to water allocation reform discourses. In mainstream media, land has also gained prominence as the most sought-after resource, especially with current debates on land expropriation in the country. Water reform has remained in the back seat, yet water issues in South Africa are as important and require more attention given that most research on water, as Asmal points out, “has been concentrated on addressing the problems and needs of the wealthy sector” (DWAF 1994:29). Many studies on water in South Africa have also mostly been from the perspectives of scholars in the environmental and natural sciences disciplines (cf. Mouton, Basson, Blanckenberg, Boshoff, Prozesky et al., 2019). This study focused on the needs of the poor; the HDIs who were systematically denied access to water for economic use and it provides an opportunity for their voices to be heard.

Narratives on poverty alleviation have tended to focus on, among other things, wages, as a solution for the HDIs without looking at long lasting options. Coming from a past of resource inequalities, the poverty narrative in South Africa needs to include resource redistribution that can impact the lives of the poor in ways that ‘social wage packages’ (RSA 2013:21) would not. A study on water allocation reform strategy will add to current debates on resource redistribution and bring to the fore the need for not only land reform (see, for example, Moyo, 2003; Ntsebeza & Hall, 2007; Lipton, 2009; White, Borras & Hall, 2014; McCusker, Moseley & Ramutsindela, 2016) but also active water reform.

Additionally, gender issues have been presented in narratives that condition the world to view women and development differently, seeing women as victims. Solutions have also been sought which encourage further separation of men and women thereby furthering the gender divide. This study sought to close that divide by questioning the validity of separating women from the HDI group in order to benefit them separately. The study also sought to clarify that both males and females can at the same time be historically disadvantaged by a system. The study aims to deconstruct some of the taken-for-granted issues about gender and development, and hopes to find answers to the research questions and add to the literature on water, gender and development.

## **1.10 Chapter outline**

Chapter 2 describes the study methodology, the qualitative design, the chosen research paradigm and the case study area. Criteria that were used to choose the study area are also explained. The chapter discusses data collection, sampling methods employed and how data were analysed using atlas.ti software. The steps taken to secure ethical clearance with the university and obtain consent from participating individuals and institutions are also explained.

Chapter 3 Literature on the principle of water allocation reform, equity, together with other concepts, is reviewed to address the research questions. The chapter also delves into the discourses of water allocation as well as the various institutions that provide support for the strategy while also looking at the potential limitations. The analysis of data starts in this chapter

as texts are read and analysed for their relevance to the study at the same time employing deconstruction theory to read what lies between the lines in some of the texts.

Chapter 4 presents the theoretical framework used in the study, that is distributive justice theory and deconstruction theory. It discusses other theories that have been used to discuss and understand water access and allocation. The chapter also highlights criticisms and strengths that using the theory of distributive justice present.

Chapter 5 presents the findings in ways that explain how the research questions were addressed. The chapter also provides limited discussions on the findings as further discussions are contained in the chapter that follows. Themes that emerged from the study are also highlighted, as well as the challenges the researcher faced during the fieldwork phase of the study.

Chapter 6 discusses the primary findings of the study and links them to literature and theory as discussed in Chapters 3 and 4.

Chapter 7 is the final chapter of the study It briefly explains the study's contributions to knowledge in general and to Development Studies in particular. A summary of findings based on the three study objectives is provided. The chapter also discusses the implications of the study to policy and proffers recommendations for future studies.

# Chapter 2

## 2 RESEARCH METHODOLOGY AND DESCRIPTION OF THE STUDY AREA

### 2.1 Introduction

The purpose of the study as laid out in Chapter 1 is to analyse whether the Water Allocation Reform strategy can indeed be a vehicle for redressing the inherited skewed water resource allocation in South Africa. To achieve this, the study makes its main objective the investigation of the Great Letaba River Development Project (GLeWaP) as a deliberate strategy to benefit historically disadvantaged individuals (HDIs). While the previous chapter provided the background and motivation for the study, this chapter discusses the methodology and methods that were used in the investigation and provides more details about the case study area. Through a detailed description of the study area, the study lays the foundation for an understanding of the socio-political, economic and environmental dynamics that make up Greater Tzaneen Municipality and the Letaba Catchment area in which it lies in. Considerations for water access and allocation have to not only consider municipal boundaries but the water catchment area.

The section on the case study area serves to provide an understanding of the broader operations of the municipality and how it is organised around the issues that may affect distribution of resources such as water. Berg (2001:234) describes case studies involving communities as meant to gather enough information to provide a researcher with an understanding and awareness of what happens in the community, why and how those things occur, who among the community members participates in the said behaviours and/or activities, and what social forces may bind members of the community together. The chapter provides background information that will be useful in the determination of whether there were any intentions to allocate water for productive purposes to historically disadvantaged individuals through the GLeWaP. The

section that follows discusses the philosophy behind the choice of the research paradigm used in the study.

## 2.2 Research paradigm

A paradigm is described by Patton (2002:9) as “a way of describing a world view that is informed by philosophical assumptions about the nature of social reality [... ontology ...], ways of knowing [... epistemology ...] and ethical and value systems [... axiology ...]”. Scholars have pointed out how researchers' world view is reflected in the approaches they take in executing their research work (Ngwenyama & Lee, 1997; Seale, 1999; Klein & Myers, 2001; Chilisa & Kawulich, 2012; Kivunja & Kuyini, 2017). There are several research paradigms, for example feminist research, postmodernism, post-positivism, constructivism, transformative, critical science, positivism, interpretivism and pragmatic theory to mention but a few (see Chilisa, (2011) for a discussion of the differences between some of these paradigms). Some paradigms arose out of a need to move away from dominant paradigms perceived as products of white male intellectuals' studies on males (Chilisa & Kawulich, 2012:11). These include transformative or emancipatory research, critical social science, participatory action research and feminist research (Chilisa & Kawulich, 2012). Positivism, interpretivism and critical science were identified by scholars such as Klein and Myers (2001) and Neuman (2014) as the most used paradigms. Maxwell (2004) puts forth that interpretivism and critical theory are especially suitable for qualitative research, and positivism, according to Cantrell (1983) and Kivunja and Kuyini (2017), would best suit a quantitative approach. In the water sector in South Africa, positivism is viewed as having been the dominant paradigm (the driving force) ever since the 1971 establishment of the Water Research Commission (Meissner, 2017:14). According to Neuman (2014:97), positivism is an approach best suited to natural sciences.

The study of water allocation reform in South Africa would most likely be viewed as falling within the positivism paradigm by default, since past water sector studies have fallen in that category. A critical perspective may, however, be required in a distributive justice study, especially given that some scholars state that “the foundations of water resource management in South Africa, contain myths” (Meissner, 2017:2) and that “the real water war is ongoing, and



it is against the poor” (Swatuk, 2017:111). Furthermore, patterns of distribution are understood to not occur in a vacuum (Powell, 2005:9). It is for these reasons and also because of what critical theories paradigm upholds that the critical paradigm (also known as Critical Social Science (Neuman, 2014), Critical Social Theory (Ngwenyama & Lee, 1997) or Critical Science (Cantrell, 1983) is chosen. According to Ngwenyama and Lee (1997), critical social theorists are different from the traditional social theorists who merely observe social situations with the objective of giving a sound explanation to them or understanding them. A critical social theorist (those that employ the critical theory paradigm) sees her role as a researcher going beyond that of observer but “must extend to a critique of unjust and inequitable conditions of the situation from which people require emancipation” (Ngwenyama & Lee, 1997:151; cf. Meissner, 2016:2). Critical social theorists from the past, as noted by Neuman (2014:110), were the likes of Karl Marx, Sigmund Freud and Paulo Freire. Paulo Freire (2005:32), for instance, argued that everyone has potential to be subjects that act upon and transform the world (critical theorists) because “every human being, no matter how ‘ignorant’ or submerged in the ‘culture of silence’ he or she may be, is capable of looking critically at the world in a dialogical encounter with others”.

Kivunja and Kuyini (2017:35) explain that research in the critical paradigm is situated in issues such as social justice and intends to address the “political, social and economic issues, which lead to social oppression, conflict, struggle, and power structures at whatever levels these might occur”. In their characterisation of research that falls within the critical paradigm, Kivunja and Kuyini (2017) identify the following characteristics as discussed by Guba and Lincoln (1988) and Mertens (2015):

- The concern with power relationships set up within social structures
- The conscious recognition of the consequences of privileging versions of reality
- An examination of conditions and individuals in a situation, based on social positioning
- A central focus of the research effort on uncovering agency, which is hidden by social practices, leading to liberation and emancipation
- And endeavour to expose conjunctions of politics, morality and ethics

- The deliberate efforts of the researcher to promote human rights, and increase social justice, and reciprocity
- The deliberate efforts of the researcher to address issues of power, oppression and trust among research participants
- A high reliance on praxis
- The use of ethnomethodology, situating knowledge socially and historically
- The utilisation of participatory research.

A positivist approach is viewed as defending the status quo (Neuman, 2014:110). In line with this thinking, Pepper (1984) also argues that:

the scientific research which is or is not done – and the technological developments which stem from it – is essentially selected according to whether or not it supports the ideologies and purposes of particular groups; that these practices can be seen as tending to increase the amount of social and economic control exerted by select groups over the lives of ordinary citizens (Pepper, 1984:137).

The critical paradigm has, however, been criticised for being biased and also assuming ideological superiority whereby researchers and theorists “know the direction society should be taking socially and politically” (Roof, Polush & Boltz, 2017:83). A notion of bias and assumption of ideological superiority in research may imply that the approach is unethical. However, critical theory’s focus is that of wanting to change the social world and not just study it (Neuman, 2014:111), thus critical engagement seeks to confront an injustice (Roof, et al., 2017:93). In the case of the study at hand, the focus on distributive justice in productive water access seeks to identify ways through which justice for society’s worst off can be achieved. The purpose of the study thus informs the suitable paradigm as well as the choice of theoretical framework. Unlike positivism which is value free, critical theory posits that “all science must start with a value position: some positions are right, some are wrong”. With regards to consideration for ethics in research, critical theory does not assume a morally higher position but considers ethics as the essence of critical inquiry for social good (Roof et al., 2017:93). Roof et al. (2017:83) also observe that ethics have increasingly become procedurally technocratic in a way they see as having adverse effects for the truth-telling approach critical

theory takes. Ethical considerations for this study will be discussed in more detail in a later section in this chapter.

## **2.3 Research design**

The study uses a case study design to address the thesis statement. A case study is a “research methodology that focuses on the circumstances, dynamics and complexity of a single case or a small number of cases” (Pitchforth & van Teijlingen, 2005:2). Neuman (2014:42) explains it further saying that a case study examines both the internal details and external features surrounding the situation. Besides allowing direct interaction between researcher and research participants, case study research allows the researcher to develop a level of detail about the case (individuals or place) (Creswell, 2008) and also to create new or reshape existing theories (Neuman, 2014). Case study research brings to life abstract issues as the researcher sees and obtains the details of processes and how different factors affect each other.

Case study research requires a researcher to choose an appropriate case for in-depth analysis; sampling and selection criteria are involved. Maxwell (2004:234) discusses sampling as not only covering details about selection of participants but also the times and the settings for the observations and interviews. The case to be used in the study also requires to be selected purposively as argued by Seawright and Gerring (2008:295). Although randomly selected case samples avoid the dangers of bias that can come with purposive sampling, Seawright and Gerring (2008) fear that random sampling has representativity as well as sample size problems. Purposive sampling also has problems that may not necessarily be generalisable (Noor, 2008). Case study selection, however, has to be done with the thesis statement in mind as the overall deciding factor. Seawright and Gerring (2008) discuss seven case selection techniques and from these, the typical case was chosen as the most relevant to this study. The typical case is a method used for “confirmatory” purposes where a researcher “wants to find a typical case of some” (Seawright & Gerring, 2008:299). The case chosen for this study, that is of the Tzaneen Municipality/Letaba Catchment, provides a case where there is need for a discussion about distribution of water to historically disadvantaged individuals.

### 2.3.1 Selection method for the GLeWaP in the Tzaneen Municipality

Water resources in South Africa are said to be fully allocated in most catchments (DWS 2017a; Molewa, 2013) with no surplus available. The selection of a case study thus had to consider a case where water resource volumes were going to increase thereby providing opportunities for deliberate allocation to the HDIs. Cases where there is water infrastructure development or where climate projections showed potential for an increase in precipitation were seen as potential cases. In the Western Cape, the researcher identified the Clanwilliam Dam and in the Limpopo Province, the Nwamitwa and Tzaneen Dams project. After identifying the two water infrastructure projects, other variables were added to the assessment criteria, namely, physical, socio-economic, governance and institutional variables. Using available literature on the two catchments (DWA 2010a; Department of Rural Development and Land Reform, 2017 and StatsSA, 2010) a comparison was made between the two potential cases. The summary is given in Table 2.1.

**Table 2.1: Variables used to select case study area**

Variables	WATER MANAGEMENT AREAS (WMA)	
	Olifants-Steelpoort	Berg-Olifants
	Letaba Catchment	Olifants-Doring Catchment
<b>Physical Variables</b>		
Location	Limpopo Province	Western Cape Province
Rainfall in mm	300-1 000	100-1 500
Available surface water per annum in Mm <sup>3</sup>	170	257
Available ground water per annum in Mm <sup>3</sup> /a	33	45
Pollutants	Pit latrines, sewage, agricultural	Industrial, agricultural, wastewater, sand mining
<b>Socio-economic variables</b>		

Population	1.1M	104 000
% of population in poverty as % for province	77	32
Most common settlement types	90% rural	More than 50% urban and peri-urban
Economic activities	Agriculture, tourism, forestry	Agriculture, fisheries, forestry
Land ownership dynamics	52% white, 29% African, 10% coloured, 5% Indian, 3% other	66% white, 3% African, 17% coloured, 8% Indian, 6% other
<b>Governance and institutional variables</b>		
Availability of water for allocation	Fully committed	Fully committed
Political history	Home to former homelands of Gazankulu, Venda, Lebowa	A province of pre-democratic South Africa
Transformation of Irrigation Boards to Water User Associations	Slow paced	Slow paced
<b>Infrastructure development</b>		
Projects	Raising of Tzaneen Dam and construction of Nwamitwa Dam	Raising of Clanwilliam Dam
Purpose of project	Rural settlements primary water needs; ecological reserve	Redress imbalances of the past; economic development
Dam capacity in Mm <sup>3</sup>	Tzaneen – 158 Proposed Nwamitwa – 187	121.8

### 2.3.2 Analysis of variables in case study decision making

The variables recorded in Table 2.1 were useful in providing more information about the infrastructure projects as well as the circumstances surrounding them. Levy (2008) warned against deciding on a case study based on historical accounts which he said are not always neutral. The statistics and other

information tabulated in Table 2.1 relied on information from several sources and hence do not have the bias that a single source might have. Not all of the variables listed are directly useful in making a decision on which case study would be useful in an investigation of deliberately benefiting HDIs in water allocation. Where water should be allocated for productive use, availability of water in the catchment, land ownership by the HDIs, as well as a high presence of an HDI community would be prerequisites for choosing a site for the study. Values of 0 and 1 were used where the higher weight (1) was applied to a variable with the most favourable conditions applicable to the research study, as shown in Table 2.2

**Table 2.2: Comparison of most applicable variables with scores for the two case study sites**

<b>Variables</b>	<b>GLeWaP</b>	<b>Clanwilliam Dam</b>
Available water for allocation	No (0)	No (0)
Surface water availability	Not much (0)	Not much (0)
HDI community	High (1)	Low (0)
HDI land ownership	High (1)	Low (0)
Potential HDI beneficiaries	High (1)	Low (0)

Weights for each variable: No = 0; Yes = 1; Not much = 0, High =1, Low = 0

The weighting of the variables gave a higher score of three to the GLeWaP project where, as also shown in Table 2.2, there is a higher population of HDIs with a 29% land ownership. Although both case study sites have fully allocated water resources, GLeWaP is surrounded by a highly rural population as compared to Clanwilliam Dam whose surroundings are more than 50% urban With 77% of the population in Limpopo Province being said to be living in poverty, GLeWaP in the Letaba Catchment was chosen as the most suitable case study of the two. Neuman (2014:42) points out one of the strengths of case study research as their “ability to capture complexity and trace processes”. The GLeWaP case provides a situation where there is potential for other groups of people other than commercial farmers to access water for productive use in a case where that objective is not explicitly stated. There is a case in this project more than the other to discover multiple factors that constrain or slow down Water

Allocation Reform. Having made the decision to work on the GLeWaP, the following research questions were formulated for investigation using fieldwork methods:

- What are the views of HDIs and ELUs in Greater Tzaneen Municipality on water redistribution?
- What constitutes fairness and justice in water allocation?
- What are the priority water allocations for the Great Letaba River Water Development Project in Limpopo Province?
- Why are women given special allocation focus and what are women's views on this?
- In what ways does having access to the benefits of water use constitute equity?
- What is being done in cases where water is already fully allocated?

## **2.4 The study area**

The Greater Tzaneen Municipality (GTM) is one of the five local municipalities in the Mopani District of the Limpopo Province of South Africa (Figure 2.1). It covers a total area of 3 242.6 km<sup>2</sup> with its rural population constituting 82% of the total population (MDM, 2016a). According to the Greater Tzaneen Municipality (2014:20), the town of Tzaneen after which the municipality is named, was planned and surveyed in 1919 by a surveyor named H. Manaschewitz. Bond (2008) notes that townships in South Africa were a creation of the apartheid system and the white rule that came before it. He adds that townships were racially discriminatory in the way they ordered people of different racial and ethnic groups to live separately (Bond, 2008:405). The municipality thus has to be understood from its colonial history as a former Bantustan (Gazankulu) in which planning deliberately segregated citizens on racial grounds (Pernegger & Godehart, 2007:3).

The municipality is responsible for administration and delivery of several tasks and services in accordance with the Local Government Municipal Structures Act (No. 177 of 1998) (Greater Tzaneen Municipality, 2014:10). While the Mopani District Municipality is the Water Service

Authority, the Greater Tzaneen Municipality is the Water Service Provider (Greater Tzaneen Municipality, 2018a:58). The water service provider provides water to villages and those experiencing shortages through tankers (Greater Tzaneen Municipality, 2016). Planning in the municipality is considered based on national priorities, the National Development Plan (NDP), the Limpopo Employment, Growth and Development Plan (LEGDP), and the District Growth and Development Summit, while the Community Based Planning (CBP) is viewed as an important tool for community participation (Greater Tzaneen Municipality, 2014:12).



**Figure 2.1: Location Map of the Greater Tzaneen Municipality**

*Source: Greater Tzaneen Municipality (2018a)*

### **2.4.1 Demographics of the study area**

The population of the Municipality according to the 2016 Community Survey was 416 488 (GTM, 2018). Statistics from a 2007 community survey reports that black people constituted the majority followed by whites, Indians/Asians and then coloureds (Greater Tzaneen Municipality, 2012). At catchment level, 97% of the total population, which is approximated



as 1.1 million, are black and 2% is white (DWS 2016:27). According to the 2011 census and 2016 Community Survey, the demographics of the municipality showed that there were more women than men in Greater Tzaneen (StatsSA, 2016b). Although there are higher numbers of women in the municipality, attributed to migration of males, there are still more male-headed households in the municipality (Greater Tzaneen Municipality, 2012). Although several languages are spoken in the municipality, most of the people speak Xitsonga and Sepedi (StatsSA, 2011, in Greater Tzaneen Municipality, 2014:30).

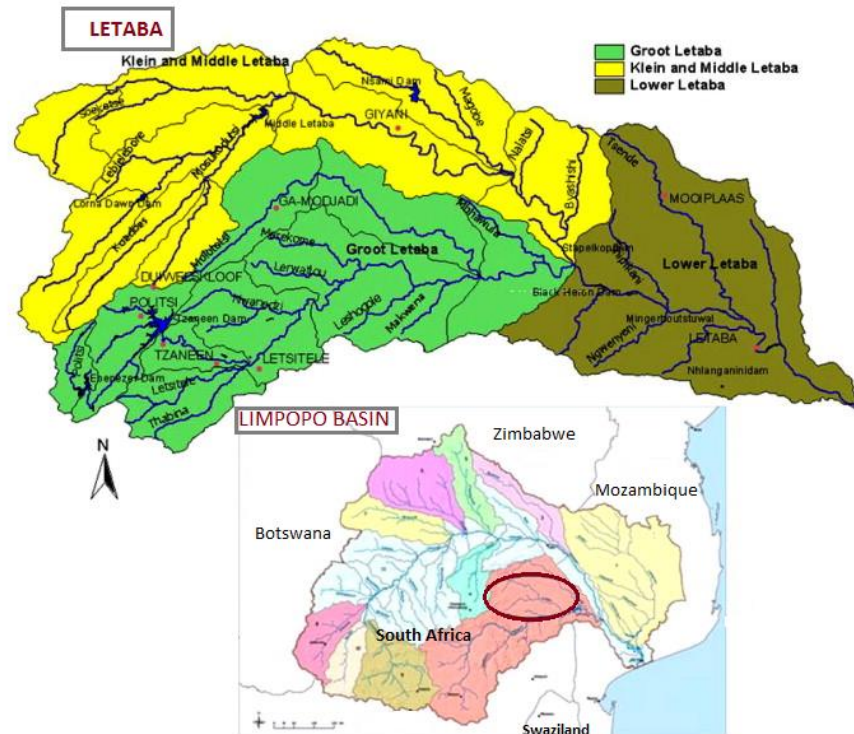
#### **2.4.2 Land ownership and land claims**

Land ownership in the municipality is largely private, constituting an approximated 66%, while state ownership under Traditional Authority areas constitutes 33% (Greater Tzaneen Municipality, 2018a:49). According to the Greater Tzaneen Municipality (2018a:39), a great deal of land under the custodianship of the Traditional Council is vacant but needs to be used. Cases of land invasions on such unoccupied land have been reported to be taking place in the municipality already. The Greater Tzaneen Municipality (2017:42; 2018:37) reported that land in the state's jurisdiction under the trusteeship of Traditional leaders, which includes wetlands and areas reserved for business development, is being unlawfully occupied. A previous study by Lahiff, Maluleke, Manenzhe and Wegerif (2008:12), however, showed that such unlawful occupations are triggered by community members' fear that township growth might encroach onto land that they saw as rightfully theirs.

Some of the land in the municipality is under claim, which is viewed as a challenge to developments as such land may not be used (Greater Tzaneen Municipality, 2014). The municipality, however, states the importance of land and its ownership, noting how this plays a big role in shaping the political, economic and social processes of any given space (Greater Tzaneen Municipality, 2017). Land claims, although viewed in their draft Integrated Development Plan as presenting challenges (Greater Tzaneen Municipality 2014), are also acknowledged together with land redistribution as welcome moves for the spatial planning of the municipality (Greater Tzaneen Municipality 2017). As of 2016, not much progress had been made with the processing of land claims as only 12 of the 37 submitted land claims in the municipality were considered valid (MDM, 2016b).

### 2.4.3 Letaba catchment

A catchment denotes an “area from which any rainfall will drain into the watercourse or watercourses or part of a watercourse, through surface flow to a common point or common points” (RSA 1998). The Letaba catchment (Figure 2.2) is located in the north of the Olifants Water Management Area. It covers a total land area of 13 670 km<sup>2</sup> (DEAT 2001). The catchment is drained by the Great Letaba and its four major tributaries, the Klein Letaba, Middle Letaba, Letsitele and Molototsi rivers (DWS 2018c). Areas covered by the catchment include the urban areas of Tzaneen and Nkowakowa (WRC, 2017:32) and a mix of scattered as well as densely populated rural villages. The Letaba River flows through the Kruger National Park, and joins the Olifants River upstream of the Mozambican boarder (DEAT, 2001:7). The surface water in the catchment is said to be highly regulated by dams in the upper and middle reaches of the river such as the Tzaneen, Magoebaskloof and Ebenezer dams as well as irrigation weirs on the Letaba River, which limit flow into the Kruger National Park (WRC, 2017). Downstream of the Tzaneen Dam and along the Great Letaba River, commercial irrigation of vegetables, citrus and other fruit constitute the major water uses in the catchment to the point of overexploitation (DWAF, 2004; WRC, 2017). Afforestation in the catchment impacts negatively on surface runoff as it reduces streamflow in the upper reaches of the Great Letaba, Luvuvhu and Klein Letaba Rivers (Basson & Rossouw, 2003:19). The Department of Water and Sanitation describes the catchment as “critically stressed in respect of both water quantity and quality” (DWS, 2014:1).



**Figure 2.2: The Letaba Catchment Area**

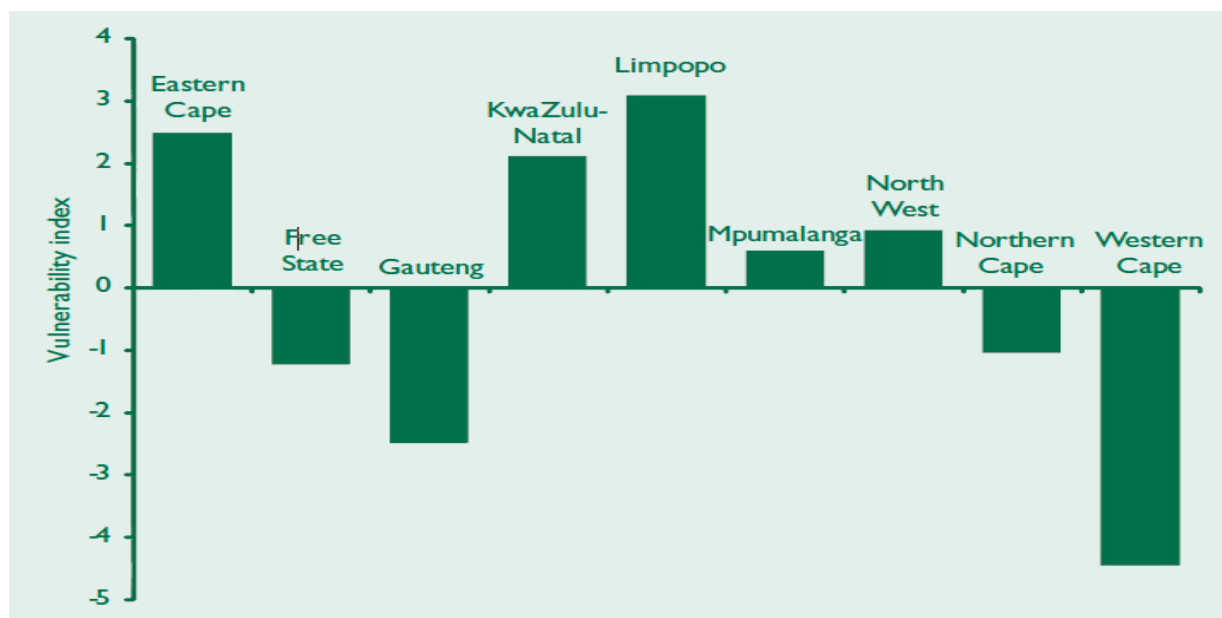
*Source: Adapted from DWAF (2005b)*

### 2.4.3.1 Climate

The climate of the Letaba catchment is relatively warm with an annual temperature range of 18° C and 28° C. Rain falls during the summer months between October and March with much of the rainfall occurring in January and February (DWAF, 2004). The mean average precipitation ranges between 700 and 1500mm while other parts have a much lower range of 450mm - 800mm (Mkwalo, 2011:34). Evaporation trends have been described as ranging from 1800mm in the mountainous western parts to 2400mm in the northern and eastern parts of the catchment (Basson & Rossouw, 2003). The geology of the area has been described as complex and varied with a wide range of soils but mostly sandy soils (Basson & Rossouw, 2003).

The Limpopo Province in which the Great Tzaneen Municipality lies is viewed as being vulnerable to climate change as shown in Figure 2.3. It has been noted that community vulnerability to the impacts of climate change on water access and use is dependent on the communities' livelihoods and their current water access methods and use (Dube, Maphosa &

Scott-Goldman, 2014). Vulnerability is also viewed as a sum result of three variables: exposure, sensitivity and adaptive capacity (Dube et al., 2014:x).



**Figure 2.3: Climate change vulnerability ranking in South Africa by province**

*Source: Gbetibouo & Ringler (2009)*

#### 2.4.3.2 Water users in the catchment

Water users in the Letaba catchment are the industries, mines, commercial agriculture, domestic water users as well as the environment. There is commercial agriculture practised in Greater Tzaneen concentrated along the Great Letaba River (MDM, 2016b). Commercial farming focuses mainly on sub-tropical fruits and forestry. Both surface and ground water are used in the irrigation sector (DWA, 2013d).

The IDP reports of the municipality do not particularly focus on small-scale farming (see, for instance, the 2017 and 2018 IDP reports) but one pointed out that one of the many drawbacks for local farmers is their poor access to water rights (Greater Tzaneen Municipality, 2014). In the 2018/19 approved IDP, the DWS promised to help the municipality by revisiting the issue of unused water allocated to farmers and negotiating for water transfers. It was observed that small-scale farming in the rural villages mostly consisted of spaces surrounding homesteads as

opposed to fields that are separate from the villagers' homes. These farming spaces varied in sizes and in all observed cases amounted to a few acres of land per farming household.

#### *2.4.3.3 Proposed water resources developments in Letaba Catchment*

The Great Letaba River Water Development Project (GLeWaP), consisting of the raising of the Tzaneen Dam and the construction of the proposed Nwamitwa Dam, are key water resources developments in the catchment (Figure 2.4). The proposal for a new dam on the Nwamitwa site dates back as far as 1983 when the Great Letaba Main Irrigation Board (established in 1960, and now known as the Letaba Water User Association) was requested by the then Department of Water Affairs to undertake a study of the catchment. This resulted in the feasibility study of a new dam (PMG 2005).

The Department of Water Affairs' strategic plan of 2013/14 to 2017/18 described the Nwamitwa Bulk water supply as having been at a feasibility stage. Projections of its benefits were, however, noted to be the supply of water to 244 500 people in households and improved volumes for the river ecosystem (DWA, 2013e). According to DWA (2010b:10), the raising of the Tzaneen Dam could be used for existing farmers, the ecological reserve and the agricultural sector. While DWAF (2004) categorically states that the proposed Nwamitwa Dam "would not provide for new allocations and would only improve the assurance of supply", the NWRS2 describes the GLeWaP as also meant to provide for new resource-poor farmers on about 2000 Ha of land (DWA, 2013a:30). The DWAF (2004) has also added that there would be no new allocations from the catchment including any new allocations after the raising of the Tzaneen Dam. The NWRS2 is, however, "a legal instrument for implementation of the National Water Act" and "this legal status ... is binding on all authorities and institutions implementing the Act" (DWA, 2013a:1, in Meissner, 2016:3).

A telephone interview with one of the GLeWaP project managers, however, confirmed that work on the Nwamitwa Dam had not started except for the raising of the Tzaneen Dam (Personal Interview 2018). She also added that due to the state of the Department of Water and Sanitation's budget, there had not been any indication of what was going to happen. Her personal opinion was, however, that human needs would more likely be given preference over the ecological needs for which the Nwamitwa Dam was intended. As such, work on the raising

of the Tzaneen Dam would proceed according to plan. The Tzaneen Dam's primary purpose is the provision of irrigation water to farmers and raw water for domestic use to the Municipality. It also has secondary uses, namely, recreational (DWS, 2015c: vii), with the Greater Tzaneen Municipality being put in charge of the management of the recreational uses of the dam (*Herald Week*, 2016).



**Figure 2.4: Key water developments in the Letaba Catchment**

*Source: DWAF (2007a:18)*

#### **2.4.4 Water resources**

Water supply in the Mopani District is dependent on dams in the Letaba Catchment, which include the Tzaneen Dam, Middle Letaba Dam, Ebenezer Dam, Magoebaskloof Dam, Nsami Dam and Modjadji Dam (DWS, 2018c). These dams supply water to various towns including Tzaneen and some rural villages. There are also several other unnamed dams on private properties (MDM, 2016b:29). The Tzaneen and Ebenezer Dams have a total yield of 168Mm<sup>3</sup>/a

(DWS, 2016). Water use in the catchment is, however, restricted as areas surrounding the Letaba, including areas from the proposed Nwamitwa Dam, have been classified as Class 1 and Class II, two classes where development is restricted (DWS, 2018c:25).

About 27% of the villages in the Letaba Catchment have enough ground water resources but these are unfortunately of poor quality and not suitable for domestic use (DWA, 2010). A Department of Water Affairs report suggests that the poor quality of groundwater, especially high concentrations of nitrates, could be due to leakage from cattle enclosures and septic tanks coupled with poor borehole construction (DWA, 2010b). Other villages, such as Rikhotso, Nkambako, Mavele and Runnymede, have very low groundwater potential (DWA, 2010c), making alternative access crucial.

## **2.5 Research methodology**

The qualitative approach was used for this study. It was chosen because it allows for descriptive analysis of issues and events (Neuman, 2014). The qualitative approach allows the researcher an opportunity to study processes and behaviours in their natural settings without the filters that sometimes come with published literature. In qualitative research, the researcher makes sense of phenomena “and the meanings that people attribute to them” (Parker, 2004:159).

Qualitative methods have in the past been criticised for being unscientific and subject to bias. Much of this so-called bias is due to the involvement of the researcher, which is different from the quantitative methods where a researcher is detached (Hossain, 2008:6) and uncontaminated by emotions or particular interests (Cohen, Manion and Morrison (2007) and hence ‘objective’. The fact that qualitative research falls within the critical paradigm can be a cause for validity concerns as well. As discussed in section 2.2, in a critical paradigm, the purpose for doing research is stated as the need to “smash myths and empower people to change society” (Neuman, 2014). Maxwell (2004) argues for the differentiation of research for personal goals, practical goals and intellectual goals, with personal goals feared to threaten the validity of a study. He added, however, that in qualitative research, the researcher does not need to get rid of their personal goals but simply be aware of them and think of best ways of dealing with them.

With its many data collection methods and use of different information sources, qualitative methods can still prevent researcher bias (Maxwell, 2004). This method is called triangulation whereby information is collected through various research techniques with a variety of research participants (Maxwell, 2004). Maxwell (2004) further argues that triangulation also helps increase validity of qualitative research.

## **2.6 Research methods**

The following techniques were used in the study: interviews, focus group discussions, literature review, online survey and resource mapping, which was done using questionnaires. The sections below discuss the techniques, how they were used in the study, and the sampling methods used. A list of the sampling methods used and discussed is presented in Table 2.3.

### **2.6.1 Interviews**

Bertuax (1981) comments that the subjects of inquiry in social sciences “can think and talk” unlike those of the natural sciences (the planets, chemicals or the natural environment). Interviews as qualitative techniques for data collection provide a social science researcher with an opportunity to talk to research participants and listen to their thoughts first hand. In this study the interview technique was used with key respondents from different institutions as well as with women in Tzaneen.

The topic of water allocation reform is central to this study and as a national policy strategy; different institutions interact with the issues and concerns surrounding the topic. As such, the different institutions were identified at the study planning stage and the participants from the institutions were later identified. Key respondents were chosen using the expert sampling method. Bhattacharjee (2012) describes the expert sampling method as a technique where respondents are purposively chosen on the basis of their expertise on the subject of study. This sampling method has its strength in the fact that experts have knowledge of the subject and their opinions, though not necessarily generalisable, may still add value to the study.

Interviews were held face-to-face, telephonically and through email correspondence. Telephone interviews were done with some of the key respondents from some of the identified institutions, while others were consulted with through email communication. Berg (2001:83) suggests that



telephone interviews are best when a researcher has specific questions planned, “formal or semi-structured”. A comparison of telephone interviews and face-to-face interviews by Carr and Worth (2001) reveals that the methods were indeed comparable but as noted by Bernard (2000), telephone interviews had various advantages. Bernard (2000) suggests that telephone interviews, although lacking the personal quality of face-to-face interaction, were less intimidating. Maphosa (2010a:42) suggests that with telephone interviews, there are no reactions to the appearance of the interviewer or interviewee although respondents may react to accents and speech patterns of interviewers.

The interviewees for the telephone interviews were consulted with, first to invited them to participate and then to seek their written consent. Thereafter an interview date was scheduled and the interview took place as planned with the researcher asking questions from a pre-planned schedule that had already been pilot-tested. The questions varied for each interviewee (in cases where interviewees were from different institutions) and all the interviews were recorded for later transcribing, with the interviewee’s consent.

Piloting for the telephone interviews was conducted to test if the questions were appropriately phrased and if they would solicit comprehensive responses. Majid, Othman, Mohamad, Lim and Yusof (2017:1073) have endorsed piloting for interviews in qualitative research, arguing that it allows a researcher to test the questions and gain interview practice. Writing on the use of pilot studies in general, Neuman (2014:320) explained the importance of asking pilot test respondents whether questions were clear.

Berg (2001:82) stressed the importance of interview length in his discussion on long versus short interviews. He pointed out that length is dependent on whether the type of questions will solicit short answers or long ones and if the questions will be multi-layered. In the case of the latter, the interview may end up being long because of the additional questions and answers that come with multi-layered questions. In this study, the interviews were held in the timeframe indicated to the respondent, which was sufficient for the planned questions. Prior communication through email to seek consent and to brief the respondent on what the interview and study were about made the interview long enough for all questions to be sufficiently addressed.

Seidman (2013:10) understood the best way to investigate an institution or a process as happening through experiences of individuals who make up the institution or those who carry out the processes. As such, the institutions identified for the study are in one way or another involved in the ideas around or the process involved in the water allocation process. The interviews with five women from Tzaneen were done with women that had been sampled using purposive sampling. Women's views were required on the issue of equal allocation of water between men and women. Women are important for this study as they are involved in both the productive and domestic use of water. Maphosa (2010b) also argues that “[W]omen continue to be marginalised as a result of decisions and policies on water which do not value or account for their input and therefore, do not seek to empower them”. They are thus part of the processes as per Seidman's (2013) recommendation.

The institutions that were included for participation in the study were:

- Department of Water and Sanitation (DWS)
- Department of Rural Development and Land Reform (DRDLR)
- Water Research Commission (WRC)
- Council of Scientific and Industrial Research (CSIR)
- African Farmers Association of South Africa (AFASA)
- Letaba Water User Association
- University of Pretoria and Nelson Mandela University

Consent was sought from the institutions in some cases and in other cases from individuals. Although consent was given to consult with personnel from the DWS (Annexure 1), when time came to consult with them, the researcher was taken around in circles until one officer advised that information could only be given after one applies for access to information through the Promotion of Access to Information Act (PAIA) (SAHRC, 2000) process. According to the personnel in the DWS, some information can only be made public after a written request through the PAIA form. After an application form is completed and a payment of R35.00 is made and proof submitted to the Department, the request is considered and feedback on the result of the application provided after 30 working days. An application was submitted and accepted where after data was provided to the researcher.

## 2.6.2 Focus group discussions

Berg (2001:111) describes focus group interviews/discussions as a style of interview that is designed for small groups. The interaction provided for in focus group discussions helps provide “a deeper understanding of the phenomena being studied” (Nagle & Williams, 2013). Participants in focus group discussions are chosen from “a well-defined target population” (Wolff, Knodel & Sittirai, 1993:119). Focus group discussions are useful in that they can complement other research techniques, such as surveys or interviews. Wolff et al. (1993:121) advises that focus group discussions can be held with participants that may have previously participated in a survey or an interview or that the discussion takes place either concurrently with the surveys or after the survey data has been analysed.

In this study, two focus group discussions were held with purposively selected community members from the case study water management area. A total of fourteen community members participated in the focus group discussions. The researcher felt compelled to have a big group of participants as the discussion topics required insights from more than just a handful of participants. The same group of focus group participants were met with on two different occasions. Following observations made by Nyumba, Wilson, Derrick and Mukherjee (2017:23) that a focus group discussion can be reconvened with the same group of participants in cases where topics cannot be exhausted in a single group discussion, the researcher thus decided to reconvene the focus group with the same group of participants. In the second meeting, the main purpose was to gain access to the group meaning attached to fairness in water allocation and gendered allocation of water. Bloor, Frankland, Thomas and Robson (2001:4) have put forward the idea that “focus groups can also throw light on the normative understandings that groups draw upon to reach their collective judgements”. The second meeting with the focus group participants also provided the participants with more discussion time as there were no researcher interjections with questions. The researcher took more of an observer's and listener's role and allowed the participants to discuss more freely while also facilitating a free and open discussion. An opportunity was also provided for the researcher to review if there were any gaps in information that would still require to be filled using a different set of participants.

Although two focus group discussions were held, the initial plan had been to have three; a focus group for men only, women only with the third being a mixed group of both men and women. The choice of exclusive gender focus group discussions is based on the need to avoid the limitations that come with having discussions with males and females in one group. Some studies have shown that women tend to withhold information or ideas when discussions are held in the presence of men, while others have argued against women only samples saying that they have potential to establish authentically female ways of knowing (Oakley, 1998:713).

The mixed gender focus group discussion was chosen after observing the dynamics of the recruited participants and the male-female ratio of the group. Scholars such as Freitas, Oliveira, Jenkins and Popjoy (1998) have also recommended this after observing that mixed gender groups tend to be more effective with improved quality of discussions and outcomes. Bloor et al., (2001:20) have also suggested the need for “sufficient diversity to encourage discussion”. In both focus group meetings, there were the same four men and eight women, with ages ranging from 21 to 78 years of age. There were dominant characters in the group showing particular interest in the topic and the elderly women participants showed no restraint in their responses. The younger women who could have offered alternative perspectives seemed satisfied with the responses that were given by the elderly women.

To achieve the original purpose that a woman only group discussion could have given, interviews with purposely selected women were done later. It was important that women’s views on the allocation of water on a gender basis be privileged. With the focus group discussions not having been the most ideal for a women-only discussion, face-to-face interviews were conducted with eight women in the two villages of N’wamitwa N’wajaheni and Rwanda in Greater Tzaneen. Out of the eight responses, five were chosen for their value-add to the study. The option of individual interviews is supported by Neuman (2014:472) on the basis that they can produce more ideas as compared to focus group discussions.

#### *2.6.2.1 Sampling method for focus group discussions*

Sampling in qualitative studies has a very specific purpose, which, according to Neuman (2014:247) is to identify a few relevant cases that can broaden an inquirer's understanding on particular aspects of their study. Wolff et al. (1993) suggest that the participants in focus group

discussions can be those who may have previously participated in surveys or interviews. Participants for other data collection techniques in this study were scattered around the case study area in a way that made it logistically impossible to draw them together for a focus group discussion. Neuman (2014:273), however, views purposive sampling as providing researchers with opportunities for obtaining a non-random sample using a range of methods to locate “a highly specific and difficult to reach population”. Purposive methods were thus used to recruit participants as they consider the relevance of the information a participant will contribute to a study (Ashley, Takyi & Obeng, 2016; Morgan, 1988). From the many purposive sampling designs available (Creswell (2007) identified eighteen), a researcher can use snowball sampling as it allows identified participants to refer other people who fit the required criteria to also take part (see Cohen & Arieli, 2011). A church deacon who was involved in a garden cooperative who had been identified, was enlisted to identify other participants with similar water use interests, while the identified ones would also refer to others, creating a chain of referrals. Participants were chosen from communities in the case study area and these were men and women engaged one way or another in the use of water, home gardens, community gardens and garden cooperatives. Enlisting the assistance of a member of the community in the recruitment of the participants removed any sense of fear that may be associated with being invited by a stranger.

### **2.6.3 Resource mapping using questionnaires**

Crane and Mooney (2005:3) describe resource mapping as a “system building process ... to ... align resources and policies in relation to specific system goals, strategies, and expected outcomes”. The World Bank (nd) has also described it as “a method of showing information regarding the occurrence, distribution, access to and use of resources; topography; human settlements; and activities of a community from the perspective of community members”. In this study water resource mapping was used to identify the relationship between the farmers and water from their perspective.

The questions for the questionnaire for resource mapping were developed after a review of literature on equity, equality, allocation priorities in resource scarce areas, etc. The questionnaire itself was developed using one of Yan, Lee, Liu and Hu's (2016:151) proposed

guidelines on questionnaire design that focuses on ensuring “that the questionnaire design follows basic best practice recommendations for general survey research”. This involved consulting literature on how to design a questionnaire and also checking questionnaire templates from other academic studies. This resulted in a questionnaire (Annexure 2) with questions that cover socio-demographics, knowledge, attitudinal, intentional and expectation questions. All these questions were important in mapping the resource needs of the small-scale farmers.

A lot of effort has to be put in the development of a questionnaire in order to make sure that the questions elicit the answers that a researcher is looking for. Researchers have to ensure that the questions are unambiguous and not offensive and that there is no repetition of ideas. Gerard (2010:129) points out that questionnaires can be understood as written schedules for face-to-face interviews. They are thus not necessarily only used in surveys. The questionnaire for the resource mapping had both open-response and closed-response questions whereby a respondent could choose responses that applied to them while other questions required them to respond in their own words. Gerard (2010:131) argues that closed-response questions are considered less valid as they restrict the choices to only those listed. The questionnaire in this study used closed-response questions in the sections where pre-testing had shown that without listed options, respondents might not have an idea of how to respond. In many cases, the closed-response questions probed more by asking for additional information using “other” or “why”.

Before the questionnaires could be administered, a pre-test was conducted to find out if the questions were suitable and also to test what type of answers one would elicit. The pre-test was run in Cullinan, North-East of Pretoria with a few randomly chosen participants. Babbie (2011) cautions that it is better to ask people to complete the questionnaire than to read it through looking for errors. The questionnaire was also tested with colleagues and their comments, and also the responses from participants in the pre-test were taken into consideration in the preparation of the final set of questions. The targeted total number of respondents was 20 but a total of 26 questionnaires were completed. Some of the questionnaires, however, had gaps where respondents had not addressed some of the questions, resulting in the original target of 20 completed questionnaires being used, 11 by male respondents and nine by female respondents.

### *2.6.3.1 Sampling method for resource mapping participants*

Purposive sampling was used to select small-scale farmers as they were required to answer specific questions to do with their farming activities, something that could not be done if random sampling was used. Purposive sampling has been defined by Max (1997, in Teddlie & Yu, 2007:77) as a type of sampling in which “particular settings, persons, or events are deliberately selected for the important information they can provide that cannot be gotten as well from other choices”. Twenty small-scale farmers were targeted for resource mapping, 10 male and 10 female farmers. Villages in Tzaneen where farmers could be found were, however, far apart. As stated earlier, purposive sampling is the appropriate design for reaching populations that are not easy to reach (cf. Neuman, 2014). Getting to the scattered villages was made possible with the help of the research assistants who reside in the municipality and also with the use of Google maps. Google maps were used to locate villages that were in close proximity to the Tzaneen Dam, as well as any other rivers or tributaries in the municipality or the Letaba Catchment. After locating a village on the map, co-ordinates were noted down and put on a Global Positioning System (GPS) after which the researcher would drive to the village with research assistants. Small-scale farmers were then purposely identified after a physical search for agricultural activities in most cases and through referral by some of the farmers.

### *2.6.3.2 Training of research assistants*

Due to the distances that needed to be travelled and the fact that the questionnaires were not going to be self-administered, there was need to make use of the help of university students from the municipality in the administration of questionnaires. Four university students were identified, one of them in second year and the other three in the third year of their undergraduate studies. Training of questionnaire administration was required to ensure that the research assistants understood the purpose of the study, the objectives of the questionnaire and the ethical considerations when conducting research. The training involved taking the research assistants through the motivation for the study, the purpose of the questionnaire and explaining each of the questions on the questionnaire so that the assistants understood them well enough. Each research assistant was provided with a sheet with an explanation of each of the questions for them to gain clarity. Research ethics were also explained to them with particular emphasis on

informed consent and age of the participants. They were also supposed to understand their role correctly, which also involved translating the questions from English to the language of the participant, which could either be Xitsonga or Sepedi.

Research assistants were to administer questionnaires as neutral transmitters of the message not as key informants on the subject, as discussed by Edwards (1998). This was important to avoid a situation where the assistants push their own understanding of issues in ways that make validity of the data obtained questionable, something that can happen in studies where translation is part of the data gathering process (cf. Plumridge, Redwood, Greenfield, Akhter, Chowdhury, Khalade & Gill, 2012; van Nes, Abma, Jonsson & Deeg, 2010). Filep (2009:69) describes translation as the transcription of “text from a source language into a target language”. The author added that translation also involves “the interpretation of cultural meaning and/or of the cultural or national concepts a specific language carries” (Filep, 2009:69). Having taken the research assistants through each of the questions on the questionnaire, no interpretation other than that intended by the researcher was ensured in the administration of the questionnaires. Research assistants were also asked to translate the questions to each other to see if they received to the same translated meaning and then translate back to English, a process described by Edwards (1998:199-200) as back translation. This ensured that meaning was not lost in translation.

The researcher also understood the research assistant/participant relationship as not independent from the researcher, thus in some and not all questionnaire administrations, the researcher would sit with any of the research assistants and participate in the administration of some of the questionnaires. This also helped the research assistants to be confident with their task and made the researcher maintain validity by ensuring that the research assistants did show understanding of the questionnaire.

The questionnaire administration process involved the research assistants introducing themselves to identified research participants using a letter of introduction prepared by the researcher (Annexure 3). The research assistant would then seek consent from the identified participant, and if given, the participant was asked to sign the consent form (Annexure 4) and the questionnaire (Annexure 2) would then be administered. Since the researcher had to also



drive the research assistants to different villages, an opportunity was always available to discuss how the questions were being received and if the researcher needed to explain anything further to the assistants. Some scholars have recommended that interpreters be involved in multiple stages of a research project (Bergen, 2018). In this study, however, research assistants who also participated in the study as translators, only participated in the data collection process as discussed.

#### **2.6.4 Survey research**

Use of a survey in the study took place after the realisation during data analysis that there was an information gap in the general public's understanding of what justice in the allocation of resources was. The other methods that had been used already had assisted in addressing the other research questions but a gap in information which could help in assessing the applicability of Rawls' theory of justice remained.

Survey research is explained by Neuman (2014:49) as a type of research where a set of written questions are used to gather information pertaining to "backgrounds, behaviours, beliefs, or attitudes of a large number of people". It works the same way as a questionnaire. In qualitative studies, a survey with open-ended questions can be used, and as explained by Ponto (2015:168), if responses are not numerical, use of a survey keeps a qualitative research design qualitative.

A pre-test was done to check the usefulness of the survey method and it was noted that indeed there was an opportunity to acquire new and interesting thoughts on the issue of justice. After pre-testing the questions, revisions were made to come up with a final set of survey questions (Annexure 5). The survey was done online using the anonymous online survey called Survey Monkey. Purposive sampling was used to identify survey participants who in this case had to be farmers. Access to farmers was granted through two organisations, one, a Water User Association and the second, a farmers' association. Creswell (2014) observes that internet-based surveys require that permission be given by the participants. Participants in this study were members of the African Farmers Association of South Africa (AFASA) and the Letaba Water User Association and permission from them was sought through their respective organisations and granted by both (Annexures 6 and 7). Further consent by participants was included as part of the survey.

The anonymous survey was undertaken after following the three steps below:

Step 1: Request for permission from the two organisations

Step 2: Amendment of ethical clearance to allow for the inclusion of new data collection method

Step 3: After permission was granted by both organisations, and ethical clearance renewed, a request was sent to the two organisations to dispatch the email with the survey link to its members

The Letaba Water User Association dispatched the email to 150 of its members as reported by the sender. The members as well as the researcher were blind copied in the email to protect the identities of the association's members to avoid Protection of Personal Information (PoPI) Act infringements on personal information. A similar request was sent to AFASA, and when no response was forthcoming after several requests, snowball sampling was used to access particularly black farmers as the Letaba Water User Association had membership of White farmers. Since participation in the survey was voluntary, many of the participants identified through snowball sampling chose not to participate, which led to the use of homogeneous convenience sampling (explained in Table 2.3).

Jager, Putnick and Bornstein (2017) describe homogeneous convenience sampling as a technique where “researchers undertake to study (and therefore sample) a population that is homogeneous with respect to one or more sociodemographic factors”. While conventional convenience sampling (named so in this study to separate it from homogeneous convenience sampling) can indeed help researchers reach a sufficient number of participants, they are considered unrepresentative of the population under study (Neuman, 2014:248). Neuman (2014:248) explains convenience sampling as a “non-random sample in which the researcher selects anyone he or she happens to come across”. In this case, a specific group in the population was required to participate. Homogeneous convenience sampling was thus used to get ideas from blacks since the white subgroup had already been accessed through the WUA and farming is generally practised by blacks and whites. Purposive sampling using telephone calls to identified potential participants had already been done to reach those involved in farming but this had failed to reach specifically black farmers. To reach a wider pull of potential participants

(cf. Meho, 2006), a total of 147 emails (to match the number of emails sent out to members of the Letaba Water User Association) were sent out to invite black men and women to participate in the survey. Only three responses had been received from black farmers sampled using snowball sampling.

**Table 2.3: Summary of sampling methods discussed in the study**

<b>Technique</b>	<b>Descriptions</b>	<b>Advantages</b>	<b>Disadvantages</b>
Purposive	Hand-pick subjects on the basis of specific characteristics	Ensures balance of group sizes when multiple groups are to be selected	Samples are not easily defensible as being representative of populations due to potential subjectivity of researcher
Snowball	Subjects with desired traits or characteristics give names of further appropriate subjects	Possible to include members of groups where no lists or identifiable clusters even exist (e.g., drug abusers, criminals)	No way of knowing whether the sample is representative of the population
Convenience (conventional)	A set of subjects who just happen to be available	Inexpensive way of ensuring sufficient numbers of a study	Can be highly unrepresentative
Homogeneous convenience	Subjects are sampled from a specific population with one or more similar socio-demographic factors	Has a clearer generalisability compared to conventional convenience sampling	There is potential for bias if sampling frame is not intentionally constrained to reduce sociodemographic heterogeneity
Expert	Hand-pick subjects on the basis of their knowledge of the subject being studied	Subjects are more familiar with the subject matter than non-experts	Sample not necessarily representative of the population due to their own subjectivity

Sources: Black (1999); Bhattacharjee (2012); Jager, Putnick & Bornstein (2017)

## 2.7 Data analysis

According to Babbie (2011:10), data analysis deals with the patterns of what was observed after data collection. He describes qualitative data analysis in particular as the “nonnumerical

examination and interpretation of observations, for the purpose of discovering underlying meanings and patterns of relationships” (Babbie, 2011:419). Data analysis in this study is understood in the way Neuman (2014:477) conceptualises it as the organisation, integration and examining of raw data to find patterns and relationships so that these can be connected to concepts, advance views and identify themes and trends. It is about finding meaning from data (O'Connor & Gibson, 2003).

In line with the qualitative design followed in gathering data, qualitative methods of data analysis were also applied in this study. As with the data gathering techniques, qualitative data analysis also has detractors. Chowdhury (2015), for instance, discussed how qualitative data analysis is criticised for being restricted to coding, sorting and sifting of data collected through qualitative methods, which is also a criticism of the validity of the qualitative data collection techniques. He, however, did not concede to the criticism, arguing that qualitative data analysis should not be judged using quantitative lenses (Chowdhury, 2015:1138). The discussion on the validity of qualitative research dates back to Comte's time when he came up with the idea of logical positivism where knowledge that could not be empirically verified was not viewed as valid compared to what was empirically verifiable (Pepper, 1984:63). The argument went further to assert that empirical science is not influenced by “cultural factors, such as dogma or mere opinion – it emphasises what can be agreed by all observers, having been derived from precise measurements performed by impersonal instruments” (Pepper, 1984:63).

The differences between qualitative analysis and quantitative analysis should, however, be understood as informed by the research paradigms they fall under and the relevance of knowledge that they seek to impart. Quantitative analysis in the positivist paradigm seeks to enable people to master and control events while qualitative analysis in the critical theory paradigm seeks to allow people to see and alter deeper structures (Neuman, 2014). Pepper (1984:67) argues that scientific studies developed in response to the “specific needs of capitalism”, thus science cannot be expected to give an objective view about human relationships with other humans and with nature. Russell (1946, in Pepper, 1984:61) also suggests that “[t]he philosophies that have been inspired by scientific technique are power philosophies, [...] ends are no longer considered: only the skilfulness of the process is valued”. Even though method gives structure and can be used as a basis for validity, conclusions drawn

from a qualitative data analysis are not judged on the basis of the methods used but, on the contexts, and situations within which the research takes place (Chowdhury, 2015:1141).

Data analysis nowadays can either be done manually or using computer software programs. In this study, data gathered from interviews and focus group discussions with key respondents and community members was transcribed and then organised by theme using the atlas.ti software. Atlas.ti is a recognised qualitative analysis software that can process data collected through both structured and unstructured methods. Atlas.ti version 8.2 has different functions that allow the researcher to code, sort and sift information faster than one would be able to do manually. The software allows the researcher to “extract, categorise and interlink data segments from a large variety and volume of source documents” and helps researchers discover patterns and test hypotheses (Friese, 2018:10). Codes used on atlas.ti were developed as the analysis unfolded, with some already used codes being used on other segments of the same manuscript or on new manuscripts. Information that was provided by the Department of Water and Sanitation with regard to licensing was analysed using excel as the information was provided in excel format and was of a quantitative nature. Excel allows for the filtering of data according to a specified criterion and then using the isolated data to create graphs representing an identified pattern.

Another form of analysis that was used in the study, critical discourse analysis, can also be done using atlas.ti. Hunter, Emerald and Martin (2013:107) describe critical discourse analysis as a method that recognises power relations and ideologies in written or spoken texts, discourse or process of text production, distribution and consumption, as well as everyday practices. Critical discourse analysis also involves the researcher deconstructing text in order to uncover the underlying “meanings, motivations, ideologies and power” (Rambaree, 2013). According to O’Connor and Gibson (2003), when analysing qualitative data, one needs to think firstly inside the box, that is, bearing in mind the questions one set out to have answered during the data collection process. The same idea has been echoed by Coe, Stern and Allan (2002) who posit that a sound analysis is impossible without the knowledge of what one wishes to achieve. After thinking from inside the box, one also has to think from outside the box, that is, looking at emerging ideas or themes that come from the data (Coe et al., 2002). The process of critical discourse analysis thus involves the researcher providing interpretations to text and coding the text based on interpretations made within and outside the box.

## 2.7.1 The data analysis process

Scholars have indicated that analysis of qualitative data does not begin after the data has been collected but is an ongoing process that happens as data is being collected (Stake, 1995; Baxter & Jack, 2008:554). This form of analysis is, however, “tentative and incomplete” (Neuman, 2014:477). Babbie (2011:419-420) adds another dimension to the continuous analysis, namely, the interplay between collection of data and theory. He explains that this is due to the methods used in qualitative research where one does not lose sight of theory as is the case with quantitative research methods.

Qualitative data analysis was done using the following steps:

### 2.7.1.1 Data logging

Akinyode and Khan (2018:166) describe data logging as the process through which raw data from interviews, focus group discussions, observation, etc. is recorded on paper. The transcription process of, for instance, interview audio recordings and questionnaires feeds into the process of the analysis as it gives the researcher a general idea about what was said on a topic and how the research questions were addressed.

### 2.7.1.2 Coding

In data analysis, coding is the process of marking sections of the data with descriptive words, categories or names. Nespore and Barylske (1991:810) are not in favour of coding, seeing it as the “decontextualisation and fragmentation of interview discourse into 'codable' elements”. Pierre and Jackson (2014:716) suggest that for social science approaches such as critical approaches, “language is always already entirely contaminated by meaning, exploding with meaning deferred” and thus they do not see coding as necessary. The coding process, when done well, is meant to reduce data without losing the original meaning (Adu, 2016). However, different researchers may assign different codes to the same text as coding depends on a researcher's “academic discipline, ontological and epistemological orientations, theoretical and conceptual frameworks, and even the choice of coding itself” (Saldana, 2009:4). Strauss and Corbin (1998:102) also view coding as necessary when they explain that in order to uncover, name and develop concepts, the meanings contained in the text (data) must be opened up so

that the ideas, thoughts and meanings are exposed. This is done through the initial coding process called open coding.

### *2.7.1.3 Open coding*

Open coding is the first stage in the coding process (Neuman, 2014). It is the process of reading and interrogating data closely in order to identify, select and group themes or phenomena (cf. Akinyode & Khan, 2018:166-7; Neuman, 2014:481). After the data logging process described above, the researcher read through the transcripts line by line in order to make sense of the data and to categorise similar themes (Charmaz, 2008:164). Two methods of coding were used: initial coding and list coding. Initial coding is when a segment in the manuscript is marked by descriptive words, names or categories as they relate to the research questions. With list coding, a code is selected from codes already used in other segments, which already begins the formulation of relationships within and between the different manuscripts.

Open coding in atlas.ti allows the researcher to do more than just assigning a code as it allows for the code to be edited. The code editing allows the researcher to explain what the code means, elaborate more or indicate what will need to be done with regard to a particular code. Because the coding process does not happen in one sitting, editing the codes provides the researcher with the necessary context in which the codes were formulated. The researcher also made use of the memos to reflect on an ongoing script analysis. Maxwell (2004:239) writes that memo-writing is an important aspect of qualitative data analysis as it helps the researcher capture ideas about the data. Neuman (2014) suggests that each coded theme could be used as a basis for a memo. In the analysis, the researcher however opted for writing memos per each script.

The researcher also took a critical approach in the reading of the text looking for any underlying meanings or lack thereof since “social and political domination is realized in text and talk”, (Scotland, 2012:14). Hunter et al. (2013:107) call this critical discourse analysis (explained in section 2.7 above). There are suggestions by some scholars that researchers go through this process with an open mind and Neuman (2014:483) argues that the reality is that researchers’ coding is shaped by their academic training, awareness of concepts and theoretical assumptions as well as readers’ expectations. Glaser (1992), on the other hand, suggests that neutral questions be asked to allow the data to do the talking. This approach is, however, viewed as

being “epistemically naïve” for failing to acknowledge the theory-ladenness of observations (Gläser & Laudel, 2013).

#### *2.7.1.4 Axial coding*

In axial coding, the focus is more on the coded themes from the open coding process than it is on the data (Charmaz, 2008; Neuman, 2014). Neuman (2014:483) adds that in axial coding, one can look for categories or concepts that cluster together. It is about how the codes relate to each other and how they create patterns. In this study, code groups were formed from the initial codes, a process that reduces the number of codes while also showing linkages between the codes themselves. Bluff (2005) suggests that categories that have no connections with others may be discarded. In a way, this, as Glaser (1992) indicated, forces categories on the data if one does not wish to discard information. Rather than discard, in this study, categories that could not cluster with others were noted down as they provided a different and not so obvious understanding of the text. As argued by Keddy, Sims and Stern (1996), different narratives may emerge from the data.

#### *2.7.1.5 Selective coding*

This is the third stage in the data analysis process after major themes have been identified and the researcher now needs to look selectively for examples that can be used to illustrate the themes and make comparisons (Neuman, 2014:484). For Jones (2011:13), “selective coding is reached when core categories become apparent”, while Creswell (1998:150) sees it as the story-telling part of data analysis.

On atlas.ti, this stage involved revisiting the identified codes and the quotations that go with the codes to categorise them into networks and narrowing these into themes. From the thirteen documents with primary data, 80 codes emerged. The interlinkages between the codes culminated in 12 networks where six themes emerged. This is consistent with Lichtman’s (2006) analysis of the coding process.

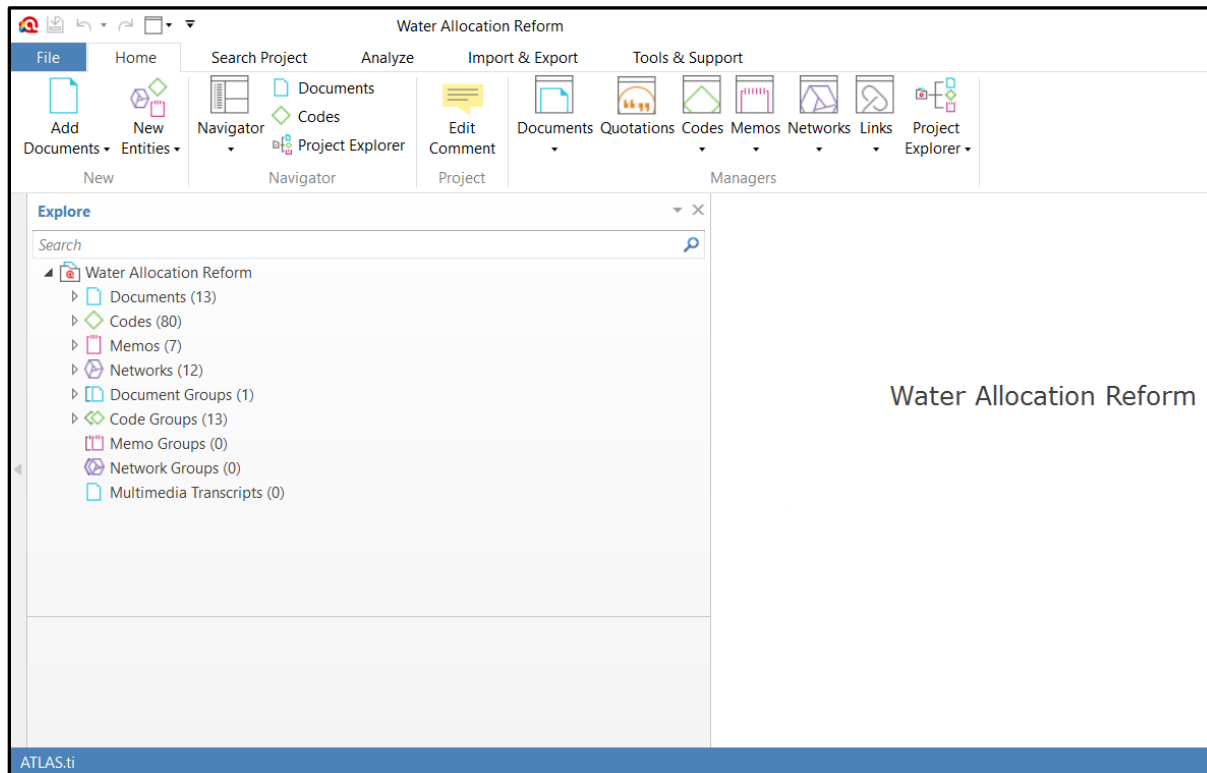
#### *2.7.1.6 How atlas.ti 8.2 aided the analysis*

As already indicated in earlier sections, the analysis of data was done using the atlas.ti version 8 software. Typically, atlas.ti is qualitative data analysis software that is meant to aid



researchers analyse “large bodies of textual, graphical, audio, and video data” (Friese, 2018:8). This study did not have particularly large bodies of data but had “multiple participant interviews”, which, as Saldana (2009:22) notes, then requires computer assistance to analyse the many interview transcripts. Atlas.ti is a useful tool as it builds connection between different sets of data during the coding process. In as much as the software is useful, the researcher does the work of coding, creating code names, code groups and networks themselves. Kelle (2004:3) describes software packages such as atlas.ti as ‘tools to mechanise tasks of ordering and archiving texts and represent software for “data administration and archiving” rather than tools for “data analysis”’. It has, however, been noted by Lawrence and Tar (2013) that information and insights gathered through qualitative research may be overlooked if traditional data analysis techniques are used, hence the use of computer-based qualitative analysis.

Once a project is opened on atlas.ti and before embarking on the coding process and other associated procedures, the documents produced through the data logging process were added to the project where they were labelled with the initial letter “D” and a number. If an excel document is added, as was the case with the WAR Project, each column in the excel document is saved as a separate document. It is for this reason that in this study’s analysis, although a total of 13 documents were saved (Figure 2.5), an attempt to save an excel document upped the number of documents to more than twenty thousand, resulting in some of the documents being numbered as, for example, D20174. (The excel documents were deleted from atlas.ti for analysis on excel with no negative effect on the analysis of the word documents). Atlas.ti allows for one to undo an action many times until one gets things right.



**Figure 2.5: Overall interface of the Water Allocation Reform project on atlas.ti**

## 2.8 Study limitations

A large group of study participants were community members who were not versed with the water sector legislation of the country, particularly the water allocation reform. This might have affected the type of responses that they gave to some of the questions on the questionnaire. Participants' age groups, however, ranged from young to the elderly, a range that includes active members of society whose lack of knowledge about some of these issues remains important for the study. The general lack of knowledge about the water legislation also assists in the understanding of the dynamics and fragility of a constitutional democracy and how distribution of benefits and disadvantages can play out in such a terrain. A certain level of political knowledge of the functions and processes of government is required in a democracy to allow for participation of the members of society (Owen, Soule & Chalif, 2011; Pastarmadzhieva, 2015).

The study had intended to also engage at least two white and a few black commercial farmers in the case study area. With no prior arrangements and with no information to use to make appointments, this proved to be difficult. Inquiries in the study area about which farm would be approachable without appointment elicited warnings about how scared the people were to go any close to the white people's farms. In the case of black commercial farmers, the researcher managed to contact two, but only one agreed to be engaged with. The second, a female livestock farmer, did not decline the invitation to participate but showed lack of interest when called for the interview. Without her consent, the interview was cancelled. Engaging with commercial farmers, especially a black female farmer, would have brought insights one cannot gain from existing texts, especially in a South African context where women are still making in-roads into commercial farming. Interviewing a female farmer would have privileged her personal views and experiences.

## **2.9 Ethical considerations**

Social science research, as Berg (2001:39) explained, delves into the social lives of human beings hence the need to ensure the human rights, privacy and welfare of all concerned. Once the proposal for the study was approved, the researcher applied for ethical clearance with the Departmental Research Committee of the University of Pretoria. To gain approval from the University, the researcher needed to first seek consent from institutions involved and also have a draft of the interview, questionnaire and focus group schedules as well as draft letters of consent for all the research participants. After consent was granted by the DWS, which was the main institution, the approval, together with the interview schedules, was submitted to the University after which ethical clearance was granted (Annexure 8). During the course of the study the researcher learnt from the DWS that they would not answer some of the questions due to the restrictions as covered by the Promotion of Access to Information Act of 2000 (RSA 2000). The researcher made the application as required by the PAIA process.

With regard to the fieldwork stage, the researcher sought consent from all participants and made all participants aware of what the study was about (Annexure 3). According to Guba and Lincoln (1994:115), the critical theory paradigm operates on fully informed consent rather than

deception. Informed consent was gained from participants in written form through the signing of a consent form (Annexure 4). Research assistants were advised to also seek consent from participants and to explain to them what the study was about and that there were no incentives that were to be used to encourage participation.

Ethical principles also require that researchers protect participants' privacy and identities. The study did not involve any collection of participants' private details. It, however, gathered some data that reveals participants' conceptions of justice, which might bring about different responses and reactions from readers. As such, the researcher kept the participants nameless and only identified them using the atlas.ti identity given to the different participants' interview transcripts and in some cases, the interview date was used. In reporting the findings, the participants' institutions are listed with the area of expertise being kept broad so that the relevance of their participation in the study can be specified.

The set up that comes with focus group discussions often requires that a researcher be particularly sensitive to the needs of participants. In this study, consideration for participants' dignity in the focus groups was very important as some participants were very shy and very reserved and prompting them to speak more than once would only bring unnecessary attention to them so this was avoided. The researcher realised that there were participants who really liked to talk while others were satisfied with just nodding in agreement to what was said by others. Their dignity was thus kept intact by not pressing them to talk when their preference to participate quietly had been noted. This relates to the respect for persons where a person's autonomy is acknowledged, and their wishes are respected (cf. Marczyk, DeMatteo & Festinger, 2005:240).

New ethical clearance had to be sought when a need to use survey research as an additional tool arose (Annexure 9). To gain clearance, written consent had to be given by representatives of the two organisations from which participants for the survey would be drawn (Annexures 6 & 7). After clearance was granted, an email request for participation from the members was sent from their respective organisations' email to avoid infringement of the Protection of Personal Information (PoPI) Act.

Participants that were interviewed through telephone interviews and email correspondence were also asked for consent and they filled in their consent forms and emailed them back to the researcher. Copies of filled in questionnaires, transcripts of telephone interviews and email responses are to be stored for a minimum period of fifteen years from the commencement of the study. The researcher also understands that copyright of the thesis rests with the University of Pretoria.

## **2.10 Conclusion**

The chapter described and discussed the research paradigm that was used for the study. As a study that aimed at finding answers to justice in the allocation of water through a reform process, the critical social theory paradigm was opted for. It also discussed the qualitative approach together with its data collection techniques and sampling methods. The case study area was also discussed using a review of literature on the area as well as observations from the visits to the case study area and brief interviews with personnel working on the GLeWaP. Water use activities in the area are noted to be demanding, making the infrastructure project provide hope for the potential of HDIs getting a share of the water.

The case study selection was discussed in this chapter. The chapter discusses the process of selecting a case study from a choice of two water infrastructure development projects in two different provinces of the country. The comparison between the two potential case studies is presented and the options weighed to come up with the most suitable case study to assist in addressing the study's research questions and objectives. In choosing the GLeWaP, the importance of not just the infrastructure project but the population dynamics in the area played an equally important role in the choice of the case study.

A total of 73 participants were consulted using face-to-face interviews, focus group discussions, telephone interviews and an online survey. Participants were from nine rural villages in the Greater Tzaneen Municipality, and seven institutions with offices in the Gauteng, Limpopo, Mpumalanga and Eastern Cape provinces.

The path taken by the study so far is represented in Figure 2.6. The following chapter presents the analysis and findings from the primary and secondary data (data gathered through field work engagements).

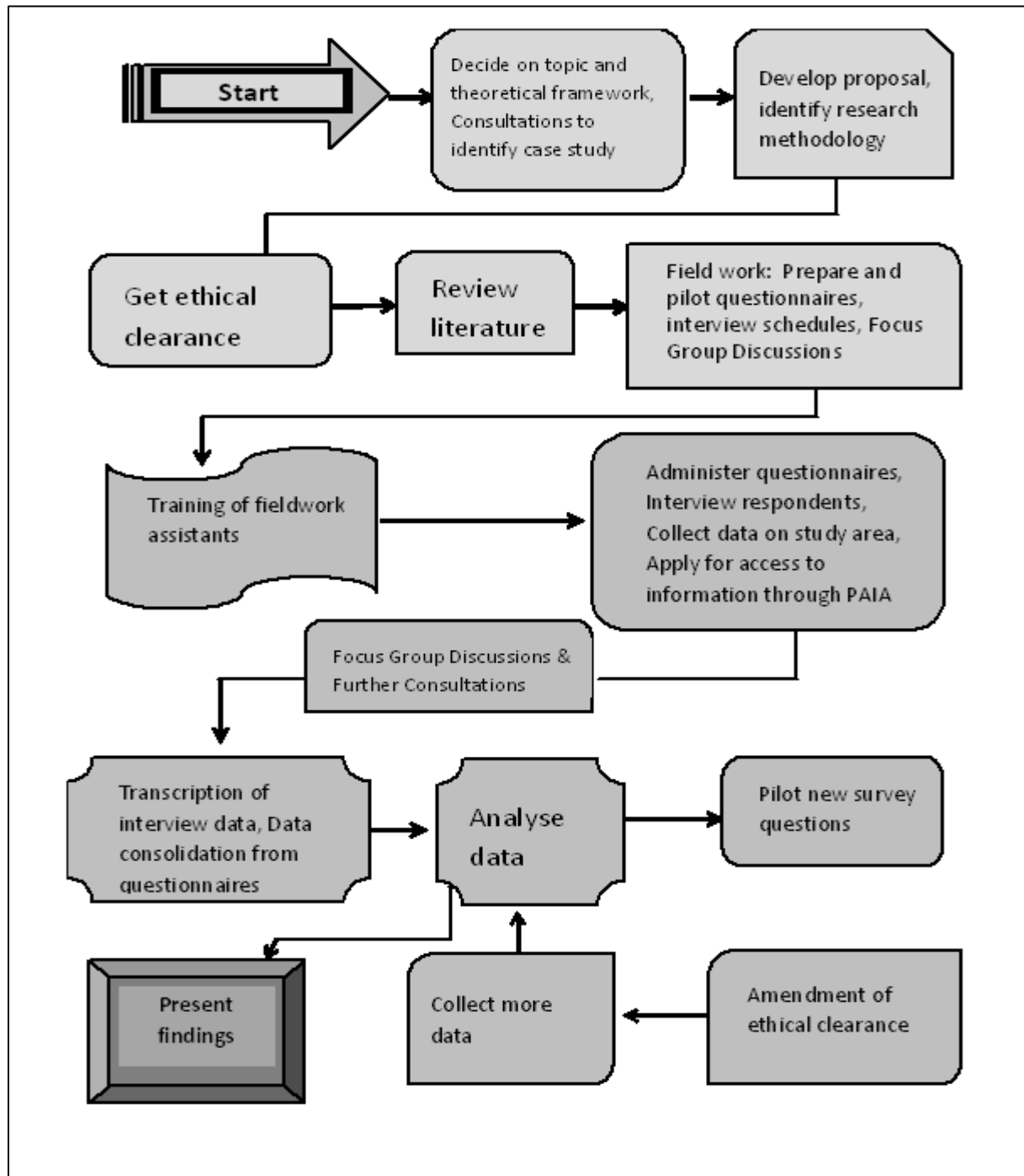


Figure 2.6: Research path taken for the study

# Chapter 3

## 3 WATER ALLOCATION REFORM

### 3.1 Introduction

The previous chapter described and explained the research methodology and the rationale behind the approaches that were taken to carry out this study. Through its description of the study area, the chapter also laid the foundation for an understanding of the socio-political, economic and environmental dynamics within which water allocation reform in the case study area can take form. The application of the qualitative research design in the study was also discussed. Chapter 3 draws on the knowledge that has been created by other scholars to formulate a baseline for understanding key ideas in distributive justice and water allocation reform. It focuses on the different discourses, policies and practices in the allocation of water as part of redress of past discriminatory practices. The literature review begins with explanations of concepts before moving on to existing discussions on the subjects pertaining to reform processes. Water allocation reform is not unique to South Africa and thus the review will draw from the global as well as local contexts. It is important to point out that the ideas of justice are not new and thus some very old literature will find its way to inform the present.

### 3.2 Definition and principles of equity

In the understanding of Water Allocation Reform (WAR), the premise on which the values and principles which underpin an equitable and sustainable distribution has to be similarly understood. Terms used to develop a policy framework need to be unpacked as “influential concepts in policy making are not merely neutral or scientific” (Molle, 2008:132). Literature on equity as a central guiding principle for WAR will be reviewed while justice as a key concept for the study will also receive attention. An understanding of these terms is required given that there is no singular way of defining a just and equitable distribution method that will satisfy all

water users (Neal (Patrick), Greco, Connell & Conrad, 2016:260), what is just and/or equitable is not necessarily universal.

The redress of water allocation in South Africa has been framed within a context of sustainability and equity. This context is viewed as providing central guiding principles for the “protection, use, development, conservation, management and control of water resources”, (RSA 1996, RSA 1998; DWA 2013a). Of primary importance to this study is an understanding of equity which Jones (2009:3) points out as having several competing meanings of equity. Deutsch (1975) also expresses that equity is often confused with equality or misunderstood. As such it will be best to start by showing the difference between the two terms, equity and equality.

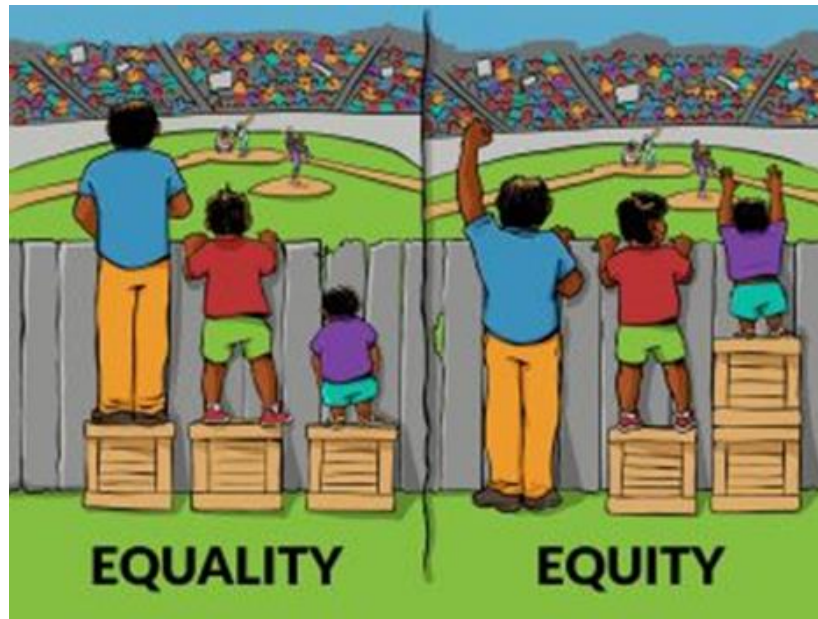
At face value, the terms equal or equality denote a wish for sameness, whereby in numerical terms all are given a similar number of items or same number of assets, for instance. The Constitution of the country, section 9(1), makes a declaration that all are equal before the law and have rights to be protected by the law (RSA 1996). Some scholars who have written about equality have not seen equality as a simple term. As a goal for any society, equality is viewed as undefinable, unachievable and not implementable (see, for instance, Rockwell, 2015; Jones, Bromey, Creegan, Kinsella, Dobbie & Ormston, 2010:61). Scholars such as Rockwell (2015) have argued that no one is clear what the principle of equality commits them to while also finding it untenable that two things previously considered different (for example blacks and whites in apartheid South Africa) can on another day be considered equal. Although viewed as a desirable outcome (Glaser, 2005:259), equality is viewed as the canonisation of envy (von Kuehnelt-Leddihn, 1952:33; Rockwell, 2015). Encouraging the idea of equality presents situations where some might prefer what others have (cf. Foley, 1967). In other words, permitting people to accept the possibility or idea of becoming equal precipitates envy, and making equality a goal is viewed as the glorification of envy.

Equity, on the other hand, is associated with being just and fair, which are qualitative terms (Hoffman, 2003). According to Hoffman (2003:5), the term equity in the context of resource allocation refers to “a state in which user’s welfare is increased to the extent possible, given the limited resource, after taking proper account of disparate claims and individual circumstances”. A graphic presentation (Figure 3.1) showing the difference between equality and equity can be



used to illustrate what equity is, when individual circumstances are considered against available resources.

Equity, as illustrated in Figure 3.1, works where assets or resources are moveable or transferrable over space and distances. While equality is shown as failing to recognise individual differences, equity is represented as considering the welfare of the least advantaged. The illustration has, however, been criticised for its inability to see beyond inability of the least advantaged (which in the case of Figure 3.1 is height) resulting in inequality, but to rather consider opportunity gaps that result in inequalities (Kuttner, 2016). Multidimensional issues are reduced to those that are characterised by one dimension. In the case of water, it could be reduced to access. However, it is well known that providing water access without addressing other variables such as land on which to use the water and equipping the targeted community with knowledge for using the water results in new challenges that take away the gains of improved water access (Msibi & Dlamini, 2011). For the World Bank (2005), equity is born from an understanding of the existence of inequalities in opportunities to address poverty, be it by individuals, families or communities. Such differential access to opportunities results in failed attempts at poverty reduction as they cannot innovate to better their lives (World Bank 2005: xi). The World Bank (2005:9) advocates for an equity lens which recognises multidimensional levels of inequity, seeing it as a way for the poor with less voice, income and opportunities to also have a chance in the development process.



**Figure 3.1: Equity as consideration of individual circumstances and opportunity needs**

*Source: Maguire (2016)*

In the preface to his book, “Equity: In theory and practice”, Young (1994: xi), (writing from a theory rooted in mathematics, game theory and economics (Gouveia 2007:481)) expresses the thought that equity does not exist. He opines that for several reasons, equity occupies a ‘distinguished position’ among non-existent subjects and argues that:

- equity has no intrinsic meaning and therefore fails to exist
- equity is so hopelessly subjective that it cannot be analysed scientifically
- equity has no sensible theory that explains it, especially one that is compatible with modern welfare economics.

Young (1994: xi) thus dismisses the existence of equity on the basis of what he calls academic grounds, an idea which is refuted by Hoffman (2003) who discusses ways of measuring equity, alluding to a scientific analysis. In spite of being convinced of its nonexistence, Young wrote a book on the ‘nonexistent subject’ after adding that “equity, or at least its close relative, is very much alive and occupies a prominent place in moral philosophy”. Indeed, equity is a complex matter to define and is seen by some scholars as having no clear-cut principles that can be set

out and applied universally and is best understood in the context within which it is applied (Ingram, Whiteley & Perry, 2008; Young, 1994). Wilder and Ingram (2014:1) observe that water equity can be recognised when it happens in specific contexts. The authors presented two case studies of Detroit (America) and Cuatro Mujeres (Mexico) in which they indicate that public participation, recognition of water access rights and the writing of rights into constitution form part of the realisation of equity (Wilder & Ingram et al.:14-17).

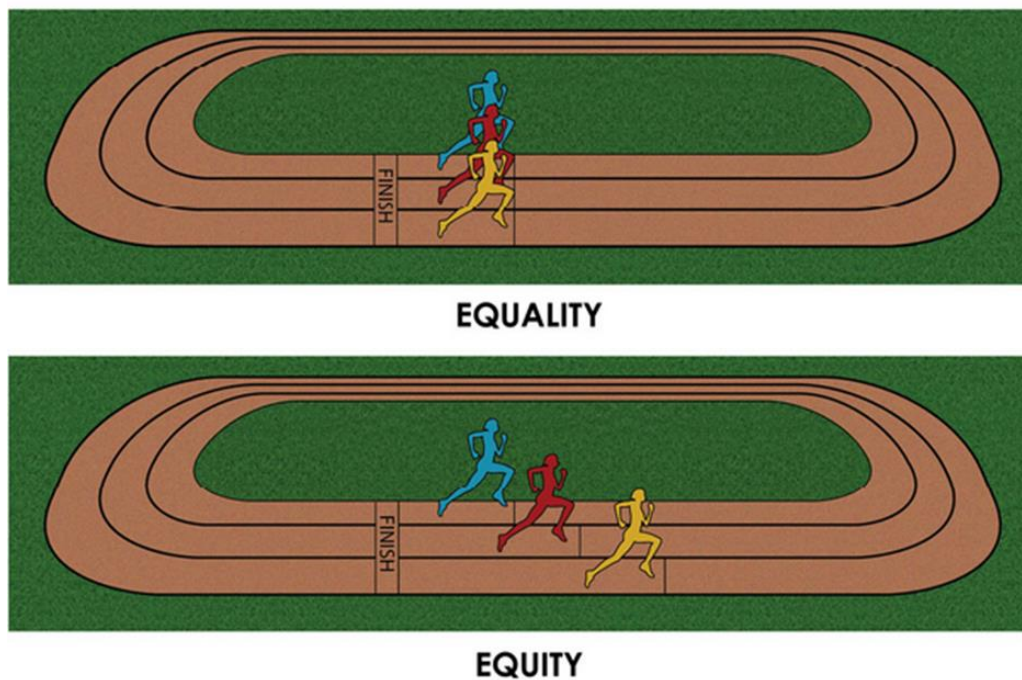
Equitable distribution of water, a scarce resource in South Africa, is difficult to picture, especially when the resources are further threatened by climate change and persistent degradation through pollution (cf. Funke & Jacobs, 2011). Understood as a scarce resource, discussions of its reallocation are not always well received and thus equity is at times understood by many and in some instances as attempting to take from those who have and giving it to those who do not have (Atuguba, 2013:109). This, however, begs the question; how else can those who did not have access to water resources gain access other than if it is taken from those that have? This, however, pits the haves against the have-nots.

Equity is also defined on an input-output nexus. According to Adams (1963, in Neal Patrick, et al., 2016:255), equity is achieved when rewards or outputs are perceived to be in proportion to inputs or contributions. This is also put forward as an equity principle by Aristotle when he contends that “goods should be divided in proportion to each claimant’s contribution” (Young, 1994:9). That notion of equity, however, assumes that those that contribute the most accomplish the most. However, there are others who argue to the contrary. Deutsch argued against a nexus basis for equity, saying “the most needy may not be the most able, those who work the hardest may not accomplish the most, equal opportunity may not lead to equal reward, treating everyone as equals may not maximize the common good” (Deutsch, 1975:139).

Equity that is structured on the basis of contributions or inputs fails to recognise in some cases the context in which one acquires and uses inputs, the unequal playing ground during the implementation process that warrants one to be eligible for allocation. For instance, non-participation of blacks in production (output) is often embroiled in race and class politics in which black Africans are constructed as lazy (Mtose, 2008). On the basis of this construct, allocating resources to black Africans is considered to be unjustified. Some narratives portray

those who are given money rather than land through land claims as only wanting money and not the land (Nair, 2017; Xaba & Roodt, 2016). These narratives construct land claimants as unsure of their needs and not willing to work for a living thus making any such claims seem unworthy.

In a discussion of equity, the World Bank argues that “distribution of opportunities matters more than the distribution of outcomes” (World Bank, 2005:4). Figure 3.2 explains what equity is in relation to equality when the World Bank perspective, which emphasises outcomes, is prioritised. In this case, the fair distribution of opportunities is more valuable than the distribution of outcomes, in other words, fair chance for all.



**Figure 3.2: Fair distribution of opportunities**

*Source: Kuttner (2016)*

Equity can also be driven by economic values. Deutsch (1975:137) suggests that in societies where economic values seem to pervade all aspects of social life, a focus on equity is naturally

inevitable. He, however, worries that this will result in an equity principle where rewards, prestige, power and economic functions and goods are allocated to those who appear to contribute the most (Deutsch, 1975:145). This is viewed as problematic as Marx (in Pepper, 1984:164) also states that “when labour invested in a product is regarded from the viewpoint of the product’s exchange rather than use value”, labour becomes objectified, “a function of impersonal ‘laws’ of economics which appear universal but in reality are specific to capitalism”. An equity principle where economic value and the markets dictate who gets what defeats the idea of a common good.

Another form of equity is vertical equity, whose approach recognises opportunity differences between groups of people and thus seeks to rectify these. To understand vertical equity, one would also need to understand horizontal equity. Horizontal equity is described by McIntyre and Gilson (2000:236) as the equal treatment of equals while vertical equity is the “unequal but equitable treatment of unequals” (see also Mooney & Jan, 1997). Scholars such as Mooney (1996) and McIntyre and Gilson (2000) recommend the use of vertical equity in the health sector, arguing that it considers the worst off in the distribution of resources. A similar understanding of equity in the allocation of water is, however, noted to have been lacking by scholars such as Syme and Nancarrow (1997:2143) who also view equity as an undefined term (Nancarrow & Syme, 2001). In a South African context where all are equal according to the Constitution, vertical equity presents itself as conflictual and also as a process with a potential to maintain unfair distribution of resources.

Equity measures may require that institutions in power take deliberate measures to see to it that resources like water are fairly distributed. Kemerink (2015:112) gives an example of the government of Zimbabwe which, on recognising the importance of and inequity in water infrastructure, established a national fund to stimulate the development of water infrastructure in previously disadvantaged areas. Kemerink (2015) argued that a physical oriented measure such as the one made by the Zimbabwe government gives the government the opportunity to directly “rearrange water flows and as such affect the distribution of water resources”. Such is the hope that the infrastructure at the Nwamitwa Dam in Tzaneen and other developments will also deliberately have the needs of the historically disadvantaged in mind.

### 3.2.1 Equity principles

Equity has been discussed by some scholars as a principle in itself, a value to be considered in social justice matters. In discussions about distribution of goods, Jones (2009: vi), for instance, considers equity as a guiding principle bringing focus to specific areas of policy.

Young (1984: xii) also argues that equity being shaped by cultural values, precedent and the types of goods being distributed, becomes a “complex idea that resists simple formulations”.

In this section, principles of equity by three different authors namely, Young (1984), the World Bank (2005) and Jones (2009), are presented. Young takes a critical approach in his presentation of what may be considered as principles of equity, by not explicitly stating them as principles of equity while also pointing out their potential weaknesses:

- (i) No envy: Young (1984:11) presents Tinbergen’s (1953) in which an equitable society is seen as one in which each person is satisfied by their situation and has no wish to change places with others. In the allocation of goods, the idea of being envy free would mean no preference for another person’s allocation (Foley, 1967, in Young, 1984:11). Young (1984:12), however, notes that this would only be applicable where everyone has equal claim on the goods, which is usually not the case. The principle is said to be irrelevant as variables such as disparities in merit, just deserts, contribution, need have to be taken into consideration.
- (ii) The priority principle: This principle relates to distribution in order of the most deserving followed by the next deserving, “given the claimants’ circumstances and the good being distributed” (Young, 1984:15). Young argues that this principle brings to question the concreteness of priority, which is a matter of judgement. The problem with this, as Young sees it, is how a balance can be reached where there are diverse opinions.
- (iii) The consistency principle: This principle is said to be applicable in situations where goods are indivisible and there are many claimants. The consistency principle works by reference to a standard of equity where goods can be divided between two claimants and this standard will be applied in cases with more claimants using the principle for two. The goods will be allocated such that every two claimants divide an “amount allotted to them as they would if they were the only claimants” (Young, 1984:15).

The World Bank (2005) offers two principles, namely:

- (i) Equal opportunities principle: The World Bank (2005: xi) explains that equity is when each person has an equal opportunity to achieve in life based on their talents and effort and not due to “pre-determined circumstances” such as race, gender, social or family background
- (ii) Avoidance of deprivation in outcomes: The talents and efforts should not be constrained by health, education or consumption constraints (World Bank, 2005).

Jones (2009:5) presents what he concedes to be three strong areas of convergence and consensus on equity principles. The three principles according to Jones and in order of priority are:

- (i) Equal life chances: In this principle, Jones draws from the World Bank’s (2005) first principle of equal life chances and considers this a first order principle of equity. In his discussion of the principle, Jones argues that factors beyond a person’s control should not define life chances a person should have. These, including one’s race, gender and place of birth, should not predetermine a person’s destiny (Jones, 2009:6), as adopted from the World Bank’s definition of equity.
- (ii) Equal concern for people’s needs: Jones (2009:6) states that the principle is about distribution of goods/services that people need, the level of need and nothing else should be used as basis for distribution.
- (iii) Meritocracy: Jones (2009:7) argues that positions and rewards in society should be distributed to reflect differences in effort and ability. It has to be allocation that is based on fair competition.

It is interesting to note that each of the above principles makes sense, each on its own until it is contextualised, at which point it creates “impossibility theorems”. While scholars such as Ingram, Whitely and Perry (2008) want to view equity as context specific, Young (1994) presents equity principles (although highlighting their weaknesses) in a context where there are no inequalities as a result of racial and class discrimination. For the most part, the equity principles laid out by Young, World Bank and Jones will need to be contextualised for their validity to be seen. More than the context, equity is also shaped by the “specific types of goods and burdens to be distributed” (Young, 1994: xii).

### 3.2.2 Equity in water distribution

Wilder (2008:100) contends that water management provides a context within which equity is difficult to define and measure, especially given its scarcity and its importance in socioeconomic activities. According to Whitely, Ingram and Perry (2008:1) the world's water is "located in the wrong places, misallocated, wasted or degraded by pollution", which worsens the prospects of achieving equity in its management. Equity considerations in water management are best seen in the way institutional arrangements for policy making include communities as stakeholders (Meynen & Doornbos, 2004). That way, views of the elite may not override the needs and concerns of others. There is, however, pressure for economically active groups to be water users or to have water allocated to them and this has potential to generate conflict in how the needs of other groups are addressed (Levite & Sally, 2002).

South Africa presents a case where the majority of the population, which was previously denied water access, is seeking to secure water resources for economic and domestic uses. According to the Department of Water Affairs (now Department of Water and Sanitation), equity "means that special attention must be given to the needs of those that were historically denied access to water or to the economic benefits of water", (DWA 2013a:45). As part of water allocation reform, the principle of equity was viewed as a strategic way of transforming the skewed water allocation. The DWA (2013a:45) in its contextualisation of equitable water allocation, divided equity into three subcategories: (i) equity in access to water services, which mostly covers domestic water use for the general public; (ii) equity in access to water resources, which covers water for productive use in irrigation, business or an industry; and lastly (iii) equity in access to the benefits from water resource use, which covers direct or indirect benefits from the use of water, e.g. through wage employment (an opportunity that can still be thwarted by use of high technology in commercial agriculture (cf. Schreiner, Tapela & van Koppen, 2010:14). However, it is also said that water allocation is still guided by five water allocation priorities where the first two speak to environmental sustainability and shared river basins while the last three pertain to water allocation for poverty eradication and economic growth. In this approach, users with higher priority in the allocation of water, the environment (DWA 2005a:6; van Koppen, 2008:235) and international treaties are given precedence over water allocation to change the economic plight of the historically disadvantaged. This is as a result of the



juxtaposition of sustainability and equity, which leads to equity being sacrificed in favour of sustainability, which has to be achieved even under what Wegerich (2007:187) calls “morally reprehensible conditions”. Other scholars have also posited that equity discussions tend to focus on “a very small part of the water resource – that needed for drinking water supply and domestic purposes” (Bird, Arriens & von Custodio, 2008:13), which is below ten percent of water resources (Peters & Woodhouse, 2019:2).

Levite and Sally (2002:827) have defined equity in water allocation as “fair access to the water needed for their activity” by all users. This definition tends to perpetuate the same state of affairs given that some of the user’s activities are limited by the lack of other resources, especially land. Equity as the formula for water allocation becomes ineffective without the realisation of land rights when access to land also defines access to water. In South Africa the bulk of the water resources are used by the minority in a way described by Turton and Meissner (2002) as resource capture. Equity in water resources, however, implies access, meaning water should be affordable and enough to be viewed as accessible (Prasad, van Koppen & Strzepek, 2006).

### **3.3 Understanding water allocation**

Water allocation has been defined by Bird et al. (2008:1) as a process where available water resources are distributed (or re-distributed) to legitimate claimants resulting in the granting of water use authorisation, transfer, review and adaptation as a water right. In the South African context, it is also a legislative process guided by two separate legislations, one dealing with water services, the Water Services Act (WSA) of 1997, and the National Water Act of 1998 which deals with water resources, or water for economic use. The separation of the Acts gives allocation responsibilities of the WSA to the local government while management of water resources is under the protection of national government (Movik, 2012:33). The separation of services and resources has, however, been interpreted as giving effect to differential consumption as the WSA deals with what scholars such as Swatuk (2017) call “small water”, which is basic water pegged at 25 litres of free water per capita per day. Described as falling under basic water rights and also being constituted by drinking water, in legislation, the basic

water rights are said to “amount to a very small percentage of the overall water resource, while the water allocated for municipal, industrial or irrigation uses are generally far larger” (Bird et al., 2008:2; see also Swatuk, 2017:59).

Much of water allocation to be understood in this study pertains to allocations under the National Water Act as the focus is on water resources for economic development. The framing of different concepts within the Act is understood to determine how processes emanating from the legislation are set to take place. For instance, the NWA makes provision for water resources allocation as well as temporary transfer of water rights without much discussion on re-allocation, which is an important component of WAR, especially to address equity issues. In a context where, historically, water has been in the hands of one small group, re-allocation would seem like the preferred option to describe the re-distribution process, especially given that most catchment waters are fully allocated or committed. However, reallocation tends to be the exception rather than the norm. DWAF (2005a:7) has described reallocation as a process that takes place between water users “via compulsory licensing or when licenses are reviewed” only. In other words, already allocated water in the hands of existing users is more likely to be maintained and less likely to be reallocated.

Allocation, on the other hand, can be understood as being about the decision taken about who gets a good or who does not, a decision that is said to be made by a group or an institution, on the group’s behalf (Young, 1984:7). It has also been described as a “process whereby an available water resource is distributed to legitimate claimants and the resulting water rights are granted, transferred, reviewed, and adapted” (Le Quesne, Pegram & von der Heyden, 2007:10). DWAF (2005a:7) defines allocation specifically as the “allocation of ‘allocable water’ in catchments that are not water stressed”. However, five out of the nine Water Management Areas in the country are water stressed, as shown in Table 3.1.

**Table 3.1: Available yield and water requirements by Water Management Area**

<b>Water Management Area</b>	<b>Available Yield (million m<sup>3</sup>/annum)</b>	<b>Water Requirement (million m<sup>3</sup>/annum)</b>
Vaal	3 000	3 883
Limpopo	1 872	1 831
Pongola-Uumzimkhulu	1 917	2 539
Mzimvubu-Tsitsikamma	260	1 358
Orange	4 449	4 116
Breede-Gouritz	1 282	1 327
Inkomati-Usuthu	2 021	1 192
Olifants	1 265	1 249
Berg-Olifants	1 015	1 300

*Source: DWS (2017a)*

### **3.4 Criteria for allocation**

The DWAF (2005a:7) prescribes that allocations in the Water Allocation Reform process have to consider:

- the needs of the reserve
- relevant international obligations
- requirements of existing licenses
- needs for redressing past racial and gender inequalities
- existing lawful uses
- other allocations by public tender or auction.

#### *3.4.1.1 Race and gender-based allocations*

The Department of Water considers allocation that addresses past racial and gender discrimination to be one of the priority allocation issues (DWAF 2005a; 2006a; 2008). Chapter 2 of the Constitution, the Bill of Rights, clause 9.3 of the equality clause states that there should not be unfair discrimination on any basis including race and gender (RSA 1996, see also RSA

2000). The Department sees it as a constitutional mandate to address any forms of discrimination in water allocation (DWAF 2005a:7). The need for a gender focus is also described by Seetal (2006:441) as a constitutional mandate. Redress on racial and gender grounds that are premised on the constitutional mandate argue for equality and henceforth the allocable water for HDIs will be distributed equally between black men and black women (Msibi & Dlamini, 2011). Under these terms, the 60% allocable water for HDIs will be equally divided between men and women (DWAF 2008:x; Msibi & Dlamini, 2011:36). This allocation method emphasises equality rather than equity, while the basis of Water Allocation Reform according to DWAF (2005a; 2008) is equitable allocation.

#### *3.4.1.2 Broad Based Black Economic Empowerment*

The Department of Trade and Industry (DTI) (2016:7) has defined Broad Based Black Economic Empowerment (BBBEE) as “an integrated and coherent socio-economic process that directly contributes to the economic transformation of South Africa and brings about significant increases in the number of Black people who manage, own and control the country’s economy, as well as significant decreases in income inequalities”. One of the key objectives of the BBBEE Act is to change the racial composition of ownership and management structures (RSA 2004). In his 1963 speech entitled ‘The Race Problem’, Malcom X criticised the singling out of one, two or a few blacks for a programme as tokenism, which he saw as hypocrisy (Malcom X, 1963). The BBBEE approach focuses on a few blacks in a tokenistic way and Bond (2014a:49) argues that policies that are tokenistic have no aim of delivering high benefits to recipients than did earlier systems (reference to apartheid system).

In the context of water allocation reform, the objective of having the BBBEE Act is to go further than allocating water for basic livelihoods and to aim for large scale productive uses (Msibi & Dlamini, 2011:36). Implementation of the WAR programme is thus guided by the BBBEE guidelines and allocation preferences are given to black- and women-owned enterprises (DWAF 2006a). Table 3.2, however, shows a larger number of non-BEE compliant companies having licences compared to any other category, including HDIs.

**Table 3.2: Statistics of approved water licences**

<b>Approved licence category</b>	<b>Approved licences</b>
Historically Disadvantaged Individuals (HDIs)	301
Historically Advantaged Individuals (HAIs)	249
BEE compliant companies	763
Non-BEE compliant companies	2 015
Water Service Providers	207
Water User Associations	1
National Departments	1
Provincial Departments	6
Total	3 547

*Source: DWS (2015a)*

#### *3.4.1.3 Existing lawful use*

Existing lawful use is whereby “people or organisations who were using water for farming, forestry, mining, business and industry before the new Act in 1998” are allowed “to carry on using the water until they get a licence” (DWAF 2006b:6). Marcatelli (2017:63) points out that customary water rights of black small-scale farmers in the former Bantustans are not included in the definition of ELUs. According to DWA (2013b), existing lawful use covers the period from 1 October 1996 to 30 September 1998. Existing lawful users are expected to register their water uses and also apply for licences under the compulsory licensing framework discussed below. A DWS (2015a) water use dashboard showed that at national level, there were more companies with confirmed registrations than other users (Table 3.3). It is not clear who owns the companies that hold the Existing Lawful Use authorisations but a DTI (2014) report indicated that black people owned only 3.9% of the country’s companies, which covers all forms of businesses.

**Table 3.3: Existing Lawful Users at national level**

Existing lawful category	Confirmed	Not confirmed	Declined	Total
9 Categories				
Black individuals	3	7	0	10
Coloured individuals	22	17	0	39
Asian individuals	1	0	0	1
White individuals	1 706	1 520	0	3 226
Companies	1 913	1 019	0	2 932
Water Services Providers	21	39	0	60
Water User Associations	39	22	0	61
National Departments	5	28	0	33
Provincial Departments	9	7	0	16
Total	3 719	2 659	0	6 378

*Source: DWS (2015a)*

As a criterion for allocation and reform, existing lawful use presents itself as non-aligned to the reform agenda. Van Koppen and Schreiner (2014a:8) have argued that the recognition of existing lawful users accommodates those who want to protect the entitlement they gained from previous legislation that gave them control and ownership of water. Marcatelli (2017:63) concurs with the thought and adds that the government had power to choose who had access to water and who was excluded and he concluded that the beneficiaries of the water reform process were white commercial farmers. Furthermore, any curtailment of water from Existing Lawful Users was to also consider the public good and the potential negative effects on their production levels (Movik, 2012:66). The Department of Water and Sanitation cautions any curtailments as below:

The Department is very aware that the use of water is tied closely to people's livelihoods, and that many existing users are contributing to economic growth and job creation. Because of this any curtailments to existing water use will be approached with caution (DWS 2017b).

The NWA's approach to dealing with the existing lawful users departs from the approach taken by the Department of Water. In the NWA, the approach was one where continued water use was supposed to be a 'transition mechanism' while the DWAF approach had been primarily economic (Movik, 2009:10), safeguarding the economy of the country (see also Marcatelli, 2017:63). As such, allocation of water had and still has to be done in an environment that ensures the stability of existing lawful users while allocation to HDIs is secondary (DWAF 2005a:4). This approach can be said to be discriminatory as defined by section 7(b) of the Equality Act of 2000, which expresses that "exclusion of persons of a particular race group under any rule or practice that appears to be legitimate but which is actually aimed at maintaining exclusive control by a particular race group" as unfair discrimination (RSA 2003:8). In the Orange River, for instance, a decision was made that water in the hands of existing users should not be considered for re-allocation or the ecological reserve (DWA 2013a:18). The Department's economic approach is seen in how it summed up the considerations of water use in the Olifants River when it expressed that:

The Olifants River is highly impacted by abstraction for irrigation in the upper reaches. The reservoir of the Clanwilliam Dam also drowns a long reach of the river. A Preliminary Comprehensive Reserve has been determined for the Olifants River with the recommendation that it is impractical to try and restore the river to a more natural system, and that water should not be taken back from existing lawful users for this purpose, due to the negative impact this will have on the area's economy (DWS 2015b:9).

Allocation that results from this economic understanding of allocation may not be useful to all the people but only the ones it seeks to privilege.

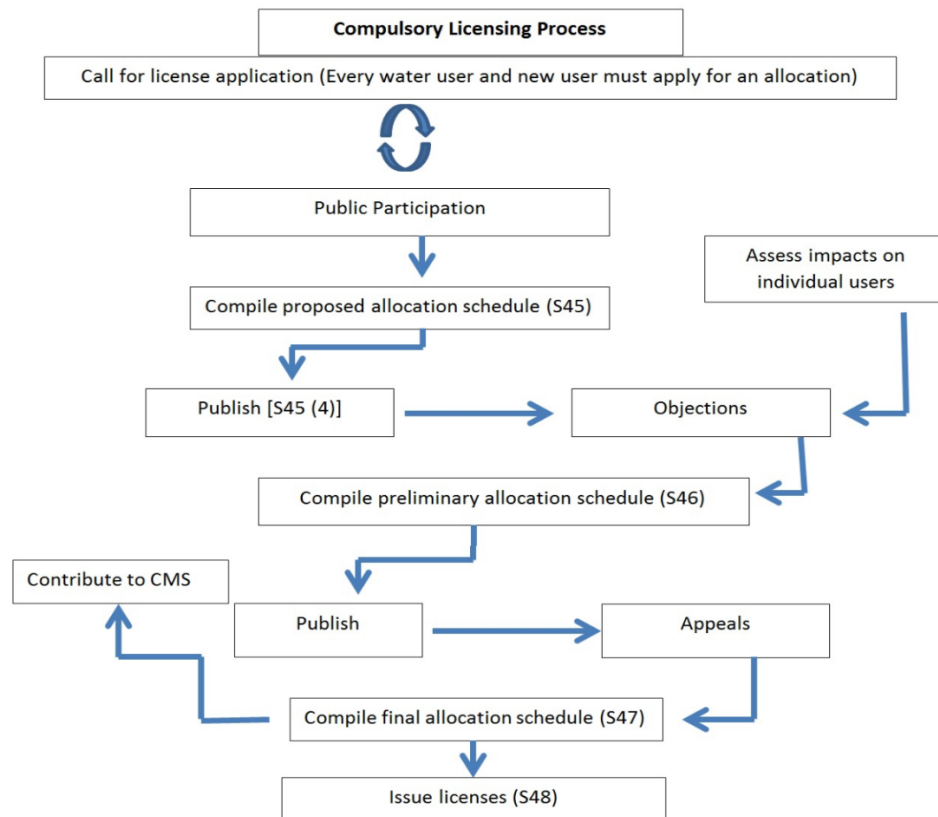
### **3.4.2 Compulsory licensing**

Compulsory licensing of water is described as "a mechanism through which all the water use authorisations in an area are reconsidered in order to amongst others achieve a fair allocation of water from a resource that is under stress" (DWAF 2008). The Department of Water Affairs

describes compulsory licensing as the most important tool for water allocation reform (DWA 2006b). Licensed water use is viewed as rather complex, highly technical (DWA 2005) and administrative (cf. van Niekerk, 2008:30) (Figure 3.3 shows the licensing processes). Under this process, water allocation has been structured in a way that verification of available water resources to see what is available first takes place followed by validation which seeks to confirm that the said resource is actually there, and finally a process of compulsory licensing (OECD 2015). If any allocable water was found to be available, opportunities for black and female water users would be determined followed by an assessment of impacts on existing lawful users (OECD 2015).

Compulsory licensing's primary focus on already over-allocated catchments, however, implies that existing lawful users who are aware of the specific quantities they require per season are in direct competition with up and coming farmers who are trying to establish themselves. Figure 3.3 shows that there are opportunities for objections and appeals in the licensing process and these may best be done by those already familiar with processes and procedures. Movik (2012) points out that the process of assessing and estimating available water for allocation as well as abstracted water was filled with uncertainties and rife with contestations. The compulsory licensing process is viewed as one of the challenges in the implementation of the water allocation reform programme. A Department for International Development (DFID) consultant interviewed by Movik in 2006 (Movik, 2012:52) opined that there were gatekeepers who held the WAR process hostage "in their desire to get the models" for compulsory licensing right. It has also been argued that the limited capacity in the Department of Water Affairs made evaluation and judging of applications on their merits difficult (Funke & Jacobs, 2011). As such, obtaining a licence for large-scale users meant simply the submission of an application (Van Koppen, Sally, Aliber, Cousins & Tapela, 2009). There have been suggestions that compulsory licensing be replaced by water trading, which is assumed to be more administratively efficient in comparison (Van Niekerk, 2008:31). This, however, does not consider the capacity of upcoming farmers, small business and other potential new water users to trade with established commercial farmers or miners. Literature currently shows a large number of authorisations for water use being in the hands of whites (DWA 2008:1) and very little is happening with regard to reallocation (Schreiner, 2013:242).





**Figure 3.3: Compulsory licensing process**

*(DWA 2012b)*

### 3.4.3 General authorisations

General authorisations (GAs) are conceived of as a means of achieving redress and availing water resources to small water users (DWA 2013a:12). They are specifically aimed for black and female users and “may be gazetted for specific catchments” (DWA 2013a:45). For the Department of Water and Sanitation, the GAs system allows them to authorise water uptake for a large number of people without issuing licences (DWS 2015a). Section 27 of the NWA (RSA 1998) presents the considerations for the issuing of general authorisations, which include among other things the need to consider existing lawful use and the need to redress results of past racial and gender discrimination. Conditions for the issuing of licences include specifying

the water use or uses and the property or area of which the water will be used (RSA 1998). The DWS reported the national statistics on GAs, represented in Table 3.4.

**Table 3.4: General Authorisations at National Level**

<b>General Authorisation</b>	<b>General Authorisations for current financial year</b>
9 Categories	
Black individuals	1
Coloured individuals	0
Asian individuals	1
White individuals	33
Companies	703
Water Services Providers	739
Water User Associations	0
National Departments	267
Provincial Departments	189
<b>Total</b>	<b>1 933</b>

*Source: DWS (2015a)*

Anderson, Quibell, Cullis and Ncapayi (2007) are of the opinion that general authorisations (GAs) are flexible and can be delegated to a local level where area specific concerns and priorities can be addressed. Although general authorisations were initially thought of as a temporary arrangement, Anderson et al. (2007:170) point out that GAs were later viewed as a means through which the HDIs could obtain water through the water allocation reform. Section 28(b) of the NWA, however, specifies one of the essential requirements for licences as the specification of “the property or area in respect of which it is issued”, in other words, land of which the HDIs might not have legal ownership.

Concerns have, however, been raised about the feasibility of GAs as a means of achieving redress and availing water to HDIs. Movik (2009:23) considered the lack of abstraction infrastructure by the HDIs. She noted that the decision made at the GA inception workshop was that “water should be allocated primarily to users that were able to take up the water and use it productively, not simply because the users were HDIs”. Van Koppen and Schreiner (2014b:15) also see the exemption from applying for licences provided for in the GA process as a form of discrimination that reduces small-scale water users to “second-class entitlement to water”. In both instances, the authors view licensed water use as carrying more weight than General Authorisations. While scholars such as Anderson et al. (2007) view GAs as a means for redress for small-scale users, van Koppen and Schreiner (2014b:3) seem to reject that view when they point out that “the total quantities per individual remain micro- and small-scale, because the volumes are capped by the small-scale of their farms or other water-dependent enterprises, and by the limited ability to abstract large volumes of water”.

The Department of Water and Sanitation's 2018 National Water and Sanitation Master Plan has suggested additional ways of accessing water for black farmers or black people applying for water use licences. Table 3.5 below lists the identified potential actions which in themselves read like actions to mine or scavenge for water to allocate to black people.

**Table 3.5: The NW&SMP summary of actions relating to water allocation for black applicants**

Action		Responsibility	Completion date
17.	Identify alternative sources of water and water that is not utilised (e.g. as mines are closing, resulting from war on leaks, etc.) and allocate to black applicants	DWS, CMAs	Initial mapping by 2019
18.	Identify where water can be made available and allocate to black applicants	DWS, DAFF, CMAs	Allocation of water to begin in 2019
19.	Identify areas where small dams or groundwater development can provide water for small-scale black farmers	DWS, CMAs	Initial mapping by 2019

20.	Align water, land and agrarian reform programmes and link to the Irrigation Strategy	DWS, DAFF, DRDLR	2018
21.	Implement the Water Administration System on all government irrigation schemes and reallocate savings to black applicants	DWS, DAFF/PDAs	2023
22.	Implement pilot project on voluntary contributions from farmers for water reallocation in prioritised catchments	DWS, IUCMA	2018
23.	Use General Authorisation to enable and increase small-scale water use by black farmers	DWS, DAFF	2019

Source: DWS (2018a: 47-48)

### 3.5 Guidelines for water allocations

The primary purpose of the water allocation reform process is to enable allocation of water to historically disadvantaged individuals. The allocation process, however, requires recognition of other priority groups/areas in the allocation process. DWAF (2005a) outlined some guidelines for allocating water within the Water Allocation Reform framework and these are summarised in Table 3.6.

**Table 3.6: Guidelines for allocating water**

<b>GUIDELINES</b>		
<b>Scope</b>	<b>Intent</b>	<b>Priority beneficiary</b>
Redress past inequalities in allocations to Historically Disadvantaged Individuals	Access to the resource and/or benefits from its use. The objective is intended for all catchments in the country.	Historically Disadvantaged Individuals in general
Capacity development programmes to support allocations	To ensure productive and responsible water use. Women's participation and equitable and active participation for HDIs for the improvement of livelihoods.	Historically Disadvantaged Individuals and poor women principally
Contribute to Broad-Based Economic Empowerment (BBBEE) and gender equity	Facilitation of licensing of water use by emerging black and/or women owned	Black enterprises and women

	enterprises participating in productive water use	
Local, provincial and national planning initiatives, international obligations and regional SADC initiatives	To ensure water requirements in the allocation process are in line with sustainable development as understood at local, provincial and national level	The environment
Fair, reasonable and consistent manner in dealing with existing lawful uses	Minimise impacts on Existing Lawful Users in cases where re-allocation is the only viable allocation option Ensure productive users are given a chance to phase out their use or become more efficient	Existing Lawful Users
Protection of water resources through the creation of a Reserve	Ensure that water use enhances the economy without any compromise on the environment	Basic human needs and the ecology
Innovative means for reducing the burden of licensing procedures, support of productive water uses, management and protection of water resources	Develop a mechanism for reducing administrative burden of authorising water use Develop evaluation procedures to guide applicants on options on productive water uses Ensure optimum water use and protection of the resource	Water Allocation Administrators, Existing Lawful Users, HDIs, the environment

*Source: Adapted from DWAF (2005a:8-12)*

### **3.5.1 Considerations when allocating water**

South Africa is known as a water scarce country with a total surface water average of 49200 million m<sup>3</sup>, 4 800 million m<sup>3</sup> originating from Lesotho (DWA 2001:4). This places South Africa as the 30<sup>th</sup> driest country in the world (DWA 2013a:8). The country also receives generally low rainfalls averaging 500 mm when compared to the world annual average of above 860 mm (DWS 2016a). Several of the catchments are already over exploited with water demand exceeding the available water (see Table 3.1 above) (DWS 2017a). Le Quesne, Pegram and von der Heyden (2007) observe that over-extraction in situations of scarcity can cause social, economic and environmental challenges, hence the need for well thought out allocation strategies. While allocation of water is seen to be a solution to the ever increasing scarcity,

Islam and Susskind (2015:40) view current unguided allocation practices, among other things, as reason for water stress in regions such as Africa and the Middle East.

A historical account of the evolution of water rights in South Africa (Tewari, 2002) will attest to the fact that prior to colonialism, water was not considered a scarce resource. The communities at the time are reported to have lived lifestyles that did not exert much pressure on the competition for water use. Land and water were under the custodianship of the chief (Tewari, 2002:4-5). Water was available to the groups under the chief or headmen and not necessarily allocated to individuals. Tisdell (2003:405) mentions that the link between open access to water and the “potential for over-exploitation of water resources resulted in part, in the development of water doctrines based on common property and over time to forms of personal and state property”. In the case of South Africa, Tewari (2002:5) opines that the term ‘water rights’ has always referred specifically to “access to water and water use by colonists”. Other communities did not have the advantage of being allocated water rights as they were not considered to be part of the citizenry. Water allocation reform is advanced to address this past discrepancy in how water access was defined and allocated on the basis of discriminatory practices.

With the rise in population, industrial, agricultural and domestic needs for water increased demand resulting in the resources being described as scarce with calls for water management that recognises its scarcity. There are different strategies that have been suggested as to how scarce water resources can be distributed among the different user groups. One prominent view comes from economists who argue that being an economic good, water should be “bought and sold” (cf. Mehta & Ntshona, 2004:1). The World Bank, the International Monetary Fund (IMF) and the World Trade Organisation (WTO) are also understood to be behind the privatisation of water in the name of an economic good (Foskey, 2006:65). De Lopez, Elliott, Armstrong, Lobuglio and Bartram (2011:9) noted also that the Dublin Statement Principle No. 4 states that “Water has an economic value in all its competing uses and should be recognised as an economic good” and this approach has been used in various countries including Chile, USA, Australia. In South Africa, water is viewed first as a public good then a social and economic good (DWA 2012c:38) and being an economic good means that charges will be levied for its use (Speelman, D’Haese, Buysse & D’Haese, 2008:31).

In a context of scarcity, Ashton and Haasbroek (2002, in Ashton, 2007:7) suggest that allocation should focus on productive sectors where there are greater economic gains through a reallocation process. DWA (2001:30) also saw value in allocation of water where it will be “most beneficially used in the public interest”. The Department, however, discerned potential for ‘resource capture’ if efficiency and effectiveness of use were primary concerns that would override equity processes that sought redress of historical water allocation inequities. The DWA argued that: “[p]otential exists for management of water scarcity to become a tool for the exclusion of the previously disadvantaged and the poor from access to water and from the right to use water for economic development and to escape from poverty (DWA 2001:31).

The Department’s views on the subject have, however, not been consistent when one considers its 2015 view on dealing with water scarcity in the Olifants River (reference to discussion in section 2.4.1.3).

Equity has also been suggested as one of the considerations for allocating scarce water resources. Equity objectives are concerned with fairness whereby all get some water regardless of social class (Dinar, Rosegrant & Meinzen-Dick, 1997:4). Dinar et al. (1997) have, however, discussed such equity in the context of domestic water use and not productive use.

The DWA (2013a), in its National Water Resources Strategy 2, suggested that scarce water resources be allocated efficiently. This has been explained as meaning that the resources available should be allocated in a way that achieves maximum benefits (DWA 2013a:106). Besides equity and sustainability, the NWA, section 27.1c, (RSA, 1998) also advances the notion of efficiency in water allocation, noting that licenses for general authorisations should consider efficient and beneficial use in the public interest. English common law in the 12<sup>th</sup> to 17<sup>th</sup> centuries also introduced efficient water allocation whereby mills had privileged access because of their benefits at the time, and their upstream or downstream impacts were considered insignificant (Speed, Li., Le Quesne., Pegram & Zhiwei, 2013:21). Zwarteveen and Boelens (2014:145) observed that “large-scale commercial enterprises, agribusiness firms, private drinking-water companies, and mining and hydropower conglomerates” were considered efficient “modern” users within Integrated Water Resource Management (IWRM) discourses. In South Africa, indicators of efficiency have been put forward as contribution to Gross

Domestic Product (GDP) and to employment per cubic meter of water allocated with a special focus on the agricultural sector and stream flow reduction activities (SFRA) such as forestry (Anderson, Mahlangu, Cullis & Swartz, 2008:733). Contribution to GDP and employment, however, suggests that commercial water use will work best with these indicators compared to small-scale water users (Anderson et al., 2008:734).

Some principles have been drawn up that also seem to emphasise efficiency in water use at the expense of either equity or sustainability. Table 3.7, which sums up the principles and criteria for sharing water, considers efficiency as a higher priority in contexts of water scarcity. Nkondo (2013) argues that efficiency is not distributive, rather it reinforces inequalities. The principles and criteria do not factor in historical patterns of ownership and use of water as is required in the case of South Africa, for example. They also do not factor in circumstances of up and coming farmers who may not know exact amounts of water required per crop, and may also not have ready markets to have a visible impact on GDP. The principles have potential to work best in a context where the grounds for allocation are levelled and where one consideration has no greater value than the other. Wilder and Ingram (2018:2) have suggested the elevation of equity “to a higher level” as a way of neutralising the dominance of neoliberal views in water governance.

**Table 3.7: Principles and criteria for sharing water**

CONSIDERATION		MEASURE
<b>Proportionate division</b>	Equal division	Equal share for each riparian state/province
	Physical characteristics of basin	Area, rainfall, length of river
	Population	Population numbers in, or dependent on, the basin
<b>Existing use</b>	Historic or current use	Existing diversions or shares
	Estimated demand	Water demand assessment, e.g. crop water needs



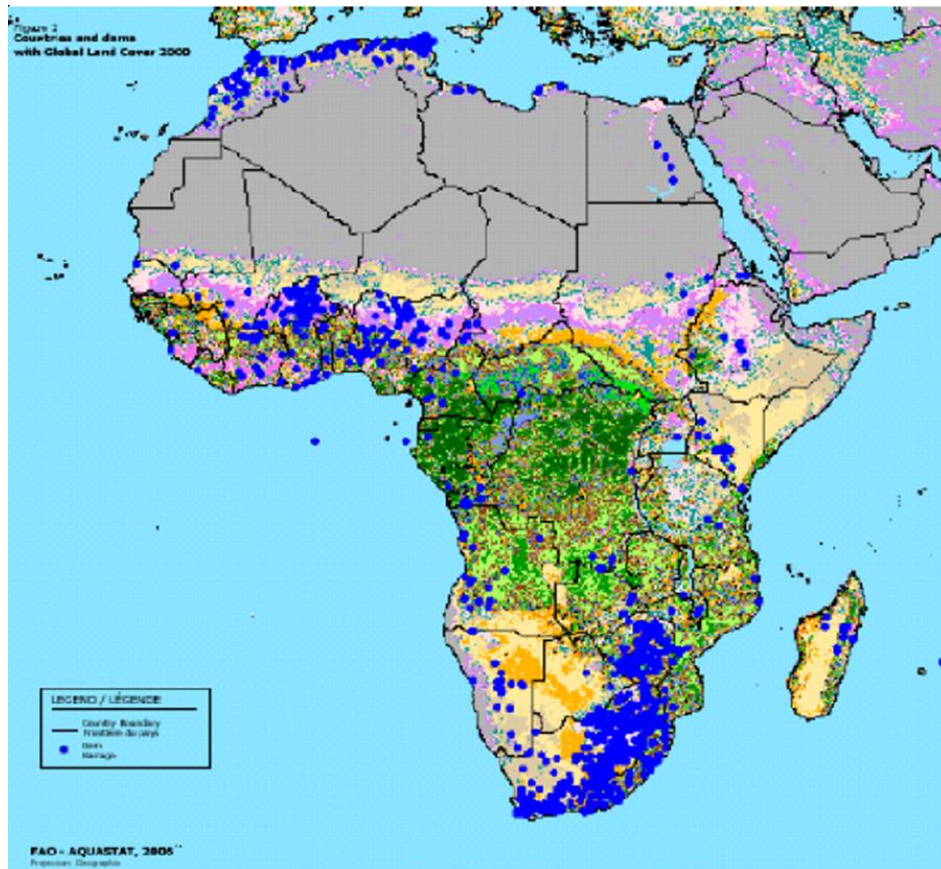
	Efficiency of water use	Output per unit of water (physical or economic)
	Social and economic dependency	Socio-economic reliance of the population on the waters of the basin
<b>Future use</b>	Growth projections	Regional and sectoral gross domestic product (GDP) growth estimates
	Alignment with development planning	Development space, future development priorities, value added per unit of water

*Source: Speed et al. (2013)*

In the western United States, Vaux and Howitt (1984) identified development of additional water supplies to manage scarcity as the means that was used. Most OECD countries including South Africa are also observed to have used the supply-based solution, which relies on the development of infrastructure (OECD 2015). This has resulted in South Africa being the country with the most dams in Africa (see Figure 3.4). Of the 1 300 large and medium dams in Africa, 40% are in South Africa (FAO, 2007:1; FAO, 2016:3). In western United States, there was an emphasis on the construction of large storage and conveyance facilities and security of tenure (Vaux & Howitt, 1984). Dams have, however, been criticised for their potential negative environmental impacts, for example, on rivers and freshwater ecosystems (WRC, 2005) and for uprooting millions of people from their land (Alvares & Billorey, 1988, in Newson, 1992). The World Commission on Dams (WCD) (2000) details the environmental and social disturbances associated with the construction of large dams pointing out that it is not enough to just acknowledge their positive impacts when communities are displaced, livelihoods are disrupted and heritage sites are destroyed. Goldsmith and Hildyard (1986, in Newson, 1992:176) have also added to the criticism of dams arguing that “... real beneficiaries of large-scale dams and water development schemes have invariably been large multi-national companies, the urban elites of the Third World, and the politicians who commissioned the projects in the first place.”

A report on the feasibility of raising the Clanwilliam Dam on the Olifants River, for instance, reported that the irrigation farming in existence at the time of the study was very profitable and so researchers saw it as being more viable to expand existing farms rather than developing new ones (Van den Berg, Mabuda & Brown [nd]). With regards to allocation of water to resource poor farmers, the report expressed such allocation in terms of “pressure” to do it. The report also pointed out that although the raising of the dam offered a unique opportunity to support WAR, such developments would require significant government support for their success. Consideration could also be given to regular servicing of current infrastructure through dredging and de-silting as raising of dam height is viewed as environmentally costly (Agbontaen, Nahuche & Anyakora, 2018), an effect always felt by society’s most vulnerable.

Concerns that have been highlighted in the literature on how scarce water can be allocated have dealt with international, government and private bodies’ efficiency and sustainability concerns while voices of ordinary people for whom equity is meant, have mostly been silent. It is the voices and the interests of the powerful that are heard (Nkondo, 2013). Concerns about equitable allocation and past discriminatory water laws are written and heard of from the elite, which has led some to argue that “[w]hen those at the top claim injustice and discrimination from below, it is difficult to know whether such claims are based sincerely on fairness concerns or are simply strategic ploys to maintain their own advantage (Jost & Kay, 2010).



**Figure 3.4: Map of Africa showing South Africa with the highest number of dams**

*Source: FAO (2016)*

### **3.6 Understanding justice**

Albrecht (2014:5) opined that “how we explain things shapes how we respond to them”. Patrick, Syme and Horwitz (2014:2480) have also pointed to the same fact saying “the level at which an issue is framed affects perceptions of justice”. Concepts and categories cannot be viewed as having an independent existence; rather, how we explain concepts and categories is informed by many things including economics, education and socialisation (Pepper, 1984:2). A people’s understanding of issues and misunderstanding thereof, form the way they view and deal with issues. Justice as a concept may also be understood from one’s socialisation as well as by how institutions in place interpret it to the people. There are different world views and, as such, this section will review conceptions of justice from an African perspective as well as from an

Oriental perspective. The discussions on justice in other parts of the study are largely western, including Rawls' idea of justice. Similarities may, however, be drawn from the different parts of the world.

Ingram et al. (2008:8) understand justice as concerning itself with “fairness, dignity, respect for mutual rights and obligations and that institutional arrangements nurture the full development of human capacity”. In line with the idea of fairness is the questioning of how people come to own the properties they own, expressed by Nozick's entitlement theory. Nozick (1975) argues that if a person acquires property in a just way, then the person is entitled to that property. Fair acquisition thus gives way to just acquisition.

Justice can also be understood from conceptions of what is unjust and these may differ according to context. In a distributive system, Deutsch (1975:138) discussed several forms of injustices that could be part of a distributive system, such as: injustice of value, injustice of rules, injustice of implementation and injustice of decision-making procedures. Participation in decision making of what is deemed just, traditional conceptions of what is right or wrong, authority to define just and unjust, and respect of decision maker other than self, are viewed as legitimising factors for acceptance of decisions made in distributive systems (Deutsch, 1975). Unfortunately, there are some who are powerless to participate and “[W]hen one is powerless, one is subject to the plans, decisions and ideas of others either in the sense that they determine the conditions of your life or in the sense that you are the one who must execute them” Modiri (2015:234). Just systems may therefore exist but may not necessarily benefit all. Modiri (2015) further argues that the structures of apartheid placed most black people in “the social position of powerlessness”.

### **3.6.1 African conception of justice**

There is not much literature on the concept of justice by indigenous African scholars, yet an understanding of how justice played out in the lives of the indigenous Africans will be useful in understanding their participation in issues of distribution of resources. A number of scholars, including Asante (2011), Bilolo (1986) and Karenga (2004) have, however, written on Maat, a concept associated with “truth, righteousness, justice, order, balance, harmony and reciprocity” (Asante, 2011:49) in ancient Kemet, that is modern day Egypt. In this study, the researcher

draws from contemporary ideas of justice as understood by scholars drawing from a much recent African past. From the Igbo perspective, for instance, and derived from their traditional ways of living and generally accepted ways of distributing or sharing resources, justice came to be understood as “conformity with the requirements of the custom and tradition” (Oraegbunam, 2009:58). The words *akankwumoto* and *ikpenkwumoto* were used to denote justice and what is just, respectively (Oraegbunam, 2009). Letseka (2015) also argues that the concept of *Ubuntu* (or philosophy of *Ubuntu* as Ramose (1999) calls it) associated with the people of southern Africa upholds humaneness and “has the capacity to constitute order, to restore peace, and to maintain the balance between conflict and harmony in traditional African communities” and thus conveys justice as fairness. However, both Oraegbunam (2009:80) and Letseka’s (2015:549) discussions of justice do not discuss justice of a distributive nature. Oraegbunam’s (2009) account deals with justice with regard to land disputes pertaining to boundaries or matters of trespassing, matters that could be dealt with at a village or community level. There is a chance that justice of a comprehensive distributive nature was not invoked in these communities. Hume (1998, in Wolff, 2008:3) is observed as having stated that justice only arises where there is possibility of conflict of interest. Mamdani (1996) also points out that in the case of land, customary law kept issues in the balance. Mamdani stated that:

[I]n non-settler Africa, the Africa administered through Native Authorities, the general rule was that land could not be a private possession, of either landlords or peasants. It was defined as a communal holding, to which every peasant household had a customary access, defined by state-appointed customary authorities. (Mamdani, 1996:21-22)

### **3.6.2 Conceptions of justice from the Orient**

In the Orient, some ideas of justice have been drawn from the ancient Chinese sage, Confucius, whose ideas are said to have influenced not only Chinese thought and culture but many East Asian countries as well (Jianhong, 2007). Confucius' philosophy is said to have been based on the idea of loving others or *ren*, which he believed was the basis for a harmonious society (Jianhong, 2007; Wang, 2009:328). Social structures and orders of such harmonious societies were controlled by “systems of rites and codes of conduct” through a concept called *li* which is said to have been learnt through moral education (Wang, 2009:328). The Confucius philosophy

revered harmonious societies and despised personal interests (Jianhong, 2007). In disputes, resolutions that were fair and consistent with human feelings were preferred, “fairness was based on finding the truth” and rights were moral rather than legal. Wang (2011:212) suggests that the Confucian teachings of societal harmony could be one reason why “ancient China refrained themselves from conquering and colonizing the world with violent aggressions despite their technological supremacy”.

Wang (2011) also argued that the western concept of justice is “haunted by the dominance of reason over emotion”. In the Confucian ways, individuality was developed alongside affection for fellow human beings, and on its own self-interest/individuality was not given authority. Thus “rules of justice that are not just” would not be performed as the ground for justice was humaneness (Wang, 2009:321). Justice in the early Chinese understanding of justice thus did not come from a governing structure or order but from within. In Wang's understanding, “The highest personification of justice belongs to those sages who are capable of rising above their personal likes and dislikes and discovering and disclosing the *sensus communis* of the hearts of the people” (Wang, 2009:330).

Similarities between the African ideas of justice can be drawn with the Confucian idea of justice where humaneness is central to societal harmony. In the West, on the other hand, justice has been sectionalised into many segments such as political justice, social justice, environmental justice. Literature shows that there are no words in African languages that can be directly translated as justice. Oraegbunam (2009) discusses how in the Igbo language, two words describing an action were combined to denote justice. In his discussion on justice to the concept of justice, Yang (1997) argues that there does not necessarily have to be one word in the Chinese language that corresponds with the English word ‘justice’. Similarly, *Ubuntu* is viewed as a philosophy of life yet at the same time denotes justice. In the West, justice determines the order of society while the ordering of society determines justice for the African and the Oriental. Wang (2009:317) wrote that the Greek understanding of justice influenced the Western ideas of justice whereby “the administration of justice, which is the determination of what is just, is the principle of order in political society”. Krishnan (2011) has also argued that individualistic cultures such as western ones see justice being executable through equity while in collective societies, justice can be interpreted as equality- or needs-based. These differences

in how societies are ordered has potential to create conflict when West meets Africa or the Orient and these misunderstandings affect how distributive justice in the context of natural resources may play out.

### **3.6.3 Justice after colonialism and apartheid**

Understanding first what colonialism and apartheid are helps put in perspective what justice in a “post-colonial” or “post-apartheid” state should be conceived as (Churchill, 2012, posits that there is nothing 'post' about colonialism, hence the inverted commas on post-colonial and post-apartheid). Césaire (1955:2) settled on agreeing on what colonialism is not and states that it is “neither evangelisation, nor a philanthropic enterprise, nor a desire to push back the frontiers of ignorance, disease, and tyranny, nor a project undertaken for the greater glory of God, nor an attempt to extend the rule of law”.

Colonialism was therefore not a social, cultural or economic exchange but a brutal and violent exercise (Bulhan, 2015; Hydrossoft Institute, 2018; Lu, 2011; Walker, 2005). Apartheid, on the other hand, is racial segregation that was achieved through dispossession of land and other natural resources and the formation of 'native homelands' (see Phuhlisani NPC, 2017). Mamdani (1996:7) suggests that this exercise required “a certain degree of force and brutality that seemed to place the South African colonial experience in a class of its own”. Its effects continue to be felt as confirmed by delegates at the Durban Declaration (a World Conference against Racism, Racial Discrimination, Xenophobia and Related Intolerance) (UN, 2001:7) where it was affirmed that they “further regret that the effects and persistence of these structures and practices have been among the factors contributing to lasting social and economic inequalities in many parts of the world today”.

Given the enduring nature of colonial injustices, what then is justice? Lu (2011) provides a context for which justice in ‘post’ colonial states can be conceptualised. Writing in the context of Japanese colonialism of Korea, Lu (2011) suggests that injustices associated with colonialism be viewed as structural. The author explains that political, social and economic injustices affecting a majority population are not a product of individual or state acts but rather that of “structural processes that enable(d) and even encourage(d) individual or state wrongdoing, and produced and reproduced unjust outcomes” (Lu, 2011:262). There is then

need, according to Lu (2011), for structural reform to take place after acknowledging colonial injustices as structural injustices, that is, layered rather than linear whereby the perpetrator is singular (see also Miller, 2007). Reform will then be realised when “victims of colonial structural injustices achieve the necessary conditions for effective political and social agency within their respective societies” (Miller, 2007:264). This view is shared by Mbeki (1978) in a speech in which he rejected the acceptance of blacks by capital only as workers. He thus proposed that

free South Africa must ... redefine the Black producer or rather, ... we shall redefine our own position as follows:

- we are the producers of wealth;
- we produce this wealth for our own benefit to be appropriated by us the producers;
- the aim of this production shall be the satisfaction, at an increasing level, of the material and spiritual needs of the people (Mbeki, 1978).

In South Africa’s water sector, the replacement of colonial and apartheid legislation with the National Water Act of 1998 paved the way for what is thought of as comprehensive water laws (Kemerink, Ahlers & van der Zaag, 2011). Tempelhoff (2017) has noted consistency in South Africa's water legislation dating the observation back to the country's colonial days. The author observes how the changes in the legislation over time had always represented “a ground breaking shift in the way the state was governed” (Tempelhoff, 2017:190). In colonial and apartheid times, legislation has served the interests of the wealthy and the predominantly white (cf. Tewari, 2002). Swatuk (2010:534) has observed that the ANC government has impressed upon those with water that their share was not going to be taken away from them to be given to “the poor and disempowered”. Instead, the government focused on free basic water using methods such as “demand management, leak detection, removal of alien plants, to make more water available” (Swatuk, 2010:534). Although Swatuk (2010:534) describes these methods as having sent “proper signals to South Africa's upstream and downstream neighbours”, they are not comparable to the water infrastructure development embarked on during the colonial and apartheid times, which ensured the white community ample water supplies. In terms of availing water to the poor and disempowered, the ANC government’s methods come across as



insubstantial considering the size of the population to be served and also in the context of water allocation reform.

### **3.6.4 Deracialisation of policy**

Many scholars have written on the subject of deracialisation but have not provided a working definition for the concept, and the available literature has focused on deracialisation in education, in political campaigns, general socio-economic inequalities and in asylum discussions. Literature on distributive justice as well as water allocation has not dwelt on deracialisation. In the context of political campaigns, deracialisation is understood as meaning avoidance of any explicit references to race-specific issues “while at the same time emphasizing those issues that are perceived as racially transcendent” (McCormick & Jones, 1993:76, in Orey, 2006:815). Discursive deracialisation has, however, been defined as “the removal of race from potentially racially motivated arguments” (Goodman & Burke, 2011). With regard to the deracialisation of policy, one can deduce that the concept concerns itself with race neutral policies. Leonardo and Tran (2013) introduce this thinking in their discussion of schooling, law and limitations of race-neutral reforms, where they express that dealing with race and political problems through race-neutral justifications produces contradictions. Leonardo and Tran's (2013:170) argument suggests that deracialisation manifests itself at times through neo-liberalism which “downplays structural inequalities” while giving the impression that the nation is operating under a “post-racial regime”.

Race, as one of the factors that produces inequality, should not be merely written out of policies. This was viewed to be the case with the Abolition of Racially Based Land Measures Act (ARBLMA) 108 of 1991, which according to Ramutsindela, Davis and Sinthumule (2016:5) sought to only repeal “racial terminology without addressing the effects of apartheid”. Race, among other social constructions “affects all actors in society to the extent that these ... establish distributions of power (differential control over or access to material and symbolic resources) ... and thus becomes implicated in the conception and construction of power itself” (Scott, 1986, in Kemerink, 2015:7). Policies that are race neutral can thus create false knowledges about inequalities, especially given that racialisation according to Grassroots Policy Projects (2017) has cumulative and structural effects. Albrecht (2014), for instance, notes that 80% of white

Americans believed that blacks “have the same opportunity for education, housing and jobs as they do”. Fifty-five percent of white Protestants in America also believed that “African Americans just do not have the motivation or will power to work their way out of poverty” (Albrecht, 2014). Scholars who have written on inequality in South Africa have expressed that deracialisation of policy does not work or has not worked. Liebenberg (2010:3) and Seekings and Natrass (2015:259), for instance, have argued that the deracialisation approach has had a limited impact on inequality in South Africa. Writing on water reform policies in general and neutral policies in particular, Kemerink (2015: ix) expresses the view that “such policies can only to a limited extent contribute to progressive societal change”. It can be deduced that current inequalities in the water sector can be said to be a result of deracialisation. The revisions to the water legislations in southern Africa, including South Africa, were a result of deliberations with supranational organisations and funding agencies such as the World Bank, DFID, etc., organisations that would align outcomes with their political ideals (Kemerink, 2015), ideals that may not necessarily consider the colonial and apartheid contexts of deprivation on racial grounds.

### **3.7 The Water Allocation Reform programme**

Observations from literature on the general focus of water allocation reform is that reform policies are driven by a wide range of issues that include but are not limited to the politics and economic concerns of the countries. While, for some countries, scarcity of water resources, whether as a natural hydrological state or due to increasing water user population, and reduced availability due to pollution are among some of the issues that drive allocation reform. Countries like Chile, for example, are considered well-resourced with a water value per person per year above world average, (6 600m<sup>3</sup>/person/year) (Donoso, 2015). Donoso (2015) argues that in Chile water allocation came about due to “growing water scarcity” as a result of increase in numbers of water users and the need to establish the “market as an allocation mechanism”. Donoso (2015) argues that there is no need for allocation of water rights if water is not scarce. In Southern African countries (e.g. Ghana and Zimbabwe) reforms in the water sector are products of water management ideologies emanating from sustainability discourses (cf. Movik,

2012:34-35 on South Africa; Makurira and Mugumo, 2005). The sustainability discourse came framed within the IWRM principles (Mapedza & Geheb, 2010; Mtisi, 2011; Swatuk, 2017), which were encouraged by international bodies such as the United Nations at the Dublin and Rio 1992 conferences (Wolfram, 2009). Movik (2012:2) posits that policy and legislative reforms in the water sector were largely driven by perceptions of scarcity as well as influences of the IWRM approach. Mtisi (2011:1), however, argues that in the context of Zimbabwe, the focus on IWRM was in contrast with local concerns for the redress of colonial injustices in the water sector.

In South Africa, the Water Allocation Reform (hereafter referred to as WAR) is the Department of Water and Sanitation's way of ensuring that the country's "limited" water resources are shared in the best interest of all (DWA 2012a). It can also be understood broadly as a process whereby significant elements of an allocation regime are reviewed; changes are made to policies, laws and mechanisms that have a significant impact on allocation arrangements (OECD 2015:93). In South Africa, the WAR strategy arose out of the need to unpack an implementation process for water allocation following the specifications of the National Water Act (No. 36 of 1998) (DWAF 2008; Movik, 2009). In 2006 Seetal, who was the head of the WAR, stated that the programme "is a proactive intervention to address race and gender imbalances created in the water sector as a result of historical discriminatory legislation in the country" (Seetal, 2006:437). WAR in South Africa was also influenced by the IWRM approach and Movik (2012:140) argues that it was the emphasis on scarcity that gave dominance to allocation discourses based on capacity to use water efficiently in the policy discourses around redistribution of water.

The WAR programme was first rolled out in 2001 (Msibi & Dlamini, 2011:1) following a series of legislative changes in the water sector, which include the following:

- White Paper on National Water Policy for South Africa (1995). The White Paper spelt out the need to address past discriminatory practices describing past laws as having come out of a need to conquer and expand (DWAF 1995)
- The Water Services Act, Act No. 108 of 1997, which sought to provide for the right to access to basic supply and basic sanitation (RSA 1997)

- The National Water Act, Act No 36 of 1998.

In 2005, a draft position paper with a call for comments on the approaches detailed in the paper was published by the DWAF (2005a). This was followed by more documents in 2007, 2008 and 2012 detailing the allocation reform programme. A parliamentary presentation by the Department of Water Affairs (DWA 2013c) as well as a DWS (2018a) master plan, however, points out that both policy and legislative tools for enabling transformation of water allocation had not brought about much change since the promulgation of the National Water Act.

While the NWA does not have the term ‘Water Allocation Reform’, it suggests reform of the law relating to water resources, repealing of certain laws and provision for matters connected with these (RSA 1998). The closest that the NWA (RSA 1998) comes to suggesting allocation reform is Clause 45.2(c) which says “A proposed allocation schedule must reflect the quantity of water to be allocated to each of the applicants to whom licenses ought to be issued in order to redress the results of past racial and gender discrimination in accordance with the constitutional mandate for water reform”. However, its reference to the constitutional mandate gives it impetus to have a strategy such as WAR to redress past water allocation imbalances.

The WAR process, which had set timelines and phases for its implementation, has been viewed by scholars as uncomfortably slow. This has led others to also point to some of the provisions of the NWA that are viewed as providing room for potential conflict, e.g. “recognition of pre-existing rights, compulsory licensing, curtailment of water use and compensation for curtailment as well as the possibility of water trade” (Msibi and Dlamini, 2011:xii). In a Department of Water and Sanitation meeting on “Water use allocation impacts on farmers”, the issues with some clauses in the NWA were reiterated. The Department pointed out that the departure of the NWA from the riparian Act had been overshadowed by the following clauses:

- Section 32, which defined and recognised particular historical water uses as existing lawful water use;
- Section 33, which made a declaration as to the existing lawful use of particular water uses that previously did or did not take place;
- Section 34, which allowed historical water users to continue to use water as a recognised form of historical entitlement until its replacement with a water use licence;

- Section 35, which provided for the verification of existing lawful water use, which was nothing more than the confirmation of the historical use, and whether it complied with the definition as provided for in s32 of the Act; and,
- Section 25(2) which, although using the word ‘entitlement’ instead of a ‘right’, entrenched the ownership of water in the sense that it allowed the holder of unwanted water use to keep the water use, in the event the authorisation to surrender it was not approved (DWS 2016b).

The Hydrossoft Institute (2018) report also noted that the “juxtaposition of equity and efficiency” in the NWA defeats the agenda of redress for the betterment of the black majority (see also Bourblanc, 2012). The Institute points out that section 27 of the Water Act on considerations for general authorisations does not prioritise equity as it is one among eleven other competing priorities, yet the WAR programme is built on the equity premise. Wilder and Ingram (2018) have also expressed that “marrying contradictory principles flawed the ... water governance paradigm” and pointed at the incompatible relationship between efficiency and equity.

The issue of equity in the South African Water Allocation Reform is not adequately addressed in the policy and legislative documents. The section in the NWRS2 (DWA 2013a:45) is not adequate to answer the question as to why equity would be an option of choice and how equitable access can be identified when achieved (see also Nancarrow & Syme, 2001:442 on water reform and equitable water allocation in Australia). The incompatibility of efficiency and equity together with the clauses identified as overshadowing the NWA fail to address colonial gains but maintains the status quo (Hydrossoft Institute, 2018).

According to the Department of Water and Sanitation (DWA 2005a), the water allocation reform process is intended to address three types of water authorisations, namely:

- General Authorisations – larger volumes of water with some potential for negative impacts on the water resource which may be generally authorised in any catchment or for a specific type of water use anywhere in the country
- Existing Lawful Use – which is a water use that lawfully took place in the period two years before the commencement of the National Water Act

- Licensed Water Use – larger volumes of water or other water use authorised in terms of a licence issued under the National Water Act, and upon approval of an application by a responsible authority (DWAF 2005a:6).

At international level, the OECD (2015) indicates that increasing concerns over water scarcity and the ecosystem are often cited as the reason for allocation reform, together with political and structural concerns. While this was in reference to education, van den Berg (2007) has suggested that in the case of South Africa, the post-apartheid reforms are aimed at ending racist regulations and were succeeding in redirecting resources to previously disadvantaged people. However, in 2018, only 5% of agricultural water use is accessed by black farmers (DWS 2018a). The High-Level Panel (HLP) report (2017:57) blamed the water licensing system for “slowing and inhibiting development”.

The objective of WAR is also to promote an enabling environment for productive and beneficial use of water (DWAF 2007b). As part of this objective, the Department of Water had and continues to have the responsibility to support race and gender reform by creating capacity building initiatives and water use enterprises for communities or individuals (DWAF 2005a; 2007b). As such, applications from HDIs that address race and gender reform were said to be encouraged and the Department would also link applicants with development initiatives that encourage productive water use (DWAF 2007b). The Department, however, stated that the reform programme did not mean that everyone would get water for commercial or productive use, but rather “the benefits of this water use will be more equitably spread. The process will ... take special steps to support commercial use of water by HDIs who are part of recognised Water Management Institutions” (DWAF 2007b:2).

The Department of Water’s 2011-2012 annual report shows how it had supported a total of 4 172 resource poor farmers (Table 3.8) instead of the planned 1 000 (DWA 2012d:29). The report, however, does not specify whether the supported farmers were part of recognised Water Management Institutions.

**Table 3.8: Support to resource poor farmers**

Province	Number of resource poor farmers	Type of support
Eastern Cape	2763	General Authorisation to access water
Free State	412	Operation and Maintenance
Gauteng	10	General Authorisation to access water
KwaZulu-Natal	34	Operation and Maintenance
Limpopo	122	General Authorisation to access water, Bulk infrastructure and Operation and Maintenance
Mpumalanga	88	Bulk infrastructure
Northern Cape	720	General Authorisation to access water, Bulk infrastructure and Operation and Maintenance
Western Cape	23	General Authorisation to access water
Total	4 172	

Source: DWA (2012d:30)

Statistics on South African agricultural communities, however, show that the planned 1 000 was a small target and the total supported still fall short of the total number of 2 116 281 of black African agricultural households, some of whom may require support for their livelihoods to be productive. Table 3.9 shows 2016 statistics of South African agricultural households by population group.

**Table 3.9: Number of agricultural households by population group of household head**

Province	Black African		Coloured		Indian or Asian		White		Other
	2 011	2016	2011	2016	2011	2016	2011	2016	2011
Western Cape	22 580	10 949	34 882	2 5920	523	769	25 549	31 514	1 039
Eastern Cape	574 118	475 665	9 560	6 127	725	462	11 627	12 787	541

Northern Cape	30 076	27 839	17 137	13 683	190	45	7 013	7 231	732
Free State	183 830	143 287	3 409	2 048	303	50	13 504	12 125	239
KwaZulu-Natal	685 245	517 661	3 211	1 967	12 092	6210	15 580	10 387	875
North West	196 276	153 720	2 317	1 648	417	220	14 639	12 192	397
Gauteng	221 155	194 633	5 252	4 092	4 949	4414	46 564	39 455	1 188
Mpumalanga	252 061	213 992	838	507	533	322	9 695	10 461	263
Limpopo	460 483	378 534	469	693	469	224	6 699	7 209	372
South Africa	2 625 829	2 116 281	77 079	56 686	20 204	12716	150 874	14 3361	5 650

*Source: StatsSA (2016a)*

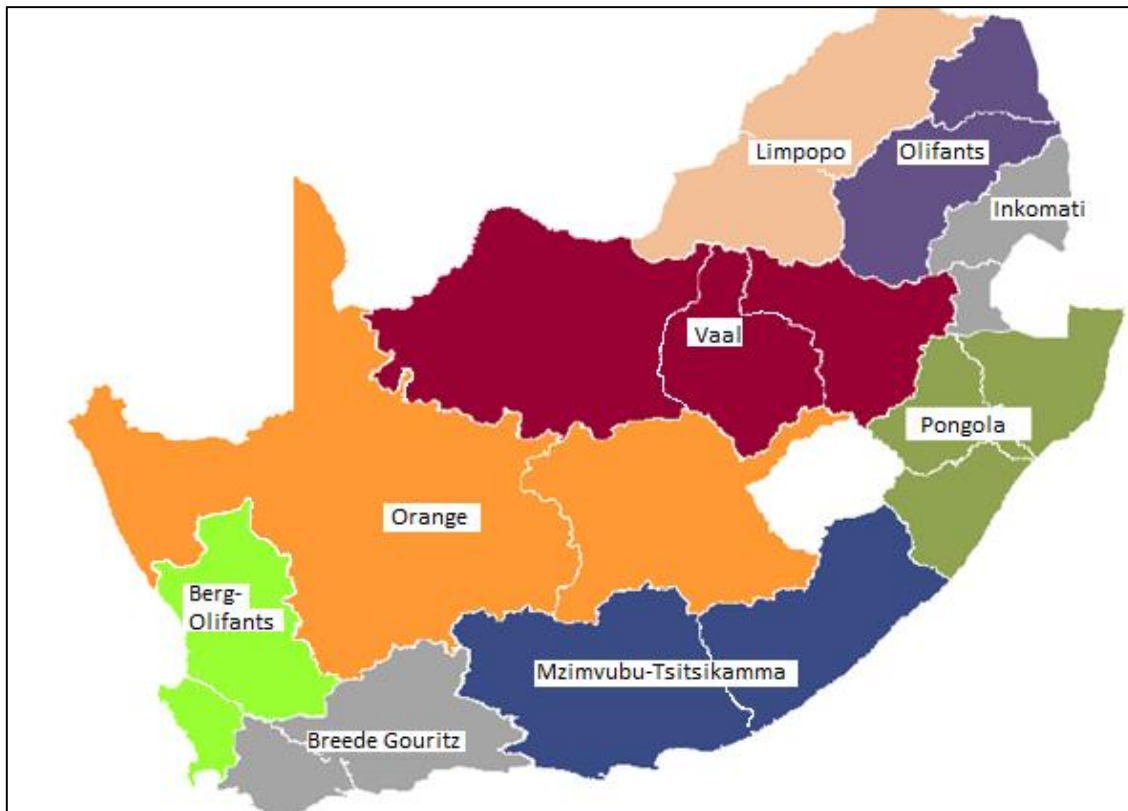
### 3.7.1 Institutions to support Water Allocation Reform

The National Water Act (RSA 1998) bestows upon the Minister of Water Affairs “the ultimate responsibility to fulfil certain obligations relating to the use, allocation and protection of and access to water resources”. As part of the transformation process, the NWA in its preamble states the need for “the integrated management of all aspects of water resources and, where appropriate, the delegation of management functions to a regional or catchment level so as to enable everyone to participate” (RSA 1998). The NWA also makes provisions for the establishment of water management areas through the national resources strategy of 2004, which culminated in the initial division of the country into 19 water management areas (WMAs). The revised National Resources Strategy II re-organised the WMAs into nine WMAs (Figure 3.5) where nine Catchment Management Agencies (CMAs) were also to be created (DWA 2013a) by 2016 (DWS 2017a). DWA (2012e:4) points out that the responsibility of the CMAs is to “manage water resources and coordinate functions of other management institutions within WMAs”. A requirement of the NWA is also a development of a strategy for each WMA (called a Catchment Management Strategy (DWAF 2000:15)) whose purposes are to:

- set principles for allocating water to existing and new water users
- provide the framework for managing water resources within the water management areas



- ensure that water resources in the water management area are protected, used, developed, conserved, managed and controlled (DWAF 2000:16; DWA 2012e:38).



**Figure 3.5: Nine Catchment Management Areas as revised in the NWRs II**

*Source: DWS (2017a)*

It was the view of the NWRs II that larger CMAs would be able to promote equity through effective water resource management, respond better to the needs of poor and marginalised communities and also empower them through involvement in structures such as catchment committees, forums and water user associations (DWA 2013a). The Department of Water and Sanitation added that catchment management of water resources enables stakeholders to hold water managers more directly accountable than when it is managed at a national level (DWS 2017a). Water User Associations (WUAs), whose purpose is to enable community members to pull their resources together in order to successfully manage their water use activities, would

also be formed at local levels (DWAF 2002:3; Kemerink, 2015 68). Existing irrigation boards were to also be transformed into WUAs (RSA 1998).

Seetal (2006), however, reported in 2006 that the establishment of CMAs had been very slow, so much that of the 19 CMAs proposed in the first NWRS, only one CMA had been established while seven were close to being established. The DWS reported that of the nine CMAs proposed in the NWRS II, only two, namely, the Inkomati-Usuthu and Breede Gouritz had been established (DWS 2017a). Noting the lack of transformation (including the slow pace of the WAR programme and lack of support for HDIs to use water productively), declining quality of water, backlogs in issuing water authorisations, ineffective involvement of stakeholders in water management, among other issues, the DWS resolved to revise the institutional arrangements by the establishment of a single CMA with nine WMAs (DWS 2017a). Meissner, Funke and Nortje (2016) have, however, expressed doubt on the need for a continued focus on CMAs saying:

With the considerable water governance challenges facing South Africa, and the DWS struggling to get many of the fundamentals in place (for example, water use licenses), it might be relevant to question whether all of the resources that have been spent and are still being spent on the CMA process have made this process worthwhile. This question is particularly pertinent given the many inherent challenges the country faces (such as the inequalities among stakeholders in a WMA), which play out in efforts to establish CMAs and can render the process very complex (Meissner et al., 2016).

Irrigation boards that had been formed before the current democratic dispensation were supposed to be restructured so that they become more inclusive and representative by having nominations from emerging farmers and farm labourers on management committees of the transformed WUAs (DWAF 2002:5). The NWRSII reported that the process of restructuring had been slow as 129 boards still had not been transformed into WUAs (DWA 2013:60; DWA 2014:20). According to the report by the Inkomati Catchment Management Agency (2008:viii), irrigation boards were supposed to have transformed themselves into WUAs within six months of the coming into effect of the National Water Act. The role of the irrigation boards had been to ensure the management of allocated water for white commercial farmers and also to collect water charges from the farmers (Schreiner, Mohapi & van Koppen, 2004:175). They have also

been a support structure building collective action for large-scale farmers in ways that sway the water policy reform environment (Méndez-Barrientos, Kemerink, Wester & Molle, 2018) in their favour. Studies by Méndez-Barrientos et al. (2018) and Liebrand, Zwarteveen, Wester and van Koppen (2012) give accounts of how commercial farmers took advantage of the transformation of IBs to claim their future water access. The DWA, however, decided in a 2014 National Water Policy Review document that both WUAs and irrigation boards would cease to exist on a date that would be specified by the Minister (DWA 2014:19).

### **3.7.2 The South African Constitution**

The South African Constitution of 1996 is the supreme law of the country and “law or conduct inconsistent with it is invalid, and the obligations imposed by it must be fulfilled”, (RSA 1996:3). According to Bekink (2012:1), the Constitution:

- states the institutions of the country
- allocates powers
- defines relationship between government institutions and the citizens
- defines the relationship between the people.

Bekink (2012:42-43) adds that the concept of justice (and injustice) are linked to the legal system of which constitutions are a part. He, however, notes that justice in South African law is not clearly defined or “directly recognized as one of the core values of the new legal paradigm” (Bekink, 2012:43), which he thinks is unfortunate.

The Constitution of 1996 is said to have had implications for water service provision as it made provisions for the right to water for all (van Koppen, Schreiner & Fakir, 2011:11). It has also been heralded by others as the most progressive constitution in the world (see, for example, Melber, 2014). The view of the Constitution as progressive has, however, been contested by some scholars who criticise it for its failure to enable transformation. Ndlovu-Gatsheni (2013:73), for instance, argued that:

the most defended thing in South Africa is the national constitution mainly by those who benefited from apartheid simply because the celebrated South African constitution officially adopted in 1996 protects the ill-gotten wealth concentrated in the hands of White bourgeoisie and a few

Black elites. The constitution of South Africa does not facilitate and enable radical redistribution of resources such as land and mines.

Albertyn and Goldblatt (1998:248), however, argue that the Constitution provides the “political and legal foundation” for transformation. The authors, however, acknowledge that there are indeed challenges with transforming the state when they explained that they:

understand transformation to require a complete reconstruction of the state and society, including a redistribution of power and resources along egalitarian lines. The challenge of achieving equality within this transformation project involves the eradication of systemic forms of domination and material disadvantage based on race, gender, class and other grounds of inequality (Albertyn & Goldblatt, 1998:249)

Hamilton (2006:136) sees the Constitution’s inability to facilitate land reform, for instance, being a result of being framed in the language of rights. The author argues that framing the Constitution in rights-discourse does not help the processes of redress as “new rights” claimants have to confront “a status quo that uses the same language of rights”. In the context of water reform, existing lawful use as noted by Marcatelli (2017:63) “must be read as a translation of the constitutional safeguard of private property rights”.

### **3.7.3 Water allocation reform phases and pilot projects**

The WAR programme is divided into three phases as discussed by Seetal (2006). The first phase involved identifying a common vision and clarifying the principles for the programme (Seetal, 2006). Processes and interventions were identified in this phase, and approaches, methods and tools for implementation were developed.

The second phase is the implementation. Seetal (2006), however, points out that although this phase is supposed to sequentially follow phase 1, it had to concern itself with the preparatory background work of determining the status of the resources before engagement with stakeholders. The last phase involves the auditing, monitoring and evaluation of the process. Successes and failures, as Seetal (2006:439) points out, would be used to inform future processes.

Pilot projects for the implementation of WAR have been on compulsory licensing. Four catchments earmarked for the pilot process were the Mhlathuze catchment in KwaZulu-Natal, the Nkomati Water Management Area in Mpumalanga, Jan Dissel catchment in the Western Cape and the Tosca catchment in the Northern Cape (DWA 2006b:19). In the Mhlathuze Catchment, the Department pointed out that the water had been over-allocated (DWA 2013a) and users had historically been allocated more water than they could use (Msibi & Dlamini, 2011). The Department thus saw room for addressing the over-allocations through re-allocations.

A number of issues are reported to have made the progress with licensing challenging. Besides the licensing in the pilot cases, licensing is reported to be having little progress nationally. There are reports of challenges including administrative bottlenecks in the licensing process such as ones experienced in validation and verification processes (Msibi & Dlamini, 2011), fear of litigation or need for compensation by existing lawful users (Seetal, 2006), reproduction of historical power relations (Goldin, 2009), Department of Water's institutional impotence in rolling out WAR due to the NWA clauses, and many more. These many challenges have thus created a situation where water allocation, if not institutionally driven, remains at an impasse.

#### **3.7.4 Challenges for the water allocation reform process**

The Department of Water and Sanitation reported that transformation programmes were failing as the control and allocation of water resources had remained unchanged (DWA 2014). Several reasons have been advanced as regards the limitations of the water reform processes. These pertain to, but are not limited to, the legislation(s) on the allocation of water, the transformation of institutions to deal with the allocation and access of water (also discussed in sections 2.1 of this chapter), the framing of discourses on water (e.g. the water scarcity discourse, section 2.9 of this chapter) and the skewed ownership of land. Literature needs to showcase how the reform processes were received especially by the existing users who had become used to a system where “water supply was assured, black demand was in check, international obligations were lax, and environmentalism was low key” (Brown, 2013:274).

The WAR advocates for a participatory process in the allocation and management of water at the catchment level through the formation of user associations. Such decentralisation processes

are, however, viewed as political while local level participation is viewed as fragmented with potential to make the poor worse off (Larson & Ribot, 2004). Larson and Ribot (2004:8) list a number of factors that affect decentralisation and its outcomes, namely:

local capacities; incentive structures; ideologies; political and social histories; forms of local social organisation; degrees of local stratification; unresolved land and forest tenure relations; failure to account for time and insecurities (and often retrenching) produced by change; the strength and manipulations of elite actors; state and government resistance; and government, NGO and development agency commitment to ‘traditional’ or private and third-sector institutions over democratic authorities.

With regard to the water reform process in South Africa, Peters and Woodhouse (2019:7) point out that commercial farmers felt that the NWA’s suggested new institutional arrangement in the management of water threatened their private control over water. Participation and local organisation beyond the state was, however, viewed by Brown (2013:175) as having “the potential power to alter the geography of water”. There were, however, differences between existing water users and the new water users in terms of knowledge and experience. Power dynamics were also skewed in favour of parties that had previous experience of organised stakeholder engagement. It is argued that white farmers used their “knowledge of water management ... to their advantage” (Peters & Woodhouse, 2019:5) and stakeholder meetings were held in English, which disadvantaged black participants (Brown, 2013:275; 278; see also Kemerink, Ahlers & van der Zaag, 2011:586). This meant that the establishment of Water User Associations would not bring the much-needed participatory process in a catchment where commercial farmers, as noted by Brown (2013), had a far greater knowledge and experience than the black farmers. Furthermore, a 2005 survey by Brown (2013) shows that the black community was more interested in improved domestic water supplies as opposed to the new institutions. Decentralisation of water governance through participatory processes in a context where stakeholder needs are different, power dynamics are at play and stakeholder knowledge and experience are not similar presented a hurdle. According to Brown (2013:178) however, apartheid beneficiaries found opportunities in the participatory processes to maintain their “relative advantage”.

The WAR programme entails processes that are complex, technical and administratively tenuous (Figure 3.3 above). The rolling out of the programme, especially where re-allocation of water has to be done, has to follow due process in order to avoid “unnecessary legal action” (DWAF 2007b). Kemerink et al., (2011) see water sector reforms bringing with them new socio-economic relations between water users in ways that can be contested. For instance, previous legislations such as the 1956 Water Act are understood by some as bestowing water ownership rights thus making water a property that is protected under the Constitution's clause 25. Piennar and van der Schyff (2007:190) posit that “these previously established rights should be regarded as property in the new constitutional dispensation”. Existing lawful users continue to enjoy uninterrupted access to water through previously established rights. This has implications for new water allocations, especially given that the property clause states the need for compensation if property is expropriated. Ntsebeza (2007:124) argues that section 25(1) of the Constitution places farmers “in a very strong position in situations where they contest expropriation and the determination of price”.

The current state of land ownership is reported as also presenting limitations to the water reform process. Woodhouse (2012) argues that land and water reform have followed parallel paths, yet these two are interdependent (see also Movik, Mehta, van Koppen & Denby, 2016). Land reform is seen as important for a successful water reform as people need land if any productive activity is to take place (Msibi & Dlamini, 2011). Turton (2005) also expresses the idea that since water gives value to land, the WAR programme should actually be thought of as an indirect land reform programme. The lack of an integrated approach between the two reform processes is blamed for the slow implementation process of water reform (Viljoen, 2006). Other scholars have blamed the slow implementation on the approach taken by the government of purposefully targeting beneficiaries of their choice for the reform process. James (2010) points out how the government attempted to foster a “land-owning, middle-class Black farming constituency”, and in much the same way, the WAR strategy prioritises allocation to BBBEEs rather than the rural poor. With regards to land, James (2010:224) further notes that, “from the early 1990s it had become clear that it was not a homogeneous or uniformly deprived Black population to which land rights would be restored or newly given, but rather one which was deeply divided along lines of class”. The 2017 land audit report by the Department of Rural

Development and Land Reform has since revealed that 72% of farms and agricultural holdings were owned by white individual landowners (DRDLR 2017a:7).

### **3.7.5 Irrigated agriculture and up-take of water allocations**

Irrigated agriculture in the country uses 61% of the water resources (RSA 2019:52). Of the 61%, 5% is used by black farmers (RSA 2019:52). A study on farming in the Greater Tzaneen Municipality revealed that a large number of farmers (62%) were smallholder farmers while 31% were commercial and 8% subsistent farmers (Urban-Econ, 2017:6).

As part of the reform process, it is indicated that water is already being allocated to black farmers. A study by Hollingworth and Matsetela (2012) reveals that the then Department of Water and Forestry (DWAF, now DWS) had allocated “significant quantities of water” for black farmers but these had not been taken up. The reasons why the water had not been taken up included factors such as:

- “Inter-departmental coordination between state role-players is weak so that support programmes are haphazard and difficult for the farmer to access;
- Government is criticized for making sound policies but not effectively implementing at farmer level, a case in point being agricultural and irrigation extension services; and
- Financial support is inadequate in the high-cost irrigation sub-sector” (Hollingworth & Matsetela, 2012: iii).

In the Urban-Econ farmer survey, irrigation appeared in both inputs and asset needs of the farmers that were interviewed (Urban-Econ, 2017:9). Although the study does not indicate needs by race, another study by Brown (2013) indicates where most of the infrastructure for irrigation is. Brown (2013:274) points out that “physical structures of dams, roads, plantations, and industrial sites are located in what was white South Africa, where they became engrained and entrenched”. The Greater Tzaneen Municipality being in the former homelands means that most of the farming requirements discussed by Urban-Econ (2017) may be for black farmers.



### 3.8 Institutions and their role in the water sector

When dealing with the issue of institutions, Soukup (2016) suggests that scientists (researchers) make it clear what they understand by institutions, seeing as there is no consensus on what an institution is. Literature on institutions has not explicitly defined what they are but has implied that there are different forms in which they appear; as political, economic or social. Economic institutions for instance have been described by Pereira and Teles (2009:2) as organisations with “decisive influence on investments in physical and human capital, in technology [...] the organization of production” and “the allocation of resources”. Political institutions on the other hand are viewed not as political organisations but as “sets of 'rules', which guide or constrain the behaviour of individual actors” (Heywood, 2013:15). Pereira and Teles (2009) argue that the allocation of political power shapes economic institutions. Social institutions cover a much broader spectrum as they include “kinship systems, community organizations, religions, norms, languages and networks” (Woolcock, 2017:6). They are believed to be central to people’s lives as they shape their identities, values, aspirations, preferences and their view of the world (Woolcock, 2017; cf. Kelechi & Nwankwo, 2015). The list of institutions discussed below is not exhaustive but constitutes some of the main institutions involved in the water sector in the country. Their roles and impacts depend on the institution’s mandate and/or the policies they put in place. Government institutions with constitutional mandates to deal with land and water reform have a direct impact on WAR. Institutional capacity to deal with WAR is dependent on human resources, financial resources, enabling legislation and a deliberate political will to redress the inherited skewed resource allocation. Literature shows the institutions discussed below falling under the descriptions of economic and political institutions.

#### *i. Department of Water and Sanitation*

The Department of Water and Sanitation (DWS) is mandated, together with the Minister, the role of safeguarding water resources. The Department is responsible for the access by all South Africans “to equitable water resources and sustainable water and sanitation services” (DWS 2017c). The NWA assigns the national government, represented by the DWS, as the public trustee of water resources. The Department, through the Minister, has the “power to regulate

the allocation, use, flow and control of all water” in the country through “policy development, strategic planning, regulatory oversight and support” (DWA 2013:62).

The National Water Act guides the DWS to facilitate proper water management through the formulation of strategies such as the National Water Resource Strategy (NWRS) and the Catchment Management Strategies. The NWRS “provides the framework for the protection, use, development, conservation, management and control of water resources for the country” (RSA 1998). According to Bird et al. (2008), the NWRS also gives priority to poverty reduction initiatives, a legislative undertaking that is different to those of other southern African countries. The Catchment Management Strategies, on the other hand, are developed in harmony with the prescripts of the NWRS and set principles for the allocation of water to existing and potential users (RSA 1998).

One of the strategies adopted after 1994, according to the DWS (2019: v), was the move away from water resource development that dealt with expansion of supply to water resource management. Although the DWS speaks highly of this move, seeing it as “a more balanced approach, with equal emphasis on measures for 'soft' WRM” DWS (2019), the move does not seem to recognise the limitations the government has in the control of the resources they wished to manage as most of the water infrastructure is privately controlled as confirmed by DWS (2018a:13). The move may also be contrary to the prescripts of the National Water Act’s section 3(1), which points to the need for both development and management of water, among other functions of the National Government (RSA 1998).

ii. *Water Research Commission*

The WRC was established in 1971 following the Water Research Act No. 34 of 1971 (RSA 1971). It was to generate new knowledge and promote water research by providing funding and playing an advisory role on water related projects and programmes. The DWS (2018b:100) explains the WRC's mandate as that of “promoting co-ordination, co-operation and communication in the area of water research and development; establishing water research needs and priorities; stimulating and funding water research according to priority; promoting effective transfer of information and technology; enhancing knowledge and capacity-building within the water sector”. The Water Research Act is in the process of being reviewed in order

to enhance the mandate and governance of the WRC as well as aligning the Act with other “applicable legislation informing service delivery orientation of the water and sanitation sector” (DWS 2018b:30).

*iii. Department of Agriculture*

The Department is responsible for acts that relate to agriculture, forestry and fisheries (DAFF 2016). The Department facilitates infrastructure development and builds capacity in the sustainable use of natural resources through “the efficient development and revitalisation of irrigation schemes and water use” (DAFF 2016:68). One of its programmes, forestry, affects the amount of water available for allocation as forests are known for stream-flow reduction that results in low amounts of water reaching water impoundments and rivers. The NWA Section 26(m) on water use regulations prescribes methods for making a “volumetric determination of water to be ascribed to a stream flow reduction activity for purposes of water use allocation and the imposition of charges” (RSA 1998). Forestry thus has to be controlled since it is considered a stream flow reduction activity (Section 36 of Act 36 of 1998, RSA 1998). DAFF as the ministry responsible for forestry is thus mandated to control forestry and its impacts on stream flow.

*iv. Department of Rural Development and Land Reform (DRDLR)*

The mandate of the Department of Rural Development and Land Reform, which is derived from the Constitution's section 24, 25 and 27, is the creation of vibrant, equitable and sustainable rural communities (Department of Rural Development and Land Reform, 2017b). As part of their goal to ensure rural communities benefit from the democratic dispensation, the Department has formulated land reform policies as well as programmes, plans and policies. Formed in 2009 for the pursuance of social and economic development of rural South Africa, the Department now has several branches that deal with land redistribution, land tenure, rural infrastructure and other land-based issues. Within the Department is a Commission on Restitution of Land Rights whose mandate is to assist the government by dealing with restitution cases. One of the DRDLR’s focus in its Agrarian Transformation system is the attainment of land-based resources. In a speech at the International Women’s Day dinner, the Minister of Lands stressed the importance of land reform, stating that it was key “to unlocking

the economic potential of our people including transformation of the rural economy to benefit communities previously denied access to land by past laws, policies and practices” (Nkoana-Mashabane, 2018). The Umhlaba Wethu (2009) has considered the lack of integration between the land reform and water reform problematic seeing it as undermining both programmes and resulting “in 'dry' and unsustainable land reform projects”.

*iv. Department of Cooperative Governance and Traditional Affairs (CoGTA)*

CoGTA is concerned with the maintenance of municipal infrastructure through its Municipal Infrastructure Support Agent (MISA) component. Through MISA, technical support is provided to the built environment. Its role in municipalities also sees it having relevance to issues of water and its scarcity (CoGTA 2018). One of CoGTA's key mandates is development and monitoring of national policy and legislation for the transformation and strengthening of key institutions and mechanisms of governance so that they can fulfil their developmental role. As part of its legislative mandate, CoGTA has developed a number of policies and legislation for local government and is also involved in the implementation and monitoring of Municipal Acts (CoGTA 2017:13).

*v. Department of Environmental Affairs (DEA)*

The DEA's mandate is “to give effect to the right of citizens to an environment that is not harmful to their health or wellbeing” by providing leadership in environmental management, conservation and protection (DEA 2016). Land and development issues, including water access and allocation cannot be separated from the drive towards sustainable development (DLA 2000). The DEA has agencies such as the South African National Biodiversity Institute (SANBI) that they work with to further their mandate on sustainable environments.

*vi. Non-Governmental Organisations*

NGOs are often the voice of the voiceless in issues of resource allocation and distribution. The Association for Water and Rural Development (AWARD) came into being as the country transitioned into democracy. AWARD is both a research and hands-on NGO dealing with rural development including equitable water resource management. In Mpumalanga and the Limpopo Provinces, AWARD works on research on “how to meet basic human needs in

practice” (Movik, 2012:38). It generates knowledge and also promotes research on water and rural development. AWARD's approach to research is participatory, multi-disciplinary and their research-based implementation aims to address sustainability, inequity and poverty issues, and it also supports sustainable water-based livelihoods (AWARD, 2015). Their work provides a solid base for development policy and practice in southern Africa (DWS (2019).

*viii. South African Local Government Association (SALGA)*

SALGA is an autonomous association that represents, promotes and protects the interests of local government (SALGA, 2018). It is an “association of municipalities in South Africa recognised in terms of section 163 of the Constitution of the Republic of South Africa” (SALGA, 2016). SALGA represents the interests of local government on different platforms including legislature, policy making and oversight structure (SALGA, 2016). The National Water and Sanitation Master Plan also assign SALGA the responsibilities of:

- developing and implementing a long-term plan for providing reliable and sustainable water supply and sanitation
- managing municipal water use
- developing and implementing municipal by-laws for the protection of raw water quality (DWS 2018a).

Some of SALGA’s main goals are to ensure:

- a) accessible, equitable and sustainable municipal services are delivered by local government
- b) safe and healthy environment and communities especially for the communities previously disadvantaged by being subjected to poor housing, health conditions and social and economic development
- c) integrated planning and economic development at local level that responds to a history of municipal planning characterised by inefficiency, inequality and segregation
- d) local governance response to policies and legislations put in place works best for the local communities
- e) human capital development in local government

f) municipalities are financially and organisationally capacitated in order to be able to fulfil their mandates

*ix. Trans-Caledon Tunnel Authority*

The Trans-Caledon Tunnel Authority (TCTA) is an entity whose directives are issued by the Minister of Water. Their task is to “facilitate water security through planning, financing and implementation of bulk raw water infrastructure, in the most cost-effective manner that benefits water consumers”. TCTA also provides treasury management and financial advisory role to the Department, Water Boards, municipalities and other organisations linked to bulk raw water infrastructure (DWS 2018b). It is responsible for funding of projects such as the Lesotho Highlands Water Project (TCTA 2016). It is also expected to leverage “transformation and Black economic empowerment through its business activities, core and peripheral” (Hlahla, in TCTA 2016).

*x. Department for International Development*

The Department of International Development (DFID) has been very involved in development projects in southern Africa. It is a department of the government of the United Kingdom responsible for administering aid overseas. It is guided by the UK government's drive to eradicate poverty and has provided funding for projects and programmes in the developing world including South Africa (until 2015). The DFID has also expressed its thoughts on land policy saying that policy that ensures security of tenure guarantees that poor people have some form of capital asset (DFID 2003; Toulmin & Quan, 2000). It also argues that equitable distribution of land gives higher incomes to the poor (DFID 2003).

The DFID has funded the following water related programmes and projects in South Africa:

- South Africa's new water legislation (Movik, 2012: 31)
- A project that was commissioned by the then DWAF in 2006 to develop an approach for estimating water allocations to black users and to also test the approach in four water WMAs (Anderson et al., 2008:732)
- The Catchment Management Agency model (DWS 2017a:8).

The integration of these institutions/departments is viewed as instrumental in successful reform of not only the water allocation but also for land and agrarian reforms (cf. RSA 2017). Funke and Jacobs (2011:100-101) have also argued for the need to acknowledge the multiplicity of actors in water allocation and land reform and henceforth the need for integration between the two processes. With many of the institutions such as ones discussed above operating in silos, Funke and Jacobs (2011) encourage cooperative engagement to avoid dealing with failed programmes as a result of non-integration.

### **3.8.1 Institutional transformation and implications for Water Allocation Reform**

Institutions in postcolonial/post-apartheid nations have a role which can either enable or hinder transformation. Land reform in South Africa has seen land transfers taking place with water rights remaining in the hands of the seller, which has been viewed as due to “untransformed and ineffective water sector institutions” (RSA 2019:52). Slater et al. (2014:354) state that administrative institutions in postcolonial states often lack capacity and may not necessarily pursue redistributive policies effectively. The authors, however, lay the failure in administrative capacity at the door of postcolonial states without consideration of residual power within the former colonisers. In many cases, so called postcolonial states remain under the control of former colonisers in what is termed coloniality (“long standing patterns of power that emerged as a result of colonialism, but rather define culture, labour, intersubjective relations [...] well beyond the strict limits of colonial administrations” Maldonado-Torres, 2007:243). As such, institutions in postcolonial states, as pointed out by De Muro and Tridico (2008), have to break away from previous institutions, routines, norms and established values and interests while guaranteeing the distribution of growth and social benefits.

Mtisi and Nicol (2015) have expressed the thought that legislative changes in the country’s water sector have been influenced by the global water politics including the Dublin Principles, which define water as an economic good as well as the Integrated Water Resource Management principles, which were viewed as ‘developmental’. IWRM has been defined by the Global Water Partnership (GWP 2000, in Mehta, Alba, Bolding, Denby, Derman, Hove et al., 2014) as “a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable

manner without compromising the sustainability of vital ecosystems”. One of the central ideas of IWRM was the effective allocation of water for poverty alleviation and livelihood improvement (GWP 2000; WWAP 2003; Soussaan, 2006, in Mtisi & Nicol, 2015:84) with an emphasis on environmental sustainability, economic efficiency and social equity (Swatuk, 2015:64). Although IWRM is seen by some scholars as creating an opportunity for repairing fragmented water management, it is argued that opportunities for reinforcing the disintegrated and divisive nature of water resource access, use and management in countries of the global South are also created (Mehta et al., 2014; Swatuk, 2015:61). Zwarteveen and Boelens (2014:145) have also suggested that IWRM is used to conceal processes of water dispossession and accumulation.

The decentralisation of water management as conceptualised by the IWRM led to the creation of Catchment Management Agencies (discussed above) where water was to be managed at a local level and water users would participate in decision making. Existing irrigation boards that had been formed in the apartheid era were supposed to transform into water user associations in which stakeholders in the catchment would all participate. The DWS (2018:25), however, noted that such transformation had not taken place, alluding to the point that water management is still divided on racial lines. Swatuk (2015:64-65) has suggested that “water is power, and to revise and rearticulate water institutions is to challenge existing forms and bases of power”. The implications of such power and privilege may be the failure by the HDIs to participate effectively (see for example Water Governance Facility, 2012), if at all, on issues regarding water allocation, particularly in compulsory licences where ELUs are involved (Anderson, Quibell, Cullis & Ncapayi, 2007:170).

The Constitution of democratic South Africa also has implications for the rolling out of the Water Allocation Reform programme. Firstly, the idea suggested by a democracy as put forward by Slater, Smith and Nair (2014:353) is that the poor majority now have power to redistribute wealth from a rich minority to themselves. Secondly, it is assumed that the Constitution for democratic states/countries is written from a veil of ignorance and the interests of the majority come first. Aghion, Alesina and Trebbi (2004:578) have argued that constitutions “are not written by social planners, and veils of ignorance have large holes in them”. They argued further that not everyone benefits the same from reforms and although the



constitution-writing process is supposed to be just, constitutional writers are influenced by vested interests (cf. Sandel, 2009:143). In the case of South Africa, Bond (2014) asserts that the World Bank was influential in the institutionalisation of policy on land reform. He further points out that the World Bank negotiated for property rights to be instituted as law in the Constitution on commercial farmers' behalf (Bond, 2014). Hydrosort Institute (2018) discussed the influential role played by such institutions as the World Bank as works of agents of coloniality. They argued that the protection of private property meant that “land and water as private property would remain untouched and protected by laws” (Bond, 2014:18). Modiri (2015:225) also rejects legal and political discourses that assume that the “new constitutional dispensation” is a “fundamental *rupture* and radical break with the past” whereas “patterns of racial subordination and socio-economic inequalities of over 350 years of White domination” continue.

Movik (2012) has also suggested that the neoliberal approach taken by the ANC in reforms has long term implications. Bond (2014b:1) has written about the “imposition of neoliberalism as a condition for the transition from apartheid to formal democracy”. One case in point is the African National Congress’s (ANC) preference for ‘industrialisation by invitation’ as opposed to redistribution and resource mobilisation (Carmody, 2002, in Movik, 2012:24). This approach informed the Existing Lawful User approach in Water Allocation Reform. Another case that has been linked to the neoliberal approach is the protection of property through clause 25 of the Constitution (RSA 1996). Scholars have argued that the clause, combined with the ANC government’s concern for economic growth, has stifled land redistribution (Kock, Massyn & van Niekerk, 2002) and land rights cannot be separated or isolated from water rights (von Benda-Beckmann & von Benda-Beckmann, 2006:112). Market-based reform has, however, not meant the end of a need for distributive reform; the two remain class struggles (Moyo & Yeros, 2005:20).

### **3.9 Water scarcity discourses**

Water reform policies that emphasise sustainability together with equity and efficiency call for a need to assess the availability of the resource for distribution. If water is to be redistributed,

are there adequate reserves for such distribution and how do sustainability, equity and efficiency which already seem contradictory, interplay to make reform possible? This section addresses these concerns by reviewing literature on resource scarcity in general and water scarcity in particular.

### **3.9.1 Understanding resource scarcity**

Concerns about resources being identified as scarce have been raised by some scholars. Pepper (1984:169) discussed the scarcity concern using the Marxist approach where it is suggested that scarcity should not be viewed as a universal concept but rather should be considered in its economic and social context. Social constructions of scarcity have been described as meaning that the “specification of what levels of environmental resources are considered adequate is dependent upon a specific form of social organisation and the patterns of consumption and expectations associated with it” (Ratner, 2004:60). Pepper (1984) points out that in a capitalist society “the idea of a need (and hence resource availability to fill it) is highly contingent on social relations of production”. Redclift (1993) also adds a Marxist view that suggests that the idea of nature having limits is used for ideological reasons, to justify that nothing can be done about poverty (see Molle (2008) on narratives in the field of development and their ideological underpinnings). Redclift (1993) suggests that it is from an ideological standpoint that developed countries also have an interest in drawing attention to resource scarcities as they fear endangering their own economic development. Africa is said to be the second driest continent on earth after Australia (Naik, 2016:2), yet it is also said to offer easy market access for investors and has abundant natural resources, which makes it an economically viable continent for several developed countries. Peters and Woodhouse (2019:2) have argued that social practices and institutions select and reinforce certain discourses at the expense of others. There is likelihood that the idea of water scarcity can thus be used to encourage assessment of resource users in order to identify efficient users rather than simply beneficial use, economic growth rather than poverty eradication. Movik (2012:52) has also suggested that the idea of water scarcity in South Africa was manufactured by gatekeepers who sought to delay the water reallocation process. She argues further that “[T]he narrow framing of the problem in the water allocation reform externalizes past practices and presents scarcity as a natural phenomenon” (Movik, 2012:140).

### 3.9.2 Water scarcity in South Africa

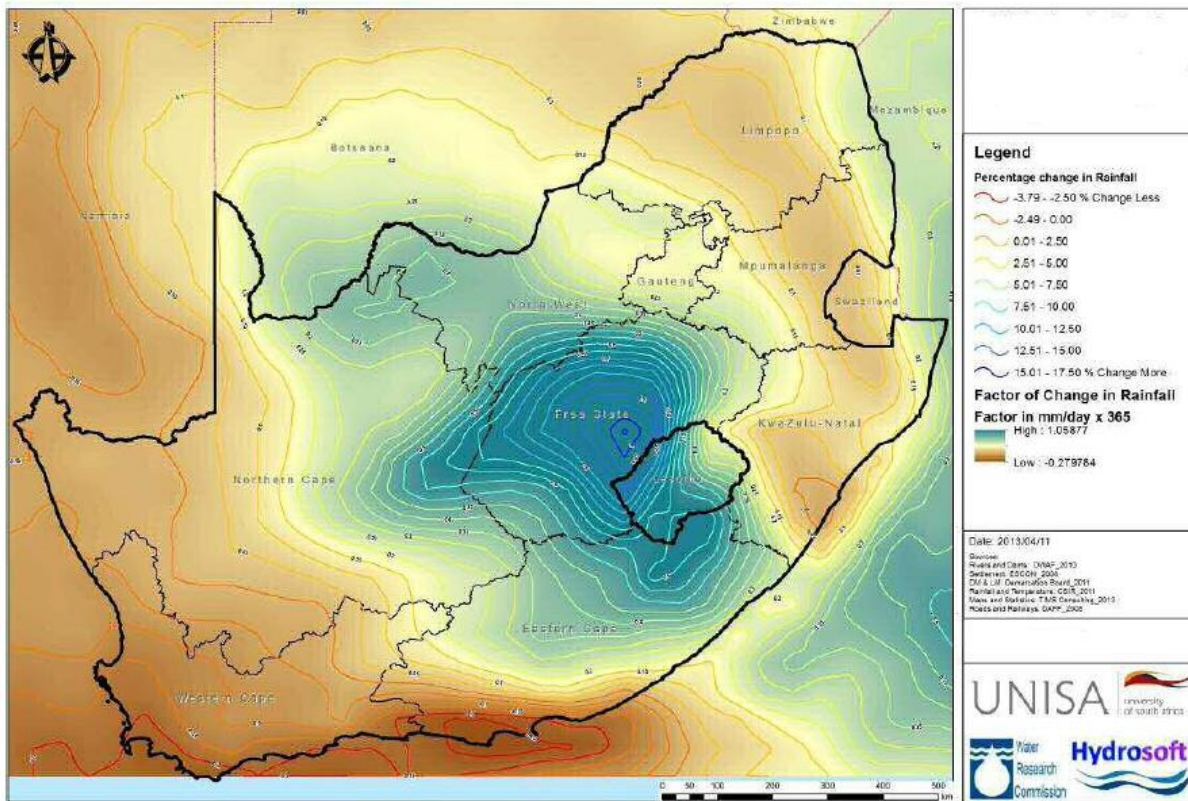
Much literature on South Africa stresses that the country is a water stressed country including the National Water Act in its preamble, but the question is to what extent. To start with, the country's hydrology, state of water quality and the anticipated impacts of climate change affect resource availability especially in the context of redistribution. It has been pointed out that the climatic conditions of South Africa have not "changed at least within the last ten thousand years" (DWA 1986:1.13; Tewari, 2002) and the country is ranked 148th out of 180 countries in terms of water availability per capita, (World Water Development Report 2012 in RSA 2012:177). In terms of water access for productive use, the then Minister of Water Affairs pointed out in 2013 that 98% of the water was considered fully allocated (Molewa, 2013). Swatuk (2017:43-53), however, discusses water scarcity in a way that shows that reference to all water resources being allocated (98%) could be in reference to just surface water and not ground water, and across sub-Saharan Africa rainfall is used for food production. Water scarcity is thus largely discussed based on freshwater availability, which Falkenmark and Rockstrom (2004) call "water blindness". Furthermore, statistics that show water being almost fully allocated without saying to who and for whose benefit feed into the narrative that no further allocations should take place as there is risk of chronic water scarcity when in fact water resource management should be brought to question. Swatuk (2017:47) warned that some claims regarding water scarcity are not only filled with inaccuracies but also open up policy avenues that are not commensurate with the real problem.

Bad quality water contributes to scarcity as it reduces the amounts of resources available for allocation or reallocation. However, the DWAF (2005a) only raised concern over water quality in relation to new water allocations. Scholars such as Movik (2009) have rejected this assumption and have argued that those concerns disregard the potential environmental threats posed by the existing users. A study on impacts of human settlements and land uses on aquatic ecosystems showed that some of the rivers in the country are already degraded beyond repair and once polluted they cannot be returned to a pristine state (Dube, Maphosa, Malan, Fayemiwo et al., 2017). Dube et al. (2017:3) have also added that such degradation results in loss of water resources as in many cases it loses its usefulness.

Climate change projections have also given reason for concern over the possible and potential climate change impacts on water. Schulze (2012:282) warned that climate change will affect supply and demand for water in many sectors. He added that “the slow registration of water users and compulsory licensing to reallocate water between users, with focus on the most stressed catchments” among other constraints, will add also to the challenges of climate change (Schulze, 2012:130). The National Development Plan (NDP) also suggested that as climate change effects become apparent, competition for water and land will increase, leading to increased water scarcity and pollution of water (RSA 2012:89). While the NDP also warns of increased scarcity due to climate change in sub-Saharan Africa (RSA 2012), Schulze (2012) gives country specific warnings, saying that the effects of climate change might “exacerbate the situation in certain regions while giving a measure of reprieve in other regions” of South Africa. Such regional or location specific projections or reports are useful in determining real or imagined concerns as far as climate change impacts on water are concerned. The UN-Water’s (2020:24) Global Drought Severity Index of 2017, for example, shows the whole of South Africa as having experienced climate change induced periods of extreme drought between 2015 and 2017. Data from the South African Weather Services (SAWS), however, indicates that only the KwaZulu-Natal region was affected (Monyela, 2017:5). It has also been noted that projections on rainfall are based on the type of rainfall a region receives, with increased precipitation for areas that receive orographic rainfall and decreased precipitation for those that receive convective rainfall (Dube, Maphosa & Scott-Goldman, 2014:111). Figure 3.6 shows the parts of the country that are projected to have increased precipitation with the south and the south-west coastal areas being exceptions.

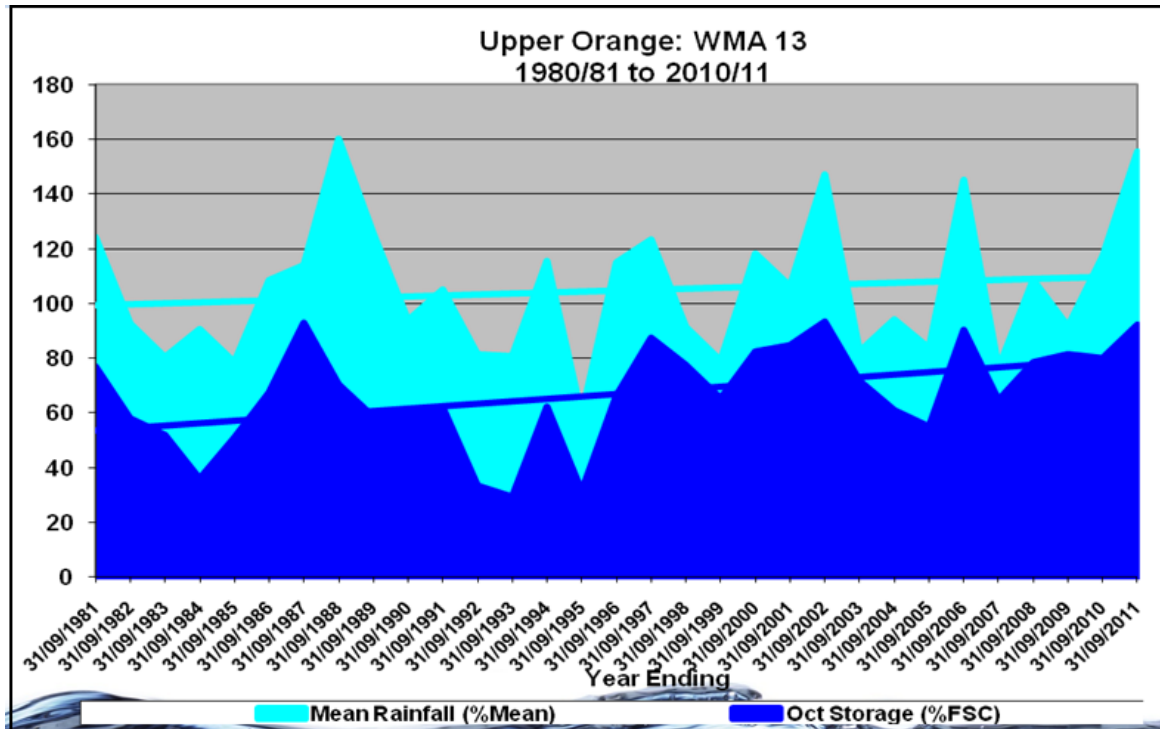
Although the outlook for South African water security has been painted bleak with stories of looming water scarcity pegged at year 2025 (DWA 1999; DWA 2001; UN 2005), some scholars have also painted a picture of hope through engineering solutions. Improved dam operations have been shown to increase dam performance, which is measured by the ratio of mean dam storage volume divided by rainfall improving with time (Mwaka, 2018). A significant improvement in dam storage was observed in the Upper Orange catchment in Water Management Area 6 as shown in Figure 3.7. A study by Ndiritu, Odiyo, Makungo, Mwaka, et al., (2017) on the Hluhluwe Dam has also demonstrated that dam performance can be improved

with improved dam operation rules. With South Africa being the African country with the highest number of dams, water storage can be maximised to address scarcity concerns.



**Figure 3.6: Percentage change in rainfall between 1961-1990 and 2070-2100 over South Africa**

*Source: Dube et al. (2014)*



**Figure 3.7: Mean water storage improved from 55% to 80% between 1981 and 2012: (level improved from 35m to 48m)**

*Source: Mwaka (2018)*

### 3.10 Gender and water allocation

#### 3.10.1 How the NWA and WAR have articulated the gender focus

The NWA (RSA 1998) declares one of its purpose to be the redress of past gender discrimination while the Constitution (RSA 1996) also promotes the equal treatment of all in its Bill of Rights. These declarations make provisions for the participation and beneficial role of women in water allocation procedures and outcomes. To support the gender focus of the Water Allocation Reform, Seetal (2006) argues that:

Current water use patterns in South Africa show not only a racial bias, but also a gender bias. Even though in many rural households women are the primary decision makers and have the responsibility for raising crops to feed the family, land ownership is often in the hands of the male members of the household. Gender inequality may therefore be further entrenched by linking

water use to property rights over land. The water reform process must recognise and correct these gender inequities in water use.

Msibi and Dlamini (2011:81) have also pointed out how skewed land and water resources favour men in spite of the fact that women also contribute much towards the economic growth of the country. Schreiner, van Koppen and Khumbane (2002:132), however, argue that the National Water Act “is unique in providing the scope to vest water rights and membership in the actual water user, irrespective of his or her type of land rights”. Conditions for accessing land, however, remain difficult for poor rural women (Rakolojane, 2013) and this is a result of multiple reasons not just patriarchy, as over-emphasised in the development discourse (Chigbu, Paradza & Dachaga, 2019). While providing a scope where water rights can be granted irrespective of type of land rights seems progressive of the Act, literature does not question how this presents land tenure reform as unnecessary for economic production as beneficiaries of water rights without land rights become trapped in subsistence farming.

Anderson et al. (2007) sees gender reform finding an opportunity to be realised through general authorisations by way of “ring fencing water” for that specific purpose. Although a priority as articulated by the NWA, gender reform also has to be weighed against existing users and any potential impacts on the resource (Anderson et al., 2007:171, 173). The WAR strategy, however, does plan to have half of the 60% water allocable to blacks allocated to women by year 2024 (DWA 2008:4).

### **3.10.2 The Department of Land Affairs’ gender policy**

The principles underlying land reform according to the Green Paper on land reform (DLDLR 2011) include the democratic and equitable allocation and use of land across race, gender and class. The Green Paper called for corrective measures to the discriminatory past through efforts that were described as collective (DLDLR 2011:3) (as opposed to racial, gendered or classist). The National Gender Policy Framework recognises women’s constraints in participating in development (RSA 2000). It lists, among other constraints, challenges to the implementation of the land reform programme as being due to cultural practices such as patriarchy (RSA 2000). At the Beijing World Conference on Women, Minister Dlamini-Zuma also added to the patriarchal narrative saying that women in South Africa “are marginalised economically with

no right to own land. Under customary law they marry and live their lives as effective minors subject to the authority of a male relative” (RSA 2000:9). Waetjen (2004:41), however, argued that the treatment of women as minors was not a result of patriarchal norms but prescripts of the 1850s Native Affairs administrator, Shepstone, who “codified customary law and officially designated women as legal minors, greatly inhibiting their ability to inherit property”. The National Gender Policy Framework does acknowledge the role of the discriminative laws and policies of the past in its discussion on women and poverty as well as women and housing, yet patriarchy remains listed as one of the main challenges faced in South Africa.

### **3.10.3 Gender, water and feminist discourses**

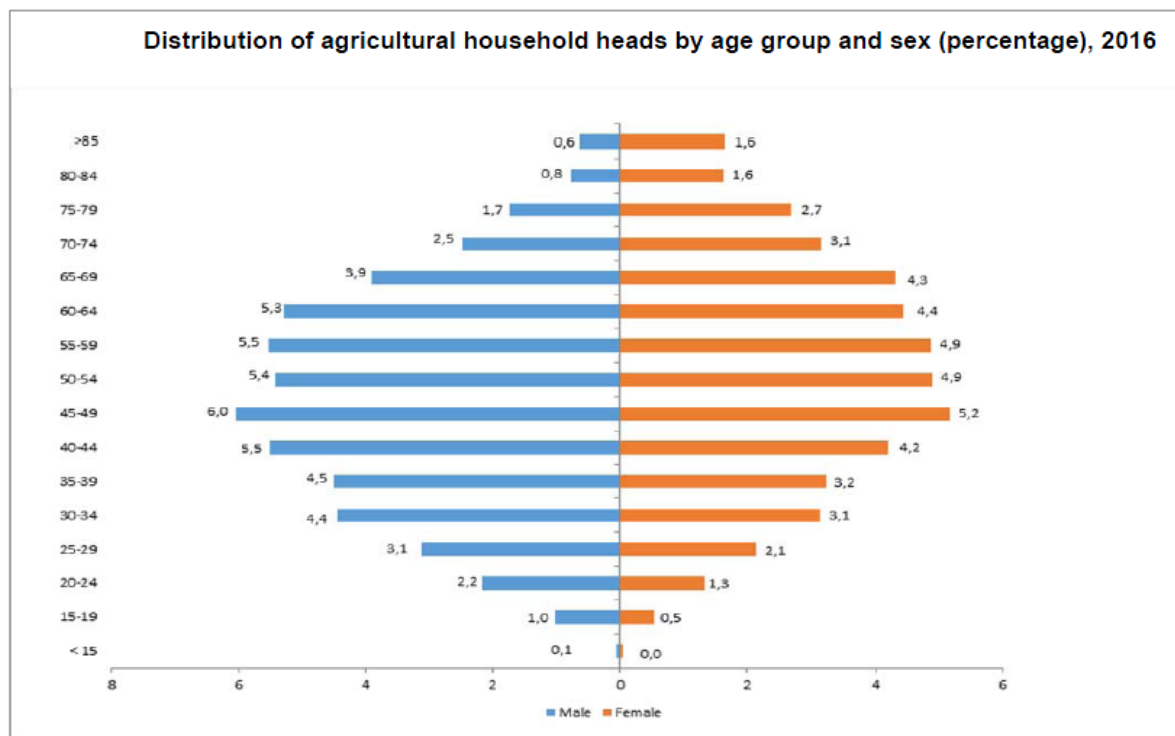
Concerns about women in general and gender in particular came about as a result of feminist movements that sought to make women’s issues a part of mainstream development issues. Lahiri-Dutt (2006: xx) has argued that water development discourses have actually been gender blind until the invisible women was recognised by development planners who also realised the need for equity. A comparison of men and women’s positions in life was summed up as being marked by “severe and marked inequalities” (Kotze & Cornwell, 2011:vi). These inequalities are viewed by feminists as a result of “women’s lack of property and independent entitlements” (Zwarteveen & Boelens, 2006). Women’s control over resources is thus viewed as addressing inequality (Zwarteveen & Boelens, 2006:4; Kotze & Cornwell, 2011:15).

Feminist views on women’s ownership of property and independent entitlements are, however, contested by some scholars who hold completely different views that they support with empirical evidence. Some studies, such as one in the Andes, has shown that water rights, for example, are considered to be family rights where “control over water is invested in household and community collectives rather than individuals” (Zwarteveen & Boelens, 2006:5). Zwarteveen and Boelens (2006:1) argue further that individual rights prescribed by feminists tend to neglect interdependencies and complementarities between men and women (cf. Scott, 1986, Cleaver, 1999). Zwarteveen and Boelens (2006) further argue that rights alone would be inadequate without the technical capacity to take the water from the source to the farming site. They concluded that gender alone should not be a basis for allocation as water needs may not be clearly identifiable on that basis (Zwarteveen & Boelens, 2006:12).



Von Benda-Beckmann and von Benda-Beckmann (2006:110, in Lahiri-Dutt, 2006) argue that gender is not the only social differential as in other societies such as in Nepal, caste and class also matter. Zwarteveen and Boelens (2006:13) also note that “all women, even in one community, do not necessarily share the same needs and interests regarding water, nor are women’s needs and interests always opposed to or different from those of men”. Literature on South African water allocation for productive use does not show water needs by gender or class of women. Schreiner et al. (2002:132) have, however, noted the predominant role played by women in farming as a result of apartheid South Africa's employment policies where men had to do off-farm jobs while farm work was done by women. They further added that from a study of farming households in the Northern Province, it had been found that decisions were largely made by women while a few were jointly made with husbands (Schreiner et al., 2002). Statistics for agricultural households, however, indicate that there are more male agricultural heads in South Africa compared to female agricultural heads, as shown in Figure 3.8.

Literature shows that women’s resource ownership, especially land ownership, is important to their status and wellbeing (Roquas, 1995, in Deere & Leon, 1998:376; Agarwal, 1994). Agarwal (1994:1455) has also suggested that women's lack of property ownership and control is the key reason for their poor economic wellbeing and social status. Agarwal’s idea is, however, refuted by Jackson’s (2003:456) argument that land ownership rights have more value for households and for men as individuals but not necessarily for women “since they experience poverty in very distinctive ways and are differently placed as subjects in relation to property and livelihoods”. Jackson (2003) suggests that women have other needs that are more important to them, such as labour and cash. An assessment of an agricultural project run by an all-women group in Gauteng also showed that the failure of production was more because the women running the project had no access to labour and cash rather than title deeds for the land on which the project was being carried out (Maphosa, 2016).



**Figure 3.8: Distribution of agricultural households by age group and sex (percentage)**

*Source: StatsSA (2016a:3)*

The idea of household rights as opposed to individual rights has been a subject of analysis by scholars such as Agarwal (1994) and Zwarteveen (2010). Agarwal (1994:1456) and Zwarteveen (2010:189) argue against the assumption that a household has common interests and preferences and that the resources will always be equitably distributed. Agarwal (1994) further argues that evidence of intrahousehold gender inequalities in South Asia are among the reasons why she thinks women need individual ownership of land. This is in line with Cousins' (2009) idea of South African black women's insecure land rights as their access is secondary to that of men in their families, e.g. husbands. Other scholars have not seen the strength of such arguments, arguing that within some households many men do not have individual ownership to land and water just like women (von Benda-Beckmann & von Benda-Beckmann, 2006:130). In South Africa, "hardly any Black men, let alone Black women, used any significant quantities of water for productive uses, or had a formal water entitlement in their own name" (van Koppen, Schreiner & Fakir, 2011:2). Zwarteveen and Boelens (2006) suggest that water rights have to

be considered within the contexts that they exist. They argued that rather than view rights as either individualised/male-biased or family-based, there is need to interrogate the water uses and distribution and decision-making practices prevailing in the society in question (Zwarteveen & Boelens, 2006:22; see also Lahiri-Dutt, 2006: xxi).

Jaichand (2016:393) points out that in pre-colonial South Africa, land was used for the benefit of the family and women's land rights were part of family land rights and married women could cultivate land without size limitations but were supposed to keep to their family's field boundaries. The case studies of rural women and land access in the panel report on land reform (RSA 2019) suggests that the structure of the family determines what rights women need or demand and also blames patriarchy in African society. In the case study of Ms Sizani Ngubane, (RSA 2019:38), she is reported as having spoken "of the dire circumstances of rural women, especially widows, divorcees and unmarried women who were hounded off the land and prohibited from land access and ownership". The narrative here can only be expressed from the way the narrator views her experience and also based on how such experiences are interpreted contextually (given meaning in local contexts) and culturally. Jaichand (2016), however, posits that it is the colonial legislation that weakened women's land rights and "entrenched patriarchal systems" that oppressed women and took away their rights. Dube (2019) also argues that it is radical feminism that positions patriarchy as a structure for women's oppression at the neglect of other systems of oppression such as colonialism, apartheid and capitalism.

Available literature does not seem to interrogate why the family structure, which traditionally had all the responsibilities including being a "unit of production" (Innerarity, 2000:58) now has individuals with self-interests where resources have to be individually owned. With regard to land, Yngstrom (2002) suggests that land scarcity has increased the demand for individual rights to land. Landlessness as a result of historical injustices also affects families and individuals and women spoken to in the land reform study expressed a strong need for individual land ownership (RSA 2019:38). In the South African context where the "community has priority over the individual" (Letseka, 2012:50), there is a gap in written literature to understand women's views on individual water rights, especially in the context of water reform. Jackson (2003) has discussed how redistribution of land within households and families may be

contested and Walker (2003:143) indicates how families are important for poor women in the context of individual land rights.

The South African literature on gender, farming, decision making and rights has a special focus on black female small-scale farmers. This is a gap worth mentioning but not one this study wishes to fill. It is, however, important to note, as water licensing policy favours women in general, which includes women from other races, as there is no specific racial focus in the policy. The gap in the understanding of gendered redistribution of water rights in a context of redistributive justice will be dealt with in this study.

### **3.11 Conclusion**

The chapter sought to address some of the research questions as stated in Chapter 1. It dealt with the question of how equity arguments are constructed in the WAR strategy and how this has bearing on the implementation of the strategy. The concept of justice was also explored as this has relevance to the choice of principles that are used in the WAR strategy. The chapter also examined the contextual background of the WAR strategy with a particular focus on the institutions that influence(d) its conceptualisation. The issues of concern with regards to water allocation contexts, practices and constraints were also discussed. It is, however, apparent that distributive issues relating to water rights and women have not yet been focused on in South Africa. Although water exists with and on land, it cannot be taken for granted that conceptions of land rights and even water rights in other regions will be similar to South African conceptions of water rights. The following chapter discusses the theoretical frameworks put forward in literature to address topics of water allocation before it zooms in on the theoretical frameworks for this study.

# Chapter 4

## 4 THEORETICAL FRAMEWORK

### 4.1 Introduction

The previous chapter reviewed literature on water allocation reform and the different narratives that inform how the strategy is constructed and is being implemented in South Africa. Chapter 4 introduces and discusses the theoretical frameworks used in the study. The study uses Rawls' theory of distributive justice and Derrida's deconstruction as the core theories for the understanding of water allocation reform discourses and narratives. As the study is located in the development studies discourses, it was important to first unpack the existence of the theoretical frameworks that have been used to explore topics of a similar nature. The chapter thus starts with a brief discussion of the other theories presented in literature as relevant to the discourse of water allocation reform. It then moves on to introduce the family of distributive justice theories under which Rawls' theory of justice falls and then presents the study's theoretical frameworks – distributive justice and deconstruction theory.

### 4.2 Literature on water access and allocation frameworks

Although Rawls' distributive justice theory and deconstruction will be used as the core theories, there will be no exclusivity; ideas from other frameworks will also be borrowed. Literature on water allocation and debates has applied different theories, some of which are discussed below.

#### 4.2.1 Neoliberalism

The theory of neoliberalism has been used by scholars such as Movik (2009) to characterise the approach adopted by the new South African government in its dealings with the issues of water redistribution. The term neoliberalism is described by Spence (in Fletcher, 2016) as a “set of institutional arrangements, public policies and common sense ideas that propose that the market

be the standard by which every institution and every aspect of human life be organized around”. In water redistribution, neoliberalism concerns itself with policy prescripts that economise water use through, for instance, the introduction of cost-recovery fees (Kemerink, 2015), and allocation and reallocation carried out through market processes (Louw & van Schalkwyk, 2002; Quesne, Pegram & von der Heyden, 2007; Movik, 2009). Bond (2014b:10) reports that the Department of Water Affairs and Forestry was advised by a World Bank expert to avoid cross-subsidised water systems and to rather disconnect non-paying households, thus advocating for strict cost-recovery. It is therefore argued that if water is an economic good and efficiency in allocation is the ultimate objective, then the markets should be used to evaluate its demand (Louw & van Schalkwyk, 2002). Kemerink (2015) cites scholars (Ahlers, 2005; Bakker, 2005; Boelens & Zwarteveen, 2005; Harris, 2005; Hart, 2006; Bond, 2006; Bakker, 2007; Swatuk, 2008; Ahlers & Zwarteveen, 2009; Kemerink et al., 2013) that have pointed out how neoliberalism leads to “exacerbation of structural inequalities in societies across the globe in terms of access to and control water resources” (sic). Neoliberal policies have been criticised for their failure to “prioritise the needs and interests of the poor or effect fundamental redistribution of resources” (Liebenberg, 2010). In South Africa, policy approaches that favour economic growth and non-curtailement of existing users, while also proclaiming water as an economic good, are thus viewed as having a neoliberal approach.

#### **4.2.2 Sustainable development**

The theory of sustainable development has been advocated for in many cases in the use of natural resources, from both an economic and environmental perspective. In the case of water users, they are always cautioned to use water wisely given that it is a scarce resource, should be safeguarded from pollution and users should ensure productivity. It was Karl Marx’s view that some environmental perspectives show vested class interests. According to Pepper (1984:32), the Marxist perspective on environmental concerns “could be said to reflect the clash of interests which is growing between those who have ownership of resources . . . and those who increasingly want them or access to them for themselves – that is, between those ‘in the lifeboat’ and those drowning in ‘the sea’ of scarcity”. In line with class interests, Movik (2009) suggests that there are environmental myths associated with redistribution of water to emerging users, adding that these myths have

gained a strong hold on the imagination of both international development agencies and policymakers ... There is an implicit assumption that reallocating to those that are not existing lawful users will result in environmental degradation, thus disregarding the potential environmental threat – such as the pollution from the mining industry – posed by the consumption levels of existing users...

Kwashirai (2003) warns that “degradation narratives must be treated with great scepticism, as they often have served colonial and post-colonial critiques of traditional African land use practices”. She adds that there is a relative lack of historical information on African ways of managing natural resources in the written form and this gap is often closed by judgements made without all the details (Kwashirai, 2003; see also Whyte, 2018:139). Tversky and Kahneman (1974) term this practice of making judgements based on biases or without enough information, representative heuristics. Tversky and Kahneman (1974) argue that often decisions are made “based on beliefs concerning the likelihood of uncertain events” but these decisions are in many cases informed by bias. The bias in this case is the belief that those who currently do not have water do not know how to use it sustainably. Whyte (2018) and Botchway and Agyemang (2012), however, think that in the case of indigenous people, awareness of the environment was there but settler colonialism destroyed the relationship. Whyte (2018) quotes several scholars and activists such as Watts (2013) who suggest that colonial interaction with land can be characterised as having been one of violence. Botchway and Agyemang (2012:66) also share their understanding of the relationship between indigenous people and the environment, which they described as spiritual. In a case study of the Sekyere ethnic group in Ghana, Botchway and Agyemang (2012) gave a list of the Sekyere indigenous regulations that govern the use of rivers and the protection of riparian zones and water bodies from pollution. The authors are thus of the opinion that colonialism with its religious, cultural, political, social and educational philosophies and concepts that were not pro-environment created the basis for the human-nature relationship that is known in indigenous societies today.

Delays in the issuing of licences for Water Allocation Reform have also been linked to the sustainability aspect of the allocation process. The need to determine amounts for the Reserve and the lack of skilled personnel to conduct such has been pinpointed as one of the challenges in the WAR process (Msibi & Dlamini, 2011: ix). An example is given of the Jan Dissels

catchment, earmarked as a pilot for compulsory licensing, where water for the emerging farmers could not be uncovered due to concerns about meeting demands of the reserve (Msibi & Dlamini, 2011: ix).

Environmental pluralism, on the other hand, does not emphasise conflict as is the case with the Marxist approach (Pepper, 1984). It contends that there are multiple narratives informing debates on environmentalism and seeks rather to cater for multiple stakeholders (Hull, 2007). Pluralism has, however, been criticised for its failure to recognise power differences in groups where the dominant group influences smaller groups and their participation results in endorsement of the ideas of the dominant group (Dunleavy & O'Leary 1987; Rowman, 2013).

### **4.2.3 Human rights**

A human rights approach has also been adopted to argue the need for water for all not for some. Foskey (2006:67), for instance, argues for an explicit declaration of the right to water, seeing it as a prerequisite for the achievements of other rights. The human rights approach, however, seems to be inadequate to address the reallocation of water for productive purposes since it covers only basic water needs. Tewari (2002) puts forth that in South Africa's colonial and apartheid eras, water rights were for the satisfaction of the dominant communities "at the expense of the majority native society". It is further noted that the supply of water to all users is a huge task that is "complicated by hydrological, logistical, economical, sociological as well as political issues" (Department of Water Affairs 1986, in Tewari, 2002). The existence of economic approaches to the management of water also creates challenges in realising water as a human right since access to water also attracts costs (Gowlland-Gualtieri, 2007:8; Foskey, 2006:75).

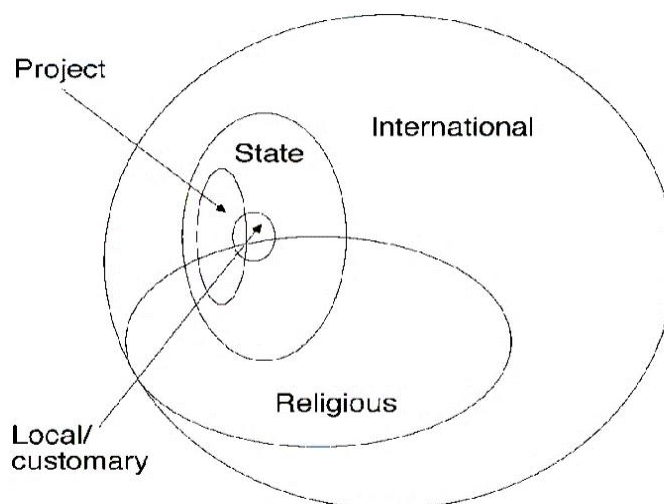
### **4.2.4 Legal pluralism**

Legal pluralism is an idea found in legal philosophy and exists as the opposite of legal centralism, where the law of the state is the dominant law and all else is subordinate (Griffiths, 1986). Griffiths (1986), however, argues that legal centralism is a myth and legal pluralism is a fact as not all law is state law. The interaction between different normative orders in a society allow for rights to be defined and redefined in those specific contexts (Kemerink, 2015). Legal



pluralism is defined by Kemerink (2015:31) as “the existence and interaction of different normative orders in the same socio-political space that affect and control people's lives”. In a water allocation context, legal pluralism finds form when different groups are persuaded by different laws/guidelines how water can be shared. Kemerink (2015:36) gives an example of the Pare culture, which believes that natural resources cannot be owned by human beings. In this culture water is supposed to be shared equally. Kemerink (2015) goes on to show how the Pare culture stands in conflict with others within a new dispensation in which districts rather than villages become responsible for water sharing.

In precolonial Ghana, customary laws on the different uses of water had evolved. These were, however, changed by colonialism when new water uses such as power production and irrigation were introduced (Ramazzotti, 2008). In South Africa, some scholars have expressed the same sentiments saying that customary practices and indigenous knowledge on water and land use were eroded by colonialism (Tapela, 2011, in Tapela, 2015). Schreiner, Sithole and van Koppen (2017:12) have suggested that customary water law in South Africa is not formally recognised, thus implying its informal existence. The South African Constitution’s position in section 211(3) is that “[T]he courts must apply customary law when that law is applicable, subject to the Constitution and any legislation that specifically deals with customary law” (RSA 1996:128). Other scholars, however, consider traditional leaders as institutional structures that can have an impact on water resources (Inkomati Catchment Management Agency, 2008:ix). Meinzen-Dick and Nkonya (2007) have added that laws governing water rights, whether customary, religious or from state institutions, are not necessarily separate as they can overlap or influence each other as shown in Figure 4.1. Legal pluralism is viewed as the best way to conceive resource rights in general (Anderson et al., 2007:170).



**Figure 4.1: Multiple and overlapping legal orders relating to water**

*Source: Meinzen-Dick & Pradhan (2002), in Meinzen-Dick & Nkonya (2007:15)*

In his analysis of the interface between customary and statutory water rights, Burchi (2005:32) expresses the importance of customary law and customary water rights, especially in countries where the rural areas govern access and rights. He stresses the importance of recognising customary water laws in preparation for what he terms the modern legislation for the regulation of water abstraction and resource use.

### **4.3 Dimensions of distributive justice**

Although John Rawls is considered among the original thinkers of the theory of justice (cf. Scanlon, 1973), other philosophers, such as Amartya Sen, have also written about the theory. Consideration has been given to Sen's idea of justice as propounded in his book 'The idea of justice', (Sen, 2009). The approach Sen takes builds on Rawls' focus on institutions and goes further to include societies "including the kind of lives that people can actually lead, given the institutions and rules" (Sen, 2009:10). Brighthouse and Swift (2008:6), however, argue that Rawls (2001:55) sees motivations and actions of talented individuals as tending to have a profound

and pervasive influence on persons, thus affecting the prospects and status of others. It is for this reason that they see validity in Rawls' focus on basic structures (Rawls, 2001).

Sen's approach to justice arises from his capability approach where his focus is on an individual's capability to achieve (Sen, 2009:66). In Sen's capability approach, poverty is seen as deprivation in the capability to live a good life and development becomes an increase in capabilities. Sen (2009:231) suggests that "a person's advantage in terms of opportunities is judged to be lower than that of another if she has less capability – less real opportunity". Rawls, on the other hand, sees inequalities resulting from stipulations made by institutions on who has what rights and access to what in life. Sen's approach in a way justifies inequalities and sees not having capability as something within an individual's control and those that are poor are seen as simply not having capabilities. Rawls, on the other hand, sees justice as liberty and fair chance for all (difference principle), irrespective of skill, gender, race, etc. Furthermore, Rawls's idea of justice values opportunities, while Sen's values "the conversion of primary goods into the capability to do various things" (Sen, 2009:66). In Sen's words, the capability approach concentrates on "actual opportunities of living" as opposed to "the means of living". Although both opportunities (Rawls) and capabilities (Sen) are essential, it may be more important in a context such as post-apartheid South Africa for one to have opportunity first and then capabilities. With the Water Allocation Reform programme, allocating of water (opportunities) happens first followed by capacity development programmes (capabilities) to allow the HDIs to actively and equitably participate in productive water use (DWAF 2005a).

Bartels (2016:11) has also noted that within philosophy, distributive justice has many different definitions from different epistemic views, such as, egalitarian, utilitarian and libertarian. The interest in the subject has also resulted in a broad range of theories of justice. Table 4.1 below presents a summary of the different justice theories with a focus on ones that relate to groundwater management (Neal Patrick et al., 2016) and those that are relevant in the distribution of scarce water resources.

**Table 4.1: A non-exhaustive summary of the various theories, principles and models of justice**

The economic family	Efficiency is the driving force behind this family of justice theories where maximising surplus is advocated. This family is represented by the following:	
	Libertarian theory	Provides an underlying rationale for settling all issues of justice through the free market (and the courts). People have the right to buy and sell whatever they want so long as they don't use force or fraud
	Efficiency theory	Is similar to libertarian theory in that it advocates a free market where there is a minimal State that protects private property but does not interfere with the economy. It differs in the means to achieving this goal in that it advocates maximum efficiency rather than the right to liberty and private property as its central tenet
	Cost-benefit analysis	Although a technique rather than a theory, cost-benefit analysis is often used in decision making. It is underpinned by the principles of Efficiency and Utilitarian (see below) theory. CBA analyses alternative courses of action based on the costs and benefits (primarily expressed in monetary terms) associated with each, and recommends the option with the greatest benefits and/or lowest costs as the most desirable choice
The rights-based family	Human rights	
	Animal rights	Provides a means of settling disputes by appealing to fundamental human rights. These comprise negative rights which are rights to non-interference (e.g. people's lives, liberty, expression, religion or property) and positive rights which are rights to assistance (e.g. health, education and wellbeing). In 2010, the UN General Assembly amended the Declaration of Human Rights to include the right to water and sanitation as a human right (UN 2010)
	These theories generally reflect a concern for the welfare of society. Two of the most popular and well-known theories are:	Provides a means of settling disputes by appealing to fundamental animal (or non-human animal or subjects-of-a-life) rights. Animal rights comprise negative rights such as right to life and freedom, and apply to wild animals. In most countries positive animal rights only come into play when dealing with domesticated animals

The social family	Utilitarian theory	
	Rawls' theory of justice	Provides a rationale for making decisions, taking action and designing policies that produce the greatest good. This theory supports decisions that maximise happiness or preference satisfaction, and is laudable in its aim to improve the wellbeing of all people
	These theories focus on ecosystem and environmental concerns, values and/or rights; and shine a light on the need to take the environment into account when making decisions about natural resource management and allocations	Rawls offers a hybrid theory that reconciles the consideration of rights and utility. The basic premise of the theory is that decisions can be made based on which alternatives offer the most help for the worst off or that the worst possible outcome is made as good as it can be. Thus decisions are made on principles that are considered fair for everyone without any prejudice
The environmental family	Biocentric individualism	
	Ecocentric holism	Is not a justice theory per se, but is a perspective that contributes to the discussion. It is based on the belief that there is value in every living thing and that people have an obligation to take this value into consideration whenever their actions affect living things
	Precautionary principle	Is a view that people should limit their activities out of concern for the continued existence of a species and the continued health of ecosystems. It is also not a theory per se, but offers an additional view point that considers the broader environment in decision making

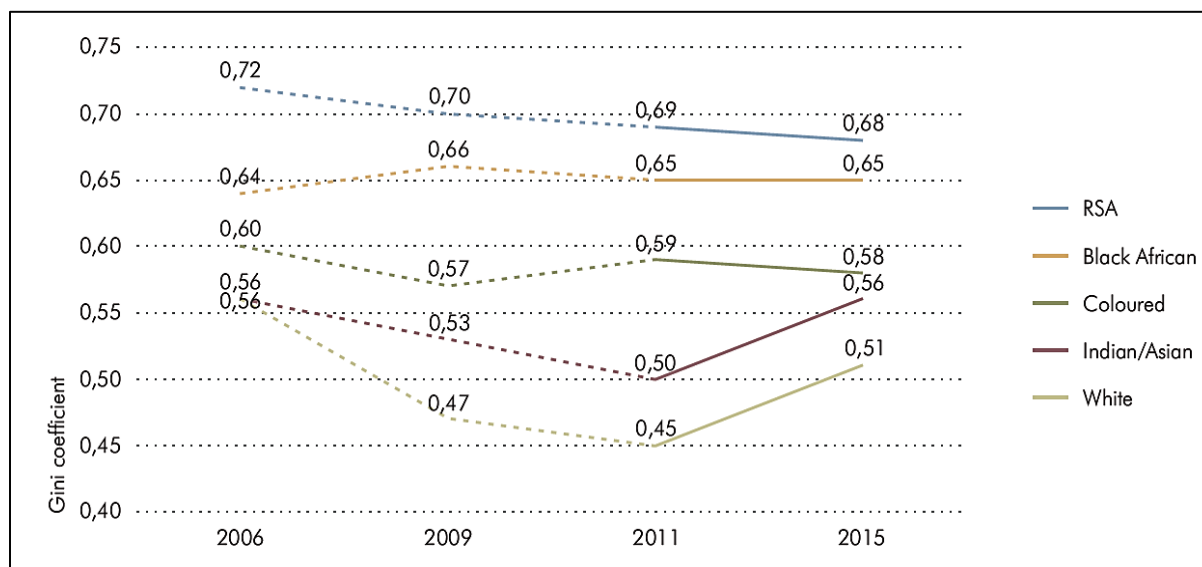
Source: Adapted from Neal Patrick et al. (2016:257-8)

## 4.4 The theory of justice and deconstruction

### 4.4.1 Rawls' theory of justice

The theory of distributive justice was used to re-conceptualise some of the discourses and principles of Water Allocation Reform in South Africa. South Africa is a highly unequal country and distribution of resources has been aligned to that unequal structure (Gumede, 2014; 2016; Knight, 2014). Seekings and Nattrass (2005, in Liebeberg, 2010:3) state that “No other capitalist state (in either the North or the South) has sought to structure income inequalities as systematically and brutally as did South Africa under apartheid”. However, other observations have been that “the political history of South Africa, with its formal systemic discrimination of the majority Black population group by the White minority, must have been deeply entrenched such that its legacy is still very much alive” (Gumede, 2010:2; Gumede, 2016:25; 203).

Statistics South Africa has shown that the Gini coefficient income per capita for black Africans has been increasing compared to that of their white, Indian and Asian counterparts in the period 2006 through to 2015; see Figure 4.2.



**Figure 4.2: Gini coefficient (income per capita) by population group (2006, 2009, 2011 and 2015)**

Source: StatsSA (2017)

South Africa has been described as the most unequal country in the world according to the World Bank Group (2018: iii). Patterns of inequality resulting in a racial imbalance in wealth have been blamed on colonial and apartheid resource accumulation. According to Wilson (2011:5), for 200 years, land and water in South Africa “formed the basis of wealth accumulation” which advantaged individuals, families and groups that were mostly white, and provided them with investment opportunities that allowed them to educate their families (Wilson, 2011:5). McCarthy (2009:24) has also noted that:

“race” has functioned as a marker of inclusion and exclusion, equality and inequality, freedom and unfreedom throughout the modern period ... and despite the ... decolonization struggles abroad, there is widespread agreement ... that the legacy of institutionalized racism is still with us, that is, the local and global relations of wealth and power are still structured along racial lines.

Such entrenched inequalities may require that society reconceptualises principles for fair distribution of resources. Theories in development studies mostly deal with understanding poverty and how poverty can be alleviated, but they fall short of envisioning poverty as symptomatic of an unjust society. The theory of distributive justice as expounded by Rawls has potential to provide a lens for a more just society as it concerns itself with the fair allocation of resources (Maiese, 2013) and also “advocates for genuine equal rights” (Robeyns, 2003:5).

The idea of a theory of justice comes from Rawls’ 1971 work in which he argues that justice is fairness. Rawls contends that the main idea behind his theory of justice is that:

the principles of justice for the basic structure of society are the object of the original agreement. They are the principles that free and rational persons concerned to further their own interests would accept in an initial position of equality as defining the fundamental terms of their association. (Rawls, 1971:11)

Among the many ideas he puts across in his conceptualisation of justice, Rawls (1971:5) puts forward the ideas that:

- (i) everyone accepts and knows that the others accept the same principles of justice
- (ii) the basic social institutions generally satisfy and are generally known to satisfy these principles.

Social policies in apartheid South Africa are known to have had unjust privileging based on race (Leubolt, 2014:8). As indicated earlier, the end of apartheid did not automatically bring universal privileging, or a just society, hence the need for a theoretical approach that unpacks notions of justice and also has principles that seek to privilege the least-advantaged in unequal socio-economic situations. Rawls suggests a conception of justice understood from a hypothetical position he refers to as “the original position” (Rawls, 1999:11). In this ‘original position’, which Rawls explains is not “an actual historical state” “... no one knows his place in society, his class position or social status, nor does anyone know his fortune in the distribution of natural assets and abilities, his intelligence, strength, and the like”, (Rawls, 1999:11). This “veil of ignorance” (Rawls, 1999) thus persuades individuals to make fair decisions about distribution of resources, assuming any unfair distribution may equally affect them.

One of the reasons why implementation of the WAR strategy is slow could be because of persuasion by those who know their abilities and strengths, and have power to influence the decisions around the distribution of assets in their favour. Indeed, in post-apartheid and postcolonial states like South Africa, power relations due to race, class and gender, discriminatory practices and policies affect how resource allocation has been taking place. A distributive justice theory perspective, however, argues that power relations “must be precluded from contexts in which determinants of justice and injustices are made” (Schultz, 2007). Schutz also recognises from power theories<sup>2</sup> that “social power is the most critical determinant of certain material inequalities among people”. Thus, although they should be absent when defining principles of justice, power relations do indeed play a role in determining justice and injustices.

To circumvent this, Rawls argues that the principles of justice should be chosen “behind a veil of ignorance” to ensure that no one is disadvantaged or advantaged. Pettit (1974:3) argues that the people Rawls imagines making contracts already have signs of “socially specific

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<sup>2</sup> Power theory is a theory “according to which those in power not only get most of the goods but also determine who else may have some of the goods” (Schultz, 2007)



modelling”, making the original position a difficult position to go back to. In the case of water redistribution, the injustices of colonialism and apartheid have already modelled potential contractors in socially, politically and economically specific ways. There is no longer an original position but very clear divisions on racial, class and gender lines and although a hypothetical position, it will be a most difficult position to imagine. Distributive justice has to take place when diverse groups decide and accept what is fair. As Schultz (2007:7) contends, the “hypothetical or counter-factual story book model situation” presented by the idea of an original position can be constructed differently by making the individuals aware of their own abilities, identities and interests as well as those of the other parties involved in the sharing. To an extent, not all may know their abilities in the context of water distribution due to discriminatory practices and policies that separated black experiences from white experiences, resulting in parallel development trajectories by race. Under Rawls’ theory, knowledge of one’s sex, race and position in society are supposed to not play a part in the formulation of a social contract on what is considered fair or just. Principles of what is just are thus to be considered from every possible social position (Mandle, 2009:14).

#### **4.4.2 Deconstruction theory**

In order to be able to fill any potential gaps that may come with going back to an original position, the researcher will use a combination of Rawls' theory of distributive justice and deconstruction theory. Deconstruction was developed by the French philosopher, Jacques Derrida, who viewed all structures, whether in the social sciences, literature or sciences, as needing “re-thinking from a new position to leave demonstrativeness to interpretation” (Derrida, 1976, in Güney & Güney, 2008:220). Deconstruction is said to be interested in what happens in a text with the questioning not being on “its meaning or its component parts, or its systematic implications – but rather by marking off its relations to other texts, its contexts, its sub-texts” (Silverman, 1989, in Güney & Güney, 2008:223). Cornwall (1997:10) provides a much simpler definition in which she describes the theory as “the principle of taking apart taken-for-granted assumptions to explore the contradictions on which they are based” (see also Rolfe, 2004). Deconstruction implies that there is never only one meaning about something, other meanings or ways of thinking will always emerge (Güney & Güney, 2008). Derrida thus saw deconstruction as justice as he saw no possibility of justice without breaking the “illusory

authority of laws and norms and overcoming the violence ingrained in the ‘Logocentrism’ of Western metaphysics” (Wang, 2009:319).

The reading and understanding of literature on water allocation in post-1994 South Africa, particularly the policy narratives, are issues for further interpretation in this study using deconstruction theory. This will be approached from an understanding that although democracy brought with it the need to reform discriminatory legislation and policies of the past, water access and allocation were viewed as mere colonial projects that could be fixed by simply changing some words and adding new ones to form a new Water Act. Reform policies and legislation have seemingly challenged the colonial nature of water access and have adopted a language that seemingly includes everyone, yet underlying it are ideologies of exclusion. For instance, issues of sustainability and equity in the access and allocation discourse are premised on 'current' or 'mainstream' thoughts, which can also be interpreted as an agenda to systematically exclude those not benefiting from the system, as further allocations threaten sustainability (cf. Movik, 2009). Equity has no clear formula as a basis for allocation and can be easily side-stepped by the need for efficiency. Equality, on the other hand, presents a seemingly understood concept yet its implementation may be unachievable given the existing unequal playing field. Deconstruction is thus used to reveal hypocrisies and inconsistencies in water allocation literature to work out whether there is room for deliberateness in the allocation of water to historically disadvantaged individuals and communities.

#### **4.4.3 Rawls’ principles of justice**

Rawls came up with two principles of justice that he argued applied to basic structures of society, the political and social institutions (Rawls, 1971). The two principles are stated as:

- (1) Each person has the same inalienable claim to a fully adequate scheme of equal basic liberties, which scheme is compatible with the same scheme of liberties for all
- (2) Social and economic inequalities are to satisfy two conditions:
  - (a) first, they are to be attached to offices and positions open to all under conditions of fair equality of opportunity

(b) and second, they are to be to the greatest benefit of the least-advantaged members of society (the difference principle) (Rawls, 2001:42).

Rawls (1971:199) explains that the liberty principle is realised through the ‘constitutional convention’ while the second principle is realised through the legislature where social and economic policies should be “aimed at maximising the long term expectations of the least advantaged ...”. Wolff (2007) argues that Rawls' difference principle (the second principle) is a principle for distributing wealth and income and it also aims to make the worst off as well off as possible. The argument Rawls is viewed as putting forward is thus the need for the economy to be arranged in a way that makes the worst off as well off as possible (Wolff, 2010:5). This concern with the position of the worst off in society is termed egalitarianism. Veatch (1991) has described egalitarianism as a justice system whereby allocation practices involve giving everyone an opportunity for equality of well-being. Hoffman (2003:21) calls it a philosophy where resource distribution is done so as to maximise the welfare of the worst-off as opposed to utilitarianism where the total benefit is the issue of concern, “independent of the welfare of individuals”. When land that is the basis for all economic activity is allocated to only those that can work it because they benefit the economy (utilitarianism), the economy of a country can be hijacked by a few of the elite with no benefit to the welfare of individuals who may remain worse off. Using Rawls’ difference principle, distribution of this asset would best be used to achieve economic growth and social equity as opposed to benefiting only the elite. Rawls’ idea of justice does not prescribe to the idea of the more productive having “natural right or desert over their production” (Wolff, 2007).

As Rawls stipulated, the two principles are “to govern the assignment of rights and duties and to regulate the distribution of social and economic advantages”. In the case of allocating water in South Africa, the relevance of Rawls’ principles is in their quest to achieve a just allocation from a situation already tainted by racial, gender and class prejudices. Rawls’ theory was, however, not conceptualised to deal with colonial legacies where structural inequalities and redress form part of the understanding of justice. Its primary focus on institutions that form the structure upon which decisions on the distribution and allocation of goods are made forms the premise on which the decision to use his theory is made. Institutions are, however, not to be viewed as epitomes of justice, hence the use of deconstruction theory together with Rawls' idea

of justice. Deconstruction theory was incorporated to reveal any underlying agendas, hypocrisies or inconsistencies (primarily in literature) to show why and how equitable water allocation is not being achieved. In this study, Rawls' principle 2(b) will form the basis for understanding the need for a deliberate attempt at equitable distribution of water using the case study of the Great Letaba River Water Development Project.

#### **4.4.4 The constitution and justice according to Rawls**

Rawls names constitutional democracy as the main institution through which basic structures to satisfy the two principles are found. With regard to what goes into the constitution as law, Rawls (1971:197-198) points out that a constitution is decided upon after an "appropriate conception of justice has been agreed upon" and "the veil of ignorance is partially lifted". He further suggests that "delegates" that choose a constitution remain unaware of their social position and that of other individuals but are aware of the "general facts about their society ... its natural circumstances and resources, its level of economic advance and political culture". This implies that the process of choosing a constitution should be free of vested interests but should respond to the natural, social, political and economic context within which it is set to operate. He added that when background fairness is lacking, outcomes "of the distributive process will not be just" (Rawls, 1971:275).

Rawls (1971:55) differentiates between a political constitution and private property in the means of production, which he calls social institution. In South Africa, however, the Constitution covers both the social and the political in the sense Rawls discusses them. The Constitution of South Africa defines people's ways of contact, defines what they can and cannot do, their rights and their freedoms. According to Ngcukaitobi (2018:1), debates exist around its suitability as a response to colonialism and apartheid mainly due to its Eurocentric approach to basic human rights. Rawls (1971) also argues that people born into different social and economic circumstances are affected differently as institutions (in this case, the Constitution) favour a particular starting point, thereby creating "deep inequalities".

In South Africa, justice has to be understood from a racial perspective following more than 350 years of colonial rule. Modiri (2015:229) argues that "[D]espite the establishment of a liberal constitutional order ... Blacks still constitute the majority of the poorest and most disadvantaged

stratum of South African society”. Rawls (1971:7) puts forth the idea that “justice of a social scheme depends essentially on how fundamental rights and duties are assigned and on the economic opportunities and social conditions in the various sectors of society”. In the South African context, Modiri (2015:249) opines that the Constitution gives “equality, dignity, and freedom” not to persons but to their abstract selves, as it fails to “address the social powers and historical inequalities that stratify and subjugate our concrete selves”. Rawls (1971), on the other hand, suggests that the issue of whether economic and social policies are just or unjust is a matter of differences of opinion. He added that policies are clearly unjust when it concerns equal liberties but not when legislature is concerned as for the latter, more information is required as laws are ‘clearly unjust’ (Rawls, 1971:199).

#### **4.5 Criticism of Rawls’ theory**

The theory is not without criticism and as is to be expected with philosophical theories, their application to reality is a “contentious undertaking” (Montilla Fernandez & Schwarze, 2013:1227). For instance, Arneson (1997) argues that Rawls’ theory stipulates that the lucky in life distribute some or all of what they have because they are lucky and they can become unlucky. Arneson argues that the worst-off should not be treated as if they are a homogenous group as there are some that are more deserving of being treated with fairness than others. He argues that there are some worst-off people who become active in making their lives better (Arneson, 1997).

Distributive justice is understood by Deutsch as more than just the allocation of goods but also conditions that affect the individual’s well-being (Deutsch, 1975:137). Rawls (1999:16) argues that in the drawing up of the contract, “no one should be advantaged or disadvantaged by natural fortune or social circumstances”. Rawls thus argues that meritocracy does not work towards a just society as people do not choose their race and gender (Oppenheimer, 2014). Distributive justice is also not about taking from those who have and giving to those who do not have as discussed by Sandel (2009) in his example of wealth redistribution. His discussion of utilitarians and libertarians focuses on the market economy where wealth distribution does not factor in

equal opportunities for all but rather the redistribution of wealth from the haves to the have-nots through a taxation system.

Rawls (1999) has also stressed that his principles of justice are to be applied to higher institutions that govern the assignment of rights and duties and also regulate the distribution of social and economic advantages. Cohen (2008, in Arneson, 2009) disagrees that institutions should be the standard for choice of what is just or unjust, saying that the conduct of members of society and their disposition should also lean towards the common good. Justice is, however, viewed as requiring maximum societal cooperation and is not involved in relations with others, e.g. “inferior races” (Deutsch, 1975:141). Apartheid saw inferior race versus superior and appropriated resources in ways that pitted races against one another and is the reason why it was not considered relevant to allocate natural resources to black South Africans. The thought that justice is not considered in relations with others justifies discrimination and unequal distribution of resources. A higher institution such as provided for by the South African Constitution, which aims to protect every citizen equally (RSA 1998:2), creates a basis for a just society.

Chomsky (2017) indicates that Rawls’ theory is rather abstract and does not apply to real situations and the power systems that exist in real life. Chomsky (2017) notes that one might not be able to do a study of the United States, for example “without recognising there is a very class conscious, very powerful business community always fighting a bitter class war”. A study of South Africa will similarly require that one recognise not only the class consciousness but the racial and gender hierarchies constructed as a result of colonialism, apartheid and capitalism. Chomsky (2017) adds that Rawls’ theory had a linguistic basis (hence the failure to relate to real life issues), which he used to create a theory that saw a need for an instinctual basis for moral judgements. Rawls does stress that his abstract original position is not an actual historical state and that its relevance is to make it impossible for people to tailor principles of justice to the circumstances of their own cases (Rawls, 1999:16). As also observed by Gyekye,

the abstract reflections of the philosopher need not – should not – detract from the relevance and value of the philosophical enterprise in the search for answers to at least some of the problems of human society (Gyekye, 1988:4)

Pettit (1974:1) argues that Rawls' theory of justice is in no way universal and is created for societies in a western democracy. Gyekye (1988:10) thought that philosophers use the problems of their times as a starting point of their analysis and have no intention of being universal in their thoughts. Systems that are governed by a democracy may consider using the philosophical thoughts, not necessarily the whole system. Societies that are governed by higher institutions, with constitutions and legal frameworks, may thus make use of Rawls' idea of justice and the existence of a constitution and bill of rights in the South African system makes Rawls' liberty and difference principles applicable. This, however, is no endorsement of the Constitution as a fair and just piece of legislation as discussed in Section 3.7.2.

Hassim (2010:330) points out that Rawls' theory of justice ignores "private inequalities", particularly "gender-based inequalities, for the achievement of social justice for women". She sees the particular focus on social justice for women being offered by Sen's version of justice (Hassim, 2010:330). Hassim (2010) further argues that Rawls' original position does not mention 'sex' and yet he also does not mention race, which begs the question, why gender? In addition to the features of the original position Rawls names, he adds that "principles of justice are chosen from a veil of ignorance" to ensure that "no one is advantaged or disadvantaged in the choice of principles by the outcome of natural chance or the contingency of social circumstances" (Rawls, 1991:11). He also adds that, "since the parties have no specific information about themselves or their situation, they cannot identify themselves anyway" (Rawls, 1991:113). This can include not knowing one's sex which should not be an issue, while gender should be. Gender, as opposed to sex which is biological, is socially constructed and should be considered an issue in the South African context, where gender-based inequalities are not a women-only issue (Dube, 2019). Dube (2019) argues that in the context of South Africa, "[G]ender-equality discourses ... need to factor in the experiences of oppression on the levels of class, gender and race as being triple oppression that not only affected Black women but Black men as well". Rawls theory safeguards the welfare of the worst off in society who in South Africa happen to be blacks, both women and men (cf. Dube, 2019).

Arsenault (2016:8) argues that Rawls' theory does not protect women in the private sphere, while Okin (1989:101) adds that Rawls fails completely to address justice in a gendered context. While these criticisms may be justified in the scholars' contexts, especially considering the

western origins of Rawls theory, it would have been difficult to apply his theory in a South African study if western ideas of gender were deeply entrenched in the theory. As Barkan (2006:1) asks “[H]ow could rights applicable to a particular people because of wrongs committed against them be held universal?” Gender experiences are not universal as Wittmann, in Dube (2019), noted when she stated that: “[O]ne cannot proceed on the assumption of a universally applicable, similar relation between the sexes ... The dynamics of gender relations are, due to specific social, historical, economic and cultural frameworks, constructed differently”.

#### **4.6 Why Rawls’ theory of justice**

The study uses Rawls’ ideas of justice, specifically the ethos that is contained in principle 2(b). As expressed by Neal Patrick et al. (2016), the theory provides a platform where “decisions can be made based on which alternatives offer the most help for the worst off or that the worst possible outcome is made as good as it can be”. WAR as a reform strategy is meant to redress inequities in ways that ensure that the historically disadvantaged are not made worse off and Rawls’ difference principle gives “absolute priority to the prospects of the least advantaged” (Brighthouse & Swift, 2008:4).

The theory has particular relevance to distribution of resources in a post-colonial/post-apartheid state such as South Africa, where resources are allocated unequally and inequitably (cf. McIntyre & Gilson, 2000). Rawls’ idea of justice seeks to correct inequalities that are “arbitrary from a moral point of view” (Mandle, 2009:24) and the legacy of apartheid in South Africa is inequality. It is the duty of responsible institutions to right the wrongs of the past and Rawls’ theory of justice was meant to serve as the most appropriate moral basis for a democratic society (Mandle, 2009:11). Rawls understood that what is just or unjust was not universal, yet even those that:

hold different conceptions of justice can, then, still agree that institutions are just when no arbitrary distinctions are made between persons in the assigning of basic rights and duties and when the rules determine a proper balance between competing claims to the advantages of social life (Rawls 1999:5).



It has been noted by DWAF (1994:4) that “the development of South Africa’s water resources has been linked more with supporting the progress of the country’s wealthy sector than with alleviating the position of the poor, particularly in the rural areas”. It is within this understanding of injustice that Rawls’ theory of justice is invoked as correcting inequalities at its core. Although the theory was conceived of in a homogenous society, an opportunity arises in this study to expand the applicability of Rawls’ idea of justice in a democratic but highly heterogeneous society. The WAR strategy is also an institutional strategy premised on the Constitution and its ability to bring about redress or justice is best assessed based on institutional ability to address social and economic conditions of the worst off.

The theory has received criticism, some of which is discussed above, but Rawls (1999:3) himself argued that “[A] theory, however elegant and economical, must be rejected or revised if it is untrue”. The theory is, however, not to be viewed “as a single piece of philosophical argument to be tested and accepted or rejected whole, but as a complex, many-layered record of at least twenty years of philosophical growth and development” (Wolff, 1977, in Fremantle, 2016:10). Some arguments presented in Rawls’ theory are relevant to constitutional democracies such as South Africa; and water reform to redress results of racial discrimination is a constitutional imperative (RSA 1996). The theory is thus considered to be valid and the study heeds the arguments against it and takes note of Bertrand Russell’s remarkable caution on receiving others’ points of view:

When an intelligent man expresses a view which seems to us obviously absurd, we should not attempt to prove that it is somehow not true but we should try to understand how it ever came to **seem** true (emphasis original). This exercise of historical and psychological imagination at once enlarges the scope of our thinking... (Russell, 1946, in Pepper 1984:2)

## **4.7 Conclusion**

The purpose of this chapter has been to present the theoretical frameworks of the study. The chapter presents other theoretical frameworks that have been used to conceptualise or discuss water allocations. Although the theories were not used as the lenses to view water allocation in this study, the discussion of these theories provided other worldviews on water allocation. The

application of distributive justice and deconstruction arose out of the need to advocate for the consideration of the worst off in the allocation of water resources. Together with the critical paradigm discussed in Chapter 2, a discussion on the need to allocate water to historically disadvantaged individuals is given more validity when discussed within the context of distributive justice. Deconstruction, on the other hand, provides researchers with an opportunity to unpack underlying meanings in texts while also exploring any possible contradictions. Ideas expressed by some scholars are thus evaluated not just as fact but as possible expressions of interest in specific ideologies. The chapter also discussed some of the criticisms laid against Rawls' theory of justice and presents a case for why the theory was chosen for the study. The following chapter discusses how data was analysed and also presents the study findings.

# Chapter 5

## 5 STUDY FINDINGS

### 5.1 Introduction

The previous chapter described the theoretical frameworks used in this study. It explained the context within which the theory of justice has to be applied before explaining the idea behind the theory of justice. The chapter also explained the criticisms against the theory and advanced the reasons as to why it still was the theory of choice for the study. Chapter 5 presents the findings of the study. The study took a qualitative approach which, however, produced both qualitative and quantitative data (data availed to the researcher through qualitative data collection processes). The findings thus cover both qualitative and quantitative data. The chapter first presents the findings from qualitative data before moving on to quantitative data.

### 5.2 Findings from qualitative data

A number of institutions were identified to take part in the study. The institutions ranged from government departments, institutions of higher learning, research institutions to water user associations. With regard to government departments, the initial idea had been to carry out interviews with government departments at both the national and provincial level in order to obtain catchment specific information from the provincial level. This was relevant for the Departments of Water and Rural Development. From the provincial level, I learnt that the national office was the central point from which information or data could be obtained. Although these were decentralised, authority to access information could only come from the national office. Further engagement with the Department of Rural Development revealed barriers that made interviews impossible and thus information had to be sought from available literature only.

The qualitative data that was analysed in this study is data that was transcribed into manuscripts (through the data logging process described in Chapter 2) from the focus group discussions (D20173), interviews with women (D20174) in the case study area and interviews with the different institutional representatives listed in Table 5.1 below with indications of their atlas.ti identification.

**Table 5.1: Key respondents for the study by institution**

Name of institution	Respondents' area of expertise/Office position	Date of interview	Identification on atlas.ti
Department of Water and Sanitation	Water Licensing Department	06/08/2018	D11
	Infrastructure Development	03/10/2018	D20172
	GLeWaP	10/11/2016	D10
Council for Scientific and Industrial Research (CSIR)	Natural resources	31/07/2018	D3
	Natural Resources	12/03/2019	D9
Water Research Commission	Research manager	15/08/2018	D6
Nelson Mandela University	Academic: Land & Agrarian issues/Gender	22/10/2018	D4
University of Pretoria	Academic: Theology and gender	10/08/2018	D12
African Farmers Association of South Africa (AFASA)	Representative on water issues	12/03/2019	D8
Letaba Water User Association	Executive officer	01/11/2018	D5

In the sections that follow, findings from the engagements with the key respondents from the different institutions are presented. The relationships between the responses from the different respondents are briefly touched on with detailed discussions on the findings following in Chapter 6.

### 5.2.1 Findings on the objectives of the GLeWaP and implications for HDIs

In order to determine whether there was deliberateness in the allocation of water to HDIs through the Great Letaba River Water Development Project, it was necessary to find out what the main objectives of the project were and what the allocation priorities would be. This was done firstly through a review of the literature around the project. Section 2.4.3.3 of the methodology chapter discusses proposed water development in the catchment and provides the different project objectives as discussed in different Department of Water documents. The GLeWaP water allocation priorities were further discussed with three key respondents, two of whom are officials in the DWS who work on the project and the third, a Water User Association official from the water management area. The responses that were given are consistent with findings from the literature including also the inconsistencies in terms of clarity about HDIs' access to water for their livelihoods' activities.

The following quotations (Table 5.2) are the responses given by the three respondents to the question on what the main objective of the water development project is.

**Table 5.2: Excerpts on the objective(s) of the GLeWaP**

<b>Document No./Institution/Interviewee</b>	<b>Quotation</b>
<b>5.3/Letaba Water User Association /Representative</b>	The dam is not intended to increase any allocations along the catchment area, other than to provide for better water services for domestic purposes
<b>20172.7/DWS/ Chief Engineer-Infrastructure</b>	The Great Letaba River Water Development Project aims at improving the management of the water resources in the catchment to develop a conjunctive scheme comprising two multi-purpose dams and associated bulk water distribution infrastructure for domestic and irrigation water supply  The project is intended to stimulate socio-economic development in the area and the Limpopo Province as a whole
<b>10.16/DWS/GLeWaP Project Leader</b>	The Great Letaba is on the forefront of the Kruger National Park and the ecological reserve was not being met by the water in the river. The Nwamitwa dam is built specifically for the system to correct the neglect of the ecosystem. So, it is one dam for the environmental reserve.

	We talk about the Tzaneen and the Nwamitwa currently being constructed, the Ebenezer Dam is for Polokwane and the Tzaneen is for irrigation downstream of the dam and the Nwamitwa will be to provide for the ecological reserve
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There is agreement on the provision of water for domestic supply in the 5.3 and the 20172:7 quotations, while the objective of the environmental/ecological reserve is not shared by the respondents. While quotations 5:3 and 10:16 only focus on the objective of the dam (proposed Nwamitwa Dam), the 20172:7 quote focuses on the project as a whole, that is, including the raising of the Tzaneen Dam wall.

Atlas.ti allows for the creation of networks where semantic relationships can be pointed out, such as differences, similarities, contradictions or the expansion of an idea. An example is the contradictory remarks on the issue of fully allocated catchments made by the DWS respondent (10.4) and the Water User Association respondent (5.5) as noted in the quotes in Figure 5.1.

<p>5:5 The Tzaneen dam has been over allocated, and the raising of the dam will not solve that problem; at best it will assist in providing for a higher assured delivery in the catchment. Further to that, the Reconciliation Strategy for the Luvuvhu and Letaba rivers makes it very clear that, even with all identified mitigating procedures put in place, the Letaba river supply versus demand system will only be in balanced until 2030. It is therefore of utmost importance to revisit all the proposals that were incorporated in the Reconciliation Strategy, and not only focus on the raising of the Tzaneen dam wall.</p>	<p>□ contradicts</p>	<p>10:4 It's not everywhere that water is fully allocated- the catchment as a whole has to be looked at as some places within an area can be fully allocated while the whole catchment may not be</p>
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**Figure 5.1: Excerpt from atlas.ti hyperlink manager showing contradictions in respondents' responses on over-allocated water resources**

The issue of water supply to HDIs as resource-poor farmers (as opposed to domestic supply) expressed in the NWRS2 (DWS 2013a:30) is not expressed by the respondents (Figure 5.2).


(MMTS-2) for augmenting the Mgeni River in supplying the eThekweni-Msunduzi metropolitan areas

- The Nootgedacht Low Level Scheme, which supplies Orange River water to Nelson Mandela Bay (a municipal scheme)
- Raising of Clanwilliam Dam in the Western Cape Province to supply irrigators and small towns along the Olifants River (WC), as well as the town of Clanwilliam
- Raising Tzaneen Dam and construction of a dam at Nwamitwa on the Groot Letaba River in Limpopo Province to supply areas in the Mopani District Municipality and, specifically, the Greater Tzaneen and Greater Letaba municipalities. The project will benefit some 400 000 people by 2027 and will provide water for economic growth in the region, minimise the further lowering of the assurance of water supplies to the irrigation sector and provide for the establishment of resource-poor farmers on about 2 000 ha of land.

Phase 2 of the Lesotho Highlands Water Project (LHWP), comprising Polihali Dam as the main component, is being prepared for implementation by the governments of South Africa and Lesotho, through the Lesotho Highlands Development Authority (LHDA), with completion expected in 2020.

The following major water resource development and

Section 4.3 of the NWRs2, Objectives, page 30



**Figure 5.2: The objectives of the GLeWaP according to the NWRs2**

**Source: DWS 2013a:30**

The responses, though concurring with some of what is said in literature, clearly show the different views by different offices and the different points of focus as evidenced by the focus on the dam only and not the whole project.

It was, however, indicated by the GLeWaP project leader that there was already water set aside for resource-poor farmers. She commented that:

There is an allocation for resource poor farmers – but the water is on the books for them but it is not taken up because of their issues. The water is already allocated to them so it will not be a reallocation. In our planning we already allocate the water as requested by the Department of Agriculture for resource-poor farmers, (GLeWaP project leader).

A study by Hollingworth and Matsetela (2012) lists nine reasons why the water allocations were not being taken up and some of the reasons point to lack of the necessary capital required to have necessary infrastructure for water up-take. Findings in this study from the small-scale

farmers also reflect the same experiences for farmers who operate on small pieces of land using basic farming tools (Table 5.7).

### 5.2.2 Findings on the choice of ‘equity’ in Water Allocation Reform

Literature on equity revealed many different views on what equity in the allocation of water looks like. It was important to gain further clarification on the basis for the use of equity in the South African context and, for this, two key informants from the Council for Scientific and Industrial Research (CSIR) and one from the Water Research Commission (WRC) were identified to provide further insight.

The interview with the first CSIR respondent (identified here as D3) took place on 31 July 2018. This was in the form of a telephone interview that was recorded with the interviewee’s consent. Transcription of the interview recording took place on the same day as the interview. Consent to use the interviewee’s name was not given; however, the interviewee was selected for this interview for his experience in the subject of water resources and the number of publications to his name. Findings from this interview are presented in Table 5.3.

**Table 5.3: Excerpts from interview with CSIR respondent referred to as D3**

Question to interviewee (abbreviated)	Quotation
How are HDIs to be included in water allocation when the reform strategy does not factor in land ownership?	<p>3:1 It may not make sense to give water to people especially for productive use if they do not have access to land. (1172:1282) – D3</p> <p>3:2 That is one of the gaps that one finds in policy structures such as the National Water Act</p> <p>[...] In the Olifants there are a lot of commercial farms close to the river with some large patches of land that are unused (881:970) – D3</p>



<p>Why is allocation to new users seen as an environmental threat when we know that many South African rivers are already degraded?</p>	<p>3:11 You are going to unleash an ecological crisis under certain conditions if you do not take into consideration the types of crops if land is allocated to people, depending on whether they want to use it for farming or use it as collateral. People do not take into consideration that farming is tough; they can start small business or use it for something else. That way you are not creating an ecological crisis because the land is just lying there, but is collateral for something else. ... (2402:3016) – D3</p> <p>3:13 One has to be extremely careful if they assume that people will be able to farm scientifically and come right (3345:3703) – D3</p>
<p>Why is the principle of equality used for allocation to black men and women while the strategy as a whole focuses on equity?</p>	<p>3:14 You must do it equitably so that no one gets disadvantaged and that helps create a standard to inform people’s behaviour towards water allocation (4224:4369) – D3</p> <p>3:15 If a single woman, for instance, applies for water there would not be any unfair discrimination (4371:4464) – D3</p>
<p>Shouldn’t policy take local contexts into account? Women land ownership being a case in point.</p>	<p>3:16 Background knowledge of people’s lives and what they make a living from has to be considered otherwise you will sit with a bad policy, a policy with good intentions but with bad outcomes. Context is of the utmost importance (4965:5202) – D3</p>

The interview with the second CSIR respondent took place on 12 March 2019. This was a face-to-face interview with a policy expert. Consent to use the interviewee’s name was also not given in this case. As with the previous CSIR respondent, the number allocated to the interview manuscript on atlas.ti is also used to identify the interviewee.

The same questions posed to the other CSIR respondent were posed in this interview. Besides the responses given in the interview, observations were also drawn from the face-to-face interview. Unlike the telephone interview, the face-to-face interview, even though much information was collected, proved to be problematic in the sense that the interviewee did not

feel the need to address the questions directly. Instead, questions were punctuated with a lot of examples from personal experiences in the field, which looked like evasion of the questions.

The delivery of the responses, however, gave the researcher an insight into how the interviewee felt about some of the key concepts used in water allocation reform. From the interview, it can be deduced that equity had not really been further interrogated to determine its suitability in the WAR discourse. Some of the key points captured from the interview on the topic of equity and progress made with the implementation of the reform strategy are contained in Table 5.4 below.

**Table 5.4: Excerpt from interview with CSIR respondent referred to as D9**

Area of focus	Quotation
Understanding equity	9:3 It was not just a case of just allocating water to the black people but also having them benefit from water use (1628:1738) – D9
	9:4 An equity dealt with the benefits of water use – e.g. a white farmer employing 100 people – not everyone wants water to farm – but if one person can create jobs then that person can get water. Those who also want to do that can set up enterprises and get an allocation – so we were dealing with small-scale livelihoods – and this was important in the constitutional right to water (1740:2121) – D9
	9:17 Sometimes I get frustrated with academics, let’s not waste time discussing English semantics, let’s do work with the communities. We are not gonna go there. Those same things you ask me today came 20 years ago (7371:7580) – D9
	9:18 You are zooming in on one little thing (8201:8239) – D9
Reform processes	9:5 a lot of the black guys do not know the processes unfortunately (2777:2839) – D9
	9:6 There are very few capacitated black officials (2843:3159) – D9
	9:7 Black people are invisible if you have incompetence (3161:3920) – D9
Why a gender focus	9:8 When I said HDI – I meant blacks, women and the disabled (3922:4009) – D9

Experience from the field	9:13 There was a protest by 300 families at Loskop Dam and we told them that there was no land there for settlement and besides, where would they get the water, there is no water in that area anywhere, Loskop dam was for transfers (5215:5444) – D9
Experience from the field	9.15 Communities cannot just be settled and then water is brought to them. It costs a lot of money to construct pipes to get water to people – there is nothing there, it is a farming area (5706:5887) – D9

It was difficult to get an understanding of what equity in the allocation of water really meant outside of the definitions and explanations available in literature. The use of equity in the reform strategy is, however, important as it is the key term needed to evaluate the reform process. It could be that the whole process needs to be redesigned if the underlying principle of the strategy is not well understood. The interviewee (D9) did not see it that way, leading him to say that “[S]ometimes I get frustrated with academics, let’s not waste time discussing English semantics. Let’s do work with the communities. We are not gonna go there. Those same things you ask me today came 20 years ago,” (Interview, 12 March 2019). Using van Dijk’s (1995:20-21) description of Critical Discourse Analysis (CDA), this can be viewed as an illegitimate form of control as this comes across as agenda setting on the part of the interviewee by choosing what should/can or what shouldn’t/cannot be discussed. Key informants in research are chosen because of their access to specific institutional knowledge and the dismissal of a researcher’s question could in CDA be construed as knowledge-power-access dynamics that may only work to maintain a status quo.

The response from the WRC interviewee on the same issue of equity expressed that the idea that a focus on the definitions of the term was delaying the process. He said that:

to split a head around those definitions was the very thing that was delaying progress if it’s not delaying it today. Because the bigger problem was that the black population in general did not have sufficient access to water [...] So I think it was just an issue of trying to address matters without looking at the broader issue of equity, but then it is still an underlying principle. (Interview, 15 August 2018)

The interviewee added that he was not sure whether there was an agreement on which terms to use and whether reasons for those choices were discussed or clarified.

### 5.2.3 The gendered focus on water allocation

Responses on the gendered focus of water allocation came from the interview with key respondents in academia, the focus group discussions and interviews with women in the Nwajaheni and Rwanda villages in the Tzaneen Municipality. Differently phrased for the different categories of respondents, the questions sought to gain an understanding of why scarce water resources had to be shared equally between black men and women.

One response that corresponded with the underlying assumptions in this study was expressed by one of the female academics. Besides questioning the policy, the respondent questioned the validity of sharing water equally between black men and women. For her, water needs had to be taken into consideration and policy had to respond to real needs and “not act in boxes” (Interview, 22 October 2018). She expressed dissatisfaction with the WAR strategy and exclaimed that “[I]t’s not as if there are hundreds of thousands of black women who are farming on an industrial scale. And in most rural areas most women are farming their land on a small-scale way, usually in their designated field, depending what their rural area and people are farming/planting based on their own needs” (2713:3012) – D4, (Interview, 22 October 2018).

The view on policy was also echoed by the other academic whose response was that:

[G]ender dynamics are usually used by policy makers to decorate their policies. What is in policy is never implemented authentically, thus equal gender distribution for me simply means that water should be allocated fairly between men and women. However, the truth is that in Africa men and women work in partnership, therefore the policy and implementation should first be faithful to this, then consider the African family system, there are single mother households, nuclear and extended family households, all these should be considered. (2441:2516) – D12 (Interview, 30 August 2018)

Views shared in the focus group discussions were more inclined towards that given by the two academics. There was consensus in the group that there had to be some form of partnership between men and women, although in the overall discussion there was no clear separation between water for productive use and that for domestic use. One female respondent stated that:

The government must come forward and tell the community about the capacity of water it has in the dams to be supplied to the community. The municipality must distribute water equally

between males and females, because if not so it will be very hard for one not to get enough water than the other one. Even if we do not get equal capacity of water, it is obvious that men have to provide for women, if women finish their water, they will go to the men to ask for water (6665:7133) – D20173. (Focus Group Discussion, 24 January 2019)

All of the five women from the Tzaneen villages that were interviewed held the same opinion, which saw equal sharing of water between men and women being fair. Two of the women had this to say:

... it is fair that it is shared equally between both parties as both women and men are involved in agricultural and other important economic activities. It should not really matter who does what as now we live in a democratic country whereby both men and women are equal. Now both parties are allowed or they share equal rights when it comes to usage of resources as well as the kind of labour involved in both economic and agricultural work. As a woman I strongly believe that water should be shared equally between men and women (337:874) – D20174. (Interview, 28 June 2019)

Another participant concurred, stating that:

The roles that were assigned to men and women by society are also changing. Women can now [be] providers of the family. During the olden days, women were the ones who worked in the fields and men in the mines. However, men are now also working in the field. Therefore, it is only befitting that men and women share water equally (3943:4269) – D20174. (Interview, 28 June 2019)

Another viewpoint on equality between men and women came from a key respondent from the Water Research Commission who specialises in policy analysis and has also written scholarly works on water allocation reform. In his explanation on the choice of equality and not equity as the guiding principle for the allocation among blacks only, he stated that:

... we saw that 'black' would cover both women and men, then you had women as well. There was a reason for that emphasis, it was seen that the most people who were seen to be disadvantaged in all this were the black women due to other cultural situations that they were not really involved in some of these discussions; it was seen to be sort of men only. But we had learnt that in our rural areas especially, it was the women who tended to be much more productive with agricultural activities. So, I think it was just an issue of trying to address matters without looking

at the broader issue of equity, but then it is still an underlying principle (2505:3472) – D6.  
(Interview, 15 August 2018)

Responses from focus group discussion members, questionnaire respondents and interviews with the women from the Tzaneen villages showed many respondents expressing that women needed to be empowered by providing an opportunity for them to access water for productive use. With regard to allocation in general, there was consensus that water should be allocated to those that can use water productively and those with the land to use it on.

#### **5.2.4 What ideas of justice did participants share?**

From the interviews and focus group discussion, justice as a concept was not dealt with head on; rather, participants shared contexts from which one would discern that justice was possible or impossible to meet. The issues some of the participants pointed to are indicators of how the historical past affects the current state of resource sharing in the country. They expressed the idea that the pre-1994 structure of resource allocation set precedence to the unjust current resource allocation. Quotations below are from two female academics who support this view:

There is a gap in thinking because of the apartheid set up of rural areas, how do you provide water on site for many households that are involved in economic uses (11990:12153) [...] before 1994, most rural areas were neglected by the government and you are just used to the water that appears naturally in springs, dams, rivers [...] (3349:3587) – D4

Another participant added that:

... in Africa colonialism stole from black people and gave white colonial families access to land and clean water at the expense of the black families, who were and are still considered as workers for the white bosses (2979:3168) [...] You cannot say sharing what was stolen is justice. Justice is when my stolen asset is brought back to me. Natural resources such as water and land cannot be treated with ignorance, one needs to go back to history and find out how these resources were allocated. (3499:3580) – D12

While the above views looked at the historical context of inequalities, other views saw responsibility to change the status quo lying with the black people. This was expressed in the following quotations:

- One of the most obvious methods of addressing the inequalities of water is of course that black farmers will have to buy properties that have a water allocation; there is not any additional water that can be allocated (5314:5923) – D5.
- There are very few young people who are willing to do farming, but the problem is laziness. Also, if you have a short vision in agriculture you will not survive as they want fast life and fast rewards. They are lazy (8899:9303) – D20173.

The issue on why young people are not interested in farming was analysed by another interviewee who noted how times had changed and how this had shifted the society's youth to levels of individualism. The respondent's words were:

People ask why young people aren't interested in farming, this is not the precolonial world where people could organise as a village, now people are living individualised lives and agriculture is not an option and with social grants it's much easier to live their lives. The culture in rural areas has changed, people cannot be organised the way they used to. Policy makers need to consider these things when they make such decisions. (Interview, 22 October 2018)

From some of the interviews, one could get the idea that justice might not be achieved through the WAR strategy. In the interview with the key respondent from AFASA, the neoliberal approach to water allocation, which is also discussed in the literature by scholars such as Movik (2012), came out. The respondent expressed the view that even though water is understood to be an economic enabler, perceptions were that giving it to black people would threaten food security. The respondent further described how white people manipulate the system in their favour by:

- being in touch with the institutions that make policy decisions
- being on boards where key decisions are made
- taking away water rights after land has been bought, etc.

These views were expressed in the following quotations:

... they even know what the government's move is going to be even before government makes the decision, why, because they are also sitting on Business Unity South Africa (BUSA) and advisory committee of ministers and all these things, so they will do what I call strategic planning around the sector. And what they do is, obviously agriculture was one of the sectors that they had

a strong hold in, they obviously resisted the entry of black farmers into those sectors and by all means they tried to discourage or sabotage government efforts in order to commercialise, we speak small-scale, they like that, because small-scale is not a threat to them, small-scale is not profitable, it keeps us in the loop of poverty, nothing small-scale is profitable, sustainable.  
(7157:7916) – D8

The participant added that:

And you find out that in some cases white farmers who sell their farms strip the farms of water rights or they reallocate their water to another farmer and then they continue using the water.  
(8527:8719) – D8

The interview with the respondent from AFASA revealed that Water Allocation Reform has major complexities that make it difficult to implement. In his responses, he also mentioned that the Verification and Validation process (V&Vs) was still taking place in 2019, a process that assists in the declarations of water allocations as Existing Lawful Users and is also followed by the compulsory licensing process. This also opens opportunities for further manipulation as indicated in an interview with a retired DWS respondent who stated that:

The reason why they went the compulsory licensing route is because water was dramatically over allocated – but people could not use all their allocations – some people had like 10M<sup>3</sup>l of water available and were not using all but when told that some of it would be taken away they cried that they were now being disadvantaged, so compulsory licensing was put here to make people happy.  
(Interview 10 November 2016)

In Critical Discourse Analysis, the quote above can be viewed as manipulation of the listener or a way of trying to manufacture the listener's support for the "crying" and about to be "disadvantaged" people whose happiness all now need to be concerned about. A procedure that is part of a reform process, compulsory licensing, is thus said to have been adopted "to make people happy". In the quotation, "people" that should be made happy are not all citizens, but those who already had water allocated to them and were worried about losing some of it even though in some cases, they "were not using all". Van Dijk (1995:19) mentioned the "need to explore which structures and strategies of text and talk to attend to in order to discover patterns of elite dominance or manipulation 'in' texts" (emphasis original).



### 5.2.5 Benefits from water use

The issue of benefits of water use was raised with some of the research participants for the interviews and the focus group discussions. In the interview with a chief engineer in DWS, socio-economic stimulation was indicated as one of the objectives of the GLeWaP, an objective that aligns with the WAR’s idea of benefits of water use. The discussion of benefits from water use was received differently in different quarters with respondents from water institutions and the CSIR supporting the idea, while stakeholders on the ground rejected the concept. This is captured in Table 5.5 with quotations from the interviews with a CSIR respondent (9.3 and 9.4), WUA respondent (5.8), focus group participant ((20173:22) and a DWS respondent (20172:5).

One male focus group participant who is self-employed as a small-scale vegetable farmer at a church garden complained that they had been told that “the only agriculture we can survive on is growing maize, but they didn’t mention that besides maize, tomatoes, onions, peanuts, green peppers, we can also survive (sic)”. The participant raised concern about having been made to focus on maize and not any of the cash crops. It thus did not seem acceptable to him that they would be told again to work for someone in order to benefit from other people’s water access, (see Table 5.5 quotation (7740:8173) – D20173).

**Table 5.5: Different responses to benefits from water use as equitable distribution of water**

<b>Quotation Reference/Respondent</b>	<b>Quotation</b>
(1628:1738) – D9	It was not just a case of allocating water to the black people but also having them benefit from water use
(6865:7131) – D5	Employment opportunities are be provided to local communities Local produce for consumption Investment by farmers in local area, either by becoming involved in existing commercial projects, or by developing new socio-economic upliftment projects in the community
(1740:2121) – D9	An equity dealt with the benefits of water use – e.g. a white farmer employing 100 people – not everyone wants water to farm – but if one person can create jobs then

	that person can get water. Those who also want to do that can set up enterprises and get an allocation – so we were dealing with small-scale, livelihoods – and this was important in the constitutional right to water.
(7740:8173) – D20173	I have my own place where I grow plants, I would rather continue like that than to get orders from someone else. If you have your land you will also create jobs for the black community. We really need water, as we have our places to grow crops so that we can eat and sell some to help in the house. As a youth, I will rather have my own land for job creation and economic development
(1112:1170) – D3	If you do not have land you cannot put your labour into it.

### 5.2.6 Complexities of the rural scope in the water allocation reform context

The discussion of water allocation reform with some of the respondents turned the focus to the realities of some of the rural areas in South Africa and how complicated such a scope was when water allocation reform had to be factored in. Even though the primary focus in this study was water for productive use, a number of respondents showed more concern with access to water for domestic use. One respondent commented that:

[B]efore laws of distributions of water are put in place it's important to make sure that every household in South Africa has access to clean running water in their households. No one, whether male or female, should walk for kilometres to get partly clean water from a dam. (5029:5299) – D20174)

Another respondent pointed out that:

[T]he most important things to consider is sanitation therefore distribution would start from home for domestic use, commercial use and other follow. ((1897:2042) – D20174)

It was also noted with regards to women and water allocation that:

[W]omen are not able in rural areas to separate their household water needs from their economic production in the field. ((9140:9258) – D4)

The other complexity that was noted was the issue of land and infrastructure. One respondent spoke about the absence of infrastructure in the rural areas as a by-product of the country's

historical past. She made a comparison of the types of access between blacks and whites when she stated that:

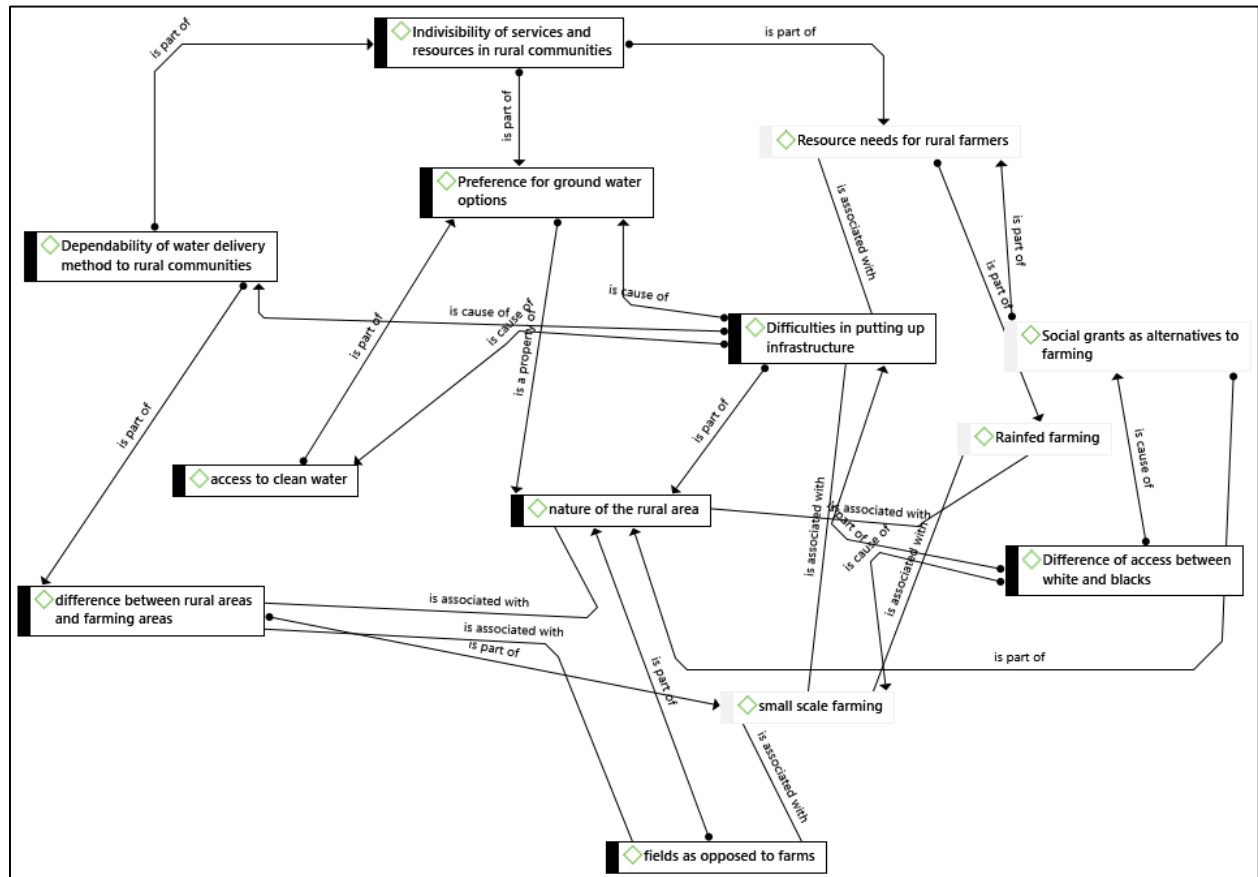
[C]ompared to the white farming areas, the most common infrastructure that they have is a windmill to help pump water from a borehole and get it into a tank or something, feed the animals, etc. That type of basic water infrastructure is not seen in the rural areas, it's still very manual and physical in the rural areas. Animals have to be taken to drink water, and water for small-scale agriculture depends on rain or people have to fetch the water by hand. It's very rare, very few, and where that may be available is in some former Bantustan where maybe they are being supported by the government with some infrastructure and are placed close to water, but it is very small-scale, it's not a norm. ((7096:7791) – D4)

This view was corroborated by another respondent who opined that “water irrigation schemes were according to the spatial planning of the apartheid government; they made these schemes in order to empower white farmers” ((760:2289) – D8).

Another noted the difficulty of having infrastructure when there is no ownership of land. The respondent pointed out that “[I]f you don't have land or land tenure or are renting with a contract, it becomes risky to set up infrastructure” ((1007:1110) – D3).

Other views from the respondents also expressed the viewpoint that the nature of the rural area did not present a suitable environment for the smooth implementation of the water allocation reform. It was also noted that even if one were to acquire land, from government or from a private purchase, funding would still be a problem if one had no water rights as observed that, “banks are saying that water rights have to be in place before they approve loans, which is further disadvantaging black farmers” (8197:8526) – D8, Interview, 13 March 2019).

Figure 5.3 below, generated through atlas.ti networks, shows there are a number of variables that link together to show how complex the rural space is. This is combined with the fact that besides the need for water for livelihoods, the rural communities continue to struggle to access basic water for domestic use.



**Figure 5.3: Rural complexities in the context of water allocation reform, extracted from atlas.ti Water Allocation Reform project**

Besides issues such as the size of the fields that the small-scale farmers have for farming, other issues converge to make water allocation implementation impossible if not irrelevant to them as they do not have enough farming implements that make WAR possible; e.g. infrastructure and land. From the diverse issues expressed in Figure 5.3, it is evident that water allocation reform has to consider the context within which it operates. This view was also expressed by a respondent who emphasised that:

[B]ackground knowledge of people’s lives and what they make a living from has to be considered otherwise you will sit with a bad policy, a policy implementing with good intentions but with bad outcomes. Context is of the utmost importance. ((4965:5202) – D3)

### **5.2.7 Knowledge about the licensing process and respondents' viewpoints**

The issue of the licensing process was investigated using the questionnaire with small-scale farmers in the Greater Tzaneen and interviews with some of the key respondents. Only one out of the 20 questionnaire respondents knew about water licensing, although he was not sure which licence he had. The rest had no idea what water licences are and knew no one who had a licence. With information on licensing being available at the DWS offices and the website as indicated by the DWS licensing official, the lack of knowledge about it by the general public is not surprising.

The issue of licensing with the other interviewees brought up different viewpoints including that of the majority of the people not knowing about the existence of a licensing system. This was expressed by two interview respondents. One was responding to the question on whether the licensing process was an enabler for new water users or a constraint. The respondent stated that:

unless there has been some recent changes that I am not aware of, for me it tended to benefit the people who are already fully aware of how the system works, because it tends to look extremely complicated and only the people who know how to navigate this thing will then be putting in the application. Some people don't even know that they have to apply for these things. It is challenge and it's not easy. (Interview, 15 August 2018)

Another indication that people on the ground did not know about licensing came from a now retired Department of Water and Sanitation respondent who was responding to the question on knowledge of compulsory licensing by the general public. His response was that:

very few people know about compulsory licensing because it is a very complex process and it has to go along with validation and verification to determine who uses what water, whether they are using it legally and what form of authorisation they have before you can actually start making changes. These are processes that have to take place before licensing takes place. (Interview, 10 November 2016)

Besides reports on the lack of knowledge about the licensing system, other interviewees expressed a viewpoint that the licensing system could also be manipulated. One of the issues pertaining to the license was that it is a piece of paper and not something physical. The

respondent's view was that due to the nature of the licence, not being physical and thus easily transferable, one would find oneself in a situation where one had land but no water rights. The respondent saw this as one of the technical challenges that was not foreseen, he stated that:

I think there was a bit of a challenge maybe unforeseen at the time, in that the NWA allowed for the transfer of water rights. So, if I had land that was being taken away from me to be given to the community for whatever reasons, and my neighbour, a cousin or a brother also had a farm and we were drawing water from the same river to irrigate our farm, and he has an allocation, and I also have an allocation, I can then transfer my allocation to my brother, and when they take the farm, the farm does not have an allocation. So maybe that was something that was a bit technical. You find that you saw the land and you saw that there was water on the land and by the time the transfer happens, the water rights are not there because water rights are not physical, it is a piece of paper. (Interview, 15 August 2018)

The issue of water transfer was also frowned upon by another respondent who described how the water transfer system was taking place. The respondent described a system where trading in water had become more lucrative than farming and expressed that the water traders had become what he called 'water farmers' (Interview, 12 March 2019). The findings here are consistent with Schreiner et al.'s (2010) finding that the licensing system privileges the "administration-proficient".

### **5.2.8 Fragmented development**

One of the issues that was raised by interview participants was on the fragmented approach used in development efforts in ways that affect how policies are implemented. Participants highlighted the issue of water reform as one strategy where integrated efforts have to be made by all stakeholder departments instead of piecemeal strategies. For instance, it was noted that the land claims commission was not in communication with the Department of Water and Sanitation, while the Department of Water and Sanitation was also not in communication with the Department of Agriculture or the Department of Rural Development and Land Reform (Interview with CSIR respondent, 12 March 2019). Working in silos was reported as one of the reasons why the government was buying land with no water rights for the people.

Another viewpoint was that the government has two policies for rural areas that work against each other, one being of giving the poor, the old and the sick, and the young social grants to satisfy basic minimum needs (Interview, 22 October 2018). The other approach the interviewee described as incoherent was one where government undertakes projects without a clear picture of what type or level of rural production is needed. To quote the respondent's words:

There is no consistent policy framework for implementing rural areas in post-apartheid South Africa, there is a project by project or programme by programme approach, but no one has said that the entire landscape of South African rural areas must turn into vibrant small-scale agriculture, then the government must then put line item budget into it. We have rural development on one side and agriculture and fisheries on another side, social welfare development on another side, all three of them, will say they want livelihoods, there is nothing worse than the discourse of livelihoods in policy making. We want livelihoods, what does that mean? Do they want full-on agricultural revival in the rural areas or not, don't say we want livelihoods. (Interview, 22 October 2018)

The fragmentation as discussed by the study's key respondents does not lie only in the separation of portfolios into different departments when there is need for coherence between the departments. It is viewed as a deep lack of resoluteness on the government's part with regard to the rural economy as a whole. While some interviewees expressed appreciation of the context within which the policy was made and gave responses such as "The strategy was put in place without looking at how the land issue would play out into the future" (Interview, 31 July 2018), others showed disappointment and felt that the policy "seems to be smoke and mirrors, it is not a policy for coherent integrated water provision ... rural economy ... will require a strong water policy, there is no agriculture without a strong water policy ...", (Interview, 22 October 2018). The same respondent advocated for an approach used by the Chinese government, which she described as follows:

China's rural and agricultural development policies are directly linked to their urbanisation policies. You cannot separate the two dynamics, the rural and the urban, what is happening in the urban area has a direct link with what is happening in the rural area. So China, of course it has forceful government, they are rather authoritarian, but they make the decisions, what we want is to know that we can take people from the villages into the urban areas and they can find jobs, and

those that stay in the villages, we need to make sure that they have a basic minimum basket of services, to make sure that they are not in poverty, and then they start picking the social indexes that they want for their rural areas ... (Interview, 22 October 2018)

### **5.2.9 Equality versus equity: study participants' views**

An online survey was carried out to examine the applicability of Rawls' distributive justice theory to the context of WAR as a strategy for redress. Titled *Understanding Justice in the Allocation of Resources* (Annexure 5), the survey had 10 questions including three that focused on the demographics of the respondents, i.e. gender, age and race, while the rest focused on the respondents' understanding of justice, equality and equity and a fair way of distributing resources as part of social redress. It is important to point out that there was no briefing on the survey brief on Rawls' original position or veil of ignorance to avoid the influence this could have on the respondents. Miller (1992:556) points out that there is a difference between what people will say is just or fair and how they will behave when asked to allocate a valuable resource. Observing how people would behave when asked to allocate resources is an important point but it is beyond the scope of this study and may require that a researcher carry out social experiments to discover any such behaviours. Miller (1992:557) adds that the allocation of resources can be observed from how institutions allocate resources in practice, which for this study is detailed in the literature review.

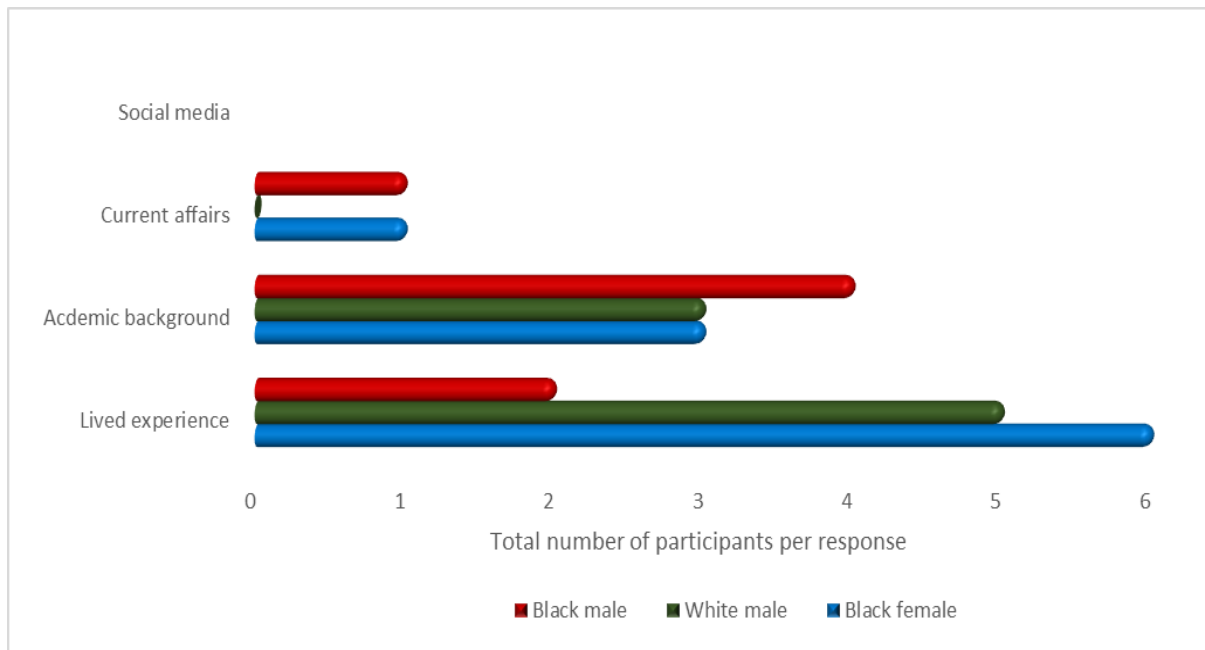
The online survey was open for six weeks and the number of respondents were 14 males and 10 females. After receiving the invitation to participate through an invitation letter send either by the researcher, the Letaba Water User Association channel or through snowballing by already invited potential participants, a total of eight responses were received from white males while 16 were from blacks, 10 of them female and six males. There were no responses from white females or other racial groups. The findings generated from their inputs are given below.

### **5.2.10 What informs your idea of what is just or fair?**

There were four options to choose from. The option that was chosen by the most respondents was lived experience, followed by academic background (Figure 5.4). Only two respondents chose the current affairs as influencing their idea of what is just or fair. None of the respondents chose social media as an option even though social media may currently be considered an



influencer on public opinion on issues. The fact that none of the respondents were influenced by social media on what informs their understanding of what is just or fair means the assumption that it would was incorrect. This realisation is consistent with Livingstone's (2015) assertion that mass media is not passively consumed. So even if respondents do use social media, it certainly did not influence their views on justice.



**Figure 5.4: What informs participants on what is just or fair according to race and gender**

### 5.2.11 What in your opinion is equality about?

The question on respondents' understanding of equality was one of the open-ended questions, to give room for respondents to explain the concept in their own words. Out of the 24 participants, four skipped the question while 20 responded. Eight of the responses expressed consideration for fairness and same treatment regardless of physical differences which is akin to humaneness found in the *Ubuntu* philosophy. Seven other respondents did not separate their understanding of equality from the context of resource allocation, hence responses such "fairness and equal distribution of resources and services among all people". An interesting link was drawn to the similarity between equality and equity. In isiZulu, equity and equality mean the same, both denoting fairness as expressed in the term *ukulingana*. Equality was also viewed

as something that should relate to skills. This is synonymous with meritocracy which in Jones' (2007) explanation of equity, has an emphasis on differences and fair competition. Such values are viewed as economic values when rewards are given "to those who appear to contribute the most" (Deutsch, 1975, section 3.2 of this study). According to Sandel's (2009:160-164) analysis of Rawls' rejection of moral desert, the skills that allow one to compete more successfully than others are not entirely their own doing. This has to be factored in when equality in resource access is linked to a skill set when discriminatory practices created differences in the acquisition of the skills. A large number of responses on this question, however, leaned more on equality within the value systems embraced in *Ubuntu* philosophy.

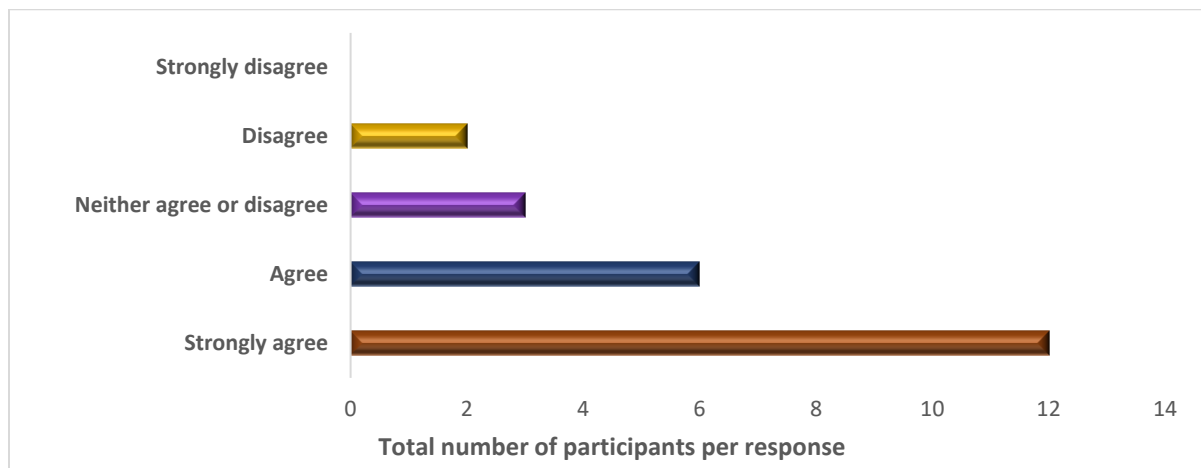
### **5.2.12 Which option best describes your understanding of equity?**

The options provided to respondents for this question are sampled from literature on equity principles as espoused by Young (1984), Jones (2009) and the World Bank (2005), (all discussed in 2.2.1 of Chapter 2). Most of the respondents, 16 out of the 24, chose 'equal chance for all' as their understanding of what equity means. This was followed by 'distribution according to most deserving' which was chosen by four; 'distribution according to need' opted for by three and lastly, 'each person is satisfied by what they have' chosen by one person. None of the participants chose to indicate that they had difficulty understanding equity.

### **5.2.13 Principles for resource allocation and consideration for the poor**

Frohlich, Oppenheimer and Eavey (1987:606-607) point out that Rawls thought that "a set of individuals would unanimously choose, as the governing principle of distributive justice, to maximize the welfare of the worst-off individual in the society". Rawls (1971) also imagined a well-ordered society acting on a common understanding of justice. Results from the survey, Figure 5.5, however, show differences of opinion on the maximisation of the welfare of the worst off but with more individual participants choosing to better the welfare of the poor. Rawls (1971:454), however, argues that "conceptions of justice must be justified by the conditions of our life as we know it or not at all". Responses from the 23 respondents who answered the question show different conceptions of justice. It has been noted that society's conception of justice is acquired from governing institutions (Rawls, 1971). The privileging of those who are

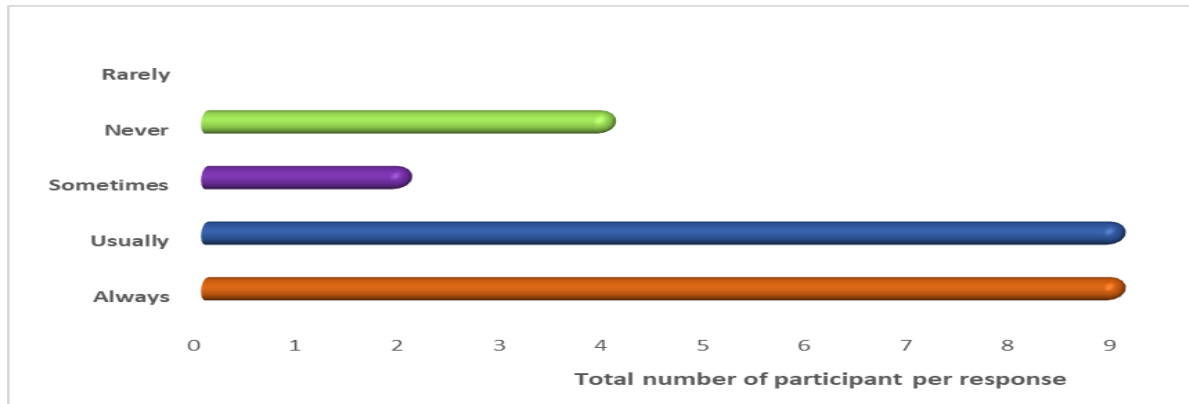
better off as maintained in the NWA and the Constitution provides for an ill-ordered society with no common conception of justice.



**Figure 5.5: Allocation principles to make the poor better off**

#### 5.2.14 Merit principles in resource allocation

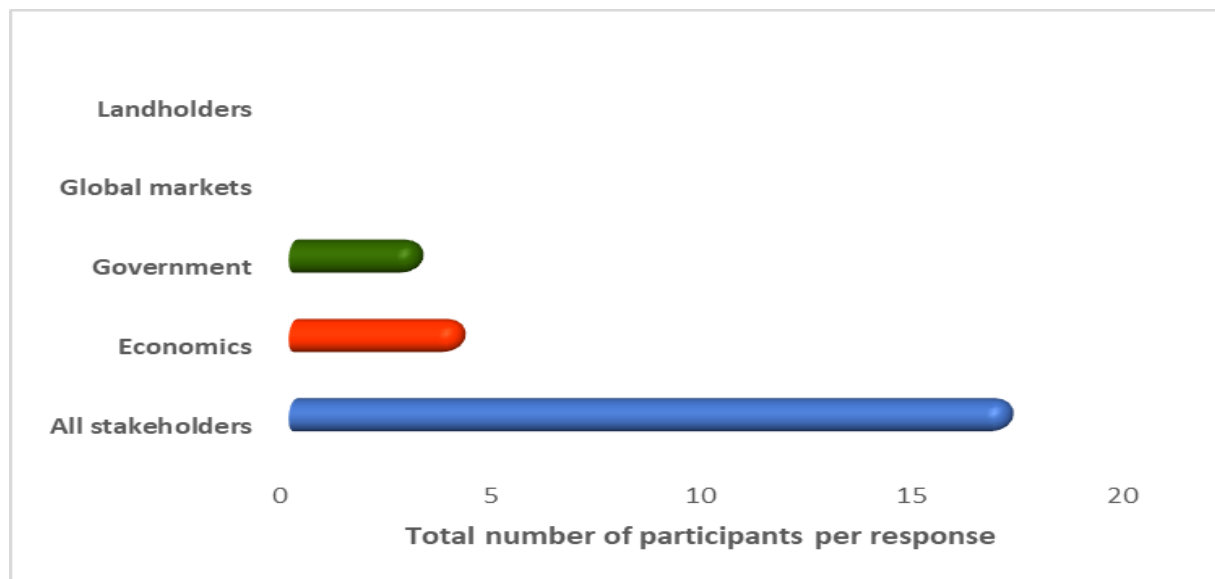
The question on allocation based on who uses the resources best was set to capture respondents' understanding of the underlying systems that may exclude some from accessing resources on the basis of their "inability to use the resources". Phrased as follows: 'Allocation of resources as part of redress of past discriminatory practices should consider who uses resources best' with options showing levels of congruence, it was shown from the responses that meritocracy was considered to be the best principle for the allocation of resources. Others seem to have considered the context of redress and opted for skills to never be considered while others thought there were times they ought to be considered. The responses captured for this question are given in Figure 5.6.



**Figure 5.6: Responses on link between resource access and ability to use the resources best**

### 5.2.15 Who or what should govern laws on water allocation?

The question requested of the participants to choose an institution that would best allocate water justly. Rawls (1971) suggests that for just outcomes in distributive processes, there is need for proper arrangements of institutions concerned. Institutions are thus expected to provide for equality of opportunity and prevention of the “establishment of monopolistic restrictions and barriers to the more desirable positions” (Rawls, 1971:275). Participants’ choices were thus a reflection of their level of confidence with the different institutions that were listed as options (Figure 5.7). Most of the survey participants indicated that they preferred that laws on water allocation be governed by all stakeholders. Economics and the government were also chosen by four and three participants respectively. Landholders and global markets were not considered as options from the list of choices.



**Figure 5.7: Respondents’ choice of institution to govern laws on water allocation**

### 5.2.16 Responses to the ‘veil of ignorance question’

For this question, the respondents were supposed to assume ignorance about their status in life, their gender, race, age and abilities and propose what they would agree on as grounds for the sharing of limited resources. This question assumes what Rawls would have considered an ‘original position’ or the ‘veil of ignorance’. In his explanation on how to achieve the ‘original position’, Rawls suggests the following:

... if a man knew that he was wealthy, he might find it rational to advance the principle that various taxes for welfare measures be counted unjust; if he knew that he was poor, he would most likely propose the contrary principle. To represent the desired restrictions, one imagines a situation in which everyone is deprived of this sort of information. One excludes the knowledge of those contingencies which sets men at odds and allows them to be guided by prejudices. In this manner the veil of ignorance is arrived at in a natural way (Rawls, 1971:18-19).

Three respondents from the total of 24 skipped the question. The given responses are tabled in Table 5.6 according to the respondent’s subgroup.

**Table 5.6: Respondents’ application of the original position to principles for sharing limited resources**

<b>Respondent subgroup</b>	<b>Age</b>	<b>Response to the question: Supposing you did not know your gender, race, age and abilities; what would you agree on as the grounds for sharing limited resources?</b>
Black female	48	Ensuring that all the people have the necessary resources
Black female	34	Who needs it most
Black female	47	Equal chance of access and use resources for all
Black female	36	Equal sharing of water resources based on individual needs to maximise sustainable use of limited resources
Black female	50	Economic background
Black female	50	Distribute according to need
Black female	24	50/50
Black female	51	Limited resources should be shared according to the need. Most needy people should receive more help as opposed to the well-resourced individuals
Black male	56	Equality
Black male	53	Nothing
Black male	26	Most disadvantaged group
Black male	55	Resources should be shared to those who didn't even have anything
White male	42	Where it is needed the most in order to make a better economy
White male	75	Everybody should live their lives equally
White male	69	Share but do not abuse “education”
White male	69	1. Wastage education 2. Increase storage capacity. Allocation per % economic contribution with a maximum limit
White male	44	Financial return on use of resource

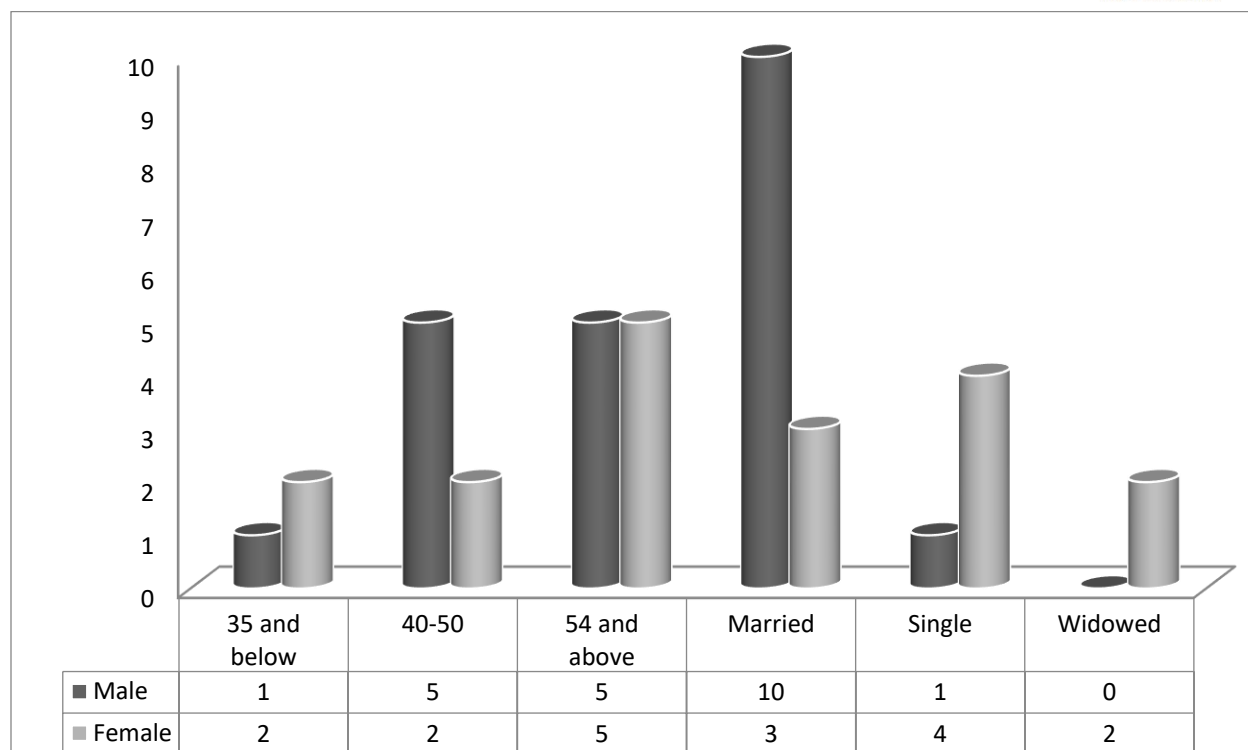
White male	49	Best use for all. Allocation of resources to parties that will waste or not use effectively is not optimal. Do not penalise current economic users just on their background
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### 5.2.17 Findings on the small-scale farmers' water needs

Data from the resource mapping questionnaires was first tabulated in the transcription process and presented according to the different sections of the questionnaire. The questionnaire comprised of three sections, the first section was on respondents' demographic profile, the second on resources respondents had access to, and the third on resources the respondents needed. The transcription from questionnaires to a table presented itself as the first stage of categorising the data in terms of its value to the research questions. Although all questions in a questionnaire are supposed to add value, response rates to a particular question gives a new understanding based on what respondents themselves value as important as well.

#### 5.2.17.1 *Demographics of the small-scale farmers*

The profile of the small-scale farmers was drawn using the first section of the questionnaire (Figure 5.8). Questions regarding their gender, age, marital status and main source of household income were asked as these would later assist in drawing comparisons relevant to the study. A total of 26 questionnaires were completed but only 20 were used for the analysis, which was consistent with the proposed number of resource mapping participants at the beginning of the study. From the 20 completed questionnaires, 11 (55%) were completed by men and nine (45%) by women. Compared to the statistics provided by Stats SA (2016) on agricultural households, this is a fair representation as there are more males than females involved in agriculture except from the 70 and above age-group, where women are more active in agriculture compared to their male counterparts.



**Figure 5.8: Demographics of small-scale farmer respondents**

*5.2.17.2 Period respondents had lived in their villages*

Respondents' period of living in their villages ranged from three to 86 years. Two respondents out of the 20 did not indicate how long they had lived in their village, Nkambako. Other respondents from the village had lived in Nkambako for 60, 40, 26 and three years, respectively. The respondent from Nkowankowa indicated that his family (including his parents) had lived in the village for 86 years. He had inherited the land from his father. The two respondents from Rikhotso village had been there for 63 years, and 29 years, respectively. The respondents from N'wamitwa N'wajaheni had lived there for 41 years and 26 years, respectively. Of the three respondents from Runnymede, one had lived there for 46 years while the other two had lived there for 30 and 24 years, respectively. The two respondents from Dan Extension had lived in their village for five and 10 years, a shorter period compared to the average of the other villages. From Ward 20 and Mavele Village the respondents, one from each village, had lived in their villages for 24 and 14 years, respectively. The number of years has significance in that



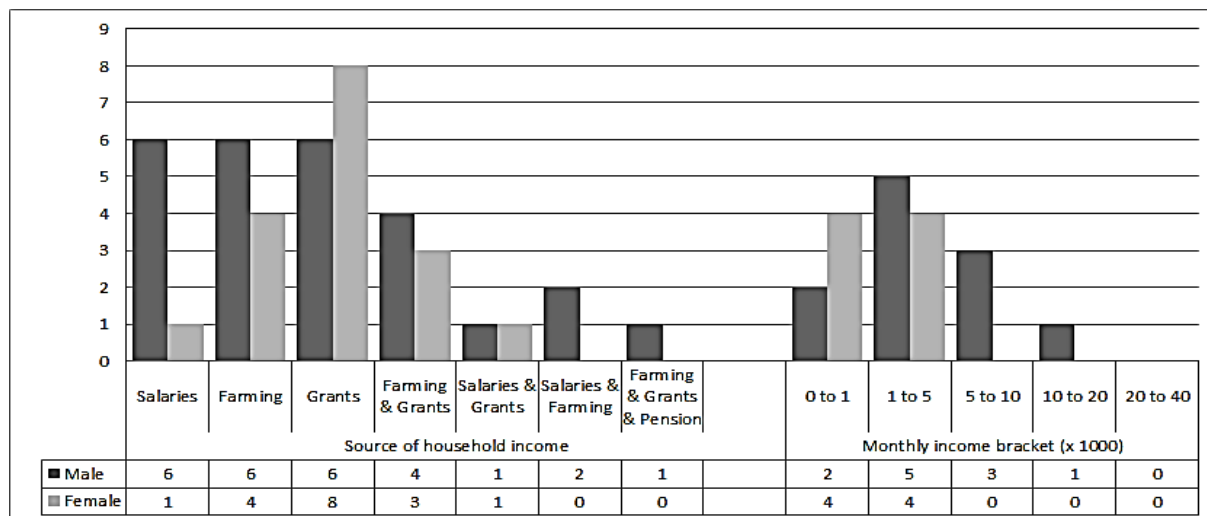
participants would have been living in the area before and after the allocation reform programme came into effect.

### 5.2.17.3 *Small-scale farmer respondents' socio-economic status and resource needs*

Most of the farmers farmed on a very small-scale with 50% of them gaining some income from their farming activities. Out of the 20, only one farmer in Nkowankowa had a big farm with a borehole and some farming equipment, as well as access to the Letaba River where he extracted water for irrigation. The rest indicated that they were not very close to the rivers or any large water sources and depended largely on rain for water or fetched it from rivers with wheelbarrows or other means. The farming practices were largely reported as manual.

Resource needs included more land and water, although water needs were not limited to farming needs alone. Respondents indicated that they needed water for both domestic and farming needs. Others indicated that they needed water to sell to the community as there were problems with accessing it and they could earn some income by selling water. Twelve (60%) of the respondents indicated that they would want more water to sell (at R1 per 25 litres, which is more expensive than the municipal rate of R3.96 per kl (Greater Tzaneen Municipality, 2018b). Most of the participants had incomes from a combination of different income-earning activities as shown in Figure 5.9.

An assessment of their needs revealed that they needed more land, more water and the basic farming tools, as well as infrastructure that to make their farming practice less labour intensive. Table 5.7 describes what the small-scale farmers have access to with regard to their everyday and livelihood needs. Some of the villages have very low groundwater potential as discussed in the literature (cf DWA 2010c – section 3.5.4 of Chapter 3).



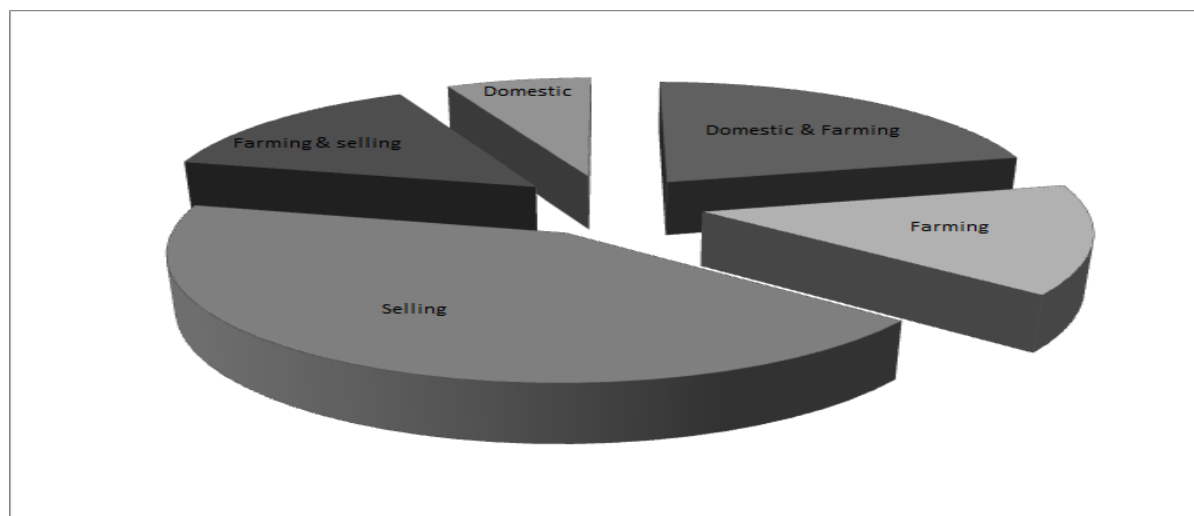
**Figure 5.9: Main source(s) of income and monthly income bracket**

**Table 5.7: Resource access in different villages/wards**

Village name/Ward number	Total no. of respondents	Source of domestic water	Source of water for productive use	Land size	Farming equipment available
Rikhotso	3	Borehole	Borehole	2 acres	Irrigation pipes, borehole
Nkambako	6	Borehole (salty)	Borehole Ritavi River	Piece of land adjacent to homestead	Buckets
N'wamitwa N'wajaheni	3	Borehole	Borehole Rain N'wanezi River	Piece of land adjacent to homestead	Irrigation pipes, storage tanks
Dan Ext 2	2	River Borehole	Ritavi River	Piece of land adjacent to homestead	Buckets
Ward 20	1	Ritavi River	Ritavi River	Piece of land adjacent to homestead	Buckets
Mavele	1	Letaba River	Letaba River	Piece of land adjacent to homestead	Buckets
Runnymede	3	Borehole Water tanks	Borehole	Piece of land adjacent to homestead	Buckets Spades Forks

Nkowankowa	1	Letaba River	Letaba River	52 acres	Pump for extracting water from river Irrigation pipes Tractor
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Water needs were shown to fall into different categories as in Figure 5.10. Respondents from the Mavele, Rikhotso, N’wamitwa N’wajaheni, Nkambako and Dan Extension 2 villages expressed the need for access to more water so that they could sell it to the community. Although practising farmers, respondents showed that domestic and farming water needs could not be separated and that farming water needs could not take precedence over domestic needs. The same sentiments were expressed in the focus group discussions where domestic needs could not be separated from productive uses.

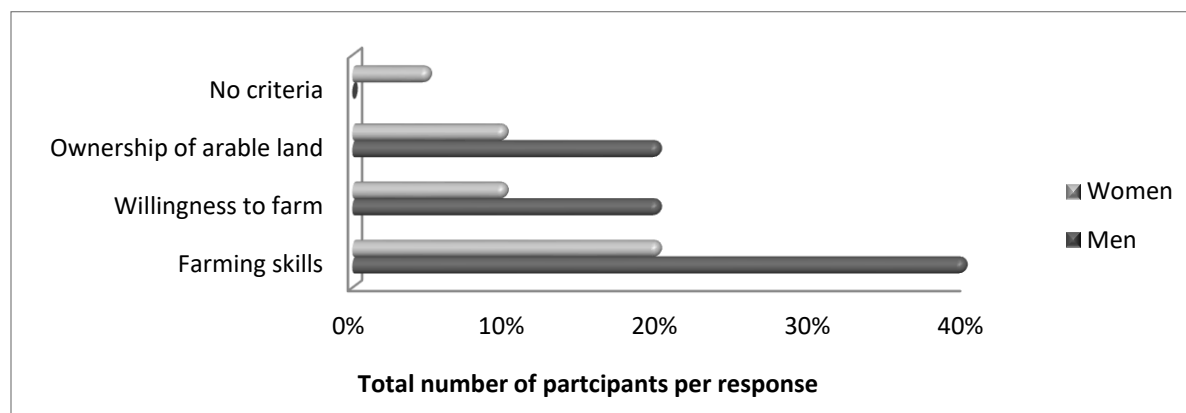


**Figure 5.10: Priorities in small-scale farmers’ water needs in Tzaneen**

#### 5.2.17.4 *Criteria for water allocation*

Resource needs questionnaire respondents were given four criteria to choose from regarding the allocation of water. While in the literature certain criteria are recommended for the sharing of water resources, in this study, the given option was chosen on their relevance to the local context within of the farmers. The questions in this part of the questionnaire thus did not seek to be experimental and did not include choices such as the efficiency of water use, or historic or current water uses. From the given options, most of the male respondents thought that having

farming skills, willingness to farm and ownership of arable land were the biggest criteria for sharing water. and. The female participants ordered the options in a similar hierarchy with one female participant also indicating that there was no need for a criterion to allocate water. The summary of the findings is shown in Figure 5.11.



**Figure 5.11: Criteria for water allocation defined by small-scale farmers in Tzaneen**

### 5.3 Findings from quantitative data

The quantitative data consists of the licensing data provided by the DWS in the form of excel spreadsheets. The analysis of data gathered by someone else is described by Neuman (2014) as “secondary data analysis”. Secondary data analysis can be used to address old or new questions not related to the original purpose the data was collected for (Neuman, 2014:384; 386). In the context in which Neuman discusses secondary data analysis, already existing data can be used for the consideration of a totally new research problem, e.g. analysing religious issues from health survey data (Neuman, 2014:384). Secondary data analysis in this study makes use of secondary data on water licensing, quantitative data obtained through qualitative engagements with key respondents in the study. Of importance in this study is the licensing statistics in as far as they address distributive justice questions as conceived in this study.

#### 5.3.1 Findings on the water licensing status and statistics

This section makes use of secondary information gathered through the qualitative process. Inquiries on the licensing status and statistics led to a request for access to licensing data from the Department of Water and Sanitation. Licensing data, according to the records, revealed that

a total of 21 648 customers were approved and these include all customer types, that is, companies, individuals, national and provincial departments, water service providers and water user associations. Of the approved licences, only 1 679 were for individuals. The Pongola-Umzumkulu WMA had the highest number of individuals with approved licences at 442, followed by Limpopo WMA with a total of 355.

**Table 5.8: Approved licences per WMA by customer type**

WMA	CUSTOMER TYPE					
	Company	Individual	National Department	Provincial Department	Water Service Provider	Water User Association
Berg-Olifants	750	86	55	168	348	3
Brede-Gouritz	282	54		4	265	25
Inkomati-Usuthu	776	23	3	4	63	1
Limpopo	2 143	355	21	7	89	3
Mzimvubu-Tsitsikama	1 719	81	0	9	1 394	0
Olifants	4 931	171		1	28	9
Orange	1 037	146	2		237	5
Pongola-Umzimkulu	2 361	442	29		332	3
Vaal	2 836	321	2	18	425	0
<b>Total</b>	<b>16 835</b>	<b>1 679</b>	<b>112</b>	<b>211</b>	<b>3 182</b>	<b>49</b>

Source: DWS (2018d)

### 5.3.2 Existing lawful water use registrations

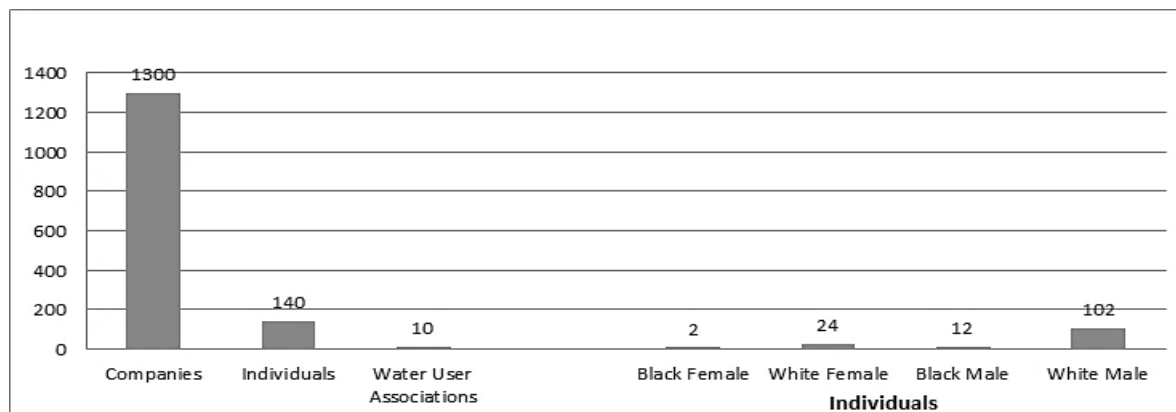
In the water management area in which the case study area falls, the Olifants, there are 1 300 companies with existing lawful use rights and 140 individuals (Table 5.9 and Figure 5.12).

Registration of existing lawful users remains ongoing with the largest number of registered users having been recorded in 2017 (Figure 5.13). Statistics from seven of the nine water management areas also reveal that there are more companies with existing lawful use rights than other customer types (Table 5.9). An interview with an AFASA respondent, a key respondent for the study, revealed that commercial farmers realised that “agricultural infrastructure would be in the hands of white companies or entities” so they joined the companies where they “receive loyalty points”, (Interview, 12 March 2019).

**Table 5.9: Existing lawful users per WMA by customer type**

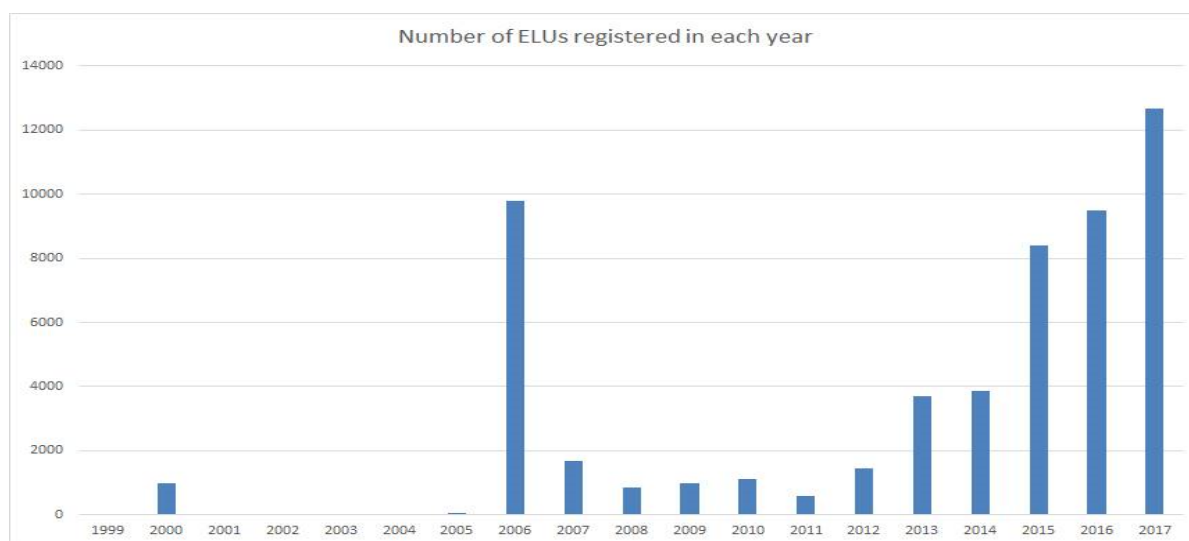
WMA	CUSTOMER TYPE						
	Companies	Individuals	National Departments	Provincial Departments	WSP	WUA	Total
Berg-Olifants	0	7	0	0	0	0	<b>7</b>
Brede-Gouritz	6 447	1 183	0	0	16	73	<b>7 719</b>
Inkomati-Usuthu	3 067	413	12	11	138	112	<b>3 753</b>
Limpopo	3 380	2 443	36	0	10	408	<b>6 277</b>
Mzimvubu-Tsitsikama	5 397	2 531	0	0	145	5	<b>8 078</b>
Olifants	1 300	140	0	0	0	10	<b>1 450</b>
Orange	7 138	9 140	70	40	52	2	<b>16 442</b>
Pongola-Umzimkulu	3 208	972	0	7	7	0	<b>4 194</b>
Vaal	4 315	4 868	18	6	415	95	<b>9 717</b>
<b>Total</b>	<b>34 252</b>	<b>21 697</b>	<b>136</b>	<b>64</b>	<b>783</b>	<b>705</b>	

Source: DWS (2018d)



**Figure 5.12: Recorded existing lawful users in the Olifants WMA**

*Source of data: DWS (2018d)*



**Figure 5.13: Number of individual and company ELUs registered each year**

*Source of data: DWS (2018d)*

### 5.3.3 Water licences by gender and race per WMA

While Table 5.8 draws attention to licences granted to different customer types, Table 5.10 focuses on the progress made in terms of addressing the gender and racial disparities. The objective of redressing gender inequalities as envisaged in the WAR programme appears far from being accomplished as in all represented race groups, men have far more licences than

women. The situation is slightly different where race is concerned as the total number of black licence holders is slightly higher than that of their white counterparts. A closer look at the statistics, however, reveals that licensed male white water users still outnumber licensed male black water users. Of the 828 licensed black water users, 637 are men, while 694 of the licensed white water users are male. Sixty percent of all water rights for ELUs are companies, and 64% of all licensed water users are also companies. Considering that water licences are being established now, it is clear that there are more users who are registering their water rights as companies rather than individuals. Registration under companies could be hiding the demographics of the beneficiaries of water rights given the limited transparency of company ownership. A DTI (2014) report shows that of all the companies in the country, only 3.9% are black-owned. The percentage involvement of black people in company ownership is significantly low to reverse water allocation inequalities in any catchment. The high number of individual ELUs as shown in Table 5.11 also increases the total number of authorised water users in control of the white population in ways that normal licensing may not be able to balance.

**Table 5.10: Water licences per Water Management Area by race and gender**

WMA	Asian		Black		Coloured		White		Total per WMA
	Female	Male	Female	Male	Female	Male	Female	Male	
Berg-Olifants	0	1	0	0	0	0	10	75	86
Brede-Gouritz	0	0	2	3	8	30	1	10	54
Inkomati-Usuthu	0	0	0	7	0	0	4	16	23
Limpopo	0	0	62	248	0	0	0	41	355
Mzimvubu-Tsitsikama	0	0	1	12	0	1	0	66	80



Olifants	0	0	22	106	1	1	0	29	159
Orange	0	0	3	5	4	7	15	111	145
Pongola-Umzimkulu	1	2	86	216	0	0	3	134	442
Vaal	0	0	5	40	6	11	39	212	313
<b>Total per race group</b>	<b>4</b>		<b>828</b>		<b>70</b>		<b>777</b>		

Source of data: DWS (2018d)

**Table 5.11: Individual ELUs per WMA by race and gender**

WMA	Asian		Black		Coloured		White		Total per WMA
	Female	Male	Female	Male	Female	Male	Female	Male	
Berg-Olifants	0	0	0	0	0	0	0	7	7
Brede-Gouritz	0	0	0	0	17	0	120	1 046	1 183
Inkomati-Usuthu	0	3	0	0	0	10	81	319	413
Limpopo	0	16	1	12	0	0	229	2 185	2 443
Mzimvubu-Tsitsikama	0	0	16	4	0	0	141	2 370	2 531
Olifants	0	0	2	12	0	0	24	102	140
Orange	0	2	3	19	47	97	940	8 032	9 140
Pongola-Umzimkulu	0	14	9	7	0	1	138	799	972
Vaal	0	1	5	40	2	7	512	4 301	4 868
<b>Total per race group</b>	<b>36</b>		<b>130</b>		<b>181</b>		<b>21 346</b>		

Source of data: DWS (2018d)

#### **5.3.4 Period for which water has been drawn by existing lawful users in the Olifants**

The DWS (2018d) records show the date on which a registered volume of water was effected covering the dates 1900 through to 2017. The records reveal that from 1900, lawful registered users were companies and a single white individual (with two more in 1948) until 1959 when three black males also registered to use unknown amounts of water. Table 5.12 shows the trends in which water users, where applicable, by race and gender, have had registered access to water since the recorded dates as captured using the registered volume effective date. The actual volumes for the different customer types are omitted from this analysis as there are many blanks in the data.

**Table 5.12: Lawful users by registered volume effective date in the Olifants**

	Companies	Black Males	Black Females	White Males	White Females	WUA
1900	150	0	0	1	0	0
1920	2	0	0	0	0	0
1926	4	0	0	0	0	0
1932	4	0	0	0	0	0
1937	91	0	0	0	0	0
1945	16	0	0	0	0	0
1948	1	0	0	2	0	0
1949	3	0	0	0	0	0
1950	2	0	0	0	0	0
1951	3	0	0	0	0	0
1954	2	0	0	0	0	0
1955	7	0	0	0	0	0
1958	50	0	0	0	0	0
1959	0	3	0	0	0	0
1960	12	0	0	0	0	0
1961	1	0	0	0	0	10
1963	4	0	0	0	0	0
1965	17	0	0	11	0	0
1966	0	0	0	0	8	0
1971	0	0	0	12	0	0
1975	0	0	0	2	0	0
1976	0	0	0	1	0	0
1980	0	0	0	1	0	0
1981	0	0	0	3	0	0
1983	0	0	0	2	0	0
1985	0	0	0	1	0	0
1990	0	0	0	4	0	0
1991	0	0	0	1	0	0
1992	0	0	0	2	0	0
1994	0	0	0	5	0	0
1996	0	0	0	3	1	0
1998	0	4	1	1	0	0
2001	0	0	0	1	0	0
2002	0	0	0	2	2	0
2009	0	0	0	0	2	0
2013	0	0	0	17	2	0
2014	0	0	0	9	0	0
2015	0	2	1	6	1	0
2017	0	0	0	2	0	0

*Source of data: DWS (2018d)*

## 5.4 Unexpected viewpoints or comments from study participants

From the interviews with the study participants, some viewpoints were revealed that were not anticipated when going into the study. These views were either expressed by single individuals or represent the not so obvious opinions that may be viewed as belonging outside of identified categories, yet still important as recurrence of a theme should not be the only determinant of what themes come out of a study.

- (i) A view was expressed by a respondent on the overall impression she got from the water allocation strategy. She said that the “intersectionality of land and water in Africa was overlooked”, leading the respondent to characterise the distributive strategy as a “colonial strategy”.
- (ii) The issue of individual water rights for women was viewed as inapplicable to black women as they are understood to share what they have with their families and even the community. This is consistent with some of the reviewed literature. Two key respondents, however, expressed the need for water strategies to consider women’s specific needs and their responsibilities. One of the respondents suggested that women be given more water than men, “if not ownership” of water.
- (iii) Racial labelling was used to explain the failed implementation of the WAR strategy. This was expressed by respondents’ phrases such as: “There are very few capacitated black officials”; “they were trying to bring in black staff, it was very uncomfortable working at that stage”; “black people are invisible if you have incompetence”.
- (iv) A respondent implied that some black people were not interested in producing their own food or goods, and pointed out that: “The communities were only interested in subsistence, that kind of stuff, the few goats and the chickens ... not on a big scale – a lot of their children were moving to the cities, it was only the old folks. It was all about looking at the community dynamics in terms of what they wanted to do in terms of livelihoods”.
- (v) Views expressed by the focus group participants were mostly on water for domestic use.

- (vi) The survey on the understanding of justice revealed that some participants were unable to assume the original position and therefore could not suggest distribution principles from a veil of ignorance. An example is the following response to question 10: “Best use for all. Allocation of resources to parties that will waste or not use effectively is not optimal. Do not penalise current economic users just on their background”.
- (vii) One of the farmers who responded to the resource needs questionnaire in Nkowankowa indicated that the municipality wanted to take some of his land to extend the municipal cemetery. He further added that the municipality had promised him electricity connection if he agreed to give away some of his land.

## **5.5 Challenges faced in the study**

### **5.5.1 Finding study participants**

In line with the University of Pretoria ethical guidelines, ethical clearance has to be granted before a researcher can proceed with conducting a study. The procedure involves obtaining consent from the institutions concerned or submitting a letter of consent signed by participants when and if they agree to participate in the study. Gaining consent from individuals was easy while consent from individuals who were part of institutions was met with bureaucratic challenges. Once institutional representatives had signed consent forms, gaining access to the participants was very difficult as the same representatives that had signed the consent agreement now put up walls and did not allow access. It turned out that farmers were an unreachable community and black farmers in particular turned out to be a “hidden population” (to borrow from Rodney Lemery, in Schwiesow, 2010:27). Schwiesow (2010:28) recognises that to reach research participants sometimes one has to go through institutions “which may put (up) barriers”.

When finally the institution supposedly agreed to take part, there was still no urgency on their part, leading the researcher to pursue other options to access farmers, particularly black farmers, as they were the ones who were inaccessible. Not many responses came from the participants identified through snowball sampling, leading to the use of another sampling method,

homogeneous convenience sampling. Sixteen more responses were received after this, resulting in a total of 24 participants altogether. From the responses and the initial analysis of the received responses, it was clear that further data collection was not necessary. It is at this point that the representatives of the Black Farmers communicated to ask if it was too late for them to participate. However, at this point, enough data had been gathered that also covered black farmers.

## **5.6 Emerging themes from the fieldwork**

A theme has been described by Saldana (2009:13) as “an outcome of coding, categorisation, and analytic reflection”. The recognition of themes is influenced and persuaded by the objective of the study, as stated in Chapter 1, as the assessment of a water infrastructure development project, the GLeWaP’s deliberateness in the allocation of water to HDIs. The following five themes emerged from the primary data:

### **Theme 1: Challenge-filled reform process**

Sub-theme 1: Indivisibility of services and resources in rural areas

Sub-theme 2: Small scale farming and its (in)significance in water allocation

Sub-theme 3: Underlying systems of exclusion

### **Theme 2: Justice and historical context**

Sub-theme 1: Manipulation of reform processes

Sub-theme 2: Government responsibilities and roles

### **Theme 3: Gaps between policy and practice**

Sub-theme 1: Land and water linkages in allocation of water

Sub-theme 2: Absence of a comprehensive rural development policy

### **Theme 4: Gender and the allocation of resources**

Sub-theme 1: Gendered responsibilities

Sub-theme 2: Gender in context

## **Theme 5: Deficit discourses about black competence**

### **5.7 Conclusion**

The chapter presents findings from the qualitative and quantitative data. The chapter demonstrates that indeed, subjects of social science inquiry do think and talk as observed by Bertuax (1981). The Great Letaba River Water Development Project is shown as having diverse objectives, some of which are not aligned to water allocation for the historically disadvantaged. From the qualitative data, findings reveal that the rural context within which water allocation reform has to be rolled out appears unknown to the policy maker as there are many gaps between what people on the ground need and what policy makers think they need. Findings from interviews and the focus group discussions reveal that domestic and productive water are indivisible and domestic water needs are urgent enough to make the discussion of water for productive use almost inappropriate. Quantitative data revealed inequalities in access and allocation to water resources. Even though the statistics show a number of black people, mostly black males, had obtained water licences in the Olifants water management area, much of the water resources are in the hands of companies and white individuals through existing lawful use rights.

The chapter, however, does not account for all the data that was collected or all the quotes that came out of the interviews and interactions with study participants. This does not mean that the data is discarded, as it will be included in the discussion chapter as it forms part of the broader understanding of the findings. In the following chapter, the findings are discussed guided by the study's research questions, the emerging themes and parallels drawn with the literature and the distributive justice theory.

# Chapter 6

## 6 DISCUSSION OF FINDINGS

### 6.1 Introduction

The previous chapter describes the data analysis process and presents the findings from the qualitative approach which produced both qualitative and quantitative data. In this chapter, the findings presented in Chapter 5 are discussed and interpreted further, using literature and the distributive justice theory as explained by John Rawls, where applicable. Chapter 5 also presents brief analysis of the findings to avoid what Neuman (2014:522-523) calls “error of segregation”, which happens when data is separated from the analysis in a way that prevents readers from seeing the connection. Chapter 6 also describes how the specific study objectives were achieved. It makes its starting point, the discussion of the extent to which the research questions are addressed. The chapter then moves to the unpacking of the themes as identified in Chapter 5 from the empirical data then moves on to other themes as identified in the reviewed literature.

### 6.2 How the study addressed research questions

Through a triangulation of data collection techniques with 73 participants (10 key respondents, 20 questionnaire respondents, 24 online survey respondents, 14 focus group participants and five female interview respondents), the researcher gathered information to answer the study's research questions. The main objective was to find answers to the question on whether water resources can be deliberately allocated to the Historically Disadvantaged Individuals and given the scarcity discourses, if it was necessary to allocate by gender rather than to households. John Rawls' theory of distributive justice was employed in the study as it offers notions of justice where inequalities are only acceptable if they make the lives of the worst-off as better as possible.



In Chapter 1, the researcher listed a number of research questions to guide the study towards answering the research objectives. The information gathered through the study participants and the review of literature is applied in the discussion of the research questions.

### **6.2.1 How equity arguments are constructed in the WAR strategy**

Literature offers a wide range of arguments for equity in the distribution or allocation of resources. There is, however, a gap in the understanding of equity in the allocation of water, especially in a context of policy reforms. In terms of its meaning, scholars such as Wilder (2008) have opined that equity in water management is difficult to define and measure. If equity is ill-defined, this begs the question of whether it can still be the path to justice in the distribution of water. Wilder and Ingram (2014) note that equity can be realised in specific contexts. Responses from study participants, however, do not provide one with an understanding of equity as something for the benefit of HDIs. While Wilder and Ingram (2018) suggested that the elevation of equity was meant to neutralise the dominance of neoliberal views in water governance, responses by one respondent in this study (D9) seem to suggest the exact opposite. Findings from this study revealed a discussion of equity as being difficult as reported in Table 5.4, where equity was reduced to just “English semantics” and the researcher’s interest portrayed as “zooming in on one little thing”, yet in development discourse, words cannot be assumed to be neutral. It was important to situate equity in the water allocation discourse without taking its effects for granted given the slow pace of transformation or the lack of it.

While study respondents could not support the choice of the use of the principle of equity in the water allocation reform strategy, in literature, equity is presented as a very broad term with some scholars identifying specific equity principles in the allocation of resources (section 3.2.1 of Chapter 3). Literature also identifies equity as a process through which differences can be recognised and used to better the circumstances of the least advantaged (Figure 3.1 of Chapter 3). In this study, however, respondents’ view of equity did not show prior engagement with the equity concept in a way that assures policy beneficiaries or policy researchers that equity in the allocation reform in South Africa can be defined or measured. Study findings identified benefits of water use as equity in the allocation of water, making it one measure of equity (Table 5.4 quotation 9.4). This construction of equity, however, perpetuates a system where beneficiaries

of past water allocation regimes continue to benefit as employers, and the means of production remain in the hands of the few as the majority are assumed to prefer “small-scale livelihoods”.

The idea of benefits of water use being a principle of equitable water allocation comes from the DWA (2013a), whose three categories for water allocation have as their third category, equity in access to the benefits from water resource use. This is explained as either direct or indirect benefits. These have mostly been interpreted as benefits from wage employment as also explained by one key respondent in this study who described it as “a white farmer employing 100 people ...” (Interview, 12 March 2019). This example evokes the poverty alleviation narratives that focus on social wage packages, options that are not necessarily long term and keep social wage earners at the periphery of the economy and in a cycle of poverty. It also lacks alignment with the vision for a free South Africa as envisioned by Mbeki (1978) when he expressed the need for black producers producing wealth for their own benefit and appropriating the wealth as producers not workers. This understanding is shared by one focus group discussion participant who expressed displeasure in the concept of working for someone for a wage. Table 6.5 captures the different responses on the issue of benefits from water use and respondent D20173 stated that he “would rather continue like that than to get orders from someone ... “ and would also rather have his “own land for job creation and economic development in the municipality also to improve the agriculture”. This shows that the assumption that there are some people that would prefer passive rather than active participation is not well informed.

The DWA's reform strategy does not seem to have had a water allocation focus on HDIs in general but those that were part of recognised Water Management Institutions (DWAF 2007b) or BBBEEs. As noted in the literature, the DWAF (2007b:2) stated that “The process will ... take special steps to support commercial use of water by HDIs who are part of recognised Water Management Institutions”. Benefits of water use would thus seem to have been intended for all the others who did not fit the category the DWAF thought should benefit. Just as James (2010) observed with the land issue that the government did not intend on uniformly benefiting the deprived black population but sought to operate along lines of class, similar conclusions can be made with the issue of water allocation, given statements such as those given by DWAF on who gets water for commercial use. Also, given the state of land ownership in the country, the

likelihood of having a large number of black people having opportunities to be employers is slim and the focus on a few maintains the inequalities and keeps the majority black people as beneficiaries of water access through wage employment and not owners of the means of production.

Other views from literature have pointed to concerns with the concept of equity in the water management context. Syme and Nancarrow (1997:2143), for instance, suggest that not much emphasis had been put on the development of the theory of the meaning of equity, fairness and justice in the allocation of water. At the time Syme and Nancarrow (1997) published their research article, community perceptions of what fair allocation is were also in their infancy. The definition of equity in South Africa's National Water Resources Strategy 2 (DWA 2013a) does not provide a measurement scale for implementers of the WAR strategy to apply and for beneficiaries of the strategy to evaluate whether the process is just. As such, the understanding of equity in water allocation in South Africa remains elusive many years after the promulgation of the National Water Act and many other water sector policies including the Water Allocation Reform programme. Equity's elusiveness in the South African context of water allocation reform, however, creates an illusion of inclusion for the HDIs as no law can be assumed to be obviously unjust according to Rawls (1971). However, of the three practical levels of equity defined by the NWRS2 (DWA 2013a:12), equity in access to benefits has been given higher priority at the expense of all others as evidenced by the discussion on benefits of water use (Section 5.3.5). Benefits of water use provide a scope to maintain blacks as labourers and not owners of the means of production as these benefits are written into law as ways to have access to water.

### **6.2.2 Impacts of South African history on WAR implementation**

Reviewed literature reveals that water issues in South Africa have to be understood from a context where colonial and apartheid legislation defined water management and allocation. Literature traces the different political dispensations and how these defined who had access to water resources and who did not (cf. Tewari, 2002; Movik, 2012). Findings from this study reveal that water allocation has continued on a path similar to the one defined by the colonial and apartheid legislations. Findings on the number of existing lawful users (Table 5.9; Figures

5.13 and 5.14) and the continued access and use of water such as is illustrated in Table 5.14 show access by beneficiaries of pre-1998 water legislations continuing indefinitely. While that is so, arguments have been presented that new allocations are constrained by the fact that some catchments are over-allocated. The literature has not been upfront in stating that the over-allocated catchments are due to the recognition of apartheid allocations as lawful users many years after the promulgation of a new Act to replace the discriminatory Acts. The fear of curtailing current water users seems to have made WAR steer clear of meaningful redistribution as litigation of water claims from those who currently have access are written into the compulsory licensing processes. Rawls' idea of making the worst-off better off is thus not part of the justice arrangement in the WAR's idea of redistribution of water. The focus is more on protecting private property with support from the Constitution and less concerned with the welfare of the majority.

Some of the reviewed literature has shown that some of the provisions of the NWA provide room for potential conflict by recognising pre-existing water rights (cf. Msibi & Dlamini, 2011) from past legislation that formed part of the discriminatory practices of colonial and apartheid water legislation. In this study, legislation has also been viewed as preventing rather than enabling the rolling out of the water allocation reform. The National Water Act was identified in an interview with the WRC key respondent as a source of obstacles in the implementation of the WAR strategy. In the words of the key respondent:

The biggest obstacle is the preparedness by the drivers of that water allocation reform to take the risk and challenge the status quo ... most of the time when either government or whichever agency is trying to do that, there is a threat of legal action. And then the government or the departments that are trying to do that tend to back down. My view has always been that, do what needs to be done, allow the legal actions to go ahead, maybe the courts will help us try to clarify the Act. It is always around the Act that people are always saying you cannot do this and that because the Act says this and that. And then we end up stuck, but maybe that is a wrong interpretation. (Interview, 15 August 2018)

The literature has provided for an understanding of a South African colonial and apartheid past that left behind structures and practices that have lasting social and economic inequalities (cf. UN, 2001; Mariotti & Fourie, 2014). This observation from the literature is shared by some but

not all of this study's participants. While some participants had a strong view on how resource access in the past was unjust and the feeling is that "what was stolen" should simply be returned to the rightful owners, others saw the unequal access to water, particularly domestic water, as a fault of those who did not pay for services. One elderly female (85 years old), a participant in the focus group discussions, explained the process of getting water services from the Lesotho Highlands and the costs incurred in the process by government, and advocated for people to understand the need to pay for the services. A discussion with another study participant, an academic, brought different insights as the issue of lack of access to water in rural areas due to pollution was brought to the fore. In as much as the elderly woman understood the logistics and costs of bringing water to the people, what was missing was an appreciation of the multifaceted nature of the water sector challenges beyond the logistics of conveying water from source to receptor.

The history of exclusion of black people from land ownership and discriminatory laws that pushed them into homelands defined resource access in ways that continue to this day. While the Riparian Act of 1956 defined water access on the basis of land ownership and the proximity to water sources, rural settlements in the case study area of this study remain located far away from water sources with white commercial farms remaining in close proximity to rivers such as the Letaba River. Although some study participants from the Tzaneen Municipality mentioned some rivers as sources of their water for both domestic and productive uses, their access is diminished by the lack of infrastructure to extract the water and the distance that they have to travel to gain access.

Further to this, patterns of allocation defined in the reform strategy seek to maintain the status quo in which the understanding of equity includes benefits of water use with no clear plans for access to water use. The statistics on existing lawful users in the Olifants (see Figure 5.12) paint a very unequal picture of the state of water resource allocation, while at national level, an impression is given that transformation is taking place with an overall high number of licences for black males (see Table 5:10). These, however, remain low when one considers that the overall water use percentage remains as low as 5% and their water resource access is from sources such as boreholes and rivers with limited infrastructure for extracting the water.

It was clear that not all participants were able to connect South Africa's history of discrimination with current patterns of resource allocation explored by the literature (cf. Gumede, 2010; 2016; Hydrossoft Institute, 2018; DWA, 2014; Modiri, 2015; RSA 2019). Their failure to recognise the effects of the historical past does not, however, diminish the fact that history had an impact on how a reform strategy such as WAR can be implemented. The employment of more than one data gathering technique with a broad spectrum of participants allowed for different views to come out as there were in deed other participants who held different perspectives, thereby closing any potential gaps on the subject.

#### *6.2.2.1 Impact of policy deracialisation on inequality*

The subject of deracialisation is dealt with in this study through a review of literature. The literature revealed that the concept of deracialisation is about race-neutral policies and one that is not viewed as a solution for a 'post-apartheid' state such as South Africa. Deracialisation can be summed up as a façade, as it attempts to ignore the structural inequalities that are produced through racialised policies that cannot simply be written off by avoiding race-specific issues. Some authors have noted how deracialisation has failed to get rid of inequalities (see for instance Liebenberg, 2010; Seekings & Natrass, 2015). The National Water Act is, however, explicit in its focus to address past racial discrimination in water allocations but loopholes continue to exist as existing lawful users continue to benefit through the same Act as indicated in Figures 5.13 and 5.14. The WAR strategy also has a particular focus on HDIs, black men and women, but still the complications that come with the allocation needs that are not yet in place (e.g. a level playing ground for effective water user association participation, availability of land as a significant requirement for productive water use) defeats the good intentions of the strategy. It can thus be deduced that although deracialisation has been found not to help deal with inequalities, being race specific without addressing all other variables that make a law just can simply be another façade to appear progressive and just.

### **6.2.3 What constitutes fairness and justice in water allocation from the perspective of HDIs and ELUs?**

The research question on fairness and justice in the allocation of water was dealt with through a review of literature as well as the online survey. In the review of literature, the concept of

justice is broadly approached from a western perspective, which is where the theoretical framework, the distributive justice theory originates. The literature review, however, went further and unpacked African and Oriental conceptions of justice that, although dealing with justice from a broader perspective, open up ways of viewing justice in the allocation of resources such as water. There are perspectives on justice in distributive systems that look at injustices such as those that are found in rules, values, implementation and decision-making processes (see Deutsch, 1975). In this study, the rules that apply to water resources allocation, specifically the NWA's sections 25(2), 32, 33, 34 and 35 as discussed under Chapter 3 section 3.7, present barriers to those that are not privileged by the particular clauses. In Rawls's (1999) conception of justice, natural fortune or social circumstance should not advantage or disadvantage anyone. The NWA, the supreme water law of the country, does so, however, by recognising beneficiaries of past discriminatory laws, thereby privileging some, not all.

Regarding the implementation of the reform process, injustices are also revealed in the findings of the study when key study respondents indicated that the licensing process, for instance, was best suited for those who knew how to navigate it. The literature identified that commercial farmers were well ahead with the licensing processes, with irrigation boards offering their offices as training grounds for DWS officials. This also speaks to the value that was attached to water by the different groups, as the commercial farmers and their irrigation boards knew the value of water. A key respondent from AFASA corroborates this when he said that “when we were discussing the CODESA (Convention for A Democratic South Africa), they took advantage of the situation because they knew at that point that water was an important resource, we were still fighting for land, land, land!” [emphasis original] (Interview, 13 March 2019). The differences in opportunities in access to water for productive uses defined well in advance the value the different user groups would attach to water. The result has also been a focus on domestic water use by the HDI community as this is a basic need that they relate to. The allocation of water has thus been taken advantage of by those who knew the value of water beyond domestic use, and have the land and know-how to navigate the highly technical process of water licence applications.

One of the water allocation reform strategy processes involves the participation of water users in what is discussed in the literature as Water User Associations. These provide users with

opportunities to make decisions, pull resources together and discuss other issues pertaining to their water uses and access. The study findings correspond with what is documented in the literature, that participation of HDIs in these forums is difficult if not almost impossible in some catchments. The needs assessment with small-scale farmers in the Tzaneen rural areas revealed that they had not heard of WUAs nor were they part of any formal or informal farming forums. In a separate discussion with a key respondent from the Letaba Water User Association, a farmer's association based in Tzaneen, it was revealed that:

[T]he LWUA has as its members those properties which had permits allocated to them during the early 1960s, although changes were effected where properties were sold or sub-divided. Membership being subject to property ownership of existing allocations means that, of commercial agricultural properties, the percentage of black ownership is growing, with about 30% of the total allocation of the LWUA belonging to either black farmers, or the Government as proxy holder of previous homeland properties now in the hands of black communities. (Interview, 1 November 2018)

Membership of these associations is thus not as easy as WAR strategy makers made it out to be. As Brown (2013) also discovered from his studies, the black community was excluded from participation because of language barriers and their relative lack of knowledge and experience as compared to white commercial farmers. Brown (2013) also noted that the black communities were invariably more interested in improved domestic water supplies, an interest also noted in this study.

Justice as conceptualised in African epistemology emerges in the literature as conformity to customary ways according to the Igbo and *Ubuntu* (and its many variations depending on language) in southern Africa. The literature reveals similarities between African *Ubuntu* philosophy and the Confucian idea of justice where societal harmony is achieved through humanness. The word *Ubuntu* was not used in any of the engagements with the 73 participants. It was, however, observed in the choices that some of the respondents made regarding the criteria that they would opt for in the allocation of water. The nature of *Ubuntu* emerges from the sincerity of the responses, which are outward looking rather than inward looking, considering what works for all rather than what would favour individuals. For instance, some of the small-scale farmers in Tzaneen chose ownership of land and having farming skills (Figure



5.11) as criteria to use in the allocation of water even though this could exclude them as potential beneficiaries of those criteria. They personally had not much land and their skills, compared to those of the commercial farmers, would not compete, but they chose options they felt were right with no coercion, making their obligations to these principles self-imposed (see Rawls, 1999). These options can be said to have been made from a veil of ignorance as there appears to be no consideration of the self but the need to choose allocation principles that would work best in a water allocation context. Consideration of the common good is also an aspect of *Ubuntu*, which in this case marries the concept of choosing principles of water allocation from a veil of ignorance with *Ubuntu*. Letseka (2015) has written about the resonance between what he called “*Ubuntu* fairness” and Rawls' notion of justice as fairness drawing similarities between the social contract of the governance systems, the African traditional democracy and the constitutional democracy. In this study, resonance between *Ubuntu* philosophy and Rawls' notions of justice is drawn from the individual study participants (not institutions) who reject the self as they decide on criteria for water allocation. Their experiences of inequality could have made them choose criteria that suit their circumstances.

The idea of *Ubuntu* also appeared in the responses given by some of the respondents of the online survey on understanding justice. In section 5.3.11, eight respondents explained equality in ways that resonate with an understanding of *Ubuntu*. In the context of water allocation, one respondent explained equality as being about treating every person as one would want to be treated. Equality is a major aspect of a just society as inequality creates a great divide, which according to the World Bank Group (2018:27), makes it “difficult to build a strong social contract by which all citizens choose to abide”.

Rawls' theory of justice suggests that when people do not know their circumstances, they would choose a principle of justice that maximises the welfare of the worst-off (Frohlich, Oppenheimer & Eavey, 1987). This was the case with the allocation of water to women where many respondents stated that women needed to be empowered by providing them with an opportunity to access water for productive use. With regard to allocation in general, there seems to have been consensus in allocating water to those that can use water productively, those with the land to use it on (Figure 5.11). This brings to the fore the issue of land redistribution, which remains unfair. A consensus that water be allocated to those with land thus translates to keeping

water in the hands of the minority as they are the ones with the land. Findings from the online survey, however, give a different perspective as a large number of participants opted for bettering the situation of the worst-off (Figure 5.5) which, known or unbeknown to them, includes a fair distribution of land. The WAR strategy has to thus factor in land ownership so as to create a balance where 95% of water resources are in the control of the better off; domestic water accessed by the worst-off is insignificant (small water, according to Swatuk (2017)). When HDIs' access to water is understood to be below 10% of water resources (Peters & Woodhouse, 2019), the water allocation reform can be said to be failing to perform its redress mandate.

#### *6.2.3.1 HDIs and ELUs' views on water redistribution*

The views of the historically disadvantaged individuals were gathered through the questionnaire with small-scale farmers, the focus group discussions and the online survey. Views of existing lawful users were gathered through the literature and the online survey.

The findings from engagements with the HDIs revealed that they had no idea about the licensing process and were making do with the little access that they had. In most cases, the discussions moved away from a focus on water for productive use to water for domestic use. Most of the participants did not have large enough pieces of land, thus they saw no point in discussing large volumes of water when they had nowhere to use them. One participant from the focus group discussions, who worked for himself in a co-operative, expressed the need for change in the way resources were allocated and how the black youth felt about agriculture in general and farming in particular.

Views of the ELUs from the online survey revealed that there was a feeling of wanting to protect resources from those who did not know how to use them (Table 5.6). While literature showed redistribution fears being on the ecological side, the online white male participants expressed fear for the economy. Only one out of the six participants expressed the need for all to live their lives equally (in the context within which the question of water allocation principles was asked). The fear for the economy is discussed in the literature in the context of efficiency in the use of water. This idea is supported by the government, which is said to not want to scare away current and potential investors. It is the same narrative that is put across by the ELUs engaged with in

this study. But if land and water, which are believed to be economic enablers, continue to be allocated only to those who can work efficiently with them, the economy of the country remains in the hands of a few elite with no benefit to the welfare of the majority who may remain worse off.

Other views on water allocation were not necessarily views of HDIs or ELUs, but those of some of the participants and are important to note in this study. An interview with one key participant revealed patterns of exclusion that can come from those who sit in positions of power and can influence policy. This interpretation arises from discussions centred on the respondent's experience in the implementation of the strategy. The respondent explained the costs that come with getting water infrastructure to the people and indicated how he had suggested to land-claim beneficiaries that they be settled close to towns and not farming areas as they would have easy access to employment and amenities. This suggests that the farming area was not seen as a place for settling people as they should seek employment and not be self-employed. This emphasises the wage package narrative as part of poverty alleviation and impresses upon one that the idea behind WAR was never to benefit a lot of people.

#### **6.2.4 The GLeWaP's priorities for water allocation**

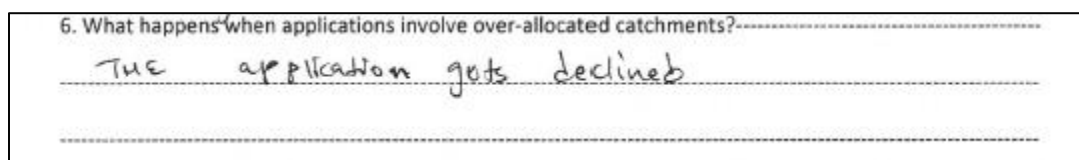
A comparison of the views from the literature review and the qualitative study shows some contradictions in the objectives and hence the water allocation priorities of the GLeWaP. These contradictions make holes in the assumption of the study that through the infrastructure development project, there could be a deliberate focus on water allocation to HDIs. While the literature indicates that the purpose of the GLeWaP was to ensure supplies for domestic needs, needs of existing irrigators as well as resource-poor farmers, responses from key respondents did not include resource-poor farmers, with one respondent pointing out that water for resource poor farmers had already been allocated, adding that the infrastructure project was for other purposes, specifically for the ecological reserve. The literature further indicates that the proposal for a new dam on the Nwamitwa site falls outside of the current government's water resources development plans, as this decision had already been made in 1983 by the Great Letaba Main Irrigation Board, now Letaba Water User Association. The responses by the key respondent from the Letaba Water User Association that the dam "is not intended to increase

any allocations along the catchment area, other than to provide for better water services for domestic purposes” may be more credible as they have the original plans.

The objectives of the GLeWAP project (Table 5.2) do not speak to the need or planning for water allocation reform. There is no real consideration of HDI farmers' lived experiences where land is an issue and secondary processing of agricultural produce is of little significance to them. Land and water are not dealt with as if they have any interlinkages. The amount of water in the allocation plans and the land size are not equalled with a plan to have the land so that the water allocation can be implemented. The plans look good on paper and may be enough to quieten people as they hope that the best will happen. The benefits to HDIs seem secondary as those that currently have the water and the land are the ones capable of benefiting from the given plans. This does agree with the water allocation reform objective of having HDIs as beneficiaries of water use – employees and consumers of food produced by others and never employers in their own right.

#### 6.2.4.1 How the issue of over-allocated catchments is dealt with

Over-allocated catchments have been explained in the literature as catchments where there is no room for any new allocations. An interview with a DWS official in the licensing department revealed that in cases such as these, new licence applications are declined (Figure 6.1).



**Figure 6.1: DWS official’s response regarding over-allocated catchments**

The literature documents that most of the catchments in the country are over-allocated (see Table 3.1). While reports indicate this to be the case (cf. DWS, 2017a; Molewa, 2013), the discussion is not taken further to indicate the demographics that compose and result in the full commitment of the catchments. The findings from the data on licensing reveal that most of the water is allocated to companies and white individuals.

The verification and validation (V&V) processes were noted to be ways to check if a catchment is fully allocated or if there is potential for new allocations. The process was, however, prone to manipulations as discovered from the study. An interview with a retired DWS official revealed that when the V&V process was introduced, many commercial farmers declared water amounts that were either less or more than what they actually had access to. By so doing, some catchments would appear as over-allocated when in fact there could be room to allocate some to other users. With the sources of water for the black people who have licences or basic access (as is the case with small-scale farmers) being mostly rivers and boreholes (Tables 5.7 and 5.13), the amounts allocated to them cannot be significant enough to have a catchment declared over-allocated. This implies that not much change has happened with the control of water access as much of it, 95% as the literature shows, is still in the control of white commercial farmers. What this effectively points to is that in spite of new water legislation that claims to seek redress, there is little transformation that is taking place. Over-allocation may need to be interpreted as a technicality rather than a fact as only the V&V process can confirm who has access to what amounts of water. The V&V processes are, however, moving at a snail's pace and existing lawful users continue to be registered with the largest number so far being recorded in 2017 (see Figure 5:13).

### **6.2.5 Perspectives on the gendered focus on water allocation**

Literature on the background of WAR provides for the basis on which gender inequality became an issue of concern within the context of water allocation in post-1994 South Africa. Seetal (2006) states that past water allocation patterns have had both a racial and gender bias. Indeed, statistics presented in Chapter 5, (Figure 5.12; Tables 5.10, 5.11 and 5.12) attest to the differential access by both race and gender, with men having more licences than their female counterparts. This gender bias is noted to also exist in the white community not just the black community. The WAR strategy, however, explicitly focuses on gender inequality in the black community only as the strategy stipulates that of the 60% allocable water to the HDIs (blacks), women and men would share equally (DWAF, 2008; Msibi & Dlamini, 2011). An argument can be presented that the allocation for HDIs that has to be shared equally with women does not specify the race of the women. The assumption that this omission in the strategy was meant to simply be interpreted as a reference to HDI women that are black is informed by the context

of redress within which the WAR strategy is framed and also a gap in literature on white women in agriculture in South Africa.

Engagements with participants in this study have revealed mixed thoughts on the gender-based allocation with all five women from Tzaneen consulted on this matter supporting the equal distribution of water between men and women. Responses from other women in academia have, however, been different, as the female academics sought to first appreciate the black household. As one respondent indicated,

the truth is that in Africa, men and women work in partnership, therefore the policy and implementation should first be faithful to this, then consider the African family system, there are single mother households, nuclear and extended family households, all these should be considered. (Interview, 30 August 2018)

This is contrary to the individual focus the WAR strategy has.

The literature points to concerns over a gendered focus on the allocation of water. Given the discrimination both black men and women have experienced under colonial and apartheid South Africa, and findings from the review of the literature, the focus on equal allocation for black men and women appears ill-informed. Noting the failure by black farmers in general to access already allocated water, the assumptions that women would be able to access the allocation stored for them is indicative of a failure to contextualise the women's agency and their capabilities. The literature presents arguments such as the need for technical capacity to take water from the source to the farm; failure to consider that women's needs are not always opposed to men's; and that household ownership rights (for water, and even land) appeal to some more than the individual rights that are advocated for by the WAR strategy. Literature on gender from the west has largely portrayed men as oppressors and patriarchy as the reason why women have no access to resources and consequently experience gendered inequalities (cf. Dube, 2019, Zwarteveen & Boelens, 2006). Reform strategies, however, have to consider the context within which strategies have to be implemented and avoid borrowing ideologies or notions of inequality that are not based on a people's lived reality. The discussion on gender is taken further in the discussion of emerging themes, section 6.3.4.

## 6.3 Emerging themes

An emerging theme in this study can be described as an idea/thought that keeps popping up in the analysed data. It does not necessarily stand out but its recurrence, especially when different data collection techniques are employed as in this study, makes it a point worth recognising. The following themes noted at the end of Chapter 5 are discussed below.

### 6.3.1 Theme 1: Challenge filled reform process

Interviews with study participants revealed that the water allocation reform has a multitude of challenges that make its implementation difficult.

#### *6.3.1.1 Sub-theme 1: Indivisibility of services and resources in rural areas*

Discussions with some key respondents and focus group discussions revealed that in rural areas, water provision services cannot be separated from water resources provision. Water reform discourses, however, frame services and resources as separate and the Acts are structured as such, the Water Services Act dealing with domestic water and the National Water Act dealing with water resources. This fragmentation does not fit well with rural needs where even though there is need for both, production does not supersede domestic needs. One of the two academics explained that:

[F]or the black rural households, the two worlds are indivisible, household and economic consumption are related to the amount of resources that the household can put together. So, when there is a drought, women will not go about looking for water for the fields, they will be looking to find water for the house. They wait for the rain. (Interview with academic)

In terms of legislation, the separation of services and productive uses and the allocation of responsibilities to different levels of government as overseers of the two portfolios does not work to everyone's advantage. Rawls' distributive theory explains that "social and economic inequalities are to be arranged so that they are ... reasonably expected to be to everyone's advantage" (Rawls 1971: 213). Meeting people's water services needs forms part of the Department of Water and Sanitation's equity sub-categories (DWA 2013a:45). Not meeting rural households' domestic or productive needs so much that they wait for rain is evident of

unjust laws, considering the water for domestic use is said to be less than 10% of water resources (Peters & Woodhouse, 2019:2).

### *6.3.1.2 Sub-theme 2: small-scale farming and its (in)significance in water allocation*

The water allocation discourses seem to consider small-scale water users as users that are not entitled to the share of available water resources. Small-scale farmers who participated in the study were not aware of the water allocation programme or the different types of licences for water use. This is not the same as their commercial counterparts, as shown in the literature that when the licensing system was rolled out, irrigation boards held meetings to explain the licensing process to its members and offered to assist the Department of Water. This resulted in the department officials working from the offices of the irrigation boards (Méndez-Barrientos et al., 2018). The small-scale farmers in the study also indicated that they were not members of any associations, which means they cannot organise to find ways of accessing water as members of water user associations or irrigation boards can do. Large-scale farmers, on the other hand, are believed to “use their agency to influence the water policy reform environment, particularly through collective action” (Méndez-Barrientos et al., 2018:250).

Small-scale farmers have inequality of opportunity to grow their talent or rise above subsistence farming. Unlike their commercial counterparts, their access to water is based on their individual capacities to secure infrastructure to access water in ways which, according to the law, may be considered illegal in the absence of a licence. Capacity to sink a borehole was to a great extent limited for the small-scale farmers who were also not aware of the legalities of extracting ground water. Statistics shown in Chapter 5, Table 5.12 on the types of water authorisations and their distribution by race and gender, together with information from questionnaire interviews with small-scale farmers, reveal that although some of the water is distributed through licences to some black people, small-scale farmers do not form part of the beneficiaries of these allocations as they stated that they knew nothing about licensing and knew no one who had a licence. Although some scholars have suggested that General Authorisations would work best for small-scale farmers, statistics from the Department of Water (Table 5.12) reveal that in the Olifants Water Management Area, for example, there is not a single black person who has a General Authorisation licence. Findings also reveal that no black females had General



Authorisation licences, contrary to Anderson et al.'s (2007) thinking that gender reform would be achieved through the 'ring fencing' of water for that specific purpose. DWAF (1994:4) notes that "the development of South Africa's water resources has been linked more with supporting the progress of the country's wealthy sector than with alleviating the position of the poor, particularly in the rural areas". One of Rawls' many assertions on distributive justice is that "[W]hile the distribution of wealth ... need not be equal, it must be to everyone's advantage" (1971:61). It is, however, not to everyone's advantage that allocation of water is skewed to the extent where small-scale farmers are not adequately equipped to utilise it productively but rather imagine possibilities of selling it as a suitable option in the absence of other resources, especially land. Inequality of opportunities is thus seen to arrange social and economic inequalities in a way that benefits some but not all, which is contrary to distributive justice ethos.

There doesn't seem to be a vision for advancing small-scale farmers (who are predominantly black) to become major players in the water economy and improve water sector transformation. The water allocation reform process seems to favour commercial enterprises as provided for under BBEEs codes (DWAF 2005a). One participant in the study pointed out that:

[T]here is no consistent policy framework for implementing rural areas in post-apartheid South Africa, there is a project by project or programme by programme approach, but no one has said that the entire landscape of South African rural areas must turn into a vibrant small-scale agriculture ... (Interview, 22 October 2018)

This creates a problem where agriculture, which is the biggest water user, serves the economic interests of a minority while the rest of the population, also dependent on agriculture for food and a livelihood, have limited access. The allocation of water to predominantly commercial users is in line with the principles of the WAR strategy where efficiency of use is a determinant of where and who water should be allocated to. A utilitarian approach to water allocation, however, places the historically disadvantaged and the historically advantaged at the same level, even though those who secured water rights early had more than 350 years of experience and dominance in the use of water. Water allocation should therefore not prioritise efficiency and sustainability, which are not commonly applicable to the various parties in the sharing process.

Although this is relevant and necessary for achievement of economic and sustainable development, fair, just and equitable distribution of benefits is what is at the core of the theory of distributive justice and seeing that any inequalities can still benefit society's least advantaged.

### *6.3.1.3 Sub-theme 3: Underlying systems of exclusion*

An analysis of the way water was accessed by black communities that were part of the study revealed a system of exclusion that created challenges in allocating water to them even within the organised context of water allocation reform. For instance, most of the settlements within which the black small-scale farmers resided were not in close proximity to any of the rivers that surround the Great Letaba municipal area. Out of the 20 participants from the farming community, only one was close to the Letaba River. The rest indicated that they were close but did not enjoy any of the benefits of being close to large water sources (Table 5.7 of Chapter 5). This is, however, not the case with their commercial counterparts who have vast expanses of land close to the Letaba River with irrigation infrastructure such as overhead irrigation that can be seen from afar. In comparison, small-scale farmers, as is consistent with their title, had fields to farm in and not farms and these are patches of land adjacent to their homes. In spite of their interest in farming and need to farm, the fact that they only have access to small patches of land means that there will be no justification in allocating large volumes of water to them. Table 5.10 shows that while the numbers of water users with water rights are almost the same for black and white people, the 828 black users have access to less than 5% of the water volume while the white water right holders have access to 95% of all the water allocated through licences, existing lawful use and companies.

Exclusion also came with the lack of infrastructure for providing water for either domestic or productive water use. Being part of the former homelands, Great Letaba lacks basic infrastructure for rural communities for either domestic services or productive water use. One participant explained how some rural areas can be defined as peri-urban due to the services they enjoy, which, however, does not include water services, as most taps provided are reported to have running dry for a long time. In the focus group discussions, the participants revealed that they had to rely on water from a town hall as their own community taps did not provide water.

In essence, the provision of basic water is stipulated in law as a basic right yet in practice some communities have to access water sometimes from unsafe sources, as indicated by some participants who stated that the source for productive water use is the same for domestic uses.

The allocation discourses are also grounds where exclusion patterns are drawn. It is clear that ecological, economic and social values of water influence its allocation (DWA 2013). Considering its scarcity, it is also clear that sustainability comes before equity in the allocation of water, and the requirement of the ecological reserve “determines the amount of water available for other uses” (DWAF 2005a:6). An understanding of allocation within WAR has to thus recognise that within the framework for allocation, there are already competing priorities before other variables such as pollution and climate change are even considered. Although guidelines for water allocation recognise the need for the poor to have access to water for the improvement of livelihoods, the guidelines do not mention the need for land rights by the poor or HDIs and the significance this would have in applications for licences for productive water use. This places the already advantaged ELU before them. Section 27 of the NWA (RSA 1998) also prioritises efficient use of water and gives no consideration to how absence of land rights will disadvantage the HDIs even if they manage to get a general authorisation in the allocation process. The 2008 version of the WAR strategy does, however, mention the link between land rights and water rights by stating that it is “unavoidable that any reform process that seeks redress on water entitlements is inextricably linked to the land reform process in South Africa” (DWA 2008:6). Much of the land is still in the hands of the minority and as DWA (2013) also notes, most of the water allocations are still in the hands of the previously advantaged. Engagements with small-scale farmers in this study have shown how disenfranchised the people still are as both land and water remain out of their reach.

The DWA (2008) recognises the link between land and water rights and the need to thus align the water allocation reform programme with the land reform processes (DWA 2013:48). Equity measures that are implemented in a skewed operational ground where beneficiaries do not own/have land are self-defeating as they are not entirely equitable. Challenges in the reform process as found in this study from the literature and field studies can be summed up as in Table 6.1 below.

**Table 6.1: Challenges for the water allocation reform process**

<b>NATURE OF CHALLENGE</b>	<b>CHALLENGE DESCRIPTION</b>
<b>Legal</b>	Expropriation of water not seen as an option due to fears of litigation Small-scale farmers unaware of legal implications of sinking own borehole Skewed ownership of land Recognition of existing lawful users The Constitution's property clause The adoption of equity as a principle for water allocation
<b>Administrative</b>	Lack of an integrated approach between departments Slow transformation of institutions to do with reform Slow and administratively tenuous licensing process
<b>Socio-economic</b>	Infrastructure requirements for small-scale farmers Water scarcity discourses
<b>Political</b>	Department of Water's choice of Water Resource Management rather than Water Resource Development ANC's choice of market-based reform Apartheid legacy of discrimination
<b>Political corruption</b>	Manipulation of licensing process by those familiar to the processes Manipulation of institutional processes such as Water User Associations

### **6.3.2 Theme 2: Justice and historical context**

The study is premised on the understanding of distributive justice and in this study, justice is shown as something that has to be contextualised, hence the theme 'justice and historical context'. With its history, notions of justice in South Africa could not be discussed without the past haunting the present. There were differences, however, with how questionnaire and focus group discussion participants viewed the water allocation reform justice and how key participants from the study's identified institutions saw justice. While the former mostly saw

processes as results of the government's responsibilities and roles, some key informants saw the process as a manipulated process.

### *6.3.2.1 Sub-theme 1: Manipulation of reform processes*

The realisation of justice was viewed to be difficult in light of the tactics used by those that have been privileged by past laws. Several ways are discussed by the respondent from AFASA who, as a member of a black farmers' association had information on what went on with negotiations for water redistribution and how the reform process was progressing. The respondent from AFASA revealed that the approach used in redistribution of water resources was neoliberal. The respondent opined that even though water is understood as being an economic enabler, giving it to black people was considered a threat to food security. He claimed that, "white people use this food security issue as quite a leverage, ... they say ... it will mess up food security if we transfer water to black people who do not have the knowledge of the market" (Interview: 12 March 2019).

Other views that were considered to be manipulative were:

- the benefits white people had with their knowledge of the licensing system (WRC respondent) (a result of having irrigation boards negotiating on their behalf) (cf. Méndez-Barrientos et al., 2018)
- influencing or changing a legislation in favour of not allocating water to a specific piece of land but to individuals and when they sell land then withhold the water right (AFASA respondent).

As indicated in Chapter 5, another respondent indicated that justice is not "sharing what was stolen ... one needs to go back to history and find out how these resources were allocated". This evokes Nozick's (1975) idea of justifiable property ownership being based on method of acquisition. The current laws and procedures protect water in the hands of the white communities without considering how the resources were acquired in the first place. Distribution of water to black people, on the other hand, is made to seem improper and unsustainable, which defeats the redress objective of the reform strategy.

### 6.3.2.2 *Sub-theme 2: Government responsibilities and roles*

It is evident from the findings that there were mixed views about the role that government should play in the allocation of water. While there were views that saw the need for government to play a better role than they are currently playing (section 5.3.8), others thought water issues are best dealt with by all stakeholders (section 5.3.15). Even though policies are in place, they are not bringing the expected results, thus communities express the need for more visible and purposeful government action in the allocation of water (section 5.3.3). The needs of the small-scale farmers reveal that institutions in democratic South Africa were continuing to work for the interests of the wealthy, as indicated by DWAF (1994:4). Statistics on existing lawful users and their demographics are a further indication of failed transformation as they continue to be registered two decades on, with the highest number of recorded ELUs being in 2017 (Figure 5.13). A great deal is happening with regard to acknowledging existing water users while very little is taking place regarding reallocation (see also Schreiner, 2013). National level statistics on existing lawful use provided by DWS (2015a) vary greatly from the findings of this study calculated from DWS data. While Figure 3.4 shows total number of ELUs nationwide as 3 719, Table 5.9 shows a total of 34 248 for companies alone plus 21 697 for individuals (DWS 2018d). These disparities between data from the same government institution bring into question the role the government itself is playing in the transformation of the water sector through the redress process. Results from this study, however, seem to concur with Marcatelli (2017)'s suggestion that the government had power to choose who had access to water and who was excluded, and he concludes that the beneficiaries of the water reform process were white commercial farmers.

Literature identified that government had moved away from water infrastructure development to water resources management (DWS 2019). Although the literature also shows South Africa as the African country with the greatest number of dams, it also shows that beneficiaries of such infrastructure are not the poor or historically disadvantaged, as suggested by Goldsmith and Hildyard (1986). The statistics on the access to water sources in this study point to the same fact. Ordinary South Africans such as those who participated in the focus group discussions and questionnaires for this study, need infrastructure including dams or canals to access a share of the resources. Government policies have, however, not considered the impact of only focusing

on infrastructure developed during apartheid and the infrastructure's use by rural communities who have no similar access to the resources as do the commercial farmers.

### **6.3.3 Theme 3: Gaps between policy and practice**

The study revealed that there are gaps between policy and lived reality on the ground. The WAR programme does not recognise realities on the ground, which have to do with land and water linkages as well as the nature of the rural space in the water re-allocation context.

#### *6.3.3.1 Sub-theme 1: Land and water linkages in allocation of water*

The WAR programme does not factor in land as part of the prerequisites for allocation of water (cf. Msibi & Dlamini, 2011). Productive water use, however, requires access to land and this means that the context of the WAR strategy where land is not a factor gives a policy that reads well and has good intention but is difficult to implement. This is further exacerbated by the availability of water resources for allocation that are already in the hands of ELUs (discussed in sub-theme 2, section 6.3.2.2 above). This points to fragmented development as discussed in Chapter 5, and in this case, fragmented legislative development that seemingly did not recognise the relevance of land beyond land-based water activities. A Letaba WUA respondent suggested the best way to address the land-water issue is by having black farmers buying properties that have a water allocation as “there is not any additional water that can be allocated” (Interview 1 November 2018).

#### *6.3.3.2 Sub-theme 2: Absence of a comprehensive rural development policy*

The case study area in the study is a product of the apartheid era spatial planning of the homelands. The study shows little change in terms of the location of rural settlements in relation to water resources and access to land in general. Although there are a high number of land claims as indicated in the literature, of the 37 land claims, only 12 were considered valid (MDM 2016b). The rural villages that formed part of this study are densely populated and agriculture is practised mostly on pieces of land adjacent to the homes and in many cases, the water is reported to be polluted or salty. In the absence of land and access to large amounts of water for the many that form part of the study, domestic water becomes the main focus as it is a basic need, with or without land. There does not seem to be any urgency in addressing land claims,

speeding up the people's access to either domestic or productive water, as there is no clear policy plan as to how the rural spaces are supposed to develop. The case of a black farmer some of whose land the municipality planned to acquire to extend the municipal cemetery adds to the absence of a clear rural development plan.

Some participants in this study indicated that there is a lack of a comprehensive rural policy in the country and this also feeds into the rolling out of strategies such as the water allocation reform. Besides allocation of productive water, the WAR's primary objective of equitable water services access remains elusive in the rural areas where humans continue to share water sources with animals and water provision through tankers is periodic and erratic (views from study participants). Socio-economic inequalities are maintained when there is no clear rural policy. This is contrary to Rawls' distributive theory where he opines that socio-economic inequalities are to be to the greatest benefit of the least advantaged members of society. Without fair opportunity for the rural people in access to land, water and infrastructure, inequalities continue to favour those already advantaged. With a comprehensive rural policy, there would be a clear plan as to where to access land to cater for the rural communities that want opportunities in agriculture and how infrastructure for such can be planned for and acquired.

#### **6.3.4 Theme 4: Gender and the allocation of resources**

The allocation of water is presented in the water allocation reform strategy as a racial and gendered issue and the gendered conceptualisation of water allocation was one of the key questions of the study.

##### *6.3.4.1 Sub-theme 1: Gendered responsibilities*

Consultations with study participants revealed that there are indeed gendered responsibilities where water access and allocation are concerned. Across the different study participants, water access was discussed at the level of domestic access by some and productive use by others. There was no consensus on the gendered responsibilities by participants from the focus group discussions as women felt they had overall responsibilities in accessing water while men felt the need to redeem themselves and so added that they also had responsibility to ensure water access in the home. Their primary focus was on domestic water, which was also discussed by



the women who were interviewed individually. These women translated their domestic responsibilities to the subject of equal access to water for productive use for black men and women and so expressed the need for equal allocation for men and women as prescribed by the reform strategy.

Discussions with women in academia, however, revealed that men and women worked as collectives with no interest in individual rights as expressed in the water allocation reform strategy. The literature shows that women in agricultural households in South Africa are responsible for much of the decision making that has to be done for their households. For rural women interviewed in this study who were not all from farming households, it is not clear where the idea of equality in access to water comes from, especially with no consideration of how the water is physically extracted from the river and how doing it collectively would work. The literature shows that water rights in some regions are considered to be a family right while feminists advocate for individual rights (cf. Zwarteveen & Boelens, 2006). There is a gap, however, in the literature on South African women and water rights. The responses given in this study vary between those of women in academia who are aware of feminist discourses and how they apply their thoughts to the issue of water rights for women and those of the other women who participated in the study. Equality between men and women is, however, a well-known phenomenon but its application to water in the South African spaces seems new. Extrapolating from Girard's (1986) thoughts on 'mimetic desire', one may deduce that some women may choose to represent their needs following an image in which men and women's needs compete rather than complement each other in pursuit of common goals.

#### *6.3.4.2 Sub-theme 2: Gender in context*

The literature and interviews with some of the key respondents show that gendered policies should take contexts into account and not offer one-size-fits-all approaches. While the literature indicates that there are cases of women who reportedly take charge of processes in their agricultural homesteads, this might not necessarily be the case for other households. Single (never married, divorced or widowed) women's preferences for water rights, for instance, may not necessarily be similar to those for married women. One respondent indicated that policy on water allocation need not approach the gendered allocation criteria "as if there are hundreds of

thousands of black women who are farming on an industrial scale”. The allocation criteria that prescribe equal allocation of the allocable 60% of water to black men and women therefore miss the point that there are more male than female agricultural heads in South Africa (see StatsSA 2016a).

These contexts all need to be considered by policy makers as they also affect the uptake of water when allocated, as the share for women may not be taken up if their involvement in productive water use is minimal compared to that of men or they prefer to work together with the men.

### **6.3.5 Theme 5: Deficit discourses about black competence**

The topic of allocating water to historically disadvantaged individuals was approached by some respondents from a perspective that saw weaknesses of the HDIs and not their strengths. Interviews with some of the key respondents revealed a lack of confidence in black people’s abilities as farmers as well as their capacities as officials in government working in the water sector. From the way one respondent spoke about allocating water to HDIs and trivialising the wishes of black land claim beneficiaries, the researcher could discern that the respondent saw the “incompetence” in black officials not as a result of their history but as a deficiency. In the field and context of education, Valencia (1997) and Gorski (2010) have explained this as deficit thinking or deficit ideology, respectively.

In its original sense, deficit thinking as a term was developed in the 1900s as an endogenous theory to explain the reasons why students of colour or racial minorities in America performed poorly or failed in school (Valencia, 1997). The theory suggests that school failure has to do with “internal deficits or deficiencies” of the failing students (Valencia, 1997). Gorski (2010:3) proposed that the deficit perspective “shapes individual assumptions and dispositions in order to encourage compliance with an oppressive educational and social order”. Valencia (1997:2) listed some of these alleged deficits as “limited intellectual abilities, linguistic shortcomings, lack of motivation to learn and immoral behaviour”. These deficits are also said to be linked to genetics, culture, class and familial socialisation (Valencia, 1997:2) and are “inherent in disenfranchised individuals and communities” (Gorski, 2010:4). This kind of deficit thinking can also be seen being applied to the potential of lack people in farming and their supposed lack

of competence as officials and knowledge about issues such as ecological sustainability. The so-called lack of knowledge or their failures in agriculture are viewed as endogenous while exogenous factors are not brought into the equation. Similar to the issues in school failure discussed by Valencia (1997), in agriculture or productive water uses, factors such as the way commercial agriculture is organised to prevent others from joining in, inequalities in access to land, policies and practices that favour those who already have access such as ELUs, are held as “exculpatory” (to borrow from Valencia) in understanding black people’s involvement in commercial and productive farming beyond small-scale/small-holder and subsistence farming.

In this study, there are a number of instances where deficit thinking emerges in the discussions on sustainability of the environment and water use by the majority of the people, the HDIs. In the interview with a CSIR (D3) respondent, the issue of the environmental threat associated with allocating water to HDIs emerged. The respondent discussed the fears that are held in some quarters regarding allocation of water to HDIs, adding that “[O]ne has to be extremely careful if they assume that people will be able to farm scientifically and come right”. Another respondent who was recalling an experience with land claims matters expressed similar fears when he said that, “the community wanted to be settled on the banks of the Midmar Dam, and I said damn right, and you will be polluting the water that feeds Pietermaritzburg – so we looked for an alternative site”. The interviewee expressed this as matter-of-fact, that if people were settled close to the Midmar, they would pollute the water. There are, however, settlements that are on the banks of dams such as the Hartbeespoort Dam and the dam is indeed polluted, yet the water continues to be used for recreational and irrigation purposes. In the literature, Movik (2009) also identifies similar fears for the environment and questions why current pollution by current users is not interrogated similarly. The online survey on understanding justice revealed the same kind of thinking on the principle of water allocation where it was suggested that water should be redistributed on a “share but do not abuse” basis, thus implying that those who are not involved in the use of water will abuse it if they gain access. This links to the idea of supposed cultural deficiencies in knowledge of how to use water efficiently.

One of the characteristics of deficit thinking according to Valencia (1997) is blaming the victim. In this study, blaming the victim was observed from the way the uptake of already allocated water did not take place because of what the respondent qualified as “their issues” or the way

one focus group member insisted that young people are ‘lazy’. Deficit thinking is not only carried by those who want to prevent others from participating, it is also expressed by those who think they are making a different kind of effort and thus see other people as being ‘lazy’. In the literature, the construction of black people as lazy is also echoed in Mtose’s (2008) thesis. Behavioural and social scientists, however, see deficit thinking as ideological rather than science and associate it with classism and racism (Valencia, 1997:2).

The problem with deficit thinking, as Valencia points out, is that it can shape national policies such as the water allocation reform. An example would be the notion of benefits of water use that makes some people benefit from working for those who have water rights while not pushing for these people to also own the means of production. Making decisions on behalf of victims of deficit thinking, as is the case with the story narrated by one respondent, takes agency away from the people who are assumed to not know what they want. In Chapter 5, section 5.6, point iv lists how a respondent stated that

[T]he communities were only interested in subsistence, that kind of stuff, the few goats and the chickens ... not on a big scale – a lot of their children were moving to the cities, it was only the old folks. It was all about looking at the community dynamics in terms of what they wanted to do in terms of livelihoods. (D9, Interview, 13 March 2019)

This is a comment made from a position of superiority and classism. Interventions made from this position are most likely to help in maintaining a status quo where the advantaged have proven their competence and newcomers are shut out. This begs the question of how justice can be achieved when the HDIs continue to be written off and those in offices of power see HDI limitations as internal deficits.

Deficit thinking in this study has also been observed through:

- associating HDI water users with small-scale users
- insistence by focus group members on prioritising domestic water and seeing productive water use as for others. The discussion’s emphasis on domestic water creates an impression that it is all they want. This can be interpreted as internalised deficit thinking
- small-scale farmers’ need to sell water rather than intensify their production.

## **6.4 Intersectionality between land and water**

The intersectionality of land and water is mentioned by one of the academic respondents. In the context in which the intersectionality was mentioned, the viewpoint stood on its own and could not be categorised with any of the other views that had been expressed in the study. The respondent stated that “the intersectionality of land and water is overlooked in Africa. Some of us black Africans have internalised that water comes from heaven and is seasonal; therefore water is life as much as land is life”. The view touched on three important aspects: Africa; black Africans and water and land as life. The interconnectedness of land and water and life and its place in Africa for black Africans is expressed in much the same way as Motsei (2018) expresses how the indigenous people’s relation with land “transcends the physical”. In the context of the study, this can be interpreted as meaning that to alienate the black Africans from land and water is to deny them life.

## **6.5 WAR strategy as a “colonial strategy”**

In the same discussion of land and water as life, the same respondent also characterised the WAR strategy as a “colonial strategy” for its failure to consider the “vulnerable” and the context in which black communities became deprived of access to water. Arrigi, Aschoff and Scully (2010:412) argue that “the colonialists dispossessed the African rural communities by force and deliberately drove them ... into confined, poor regions, with no means of modernising and intensifying their farming”. De Muro and Tridico (2008) suggest that institutions in postcolonial states ought to break away from previous institutions, routines, norms and established values and interests. In as much as the WAR strategy uses terms such as ‘equity’, which is also found in the 1956 Riparian Act, it does not adequately break away from existing lawful users of water as determined by previous institutions. It rather maintains these users’ interests, and makes the strategy appear as if it is under the control “of former colonisers”, which scholars such as Maldonado-Torres (2007) have described as coloniality. Cavanagh (2013) also suggests that in post-1994 South Africa, the ANC government put in “transformative programmes of redress with a design, in some respects, not all that dissimilar to the old regime, insofar as certain groups

(albeit different groups) continued to be singled out for special treatment” (Cavanagh, 2013:101). While Cavanagh (2013) implied a totally new group being privileged by the ANC government, other scholars have indicated how the ANC’s neoliberal policies have continued to privilege commercial farmers (Bond, 2014; Movik, 2012) for fear of scaring away investors. This also resonates with Gumede’s (2016: xxiii-xxiv) thesis that “South Africa, arguably, has not confronted apartheid colonialism directly” and the political and development interventions it has pursued since 1994 have been general rather than specific. Thus, the idea that the WAR strategy is a “colonial strategy” as suggested by the study respondent is not farfetched.

## **6.6 Conclusion**

The chapter discussed findings by unpacking how the research questions were addressed and by interpreting the themes that had been identified in Chapter 5 of this study. The issue of equity was deliberated on in this chapter with a view that it was more than just “semantics”, as the reform strategy revolved around the concept of equity. When misunderstood or not understood at all, equity as a principle for water allocation is unrecognisable. The chapter went on to examine the idea of fairness and justice in the allocation of water, where it was noted that study participants were inclined towards the idea of water being allocated to those who have land. This intensifies the need for WAR not to operate in a bubble where land issues are not given the attention they require.

The chapter explained how the history of the country has an impact on how the WAR strategy is implemented by discussing how current patterns of resource allocation are a product of past discriminatory laws and practices. From the discussion, it can be concluded that the riparian water laws of the apartheid past affect water resource access in Greater Tzaneen, as historically disadvantaged communities remain in their past locations far away from water sources, while white farmers maintain their riparian privileges and enjoy easy access to rivers such as the Letaba River.

The discussion on the water allocation priorities of the GLeWaP has shown that there is no clear plan to benefit HDIs by the water infrastructure project. Given government plans to look for

water to allocate to black people where there is none, the conflicting objectives of the GLeWaP serve to confirm absence of resolve on the part of government and relevant stakeholders to make the worst-off better off. The chapter also discussed the different views on water allocation from the perspectives of HDIs and HAIs. Domestic water access was the main concern for HDIs while economic downturn, if water resources were to be allocated to the inexperienced users was for HAIs.

On the issue of gender and water allocation, the chapter explained how the WAR strategy seems to focus on gender within the black community yet disparities in access can also be identified in white communities. The differences in perspectives on the issue of equal allocations for black men and women were also highlighted. Views of women in rural Tzaneen were found to be different from those of women in academia whose view was to consider black families from a contextual perspective and from African ways of knowing. The researcher puts forward the notion that the idea of equal allocation of water for black men and women is ill-informed in instances where it fails to appreciate the nature of families and cultural values in black communities. It raises the question as to why gender is a focus in black communities while it does not receive attention in white communities.

The chapter also discussed the idea of equity in relation to benefits of water use as well as the themes that emerged from the study. It can be noted that there are challenges with the implementation of the reform strategy. These mostly arise from the failure by strategy/policy makers to consider the South African context and its complexities as a nation best described as post-1994 rather than post-apartheid, a description that makes reform a process that requires a lot more than immeasurable and elusive concepts such as equity.

The following chapter concludes the study by discussing how the study objectives were achieved and the implications for policy. It also makes recommendations and briefly explains the study's contribution to the body of knowledge and its original contribution.

# Chapter 7

## 7 CONCLUSION

### 7.1 Introduction

This study set out to investigate if the Greater Letaba Water Development Project is a deliberate attempt at achieving water allocation for productive purposes for HDIs in a context of water allocation reform. The study sought to examine whether, under the various water access limitations in the country, there is a chance that through the raising of the Tzaneen Dam and the construction of a new dam on the Nwamitwa site, opportunities to give HDIs access to some of the water were possible. To ensure reasonableness in the expectations of the investigation, the researcher assessed the objectives of the water development project and the context within which Water Allocation Reform takes place, using both a review of literature and fieldwork investigations. Set within the Critical Social Theory (CST) paradigm, the researcher, informed by Kivunja and Kuyini's (2017) characterisation of CST, was concerned with:

- relations of power in the water allocation discourses
- the conditions and place of individuals that are based on social positioning
- interlinkages between politics (power and racial) and justice
- human rights to water as everyone's right
- situating knowledge socially and historically.

In line with this approach was the application of Rawls' difference principle in his theory of justice, which was applied in the study to examine whether the worst-off could be made better off in the allocation of water resources. Rawls' theory of distributive justice is a borrowed theory from mostly the political sciences and has not been used to understand research problems associated with the field of Development Studies. As discussed in Chapter 4, there are other theories that have been used to understand issues of resource distribution but did not seek to understand resource distribution as an objective that can be deliberately planned to benefit the



least advantaged. Rawls' difference principle considers the least advantaged as the focus of a just distribution and looks at fair ends as a result of good intentions regardless of who the beneficiary is. In the context of water allocation in post-1994 South Africa, where neoliberalism has gained roots, Rawls' theory presents a fresh look at how the poor, who happens to be the majority in South Africa, can become better off. Robeyns (2003:5) reveals that Rawls' theory was developed at a time of “pervasive discrimination against black people” in the 1950s and 1960s. Inequalities in the water sector, as revealed in the findings chapter, paint a picture reflective of pervasive resource discrimination against black people and Rawls' theory provides the lenses through which policies, practices and perceptions in the water sector could be viewed and reviewed.

Reading policies and interpreting practices and perceptions required that the taken-for-granted assumptions about water scarcity, equitable allocation and other water allocation narratives be deconstructed. Deconstruction theory was applied to unpack and reveal underlying meanings and agendas from written (literature) and verbal texts (from interviews with study participants). With regard to literature, the choice of words and use of certain concepts is considered very important as words are thought of as never being neutral. In this study, a case in point would be the use of 'equity' in the allocation of water in a context of redress. Deconstruction was thus used as a tool to interpret the different conceptualisations of equity in literature and from the interview transcripts. It is through deconstruction that the study noted how equity has gained prominence through its vagueness and its capacity to stand in for what equality cannot stand for, thus creating illusions of a solution.

## **7.2 Summary of findings on research objectives**

In the sections below, the study objectives are revisited to discuss how they were realised.

### **7.2.1 Research objectives**

*Objective 1: To examine the contextual background of the WAR strategy, particularly the institutions that influence(d) its conceptualisation*

To realise this objective, an extensive review of literature was carried out, starting with the definition of equity, the primary concept in the water allocation reform. Understanding equity is significant to the study as it is the primary concept used to inform how water allocation is realised under the current water legislation. Although the literature says a great deal about equity, findings from this study reveal what has already been observed by scholars such as Syme and Nancarrow (1997) that the meaning of equity in the allocation of water has not been fully developed. In the context of South Africa, although the concept is in use, its understanding is still in its infancy and appears very elusive with no examples to show what it will look like when it occurs. Equality, on the other hand, appeals to many as a suitable principle for water allocation but is an impossible goal to achieve given the skewed allocation of land, a key primary resource that is considered significant if water for productive use has to be shared equitably across all community groups.

There are a number of institutions responsible for and influencing how the WAR strategy came about as well as how it is being rolled out. The WAR programme is revealed to have been birthed by the DWS as a means of ensuring that the country's water resources are shared in the best interests of all. As a reform strategy, it arose out of the National Water Act's specifications for redress in order to address race and gender-based imbalances in the water sector. Besides the DWS, there are other institutions, such as the CMAs and the WUAs, that were formed to support the transformation of the water sector by facilitating access by previously excluded water users, besides those that had been privileged by pre-1994 legislations. Apart from these institutions being directly mandated to enable the transformation process, there are other institutions that were identified in the literature, mostly government departments and parastatals, that are supposed to work with the DWS in the redress of skewed water allocation. Findings from the fieldwork have, however, revealed that the fragmented nature of these institutions, as well as the dysfunctional nature of WUAs in enabling the required participation, makes WAR a challenging programme and strategy for redress.

WAR is said to have been influenced by the Integrated Water Resources Management approach. It has, however, been noted that IWRM emphasises scarcity, environmental sustainability, economic efficiency and social equity, principles that influence the WAR strategy to align allocation with water use efficiency. As a result, IWRM is said to support 'modern' users such

as commercial farmers, a cause that contrasts with the redress approach of WAR. The IWRM has also influenced the creation of CMAs and WUAs, institutions and forums that may only work where there is no history of racial and gender discrimination that create limitations for participation of all stakeholders. With the share of water resources remaining consistently unequal between water users from past political epochs and HDIs, the IWRM approach can effectively be said to have managed to maintain a system where water resources are believed to be scarce and processes of water accumulation continue under the guise of IWRM values.

*Objective 2: To expand the applicability of distributive justice theory to the context of WAR as a strategy for redress*

The theory of distributive justice, as conceptualised by John Rawls and understood by other social justice theorists and scholars, has been described as a political philosophy. Rawls (1971) aimed to privilege traditional views of “judgements of justice” that “constitute(s) the most appropriate moral basis for a democratic society”. In this study, this has necessitated the need to unpack other notions of justice, the African perspective of justice for instance, in order to check for resonance and see how the western perspective (Rawls') intersects with the African perspective (*Ubuntu* as the study findings reveal).

In his writings, Rawls' focus on the worst-off, regardless of their capacity (egalitarian approach) contrasts with the utilitarian approach that the WAR strategy takes. Findings from the study have, however, revealed that the utilitarian approach has served to advantage a few as the country's history of discrimination did not allow the majority black population to gain experience that pulls them *en masse* to agriculture on a commercial level. Bringing the distributive justice theory into the allocation reform discourses presents an alternative view point for policy makers and other stakeholders as the theory appeals to the moral sense where the worst-off are to be made as well-off as possible. In its current state, the WAR strategy continues along the path of the past where water resources were protected and developed for the welfare of the wealthy. Its focus on efficiency, sustainability and the ill-defined equity has served to maintain a water management sector where redress for HDIs is only on paper and not in practice due to the limitations that come with its utilitarian approach. The distributive justice

theory is concerned with inequalities that are “arbitrary from a moral point of view” (Rawls 1971:210).

The distributive justice theory calls into question the institutions responsible for providing principles for a just society; the political and social institutions. In this study, these institutions were interpreted to refer to the political institutions and the instruments that they employ in the governance and management of water resources. With the study’s focus also being on Rawls’ second principle, the difference principle, the legislature in as far as it channels social and economic policies to improve the long term expectations of the least advantaged has also been the focus. Post-1994 legislation such as the Constitution of 1996, the NWA of 1998 and the WAR itself were analysed and found to have loopholes that maintain “ill-gotten wealth concentrated in the hands of white bourgeoisie and a few black elites” (Ndlovu-Gatsheni, 2013). The national Constitution's failure to facilitate land reform has also enabled the NWA to continue the support for existing water users, those from the colonial and apartheid past. These were conveniently labelled lawful water users and who could block prospects for WAR, especially in the better agricultural catchments where water was already overallocated to ELUs. In a country where the Constitution and the Water Act continue to distinguish citizens according to access opportunities, Rawls' theory of justice serves as the most appropriate basis for a democratic society.

*Objective 3: To critique WAR’s special focus on women as a separate entity among the HDIs*

The study approached WAR’s special focus on women, articulated as gender, from a position in which the separation of women from men as an HDI community was questioned. Through the literature and engagements with women in the case study area and women in academia who were study key respondents, the gender focus of water allocation was interrogated. As study findings have revealed, the allocation of water was found to not be equal in the white community where more white males than females had water rights.

The question posed to study participants has been why equality is used to define how water is shared between the HDI males and females, while equity is used to allocate water resources in general. Ideas from both the literature and fieldwork engagements reveal that a uniform policy cannot be used to define how gender defined allocations of water resources should be

determined as different women will have different needs depending on their contexts. An assumption that they will be oppressed if resources are not shared equally is not well supported by the literature or results from the fieldwork.

Although women from Tzaneen that were engaged with on the subject made it clear that they would opt for equal allocation, this was not informed by fear of oppression and consideration was not being given to other technical issues involved in accessing water that are dealt with in the literature. Given the DWAF's (2007) idea of allocating water to only recognised HDI groups, the allocation by gender looks like smoke and mirrors as the engagement of women in agriculture has been noted to mostly be in subsistence farming, a sector which the study has revealed to be marginalised by the water allocation reform process. Subsistence farming by its nature does not require much water and cannot lift participants out of poverty. Statistics have also revealed that there are a larger number of male-headed households than females engaged in agriculture. Other studies have also revealed the importance of families for poor women in the context of land rights. Individual water rights need to be understood in a light similar to that of land rights. Allocating water to women, while not addressing other constraints such as access to land, financial resources and the openness of the economic environment detracts from the potential gains that could be achieved in WAR.

### **7.3 Implications of the findings**

Water Allocation Reform, as a strategy to redress past discriminatory practices in the allocation of water resources, has come across as a top-down strategy based on the concerns of the wealthy rather than the masses for which the strategy is meant. The privileging of ELUs and the unavailability of resources for allocation due to catchments being fully allocated makes the case for allocating to HDIs irrelevant, especially when water allocation discourses are framed within the context of scarcity, efficiency and sustainability. The recognition of water allocation from past political epochs defeats the purpose of redress as the same ELUs result in catchments being declared fully allocated. The many challenges in the implementation process are reflective of a process that is hamstrung by legal, administrative, political and socio-economic challenges that make the strategy incompatible with the context in which it has to be implemented.

South Africa's history of colonialism and apartheid and the accompanying legislation make the case of redistributing water similar only to other southern African countries that have experienced a similar history of racial segregation. Literature on water allocation reform within homogenous communities does not apply to the situation in South Africa. For more than 350 years, the legislation of the country has sought to privilege the minority white community at the expense of the black majority. New legislation, such as the NWA, the Constitution and other reform programmes such as land reform, have proved to be weak as they have not completely moved away from privileging those who benefited from previous political dispensations. Land ownership remains skewed, making significant allocations of water impossible while reserve allocations for the HDIs are not taken up due to lack of infrastructure and coordination between different government departments.

There are wide gaps between policy and practice. The linkages between land ownership and a successful water allocation reform are known but not made part of the implementation process due to government departments working in silos. Coordination between departments with the mandates to deal with land, water and even agrarian reform has been lacking. This is worsened by the lack of a comprehensive rural development policy that states what kind of path South Africa's rural areas have to take.

A gender-based allocation of resources needs to be defined by the needs and concerns of real people on the ground rather than world ideologies. This is summed up well by Barkan (2006), who asks why rights applicable to a particular people because of wrongs committed against them should be held as universal. There are different types of households in South Africa and their needs and experiences cannot be the same. Individual water rights thus need to be dealt with on a case by case basis rather than one size fits all.

South Africa's state of water scarcity is viewed as a water resource management rather than a water resource development issue. This has created water resource gaps, as much of the resources in the country are in private hands and the government still needs to work on government-owned resources if it is to make the worst-off better off. The conflicting views on the objectives of the GLeWaP are a case in point, as the organisation that conceived the idea of the infrastructure project has potential to control and challenge any agendas opposing their

original cause. The government, through the Minister of Water thus needs to take full control of the country's water resources and not allow individual ownership in part or in full of water resources. The Constitution's property clause supports the continued control of water resources as water is considered property in as much the same way as land is.

There has been too much focus on the neoliberal policy angle in the allocation of water with its market value, albeit for a minority. With verifications and validations of water volumes per user being confirmed, there is room to rethink and re-pattern water allocation to include those for whom the reform process was meant, the historically disadvantaged.

Reform policies may need to be written from under a veil of ignorance to avoid deficit thinking. Policies built on an idea that a group of people have no competencies are a façade for continued accumulation by a few. The WAR strategy's focus on equity and efficiency excludes those who may be assumed to not be able to use water efficiently, such as subsistence farmers. It also provides room for allocation that is immeasurable due to the elusive nature of equity. Except for recognising the need to redistribute water and including it as part of legislation, the literature reveals that there are currently no known measures for equity in the allocation of water.

#### **7.4 Contribution of the study**

There is no existing empirical study on water allocation reform that has analysed the deliberateness of a strategy using a combination of the theory of justice and deconstruction. The study has demonstrated, through the use of Rawls' theory of justice, that the poor majority require recognition in the redistribution of resources.

Through the study, an original contribution is made when the concept of deficit thinking is identified in the ideas expressed by some participants about black farmers and black government officials in the water sector. It is hoped that through this study it is realised that justice in allocation of water resources will not prevail where there are notions of the inherent incompetence of black people.

The study makes an original contribution to the body of knowledge on lack of clarity on the choice of the equity principle in water allocation reform in South Africa. Although it has identifiable principles, equity has not defined any progress in the redistribution of water and presents only an illusion of inclusion of the historically disadvantaged.

The study also adds to the already existing literature on the lack of transformation in the water sector, where existing lawful users are shown to be the dominant and legitimate water users 21 years after the promulgation of the National Water Act meant to transform past discriminatory practices.

Another contribution to the body of knowledge is made on the understanding of individual water rights from a gender context. There are contrasting views held by women in South Africa and also a lack of appreciation of the difference in uptake of bulk water and domestic water. The study findings also reveal that there is no equality of access to water resources between white men and white women.

### **7.3.1 Contribution to development studies**

The thesis unpacked water resource management issues from a social science perspective, a subject seen as a preserve for natural scientists. It also adds the theory of justice to water management, a theory that is normally engaged with in political sciences. The distributive justice theory questions the institutions responsible for providing principles for a just society; the political and social institutions. In this study, these institutions were interpreted to refer to the political institutions and the instruments that they employ in the governance and management of water resources, an issue of concern to Development Studies. Most research studies in Development Studies focus on land reform to the exclusion of water reform. This study marries the two and breaks the literary gap in current studies while also going beyond the domestic water supply and sanitation scope. Its analysis of water resources and water services brings together the two water Acts, the Water Services Act of 1997 and the National Water Act of 1998.



## 7.5 Conclusions

The architecture of the water development projects as with many other development programmes, is based on a prevailing socio-economic environment that has resisted transformation from a colonial past. As such, the development tends to increase the benefits of those who are already placed in a better position to access available resources. The white farmers in the study area already have the necessary infrastructure, physical and monetary assets, skills and the knowhow to access water. Black emerging farmers, on the other hand, are limited by structural inequalities, a result of a past of vast discriminatory laws that have excluded them from mainstream development. Transformation using a distributive justice approach appreciates the different factors that form the basis of the inequalities and deals with them from an egalitarian point of view. As a theory, it is pro-poor and allows a chance for distributive principles that do not prioritise efficiency and sustainability but offer an opportunity for the worst-off to become as well off as possible.

The legislation on water and the Constitution on which it is based have only focused on providing the parameters for transformation without making adequate provisions for addressing constraints that limit benefits for persons for whom transformation is meant. The HDIs have not received adequate legislative support in building their capacity to successfully be in a position to secure the benefits of transformation. For instance, the HDIs are expected to do a great deal of ground work to legitimise their access to water. The legislation does not make it any easier by prescribing a licensing system that is highly technical and administrative. As such, only a small percentage of HDIs manage to navigate the process, which thus maintains the skewed state of access to water resources. Furthermore, while past legislation was repealed to make way for the NWA, the NWA has remained transformative only in as far as it is a legal tool to change from past systems and is not a tool to reverse the gains made. It will provide for the need to have a water use licence without making any linkages with other necessary resources required, such as land. Confirmations of past water rights have more legal and administrative support, judging from the ever-rising number of ELUs.

Legal centralism in multi-cultural communities fails to allow for rights to be defined and redefined according to different social contexts. The institutions that have legislative authority

over water allocation issues do not consider the multiplicity of identities and cultures, or the gendered context and South Africa's *Ubuntu* philosophy, in their definition of resource rights and, in particular, how water is perceived as integral to life in as much as land is viewed as a spiritual asset. Laws to govern water thus need to involve all stakeholders, not a few elites whose approach may be top-down. African people's *Ubuntu* philosophy allows them to seek for common global benefit that would even include benefits for previously advantaged individuals. The economic focus that values individuals over collectives, also included in the notion of gendered allocations, does not uphold the *Ubuntu* philosophy. Furthermore, if Rawls' theory, which is based on western ideas of justice, can aspire to make the worst-off as well-off as possible, post-1995 water legislation that is built on the same western value system, but on African soil, can and should embrace African *Ubuntu* philosophy where the welfare of the collective rather than individuals' welfare should be at the forefront of resource allocation.

Lastly, the complexities created by colonialism and apartheid still hold and there is a need to disentangle the domination of one group over another that continues to hold sway in institutions and in resource access. There doesn't seem to be a strong desire on the government's part to have a vibrant black agricultural base. Government plans to only resort to water scavenging, as demonstrated by the NW&SMP action plans (Table 3.5), attest to the government perhaps not having the power to change water allocation patterns in a way that benefits the majority. It can thus be concluded that currently there does not seem to be a deliberate effort to allocate water for productive purposes to the HDIs.

### **7.5.1 Future research opportunities**

Some of the unexpected findings and comments from study participants have necessitated the need for future studies to look into the issues that are raised. These are:

- Notions of Water Allocation Reform as a colonial strategy
- The impact of deficit thinking on transformation processes
- Differential treatment of gender inequality in different racial groups.

Other areas that may need further research pertain to:

- The influence of global gender narratives on gender relations in Africa

- Comparative studies on vibrant rural development policies
- National water resources development plans for an inclusive economy

## 7.6 Recommendations

The study findings reveal challenges with equity, the main principle of water allocation; dissonance in the plans for water allocation priorities of the GLeWaP, where there was a potential to benefit historically disadvantaged individuals; and a general lack of government effort to have a comprehensive rural agricultural policy. Evidence from the study has also shown that deficit thinking informs perceptions and implementation of the water allocation reform strategy in ways that constrain reform processes. While acknowledging that case study research may not be generalised, concerns arising from this study inform the following recommendations:

- The DWS should embark on community engagement programmes in association with the Department of Lands to engage communities to make them aware of processes and opportunities to access land and water. This way, they also broaden their understanding of water access beyond water for domestic needs. Through these community engagements, it is also hoped that communities can be encouraged to form resource use associations where they can tap into their indigenous knowledge systems on the values of water and land in an environment where they are assumed to not have such knowledge. Formation of own community groups empowers them in a way that may make integration with WUA easier, as they would also use their own knowledge base to advance themselves without fear of exclusion on the basis of knowledge or language.
- There is a need for comprehensive dissemination of licensing information, processes and their relevance to the general public, using accessible means. This process will need to acknowledge that computer-based processes such as the online water platforms, including the internet-based licensing processes, exclude a great number of people who do not have smart phones or other suitable devices.

- Land and water access rights should simultaneously be made available. Legislative measures should be put in place to ensure that when land is sold or passed on to new beneficiaries, the associated water access rights go with that land. People with water rights for which they have no use should also be encouraged to dispose of these for the access of new players and even other possible users who could use them productively.
- Expropriation of water access rights should be investigated for application in much the same way as is being contemplated for land. While there is potential for conflict in expropriation, it is an opportunity for the Water Act to be unpacked and interpreted to benefit all citizens fairly.
- Government should combine water resources management with infrastructure development to increase government-owned infrastructure as opposed to having a large percentage of infrastructure in the country being privately developed and owned. The potential for the success of WAR is reduced in cases where water infrastructure is privately developed.
- There is need for a rural development policy to improve rural farmers' infrastructure for a vibrant black rural economy. Government should move away from equating black water licence applicants with small-scale and tokenistic water access. Today's white commercial farmers come from many years of preferential financing, including continued support by government through low cost water that is conveyed through national canals, among other national assets. A vibrant black economy can only come about through similar targeted long-term support.
- There is a need for improved local government budgets for the betterment of domestic water access. Black communities are overwhelmed by lack of basic water to the extent that they can hardly focus on accessing water for economic use.
- Principles for the allocation of water should be measurable and go beyond being policy prescripts. Equity is immeasurable and equality unachievable. Policy makers and interested stakeholders need to redefine water allocation principles that can bring about desirable and measurable transformation in the allocation of water.

Based on the above, as well as the fact that water sector transformation has failed to materialise under the current arrangement over the last two decades, there is a need to look into the

establishment of a specially tasked unit on Water Sector Transformation. This unit will be responsible for developing programmes aimed at ensuring revived efforts to transform the water sector. The government will need to make legislative efforts to transfer transformation functions from the DWS to the proposed new institution. Formation of this unit should be such that its performance targets are uniquely aimed at addressing measurable transformation requirements now and into a well-defined future. To free the transformation unit from similar challenges that beset the DWS, it would be advisable that it is established under an independent state institution for transformation in an arrangement similar to the Constitution's Chapter 9 institutions.

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## Annexure 1: Approval letter from DWS



**water & sanitation**

Department:  
Water and Sanitation  
REPUBLIC OF SOUTH AFRICA

MPUMALANGA

Private Bag X11259, MBOMBELA, 1200. Prorum Building, Cnr Brown and Paul Kruger, MBOMBELA, 1200. Tel: 013 759 7300

**Enquiries: Mr. Nekhofhe Telephone: 013 759 7443 Reference: S.9/4/P**

24 August 2017

University of Pretoria  
Department of Anthropology and Archaeology  
Faculty of Humanities  
Lynnwood Road, Hatfield  
Pretoria  
0083

To whom it may concern:

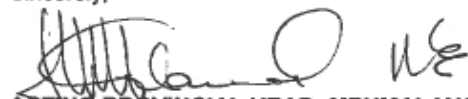
**RE: LETTER OF APPROVAL TO CARRY OUT RESEARCH WITH DEPARTMENT OF WATER AND SANITATION (DWS) OFFICIALS**

This letter acknowledges that I have received and reviewed a request by **Ms Beatrice Maphosa [student number 16405821]** which received on the 24 August 2017 to conduct a research project entitled "Distributive justice: Water Allocation Reform in the Greater Tzaneen Municipality" with the personnel at the Department of Water and Sanitation, Water allocation reform directorate.

**Ms Maphosa B** has assured the department that the research will be carried out for academic purposes and will be done in an ethical manner.

It is in light of above that I grant her an approval to conduct above mentioned research with the department under Olifants Catchment Management Area.

Sincerely,



ACTING PROVINCIAL HEAD: MPUMALANGA

DATE: 24/08/2017



NATIONAL DEVELOPMENT PLAN  
Our Future - make it work

## Annexure 2: Resource needs questionnaire

# Questionnaire

## COMMUNITIES

Rural farmers

### Distributive justice: Water Allocation Reform in the Greater Tzaneen Municipality

**Subject:** The questionnaire is part of a research study which is investigating how the Water Allocation Reform programme will be able to address the prevailing inequalities in water access and allocation in the Greater Tzaneen Municipality. The intention of the study is to determine the best approach to benefit HDIs through various reform initiatives. The developments associated with the Great Letaba River Water Development Project will be the main focus of the study.

**Purpose of the questionnaire:** The questionnaire will seek to understand the distribution of available water related resources, the nature of resources in the hands of community members as well as establishing the needs of the community with regards to water access. The information will help in determining whether their resources and needs can be aligned to the water development programmes in the area with a special focus on the Great Letaba River Water Development Project.

**Research Support:** This exercise is carried out as part of the research entitled "Distributive justice: Water Allocation Reform in the Greater Tzaneen Municipality". The study is supported with funding from the University of Pretoria and the University of South Africa

**Respondent personal information**

1 Name of respondent    First name     Surname     Female     Male

2 Contact details    Phone     Email

3 Age     Respondent's position at the household    Married     Unmarried     Widowed

4 Location?    Ward     Settlement Name     Farm     How long have you lived in this ward/village

5 Type of settlement or housing?    Formal     Informal     Rural

6 Land area owned or used at this establishment (Hectares or approximate Length X Width in metres)?     What are the uses?

7 What is the source of household income?    Wages     Farming     Grant     Remittances     No income

8 Total monthly income bracket R0 to R300  R301-R600  R601-R1000  R1001-R8000  R8001-R6000  Above R10000

9 Income expenditure Water and Electricity  Farming equipment  Health Bills  Others

**Available resources and access**

10 What farming skills do you have? Crop farming  Animal husbandry  Mixed  Commercial

11 What is the name of the nearest dam and river to your home? Dam name  River name

12 Is this the source of your water? Yes  No  If not, then which dam and/or river are?

13 What is the source of your farming water? Harvested Rain  Dam  Borehole  River  Direct Rain   
Purified  Harvested  Water Tanks

14 Do you have water storage for farming purposes? Dam  Tank / reservoir  None

15 How much water do you use per month? Mm<sup>3</sup>  Are you billed for water use for farming? Yes  No  How much

16 Is the water you can access now enough for your farming needs? Yes  No

17 How do you obtain water for the farming activities? Pumps  Gravity  Using buckets  Other method?

18 What type of water license do you have? None  General Authorisation  Date of issue  Not aware

19 Do you or anyone you know get water from the neighbouring dams? Yes  No

20 What type of equipment do you have for farming? List

21 How many workers are assisting with farming?  How many more people are working on the farm who are not workers?

22 Where do you sell your produce?  Are you managing to sell all your produce?

23 Is the land you farm on registered in your name? Yes  No  Do not know

**Resource needs**

24 Do you need more water?  About how much more water. Litres or description?

24 What do you wish to use the additional water for?

26. What other resources do you wish to have to enhance farming? List

27. Do you think you need more land?  How much more land do you think you may need to have more productive farming?

28. If extra land is not available in your area, what ideas do you have about getting more space for farming?

29. Would you wish to change your farming practices if land is not adequate? Please explain your answer.

30. What is the estimate of the additional water that you will need to succeed in the farming you wish to carry out with the same land?

31. Besides farming, what other ways can you use water to get an income and what resources would you need for that?

32. Which institution and office is currently assisting those who need more land for farming?

33. Do you know about water use licenses and how to get these? Yes  No

34. Do you know anyone who has a water use license? Yes  No  Do you support use of water use licenses? Yes  No

35. What do you think should be the criteria that has to be used to determine who gets water or land for farming?  Farming skills  Willingness to farm   
Ownership of arable land  None

36. Do you think land and water should be given to those who know how to use it productively? Yes  No   
Why?

**Other**

37. Are you a member of a Water User Association or Irrigation Board? If yes, please provide name of Association or Board.

38. Have you participated in any Irrigation Board or Water user association meeting? Yes  No

39. How does being a member of these institutions add value to your farming?

40. What issues concern you with regards to how you access water for your farming needs?

41. Are you having a difficult time getting water for farming or other uses?

42. What else do you wish to say about water access in your area?

The researcher should complete the following and also take the relevant pictures:

43 Type of housing:

44 Observed agriculture:

Questionnaire administered by  University

Date  Case study area



## **Annexure 3: Letter of study introduction to respondents**



**Faculty of Humanities**

### **LETTER OF INTRODUCTION**

The University of Pretoria has given permission for a study which deals with water access by historically disadvantaged individuals to be carried out. The study is set to generate information which will help understand the reform processes of past discriminatory practices in water access and allocation. The responses to the questionnaire are valuable in determining the available access as well as challenges to accessing water for productive use. The questionnaire also seeks to capture your ideas about how water ought to be distributed.

I wish to thank you in anticipation of your valuable contribution.

Kind regards,

Ms B Maphosa

## Annexure 4: Informed consent form



Faculty of Humanities

### CONSENT FORM

I agree to participate in an interview that is being conducted by Beatrice Maphosa for her study entitled Distributive justice: Water allocation reform in the Greater Tzaneen Municipality. As a participant in this study, I have been informed that my participation is voluntary and that I may decline to answer any of the questions, if I so wish. All information which I provide will be held in confidence and I have the option of not being identified in the thesis or any publication if I wish. I understand that there are no physical risks in taking part in this research study and that there are no direct benefits to me. I have been informed however that society may benefit from positive changes that may take place as a result of information obtained from this study.

Name of participant: \_\_\_\_\_

Signature of participant: \_\_\_\_\_

Date: \_\_\_/\_\_\_/\_\_\_

## **Annexure 5: Understanding justice in the distribution of resources**

### **Survey Title: Understanding justice in the distribution of resources**

The questionnaire is part of a study on distributive justice and water allocation reform in South Africa. The study is set to generate information which will help understand the reform processes of past discriminatory practices in water access and allocation. The responses to this questionnaire are valuable in determining the general understanding of justice in the allocation of resources such as water.

I value your input and thank you in advance for taking time to complete the survey.

Kindly note that participation in this survey is voluntary

### **Survey purpose**

The questionnaire is part of a study on distributive justice and water allocation reform in South Africa. The study is set to generate information which will help understand the reform processes of past discriminatory practices in water access and allocation. The responses to this questionnaire are valuable in determining the general understanding of justice in the allocation of resources such as water.

Participation in this survey is voluntary.

No. of pages: 1

No. Of questions: 10

1. Gender Male/Female
2. Age\_\_\_\_\_
3. Race  
Black African



White

Indian

Coloured

Other

4. What informs your idea of what is just or fair?

Academic background

Lived experience

Social media

Current affairs

Other (please specify)

5. What in your opinion is equality about? \_\_\_\_\_

6. Which option best describes your understanding of equity?

Equal share for all

Distribution according to need

Distribution in order of most deserving

Each person is satisfied with what they have

I struggle to understand equity

Other (please specify)

7. Allocation of resources should be based on the principles that make the poor better off

Strongly agree

Agree

Neither agree nor disagree

Disagree

Strongly disagree

8. Allocation of resources as part of redress of past discriminatory practices should consider who uses resources best

Always

Usually

Sometimes

Rarely

Never

9. Laws to govern water allocation should be determined by

Landholders

Government

Economics

All stakeholders

Global markets

10. Supposing you did not know your gender, race, age and abilities, what would you agree on as the grounds for sharing limited resources? \_\_\_\_\_

## Annexure 6: Survey approval letter from AFASA



House G10, ARC-API,  
391 JR, Doringkloof,  
Irene, 0062  
PO Box 248  
Irene, 0062  
+27 (0) 10 597 3673  
+27 (0) 12 346 3613  
info@afasa.org.za  
www.afasa.org.za

28/08/2019

University of Pretoria  
Department of Anthropology and Archaeology  
Faculty of Humanities  
Lynnwood Road, Hatfield  
Pretoria  
0083


Dear Sir/Madam

**Re: Letter of Approval to carry out research with AFASA members**

This letter acknowledges that I have received and reviewed a request by Beatrice Dube [student number 16405821] to conduct a research project entitled "Distributive justice: Water Allocation Reform in the Greater Tzaneen Municipality" with the members of AFASA, and I approve of this research to be conducted.

Ms Dube has assured me that the research will be carried out for academic purposes and will be done in an ethical manner.

Sincerely,



M.Thamaga  
AFASA Manager  
012 943 7690/malapane@afasa.org.za

## Annexure 7: Survey approval letter from Letaba Water User Association



LETABA WATER GEBRUIKERS VERENIGING  
LETABA WATER USERS ASSOCIATION

☎ : (015) 307 2651  
☎ : (015) 307 2651  
@ : admin@lwgvc.co.za

📍 : Thiem Str 2, Tzaneen  
✉ : Posbus/ PO Box 1220  
Tzaneen  
0850

26 August 2019

**University of Pretoria  
Department of Anthropology and Archaeology  
Faculty of Humanities  
Lynnwood Road, Hatfield  
Pretoria  
0083**

To whom it may concern:

**Re: Letter of approval to carry out research with Letaba Water User Association members**

This letter acknowledges that I have received and reviewed a request by Beatrice Dube [student number 16405821] to conduct a research project entitled “Distributive justice: Water Allocation Reform in the Greater Tzaneen Municipality” with the members of the Letaba Water User Association, and I approve of this research to be conducted.

Ms Dube has assured me that the research will be carried out for academic purposes and will be done in an ethical manner.

Sincerely,

**A.J. VENTER  
EXECUTIVE OFFICER**

## Annexure 8: Faculty of Humanities Research Ethics Committee Approval Letter



UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA

Faculty of Humanities  
Research Ethics Committee

18 December 2017

Dear Ms Maphosa

**Project:** Distributive justice: Water allocation reform in the Greater Tzaneen Municipality  
**Researcher:** B Maphosa  
**Supervisor:** Prof V Gumede  
**Department:** Anthropology and Archaeology  
**Reference number:** 16405821 (GW20171138HS)

Thank you for your response to the Committee's letter 5 December 2017.

I have pleasure in informing you that the Research Ethics Committee formally **approved** the above study at an *ad hoc* meeting held on 18 December 2017. Data collection may therefore commence.

Please note that this approval is based on the assumption that the research will be carried out along the lines laid out in the proposal. Should your actual research depart significantly from the proposed research, it will be necessary to apply for a new research approval and ethical clearance.

We wish you success with the project.

Sincerely



**Prof Maxi Schoeman**  
Deputy Dean: Postgraduate and Research Ethics  
Faculty of Humanities  
UNIVERSITY OF PRETORIA  
e-mail: tracey.andrew@up.ac.za

cc: Prof V Gumede (Supervisor)  
Prof I Pikirayi (HoD)

Research Ethics Committee Members: Prof MWI Schoeman (Deputy Dean); Prof KL Harris; Mr A Ilzou; Dr I Blokland; Ms A don Santos; Dr R Faure; Ms KT Govender; Dr E Johnson; Dr C Paredelblanco; Dr C Puttergill; Dr D Reyburn; Dr M Soer; Prof E Taljard; Prof V Thebe; Ms B Tsohe; Ms D Mokalapa

## Annexure 9: Faculty of Humanities Amended Ethical Clearance Letter



**Faculty of Humanities  
Research Ethics Committee**

3 September 2019

Dear Ms Dube (nee Maphosa)

**Project:** Distributive justice: Water allocation reform in the Greater Tzaneen Municipality  
**Researcher:** B Dube (nee Maphosa)  
**Supervisor:** Prof V Gumede  
**Department:** Anthropology and Archaeology  
**Reference number:** 16405821 (GW20171138HS) (Amendment to protocol)

Thank you for the application to amend the existing protocol that was approved by the Committee on 30 November 2017.

The Amendment as supported by documents received between 12 to 28 August 2019. I have pleasure in informing you that the amendment was **approved** the Research Ethics Committee at an *ad hoc* meeting held on 3 September 2019. Further data collection may therefore commence.

Please note that data collection at the additional site may not commence prior to the submission of the above permission and full ethical clearance will being granted. I would appreciate a response at your earliest convenience.

We wish you success with the project.

Sincerely



**Prof Maxi Schoeman**  
Deputy Dean: Postgraduate and Research Ethics  
Faculty of Humanities  
UNIVERSITY OF PRETORIA  
e-mail: tracey.andrew@up.ac.za

cc: Dr V Gumede (Supervisor) Prof I Pkikrayi (HoD)

Fakulteit Geesteswetenskappe  
Lefapha la Bumanatho

**Research Ethics Committee Members:** Prof MME Schoeman (Deputy Dean); Prof KL Harris; Mr A Blouw; Dr L Siskind; Dr K Booyens; Dr A-M de Beer; Ms A dos Santos; Dr R Fasselt; Ms KT Govinder Andrew; Dr E Johnson; Dr W Kefauver; Mr A Mohamed; Dr C Putberg; Dr D Rayburn; Dr M Soer; Prof S Taljard; Prof V Thebe; Ms S Tsebe; Ms O Mokalapa