

HYDRO-POLITICS IN SOUTH AFRICA



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INTRODUCTION

Human life, as with all living organisms on the planet, is reliant on upon fresh water. Water is not only needed to grow food, generate power and run industries but it is also needed as a basic part of human life¹. Water is central to the makeup and functioning of everything we see on the earth's surface; water is a core element of the climate processes. In the natural world, water is not found in taps, buckets and glasses but in rivers, lakes, wetlands, dams, estuaries, groundwater, the seas and oceans and is an intrinsic part of the environment. Social reliance upon water is evident throughout history, illustrating that human settlements have been closely linked to the availability and supply of fresh water².

Water is known as an economic good. Since the Dublin Conference on Water and Environment in 1992, this notion has been widely accepted among water resource managers³. According to the National Water Resource Strategy of 2004, South Africa is located in a predominantly semi-arid part of the world⁴. South Africa is not well endowed with abundant fresh water resources. In fact, it is regarded as the 30th most water scarce country in the world⁵. It relies primarily on surface water resources for urban, industrial and irrigation requirements. Historically in our country, water for production and other water use purposes was largely allocated unequally for the benefit of the minority white population, without consideration for equity, efficiency and sustainability⁶.

Water distribution and use remains highly inequitable and skewed in favour of the beneficiaries of the earlier Riparian Rights system. Through the riparian access principle, the right of access and the use of water resources were intimately linked to the ownership of land. This principle was adapted from the English Law which tied water rights to that of land⁷. Because Colonisation and later the Apartheid system were based on the theft of land, access to water resources for black South Africans in general and "African Black" South Africans in particular, had been and continues to be at a lower standard.

This paper presents key learnings from research conducted to understand South African hydro-politics in the Berg River and Kuils River Catchment areas, and neighbouring communities. We looked at two themes: Water Allocation Reform and Environmental Racism. This work has involved analysis of documentary sources, as well as semi-structured interviews with water users in the communities mentioned above and observation through site visits.

The first section of this paper provides an historical analysis of legislation relating to water, unpacking the role of water rights reform in South Africa's post-apartheid political economy; which is equally a marker for: 1) the degree of achievement of redress for past injustice and cultural inequality and 2) a measure of the country's capacity to sustain the efficient and productive use of a vital natural resource. While the political discourse of post-apartheid reparations has tended to focus more on the redistribution of land, because of the close links between land and water rights, the black population was and continues to be excluded from property rights in relation to water, to at least the same extent as for land⁸.

The second section of the paper is a more concrete exploration of environmental injustices in the country specifically in the most marginalized areas; we used Kuils River Catchment and its surroundings as our case study. The chapters are interspersed with true-life stories of struggles by communities for environmental justice. For instance, locating a toxic waste site next to a poor, black community simply because of its race and class, is an environmental injustice that violates basic human rights and democratic accountability and demands remediation and prevention⁹.

1 Gabru, N. '[Some Comments on Water Rights in South Africa](#)' in *Potchefstroom Electronic Law Journal*, 8(1), 2017, pp. 1–34

2 Kidd, M. '[South Africa: The Development of Water Law](#)' in Dellapenna J.W. & Gupta J. (eds) *The Evolution of the Law and Politics of Water*, Springer, Dordrecht, 2009

3 Savenije, H.H.G. '[Why water is not an ordinary economic good, or why the girl is special](#)', in *Physics and Chemistry of the Earth Part B: Hydrology, Oceans & Atmosphere*, 27 (11-12) 2001, pp. 741-744

4 National Water Resource Strategy 2004.

5 Nkondo, M.N., van Zyl, F.C., Keuris, H. & Schreiner, B. '[Proposed National Water Resource Strategy 2 \(NWRS 2\) Summary](#)', Department of Water Affairs (DWS), July 2012

6 Department of Water Affairs and Forestry: Chief Directorate Water Use '[Water Allocation Reform Strategy](#)', September 2008

7 MacKay, H. '[Water Policies and Practices](#)' in Reed, D. & de Wit, M. (eds) '[Towards A Just South Africa – The Political Economy of Natural Resources Wealth](#)' WWF and CSIR, Pretoria, 2003

8 van Koppen, B. '[Redressing inequities from the past from a historical perspective: The case of the Olifants basin, South Africa](#)' in *Water SA* 34 (4), April 2008, pp. 432-438

9 McDonald, D.A. (ed) '[Environmental Justice in South Africa](#)', Athens: Ohio University Press, and Cape Town: University of Cape Town Press, 2002

SECTION 1

LEGAL FRAMEWORK, ON THE MAKINGS OF WATER INEQUALITIES IN SA

1.1 COLONISATION AND APARTHEID

1.1.1 Colonial rule

Water rights have come full circle, according to the findings. The Dutch Company rulers proclaimed water as a public commodity and the state's *dominus fluminis* (overall rights of control) as early as 1652, when they imposed Roman-Dutch law throughout the country¹⁰. While the Cape Colony was under Dutch sovereignty (1652-1795 and 1803-1806), the Water Law was enacted, and decisions about water use and allocation were primarily made by the Supreme Court; from a position where the State *dominus fluminis*. Under the British (1795-1803 and 1806-1961), on the other hand, water was privatised and linked to land tenure, establishing the riparian principle as supreme. The idea of *dominus fluminis*, or total ownership, permits the ruling party to have entire control over the resource¹¹. This doctrine prevailed under Dutch rule in South Africa, for example, the Dutch rulers since 1652 adopted the principle of *res omnium communes* (a thing of the entire community) to impose control over the streams of Table Bay Valley, and control was exercised through a series of legal interventions.

1.1.2 The Water Act 54 of 1956

The Water Act 54 of 1956 was enacted during the Apartheid era and under its terms, water users enjoyed riparian rights to water sources located within, or adjacent to, their properties. The effect of this was that water users not located near water sources were at the mercy of the owners of riparian rights and their water access was limited to residual water, after uptake by the riparian users¹². Because land acquisition was based first on the dispossession of land by the colonising powers and later apartheid state, those with no or limited access to water were de-facto black South Africans.

This Act made a distinction between private and public water¹³.

- Private water referred to all water which rises and or falls naturally on any land, or naturally drains or is led onto one or more pieces of land which are the subject of separate original grants, but not capable of common use for irrigation purposes.
- Public water was described as any water flowing or found in or derived from the bed of a public stream, whether visible or not.
- Public stream was defined as a natural stream of water which flows in a known and defined channel, whether or not such a channel is dry during any period of the year and whether or not its conformation has been changed by artificial means, if the water therein is capable of common use for the irrigation on two or more pieces of land riparian thereto which are the subject of separate original grants or on one such piece of land and also on [state] land which is riparian to such stream, provided that a stream which fulfils the foregoing conditions in part only of its course shall be deemed to be a public stream as regards that part only.

As a result of this act, the owner on whose land private water was found had exclusive use and enjoyment of such water, provided, he or she did not pollute it. Only the riparian owner had the right to use the water resource with respect to agricultural and industrial purposes. The riparian owner had the right to use all surplus water for agricultural and industrial purposes. The use of public water for industrial purposes was subject to a permit. However, public water could be used for any of the defined categories, provided that such usage was beneficial and did not amount to wastage¹⁴.

10 Tewari, D.D. 'A Brief Historical Analysis of Water Rights in South Africa' in *Water International* 30 (4), 2005, pp. 438-445

11 Tewari, D.D. 'A detailed analysis of evolution of water rights in South Africa: An account of three and a half centuries from 1652 AD to present' in *Water SA* 35 (5), Pretoria, October 2009

12 Department of Water Affairs and Forestry 'National Water Resource Strategy', Pretoria, September 2004

13 Department of Water Affairs and Forestry (1997) 'White Paper on a National Water Policy for South Africa' Pretoria, 1997

14 Government Gazette 398 (19182) 'National Water Act (Act No. 36 of 1998)' Cape Town, 26 August 1998

1.2 DEMOCRACY (POST 1994)

1.2.1 The Constitution of the Republic of South Africa

The end of Apartheid saw the birth of a new era of democracy in South Africa, and an interim Constitution was adopted that allowed for the scrutiny and rectification of legislation through a common Bill of Rights¹⁵. The interim Constitution was replaced by the 1996 Constitution, which makes provision for various categories or 'generations' of human rights:

- First generation or "blue" rights are civil and political rights of individuals - right to equality, right to life, and freedom of association.
- Second generation or "red" rights are social, economic and cultural rights - food, work, housing, water - which require positive state action.
- Third generation or "green" rights refer to peoples or solidarity rights - including environmental rights.

The inclusion of socio-economic rights in the South African Constitution broadened the rights of all citizens and created an environment in which, at least in principle, socio-economic development could flourish. There have however been many arguments regarding these rights since the adoption of the Constitution, a fundamental one has been around how rights are limited by clauses in the constitution that allow government time to reach these goals. These internal modifiers, which are included in the socioeconomic rights, limit the extent to which rights must be enforced making rights subject to two limitation clauses. The general limitation clause in section 36 applies to all rights in the Bill of Rights, which effectively says that rights may be limited by a law of general application that is 'reasonable and justifiable in an open and democratic society based on dignity, freedom, and equality'. The Constitutional Court does not apply section 36 in most socioeconomic right cases, however, and has instead relied solely on the internal modifiers set out in section 26(2) & 27(2).

The enactment of the Constitution of the Republic of South Africa¹⁶ brought the South African legal system into a new era. It includes a Bill of fundamental human rights which, for the first time makes provision for limited socio-economic rights¹⁷. Chapter 2 of the Constitution (section 27(1) (b)) establishes the right for all to have access to sufficient food and water¹⁸ and created the imperative for South Africa to fundamentally reform its water laws and resulted in the enactment of the Water Services Act¹⁹ and the National Water Act²⁰.

1.2.2 Section 27 of the Constitution: Accessibility component – Socio economic rights

The right to water is provided for in Section 27 of the Constitution. It states in section 24 (a) and (b) that 'everyone has the right to have access to (a) healthcare services and well-being and (b) Sufficient food and water'. "Health" refers to health in terms of our common law but may also include reliance on polluted water supplies for drinking water" whereas *well-being* has been given a juridical meaning: in this case, the *well-being* has been extended to aesthetic and spiritual dimension of the natural environment, including a 'sense of place'. In this way the law accepts that a person's well-being may be detrimentally affected by threat or damage to the environment. The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights. The element of 'reasonable legislative and other measures' was established in the Grootboom case.

However, there is a difference between a Right to access water vs Right to water. Below you will see examples of case law jurisprudence that are directly linked to Section 27 of the Constitution.

15 Anderson, A., G.Quibell, G., Cullis, J. and Ncapayi, N. 'General Authorisations as a Tool to Promote Water Allocation Reform in South Africa' in *Law, Environment and Development Journal* (3/2), 2007, p. 164

16 [Constitution of the Republic of South Africa, 1996](#)

17 Trilsch, M. 'What's the use of socio-economic rights in a constitution? - Taking a look at the South African experience' in *Verfassung Und Recht in Übersee / Law and Politics in Africa, Asia and Latin America*, 42(4), Nomos Verlagsgesellschaft mbH, 2009, pp. 552-575

18 [Constitution of the Republic of South Africa, 1996](#)

19 Government Gazette 390 (18522) 'Water Services Act 1997 (Act No. 108 of 1997)' Cape Town, 19 December 1997

20 Government Gazette 398 (19182) 'National Water Act (Act No. 36 of 1998)' Cape Town, 26 August 1998

1.2.3 (a) Case law jurisprudence²¹- Directly applicable to section 27 of the Constitution

In the Grootboom case, the right to access to water has been qualified. The court provided that the distinction exhibits that there is no unqualified obligation on the state to provide free housing (and by inference water) on demand for all members of the public.

Manqele vs Durban Transitional Metropolitan Council 2002 (6) SA 423 (D)- (disconnection of water by Council) in this case, the right to access water in terms of the constitution has been confirmed, but the Court acknowledged that no minimum standard of water supply services had yet been prescribed in regulations.

Residents of Bon Vista Mansions Southern Metropolitan Local Council 2002 (6) BCLR 625 (W) - [disconnection of residents' water) was infringement of section 27(1) (b)]. This differed from the Manqele case. The Court provided that the disconnection deprived applicants of an existing right, and disconnection is *prima facie* in breach of the constitutional right to uphold the right of access to water. Applicants proved a *prima facie* right to a continuing supply of water. The Court ordered the local authority to restore the residents' water supply.

However, Section 25 of the Constitution (Property right) provides that no person 'may be deprived of property except in terms of a law of general application', and section 25(4) (b) advises that 'property is not limited to land'. Therefore, how does this form an integral part of water law or the right thereto? Glazewski²² avers that the implication hereof is that water is an incorporeal property right. Therefore, in theory, in light of the right to access water, section 25, which is the right to property, can be read in tandem with section 27.

1.3. THE NATIONAL WATER ACT (ACT 36 OF 1998)

South Africa's National Water Act of 1998 (NWA) was considered by many to be pioneering an international wave of reform in the water sector. The Act reflects a set of principles widely adopted as international best practice and incorporated into water reforms during the 1990s²³.

The Act:

- Stipulates that the Department of Water and Sanitation (DWS)²⁴ is the trustee of water resources on behalf of the nation;
- Sets out to accommodate the socio-economic demands of environmental management and access to water for all people; and
- Provides that all exclusive rights to water use which were in force before 1998 were replaced by water allocation granted by the DWS.

The Act is the principal legal instrument relating to water resources management in South Africa and contains comprehensive provisions for the protection, use,²⁵ development, conservation, management and control²⁶ of South Africa's water resources. The Act is not, however, the only instrument through which the objectives of the National Water Programme will be achieved. Since water is essential for all life and human endeavours, there are many other policies and laws, administered by a number of departments in all spheres of government, which govern activities dependent on water, or affect water resources²⁷. Importantly however, the Act replaces a private right system with a public right system.

Water allocation is one component of a wider government mandate to address the inequities of the past. Water allocation reform is being implemented by the DWS through the Water Allocation Reform Programme. Compulsory licensing is one of the main instruments in the NWA to give effect to water allocation reform. Compulsory licensing is a mechanism to reconsider all water use authorisations in an area, so as to potentially achieve significant reform of existing legal access to water²⁸.

21 'Constitutional Court South Africa' Southern African Legal Information Institute SAFLLI

22 McAuslan, P. 'Review: [Untitled]' of *Environmental Law in South Africa* by Glazewski, J. *Journal of Environmental Law*, 14(2), Oxford University Press, 2002, pp.266-270

23 Peters, R. and Woodhouse, P. 'Reform and regression: Discourses of water reallocation in Mpumalanga, South Africa' in *Water Alternatives* 12(3), 2019, pp. 853-868

24 Parliamentary Monitoring Group, 'Department of Water and Sanitation 2016/17 Annual Report, with Deputy Minister', NCOP Health and Social Services, 31 October 2017

25 Department of Water Affairs and Forestry, 'General Water Use Authorisation Application Process', November 2007

26 Department of Water Affairs and Forestry 'National Water Resource Strategy', Pretoria, September 2004

27 *ibid.*

28 Government Gazette 398 (19182) 'National Water Act (Act No. 36 of 1998)' Cape Town, 26 August 1998, Sections 43 to 48

1.3.1 Water Use Entitlements under the National Water Act 1998²⁹

The Act, in terms of section 21, makes provision for water use in the broad sense. In essence this relates to doing anything that has an impact on the resource – the amount of water, the quality and the surrounding environment. The Act also makes provision for priorities in water use, which can be read in the National Water Resources Strategy.

Water Use Entitlements deal with water resources - rivers, streams, dams and ground water and contain rules and regulations relating to the protection, utilisation, development, conservation, management and control of water in an integrated manner. Chapter 4 of the NWA makes provision for 'Water Use', however, 'Entitlement to Water Use', establishes the regime for water use. In light of the above, water may only be used in the following stipulated circumstances, which are to be explained further below:

- (i). Under 'general authorisation or license under this Act';
- (ii). In terms of 'an existing lawful water use in accordance with section 32'; and
- (iii). The *de minimus* use, Schedule 1.

The Act further makes provision for permissible water use (section 22). Chapter 4 provides that a person may only use water if:

- Authorised by a licence (s22(1)(b) and (1)(C)); or
- Continuation of an existing lawful water use; [s22(1)(a)(ii)]; or
- General authorisation issued under section 39 [s22 (1) (a) (iii)] [Schedule 1- Section 22(1) (a) (i)].

1.3.2 Water Use under National Water Resources Strategy

The National Water Act, 1998 requires the Minister of Water Affairs to establish a National Water Resource Strategy. From the preamble to Part 1 of Chapter 2 of the National Water Act:

"Part 1 requires the progressive development, by the Minister, after consultation with society at large, of a national water resource strategy. The national water resource strategy provides the framework for the protection, use, development, conservation, management and control of water resources for the country as a whole. It also provides the framework within which water will be managed at regional or catchment level, in defined water management areas. The national water resource strategy, which must be formally reviewed from time to time, is binding on all authorities and institutions exercising powers or performing duties under this Act."

The Act makes provision for priorities for water use (NWRS):

1. The Reserve - basic human needs and ecological reserves have first priority and only right in respect of water in the NWA.
2. Water to meet international rights and obligations - neighbouring countries for developing and managing shared water resources.
3. Use for strategic importance - authorised by Minister, and includes water use for purposes of generating electricity.
4. Inter-catchment water transfers - ensuring sufficient water in each of the water management areas (WMA).
5. Contingency to meet projected future water needs - use outside a WMA or large projects to increase future water availability.

These provisions are National government responsibility. However, the Minister can also make regulations concerning a wide range of aspects relating to the registration of water use. In light of the above mentioned,

²⁹ *ibid.*, Section 21

this may include registration in tandem with section 21 as per requirement under section 39 for general authorisation, or when requested by way of notice in the Government Gazette or certain other means. The Minister has published regulations requiring the registration of a number of water uses that must be registered: controlled activity; discharging waste or water containing waste; or disposing of waste in a way which may detrimentally affect a water resource³⁰.

1.3.3 Water use and General Authorisations³¹

The Act, in terms of section 21, makes provision for water use in the broad sense. This is governed by section 39 of the Act. The Director General of former Department of Water Affairs and Forestry (DWAF) issued numerous General Authorisations for a number of water uses where no licence was required. For instances, water use in terms of section 21(a) [taking water from a water resource] and (b) [water storage] requires authorisation. General Authorisations include users that cannot be covered by a licence but require more water than is permissible under Schedule 1. National resource specific GAs have been published in Government Notice 399 of 26th March 2004 and Government Notice 398 of 26th March 2004, authorising specific water uses. These General Authorisations are given in terms of a specified volume of surface or groundwater that may be abstracted by any persons, without a licence, in identified quaternary catchments across the country. Ground and surface water abstraction is permitted for a 5-year period.

1.3.4 Existing lawful use³²

The term “existing lawful use” plays an important role throughout the NWA. One of the aims of the water allocation reform process is to replace existing lawful use with one of the other water use entitlements under the NWA. It is specifically relevant in the bridging period between the previous Water Act and the current NWA. The concept of existing lawful use has been touched upon under ‘factors to be considered for licences’ [see section 27(a)] and compensation of de facto rights and privileges. In most cases this will be through an individual licence, but in some cases, particularly in the tribal areas, some existing lawful use may be better served by a General Authorisation.

1.3.5 Schedule 1

Schedule 1 use is defined in the NWA as water used for reasonable domestic purposes, small gardening, and the watering of livestock (excluding feedlots). Schedule 1 use can be taken up anywhere in the country and the user is not required to register their water use with the DWAF.

1.3.6 Water Use License³³

This includes larger volumes of water that are applied for by an applicant and authorised as a licence issued under the National Water Act. The licensing of water is set out in Part 2 of Chapter 4 of the Act. Section 27 of the Act sets out the factors that must be taken into account upon issuing a water licence (a GA) [section 27(1) (a)-(k)], and section 27(2) requires written approval of the Minister.

In the case of *Komatipoort Golf Club vs Chief Director, Water Use and Conservation*. “The appellant golf-club successfully appealed a decision of a Chief Director who granted the appellant a lesser amount of water than what he had applied for, on the grounds that it was not beneficially used on the property being developed”- Glazewski. Section 28 of the NWA deals with the necessity for licences. It provides that it must stipulate (a) the use for which it is issued; (b) the property for which it is issued; (c) the person to whom it is issued; (d) the conditions of use; (e and f) period and reviews. Section 29 is linked to section 28 (d) and deals with attaching conditions to any general authorization or license.

Upon issuing a licence, ‘the responsible authority may, if it is necessary for the protection of the resource or property, require the applicant to give security in respect of any obligation³⁴.

30 Government Gazette No. 20606 ‘[GNR1352 Regulations requiring that a water use be registered](#)’ 12 November 1999

31 Government Gazette 398 (19182) ‘[National Water Act \(Act No. 36 of 1998\)](#)’ Cape Town, 26 August 1998, Sections 39

32 *ibid.*, Section 35

33 *ibid.*, Chapter 4

34 *Ibid.*, Section 30

“From the 5 122 dams that are registered on the database with the department, only 320 of those are owned and controlled by the Department of Water and Sanitation.” Since 1998, the Department had issued new licenses, and 98% of the recipients have been white farmers. Now the concern is that in this 5 122, do we include dams that are built by farmers on their farms? And how do you balance the issue of ownership of water in that regard?”

The NWA also makes provision for compulsory licensing (one or more water resources within a specific geographical area). In light of the specified area, if its necessity relates to allocation of water from a water resource; to promote beneficial use of water in the public interest; to facilitate efficient management of the resource; or to protect its quality. Such compulsory licence has been issued in respect of taking water from surface and groundwater resources and storage of water in the Jan Dissels River catchment area.

1.3.7 Treaties and Trans-Boundary agreements

Trans-Boundary agreements or Treaties are written agreements between states or between states and international organisations, operating within the field of international law. Treaties may be bilateral (binding two states) or multilateral (binding on many states) in nature. In law, there are three categories of treaties:

1. Contractual - states ‘contract’ with one another to establish a legal relationship.
2. Legislative - the development of customary international law into law through codification. These bind only signatory-states.
3. Multilateral treaties create Constitutions through international organisations such as the United Nations (UN). Thus, the Charter of the UN is a treaty to which all members of states are party. This, in essence, serves as the constitution of the UN.

Currently water allocation is based on history or geography, when countries claim that they have a right to water because they had access to water in the past. An example of water allocation based in history is the conflict over the Nile River between Egypt, Ethiopia and Sudan.

However, the most successful water allocation case study that happened within South Africa is that of The Lesotho Highlands Water Project Treaty (LHWP) of 1986 between Lesotho and South Africa. This Treaty successfully bridged political strains between Lesotho and South Africa. Lesotho receives more precipitation than South Africa and has abundant water – its surface water is estimated at 4.73 km³ per year, which greatly exceeds their water demand. In accordance with this accord, Lesotho supplies water each year to South Africa based on volumes determined by a mutual agreement between each country. The LHWP treaty was negotiated between Lesotho and South Africa and provide an agreed allocation based on the needs of the two countries³⁵.

One problem with water allocation between countries is that, influential countries have limited motivation to stop using water as a means of control and share water equitably with their neighbours, while less powerful countries have little choice but to negotiate³⁶. According to water experts the country with an upstream position on a river maintains a hydrographically authoritative position because that country can build dams and divert water before it reaches the downstream countries. The contrary can however also apply, for example, South Africa holds significant political and economic power over Lesotho given that it is landlocked, the Lesotho Highlands agreement was very controversial and most believe it was skewed in favour of SA as the economically dominant country.

IN CONCLUSION: THE NATIONAL WATER ACT (ACT 36 OF 1998) AND THE BERG RIVER WATER MANAGEMENT AREA CASE STUDY

This section provides brief concluding remarks and a summation of findings of the research conducted.

1. Water rights, the constitutional property clause and compensation for expropriation raises concerns for existing water-rights holders like the lawfulness of the deprivation of water and whether those deprived of water rights will be compensated. However, to answer these two questions a consideration

³⁵ ‘Trans-boundary agreements’ *Water For All*, MIT Terrascope, 2017 <http://12.000.scripts.mit.edu/mission2017/trans-boundary-agreements/>

³⁶ Ibid.

of the nature of existing water rights has to be determined. The requirement of compulsory licencing could lead to water users' current allocations extracted from common law, and not subject to being reduced or removed.

2. Water quality concerns are linked with water use – that is, there must be enough water to meet the needs of both humans and the environment, and the quality must be at a level that it can sustain those needs.
3. Limits to access to water rights has detrimental impact to the quality of life of the majority of the population in South Africa including personal and environmental health and economic opportunity.

However, the NWA legislation is a comprehensive and ambitious instrument aimed at achieving effective, sustainable management of SA's water resources. To ensure not only that all people have sufficient access to a scarce resource, but also that there is enough water available to meet environmental needs. The Act requires a considerable administrative endeavour and political will, which does not seem to exist currently, to ensure immediate implementation. Thus, we will only be able to appreciate and reap the full benefits of this new legislation several years into the future and only if the administrative capacity and political will exists. These laws also affirm that all three spheres of government (see our FACT SHEET: [Government of Water](#)) have a responsibility to take reasonable measures to achieve every citizen's basic right to access to water and sanitation, to ensure dignity for all.

BERG RIVER WATER MANAGEMENT AREA – A CASE STUDY OF WATER ALLOCATION

Study area description: The Berg River Water Management Area (WMA) is situated in the extreme southwest corner of South Africa and falls entirely within the Western Cape Province. It derives its name from the largest river within its boundaries, the Berg River and borders the Olifants / Doorn WMA to the north and on the Breede WMA to the east. It is bordered by the Atlantic Ocean to the west the Indian Ocean to the south³⁷.

The Berg River catchments comprise the Berg River itself, along with a number of smaller coastal catchments. Water resources are planned for and managed through the Western Cape Water Supply System. This system serves more than 3.2 million people, providing water to the City of Cape Town, Overberg, Boland, West Coast and Swartland towns, as well as to irrigators along the Berg, Riviersondereind, Eerste and other local rivers³⁸.

Rainfall is highest in the southern mountain ranges where the mean annual precipitation is as high as 3000 mm per annum, whilst the north-west part of the WMA immediately inland of the coast, receives as little as 300 mm per annum. There is intensive irrigation in the Upper Berg River and Lower Berg River sub-areas and in parts of the Greater Cape Town sub-area - the Eerste River and Lourens River catchments. The bedrock of the entire Berg WMA (19) comprises the rock types of the Klipheuwel and Malmesbury Groups³⁹.

The upper catchment area of the Berg River in the Western Cape supplies most of Cape Town and its suburbs with freshwater. In addition to providing water for irrigation purposes along the middle and lower reaches of the Berg River. A substantial part of the water used for agriculture in the WMA, is used within the operational area of Water Use Associations / Irrigation Boards. The scheduled water use entitlements within these institutions - water providers - have been declared to be existing water users by the Minister of Water and Sanitation as stipulated from section 21 (Water Use). The water availability for the Berg WMA at 98% assurance of supply is based on a 1:50 year drought assurance⁴⁰. Once the licences and the specified assurance of supply has been taken into consideration the supply may be less than 98% but it is used for comparative purposes, especially water required for domestic supply. See the following table, showing water availability in the Berg River Catchment.

37 Water Research Commission 'The Water Wheel' 7(4), July/August 2008

38 Department of Water and Sanitation (DWS) 'Business Case for the Establishment and Development of the Berg Olifants Catchment Management Agency', April 2015

39 Department of Water Affairs et al 'Western Cape Integrated Water Resources Management Action Plan', 2011

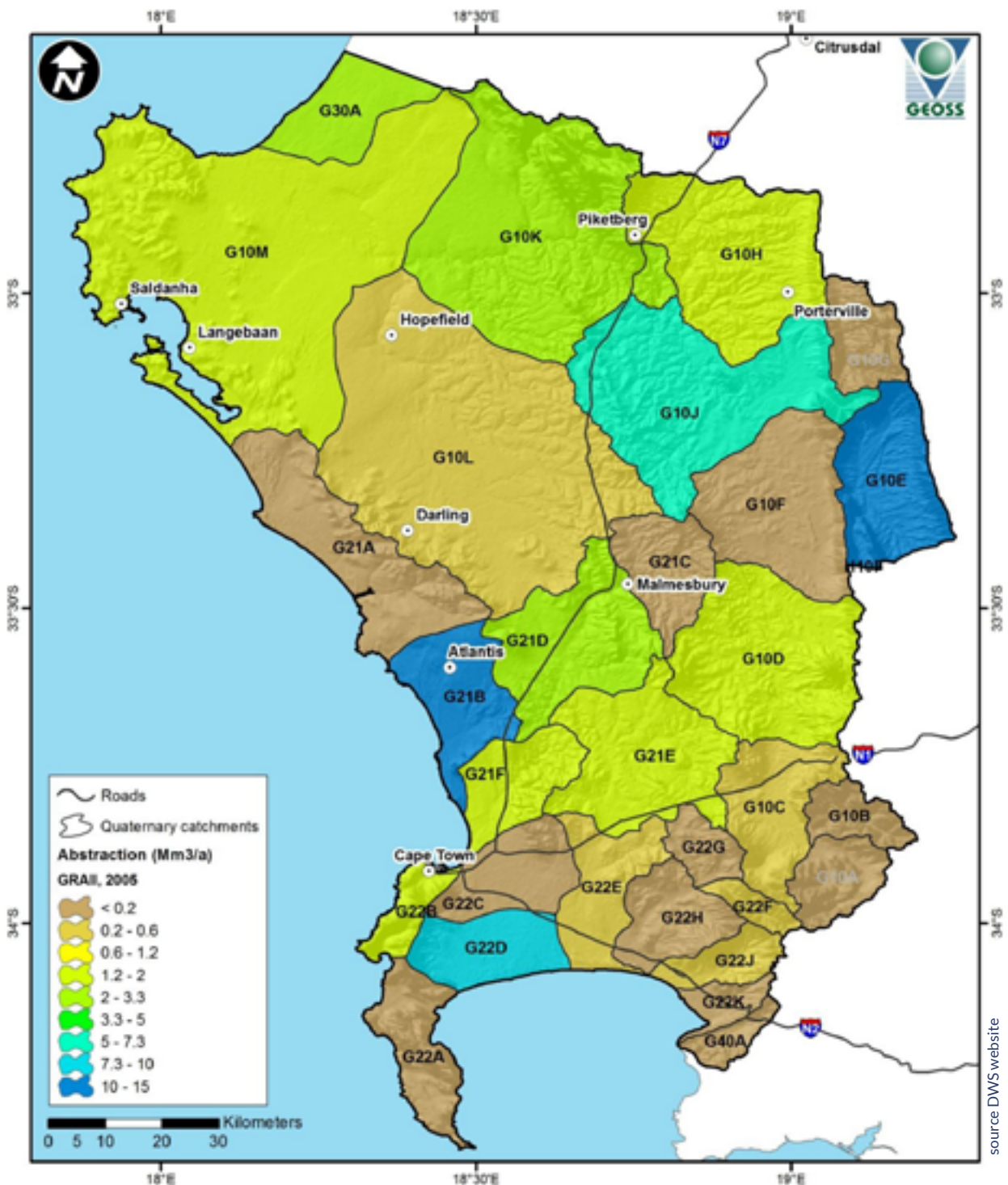
40 Department of Water and Sanitation (DWS) 'Business Case for the Establishment and Development of the Berg Olifants Catchment Management Agency', April 2015

Table 1: Berg River Water Availability (million m3 per annum)

Region	Yield (1:50 Year)									
	Natural Resources		Useable Return Flows			Impact on Yield		Total Local Yield	Net Transfer In	Grand Total
	Surface Water	Ground Water	Irrigation	Urban	Bulk Industry	Desktop Reserve estimate	Invasive Alien Plants			
Berg	425	57	8	37		23	0	482	194	676

source DWS website

Figure 1: Berg River Study Map- Groundwater abstraction for the Berg WMA



source DWS website

Groundwater abstraction - The general overview of the Berg WMA indicates good quality groundwater, however site-specific conditions need to be taken into account as water quality can vary significantly over short distances and time. The groundwater abstraction is based on available groundwater data from WARMS which is the water use registration system used at the Department of Water and Sanitation, based on work that was completed years ago⁴¹.

Due to under-registration of water use in the previous years, abstraction values are now becoming more accurate and in the context of the Status Quo Report, the values from the DWS work is considered usable. Figure 1 shows the groundwater abstraction per Quaternary Catchment. The Quaternary catchments with the highest groundwater abstraction include the Cape Flats area⁴² (Phillipi Horticultural Area - vegetable farming, the Atlantis area - Atlantis and Mamre - water supply) and Tulbagh region - mainly for agricultural use. An area of interest, the middle Berg River, which is Q10E quaternary catchment is where the groundwater abstraction exceeds the groundwater recharge, and the volume of groundwater required to meet the groundwater Reserve allocation.

Water Quality in the Berg WMA varies not only between the individual river basins but also within individual river systems. The natural geology, agricultural practises, point and non-point source pollution, all play a role in determining the quality of water in this WMA. The Berg River's source in the mountains near Franschoek and the runoff is characterised by ideal water quality.

However, water quality deteriorates downstream as a result of human activities, such as agriculture: river modifications, water abstractions, and runoff from irrigated soils; urban storm water, discharge from wastewater treatment works and runoff from informal settlements which tend to have no sanitation services. There is poor drinking water quality – especially downstream of the catchment from natural sources which are affected by the use of agrichemicals such as fertiliser, pesticides and herbicides all contributing to the poor quality standard of the water system.

WATER ALLOCATION IN BERG RIVER CATCHMENT

According to Status Report for allocations in the Berg River Catchment, surface water allocation is 584.1 million m³/a and Availability (Yield) is 582 million m³/a. Domestic use allocation is 410.5 million m³/a and Agricultural use allocation 173.6 million m³/a. So, the total allocation of 611.5 million m³/a exceeds the water system yield of 582 million m³/a by 29.5 million m³/a.

These statistics differ from those stipulated in the DWS table above, showing that the Berg River and its tributaries only produce 582 mega tubes of water, yet the authorizers allocate water users 611 mega tubes which is 29 mega tubes of more than what the system can generate and be distributed across.

The Berg River Dam is the first major dam in South Africa that is designed and constructed to make full provision for the ecological water requirements of the river, as required in terms of the National Water Act. A reminder: In terms of the Act, each water resource, must ensure the ecological water requirements of the system (water for basic human rights and water for international agreements) have been met. Only once those requirements are met, can water be allocated for other uses. Moreover, the uncertainties regarding the existing water uses are compounded by uncertainty about the volume of water used by farm dams in the catchment.

41 Department of Water Affairs and Forestry '[National Water Resource Strategy](#)', Pretoria, September 2004

42 Department of Water Affairs et al '[Western Cape Integrated Water Resources Management Action Plan](#)', 2011

SECTION 2

ENVIRONMENTAL INJUSTICE - ENTRENCHED ENVIRONMENTAL RACISM

2.1 INTRODUCTION – ENVIRONMENTAL INJUSTICE IN THE KUILS RIVER CATCHMENT AREA

The causes of South Africa's ongoing inequality are many. Unemployment, inadequate educational programs and a deteriorating public health system all play a part. But land is the most significant dividing line, where apartheid's history meets the current government's shortcomings and unmet promises. It shows itself most visibly in the scarcity of cheap housing, especially in urban areas entrenching spatial and structural inequalities. This inequality can be almost entirely attributed to centuries of conflict between white settlers and indigenous Africans⁴³. Apartheid marginalised black Africans to the outside edge of the economy, many were evicted from their own lands into landlessness and poverty⁴⁴. Many poor and working-class South Africans were, and are being forcibly removed to create national parks and 'protected areas', with little care to their livelihoods and health, and the loss of business and property. Practices of environmental racism continue to persevere - most black South Africans continue to live on the most damaged land, in the most polluted neighbourhoods near waste sites, mining areas and down river from industries. Even today, a significant part of our population does not have access to quality water, clear air, ablution and sanitation services.

The Apartheid government policies were promulgated to advance the needs of the minority white population. In areas where poor and working-class black people were in the majority - water service infrastructure was run incompetently by the uncoordinated and under resourced homeland government structures, that were almost completely reliant on the South African government for funds. Consequently, in 1994 it was estimated that 30% of the South African population lacked access to adequate water supply services and that 50% were without adequate sanitation. (DWAF, 2004).

In parts of our country, especially those located near toxic waste because of class and race, there are defenders of environmental justice for social and political change, who are threatened, ridiculed, marginalised and punished⁴⁵. Activists who struggle against water pollution have faced disturbing responses to their work in township areas, as they attempt to hold local councillors and municipalities accountable for the lack of service delivery and extremely poor management of water resources under their care resulting in threats, intimidation (including activists' houses and cars being burnt) and in some cases death.

2.1.1 Case Study: The Kuils River Catchment Area

A field survey was conducted by the City of Cape Town's Water demand management strategy section (WDMS) at Mfuleni - Kuils River catchment area. The study showed that a number of complaints were lodged, linked to issues in terms of environmental racism in the area and there was no attempt from the City of Cape Town to engage with the complainants, or to try and fix the water, sanitation and waste management problems faced by the community members in the area. Some of the issues were acknowledged and logged by City of Cape Town officials, but there has been no change in the conditions in the area, or in service delivery.

2.1.2 Description of the study area⁴⁶

The Cape Flats Aquifer is located within the central part of the Cape Metropolitan Area (CMA), and covers about 630km² of the Western Cape Province in South Africa⁴⁷. The Kuils River and Eerste River are two significant rivers that pass through the eastern part of the CMA, with the Kuils River joining the Eerste River near Macassar, forming a tributary to it. The Eerste - Kuils River estuary is one of the eleven estuaries draining into the False Bay, located approximately 36 km southeast of Cape Town.

43 Mthanti, T. 'Systemic racism behind South Africa's failure to transform its economy'. The Conversation, 31 January 2017

44 Cock, J. 'How the environmental justice movement is gathering momentum in South Africa'. The Conversation, 2 November 2015

45 Youens, K. 'The dangers of being a defender of environmental justice in South Africa'. BizCommunity News, 24 August 2017

46 Thomas, A., Chingombe, W., Ayuk, J. & Scheepers, T. 'A Comprehensive Investigation of the Kuils-Eersteriver Catchments Water Pollution and Development of a Catchment Sustainability Plan'. Water Research Commission (WRC), September 2010

47 Adelena, M. and Xu, Y. 'Contamination and protection of the Cape Flats Aquifer, South Africa', in Xu, Y. & Usher, B. (eds) *Groundwater pollution in Africa*, Taylor & Francis, 2006, pp. 265 - 277

The Kuils River, which originates in the Durbanville hills, flows in a southerly direction to the urban area of Kuils River where the Bottelary River joins it. This river system continues in a southerly direction until its confluence with the Eerste River. The upper to middle reaches of the Kuils River are completely canalised through the Kuils River urban area and are, in general, in a poor condition within the urbanised and industrial areas of the town.



A portion of this bigger catchment falls within the boundary of the CMA and the rest falls in Stellenbosch Municipality. Although these catchments form part of urban and industrial developments, significant portions of the Eerste-Kuils River catchment include agricultural lands; so it has both urban and agricultural sources of nonpoint source (NPS) pollutants.

Before the start of anthropogenic impacts – that is environmental change caused by human activity - the Kuils River was seasonal, in summer drying into a series of small pools, or “kuils”, and then flowing rapidly during the winter rains. Because of treated effluent from wastewater treatment works (WWTW) that it receives from Bellville, and Macassar, Kuils River now has a perennial flow⁴⁸.

Kuils River Catchment streams largely through the rural sandy plains of the Cape Flats, gushing through the N2 Freeway below the Driftsands Nature Reserve and curving east of the residential area of Khayelitsha to Macassar. In the lower course, the river has some wetlands, which are of high significance to the ecosystems’ diversity. The geology of the aquifer is mainly sand which varies from unconsolidated to semi-consolidated, with clay and peat layers interbedded causing the aquifer to be semi-confined in some parts⁴⁹. Various land use activities exist on surface of the aquifer. These include agricultural activities, formal and informal settlements, open spaces and sand mines⁵⁰. A number of rivers, dams, wetlands and streams flowing through and interacting with the shallow underlying Cape Flats Aquifer characterizes the hydrology of the area.



WETLANDS CLEANUP

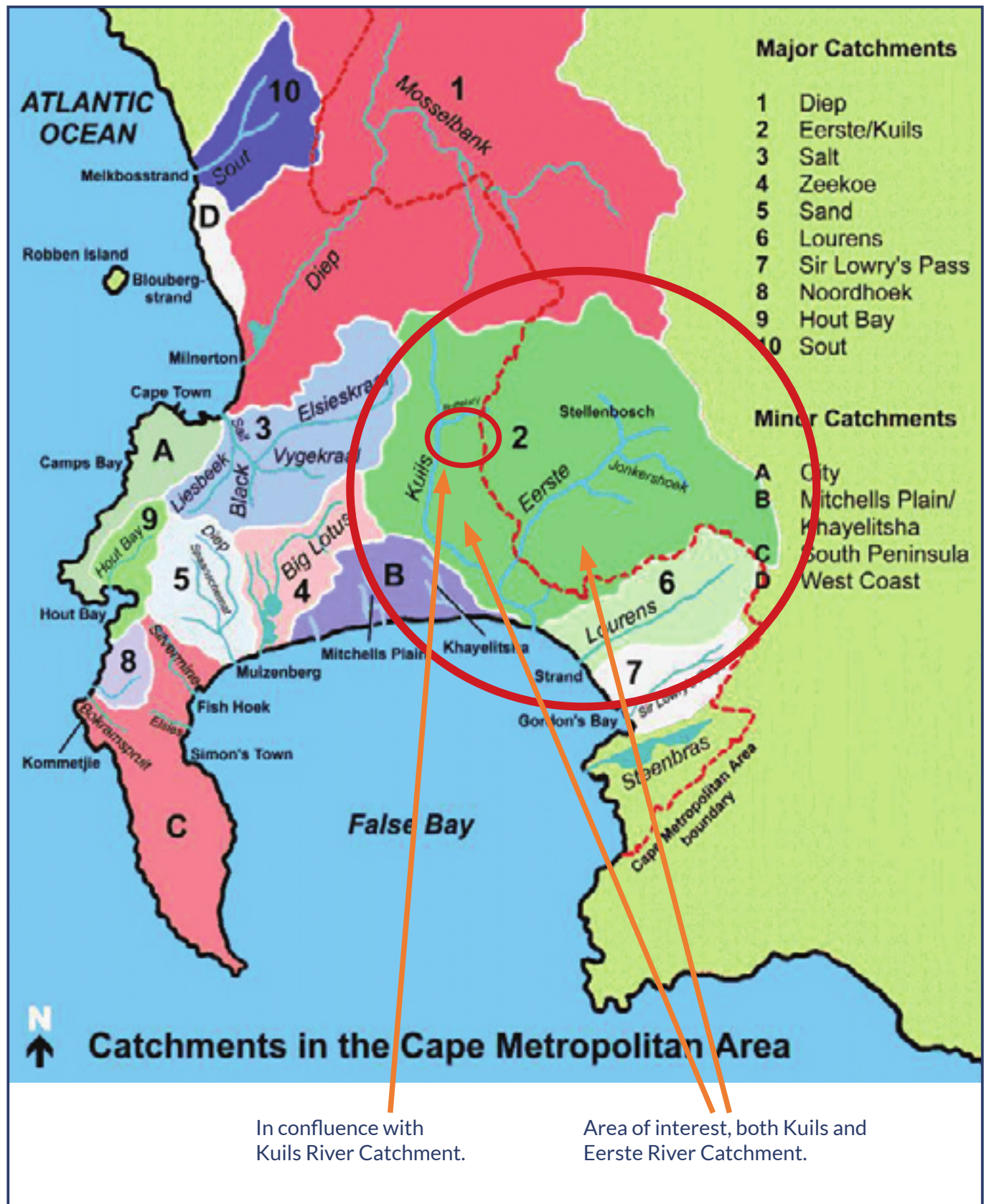
48 Rui, L. 'The Use of Treated Effluent for Agricultural Irrigation in the Bottellary River Area: Effluent Quality, Farmers' Perception and Potential Extent' University of the Western Cape, May 2005

49 Saayman, I., & Adams, S. 'The use of garden boreholes in Cape Town, South Africa: Lessons learnt from Perth, Western Australia' in *Physics and Chemistry of the Earth Parts A/B/C* 27(11-22), December 2002, pp. 961-967

50 Maclear, I.G.A. 'Cape Town Needs Groundwater: A Note On The Potential Of The Cape Flats Aquifer Unit To Supply Groundwater For Domestic Use In The Cape Town Metropolitan Area', Geohydrology Directorate Department of Water Affairs, Technical Report Gh3868, August 1995

2.1.3 Study Map: Kuils - Eerste River Catchment

Figure 2: Eerste-Kuils River catchment



2.2 ISSUES IN THE KUILS RIVER CATCHMENT AREA

2.2.1 Water Pollution in Eerste - Kuils River Catchment Area

Of concern to the communities in the catchment area is the transportation of waste and outcome of these contaminants in the lower catchment. During Apartheid, people were displaced to these areas where there are extremely high levels of pollution, the disposal of toxic and hazardous waste on the land / river located next to them. In addition, they have also expressed concern that the sewage flowing into the river from a nearby wastewater treatment plant is both an environmental and health hazard. Researchers now say that serious health consequences from the contamination are becoming increasingly severe: including people suffering E. coli poisoning of the intestine.

Water pollution can be broken up into two groups:

1. *Point source pollution* is associated with a particular site on a stream that is easily identified, where the type and quantity of the pollutant is known. Along the Kuils River one example of this would be industrial effluents from a factory or sewage effluent discharged directly into a stream, in this case Bellville Waste Water Treatment Works discharges into this river has adverse impacts downstream to users utilising the water for religious purposes like baptisms and cleansing ceremonies by traditional healers.
2. *Non-point source pollution* results from multiple contaminant sources over a broader area. An example of this would be fertilisers and pesticides that find their way into a stream from farms and urban settlements that run through the Botterlary tributary.

Storm water runoff and dumping from informal settlements and back-yard dwellings further impacts the water quality affecting the downstream reaches and is most noticeable in the Kuils River, and the Eerste River downstream of the system. This ultimately flows into the sea polluting False Bay.



MFULENI, CAPE TOWN

2.2.2 Abstraction of water in the Catchment

The Kuils River is highly impacted by abstraction for irrigation and housing development in the middle and downstream reaches.



WATER ABSTRACTION BY CONSTRUCTION COMPANY IN THE KUILS RIVER CATCHMENT

2.2.3 Factors that deplete oxygen

Water quality can be affected by the concentration of chemicals in our river system, this occurs due to industrial waste discharge. This will lead to low dissolved oxygen concentrations or other harmful/chemical characteristics which cannot support a healthy stream corridor ecosystem. Another factor that depletes oxygen is the discharge of fertiliser from agricultural industries into the river systems. Fertiliser also washes through rainfall flow into the rivers, dams, and lakes causing algae to grow uncontrollably, this is called eutrophication where algae bloom and when nutrients run out algae dies and bacteria flourish. The bacteria decompose the algae and remove oxygen from the water system causing plants and fish to die due to lack of oxygen. Prolonged episodes of depressed dissolved oxygen concentration result in dead – anaerobic - water bodies.



2.2.4 Wetlands Degradation



WETLAND IN JUNE 2019 DURING THE WINTER SEASON

Wetland - is defined as a land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or is periodically covered with shallow water in the South African National Water Act, Act No. 36 of 1998.

Wetland degradation is the impairment of the wetland's function, because of human activities. Both wetland loss and degradation relate to the change in quantity and/or quality of the wetland resource around a baseline - this is the case in the above picture illustrating degraded wetland in Mfuleni community.

2.2.5. Quality of water

This wetland feeds into the Kuils River Catchment and changes the quality of water there. About 55 - 60% of wetlands in SA have been lost from poor land management for example the Mfolozi River Catchment and the Lets'eng-la-Letsie Wetland in Lesotho.

Degradation of the water quality limits its utilisation value, places an added economic burden on society due to increase in treatment costs and gives rise to waterborne diseases. These diseases may affect the health of a community either by direct consumption, or through the ripple effect caused by irrigation with contaminated water.

2.2.6. Burundi Community – Cape Town, Western Cape



THE CHILDREN RESIDING IN THIS AREA UTILISE THIS WATER CHANNEL AS A PLAYGROUND, THEY GET ALL SORTS OF DISEASES, AS FARMERS WITH COWS, GOATS AND PIGS UTILISE THE SAME WATER CHANNEL

Quoted from community members' interviews conducted in Burundi - Mfuleni

In an interview with one of the elders and a defender of environmental justice in the area, she had the following to say:

- *"I have been in Mfuleni for the past 20 years now but there hasn't been any progress with regards to the filthiness of this area, and I doubt there will be any change anytime soon, and I guess I will die and leave behind my children in this chaos."*
- *"I have been complaining to the subcommittee about the condition of the area but they do not seem to care about a decent living area, as if nobody is affected by this condition. People were tired of complaining to the committee and decided to take it up to the City of Cape Town offices in town but still there was no progress."*
- *"Last year the members of the community got me arrested because they did not understand why I chased their children away when they are playing in this channel (Kuils River), and all I was doing was to protect them from the unknown diseases that may rise because of the polluted water. Later, after they got me arrested, a number of children were sent to the clinic by their parents, and the report back from the clinic was that the sickness they have is caused by water."*
- *"The doctors and nurses from Mfuleni local clinic investigated the cause of the similar sickness found in children staying in the area, and it was concluded that they have what we call dysentery."*

Dysentery is an inflammation of the intestine with a combination of nausea, abdominal cramps coupled with severe diarrhoea which is caused by bacteria / amoeba in polluted water.

- *"Adding to that, there is a farm here that is selling cows' milk and sour milk to the community and that is another big problem facing this place. These cows are also utilising the same source of water in the channel to drink and dip in, and that has a huge impact on the people who are buying the milk from the farm, as they drink milk that is produced by the cows drinking polluted water."*

The elder told this author that the water in the milk would separate from the curds, the colour of the water is greyish/blackish, and they assume is the cause of unknown sicknesses the children in the area are experiencing because they are eating the milk with their porridge in the morning. He emphasised that he doubts that the milk is tested before sold to customers as it is "raw milk".

2.2.7 Sanitation – the gendered effect

No toilets provided for in Burundi community along the Kuils River Catchment – A gendered effect

Women and girls in this community are doing ablutions and relieving themselves in open areas near water. Given the cultural taboos around excretion and menstruation and the frequent lack of privacy, women and girls are not drinking and eating during the day in order to wait until nightfall to relieve themselves in the nearest water resource, either wetland or river channel, to avoid putting themselves at risk of violence, by going to deserted spaces for privacy. These habits lead to health problems like urinary tract infections. Imagine weighing up the threat of violent attack at night and potential health risks, against the indignity and humiliation of urinating or defecating in the open areas during the day. This is an impossible choice that no one should be forced to make.

During an interview a group of women from Burundi said:

“We are not yet close to a civilized time we fought for in South Africa, because some of us still have to fetch water far from our places where we stay. This requires us as mothers and our daughters to do the job, as it is treated as if it is our responsibility. When we ask our husbands or any male figure in the house to accompany us when in need of relieving ourselves, we are seen as people who do not respect them as men.”

2.2.8 Reconstruction and Development Programme (RDP)

In 1994 the RDP was introduced by the ruling African National Congress (ANC) and its Alliance Partners as a means of redressing the imbalances of the past and re-directing economic development⁵¹. The RDP gave the Department of Water Affairs & Forestry (DWAFF) the responsibility to ensure universal access to basic water services for all South Africans. After 1994 the White Paper on Land Policy of 1997 was released, which stressed that the service delivery of water and sanitation would happen faster if linked to land access and ensure access to a basic water supply to all South Africans. Regarding access to water, President Mbeki, soon after his inauguration promised that “...within the next 5 years all households will have access to clean running water.”

This has yet to happen, 25 years later, poor and working-class people are still fighting for clean running water, sanitation, and waste management services. Thousands of people living in RDP homes across the Western Cape are at risk of contracting tuberculosis or diarrhoea, after a study found⁵² a direct link between defects in the poorly built homes and people falling ill. The study was done by Universities of Cape Town and Stellenbosch, whose researchers found that leaking roofs, cracked walls, insufficient insulation and meagre sanitation facilities negatively affected health. Tuberculosis and diarrhoea were the key conditions linked to poor design and maintenance of the RDP housing.

RDP Homeowner:

“I have been waiting for years and years to be handed keys, we forced matters to get these houses as we protested for years and years. We were urged to add our names to list upon list, each time we are having a strike in our area, city council visited us and robbing us every time they get a chance. We repeatedly voted for a government that keeps promising a better tomorrow, and only to find out we are preparing for our death beds by ourselves, as we were given cheap material that has leaking roofs and tin (small) houses. They knew we would not complain because we have nothing and besides, we do not have knowledge on such so they came in to rob us. We didn't know that we are preparing for our death beds by accepting the keys.”

The above-mentioned argument is most evident in Cape Town where inequality is more apparent in every aspect of basic necessities of life, where more than 60% of the population, nearly entirely black, lives in townships and informal settlements outside of the city centre. Government services are scarce, schools and health care are underfunded, work opportunities are scarce, the cost of getting into the city is high, and transportation is risky and unreliable.

51 Bailey, S. 'RDP Housing: Success or Failure?' in Southern African Catholic Bishops' Conference Liaison Office Briefing Paper 432, May 2017

52 Jooste, B. 'The RDP ticking timebomb', IOL News, 5 October 2011

2.2.9 Water Management Devices in Townships

The roll-out of the Water Management Devices (WDM's) a few years back was opposed by a lot of black communities who were being forced to allow the installation of WDM's, as they were perceived to be 'pre-paid meters in disguise' and discriminatory, since they are used primarily to restrict water to poor and working class consumers. The City of Cape Town's approach has been denounced as lacking transparency, since the initial 'pilot phase' escalated to full roll-out without any reflection on problems encountered during the pilot phase. Consultation and engagement with targeted communities appears to have been minimal or non-existent. Community members report high water bills with interest charges, after the installation of WMD's, which control water access to poor and working-class households.

Community members experienced:

- "Forceful installation of water management devices and after the installation we went for days without water."
- "Poor homes with poor plumbing - The problem with leaks in many township houses are that they are recurrent. The plumbing has been built with such shoddy material and been so poorly installed that leaks spring up with great regularity. The problem of leaks also exposes a more general institutional problem. There is insufficient capacity in the City of Cape Town to effectively monitor and regulate private building contractors."



Figure 3: Happy Valley area, picture created by the City of Cape Town

The condition of the sewer infrastructure in the Kuils River Catchment and surrounds

The City of Cape Town received complaints from local contractors regarding sewer discharging into the storm water retention pond contaminating the Kuils River. The major causes of sewer blockages and discharges are damaged/ageing sewer infrastructure, tree root intrusion and foreign objects deposited in the channels all of which have an impact on the catchment.

This impact includes contamination of the storm water system, reduction of the air quality in the vicinity and increased risk to human health. A Condition Assessment was conducted by the City of Cape Town, Water demand management strategy department and the variables that were under consideration were: Population (quantity), number of back yard structures, waste bins, gully condition, rodding eye condition, existence of a back yard toilet and sanitary piping condition.

In 2018 field workers from the area were hired and trained in the catchment covering 724 households. A field survey was conducted for about two weeks and the conclusion was that the discharges in the area were the result of cascading blockages downstream from the new developments along the channel. Another contributing factor is that after the unblocking of manholes, debris is not removed and evidence in this regard was collected and reported. The City of Cape Town Manager was issued with a Notice of Intent and Compliance Notice by Department of Environmental Affairs.



Debris from the surcharging manhole

Most of the City's infrastructural underground piping's have aged and most of the times if not always makes it very difficult to clean out all the dirt that was found due to rust.

CONCLUSION AND WAY FORWARD

Whilst we have relatively decent Laws and Policies in South Africa, it is also clear that they are poorly implemented. Access to sufficient water is guaranteed to everyone in terms of section 27(1)(b) of the Constitution, while section 9(3) leaves no doubt that such right should be enjoyed without discrimination. Experience around the world is that, more often than not, water laws aren't the problem. The problem is that they are simply not implemented, whether the result of a lack of political will or perhaps coordination and capacity challenges. The dissonance between policy and action on the ground is not a unique failing in the South African case⁵³. However, the failure to implement policy and laws in SA is exacerbated by bureaucratic implementation procedures, corruption and coordination challenges within and between government departments.

Failure to implement the laws exacerbates the already precarious lives and livelihoods of the poor – especially where these are related to other vulnerabilities such as gender, age or ethnicity, health and poor environment, further reducing their ability to escape poverty. Such vulnerabilities impact the health of those living in poverty in a number of ways, from undermining food security, factoring in the spread of water-borne diseases to exposure to Gender Based Violence.

While the laws are well-written and often praised and whilst on paper our government has the capacity to address water concerns in South Africa, particularly in disadvantaged communities, it has chosen not to do so. As previously noted, the disparity this causes has a greater impact on the most vulnerable groups. These impacts reinforce the systemic racism and classism in South African society and are clearly illustrated in the case study. If the National Water Act and Water Services Act were implemented correctly and consistently, we would see fair opportunity to access water and sanitation services, with the same equal standards throughout the country, across all races, at all times. This, however, is far from the reality. During the apartheid regime, the lack of access to water was based on racism suffered mostly by black and rural communities. Unfortunately, as a result of entrenched economic inequality and a lack of political will on the part of the state to change this, after over 25 years of freedom we are still advocating for decent water for all.

Various groups in underserved rural and underserved urban areas want their voices to be heard through personal evidence and anecdotes, which will be used to support facts and evidence accumulated over time. The information gathered indicates that the government must effectively implement its policies and laws in order to meet the requirements and desires of its citizens. However, based on the current state of affairs and progress, it appears unlikely that this will happen anytime soon, given that it has already been 27 years, we are still struggling for freedom and basic human rights.

As a result of the aforementioned, communities have begun to organize themselves, forming community-based organizations (CBOs). These types of CBOs have organized neighborhood clean-ups in collaboration with local schools, all with the purpose of promoting a healthy environment for all residents. Though it is well understood that this will not be sustainable, efforts are being made by communities to improve their lives and their environment, with the hope that the government will join hands in solidarity with communities. Because of local capacity restrictions, such as the lack of logistical support, community initiatives have not proven to be sustainable and require consistent policy and policy implementation on the part of Government to take hold.

Government must take the concerns of marginalised groups who from the majority of the population seriously, tensions are addressed rather than allowing them to spiral out of control. The importance of community-based organizations (CBOs) in fostering collaboration, accountability and peace on the ground cannot be understated and, especially given Government's impotence should consciously allow and support such organisation to thrive. Solidarity is the only way to create equality for all and the natural environment in which they live. By including everyone in improving and enforcing decision-making around human and environmental rights which are inextricably linked particularly at a grassroots level, you create the necessary condition to improve the lives of the disadvantaged.

53 Makaya,E., Rohse,M., Day,R., Vogel,C., Mehta,L., McEwen,L., Rangecroft,S. & Van Loon, A.F. '[Water governance challenges in rural South Africa: exploring institutional coordination in drought management](#)' in *Water Policy*; 22 (4), 1 August 2020, pp. 519-540



CHILDREN COLLECTING WATER, NORTHERN CAPE

Faysse (2005) accentuate the above, by arguing that the necessity for people-oriented management in water resources management gives water management organizations and institutions an opportunity to share ideas with the local population. By allowing and adopting the idea of working with the CBO's would mean including full use of indigenous knowledge systems and by doing so empowering the minds and efforts of its citizens knowing that they have a voice and it is valued and put in use.



ENVIRONMENTAL CLUB, WETLAND CLEANUP - MFULENI, CAPE TOWN, WESTERN CAPE

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