



BLUE AND GREEN DROP PROJECT

NOVEMBER 2020

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This document forms part of AfriForum's blue and green drop campaign, a project of AfriForum's #CleanWater initiative and launched by AfriForum Community Affairs.

A WORD OF THANKS

It is a privilege to work with people who share a passion for their people, the community and the environment in which they live. Thank you to AfriForum personnel and all the AfriForum branches across South Africa who made this project possible.

A special word of thanks to every member of AfriForum for your ongoing participation in this country-wide project and for sharing our vision of sustainable development and responsible water management in South Africa. We are also very grateful for your

participation during the lockdown and every sacrifice that went with that.

Thank you also to those municipalities who are performing their duties in irreproachable ways by complying with water management legislation and ensuring that water is managed responsibly. These municipalities should be applauded because they protect their communities and the environment against pollution and health hazards.



Sias Voigte of AfriForum's Ventersdorp branch is taking water samples during AfriForum's blue and green drop project for 2020.

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INTRODUCTION

South Africa is classified as a water scarce country, and this is why we must find solutions to address the extraordinary challenges and manage our freshwater resources sustainably. The country is experiencing increasing pressure on the demand for and supply of clean drinking water. Growing pressure on existing infrastructure for drinking water and sewage is contributing to the country's threatening crisis in this regard. Moreover, the country's water resources are not being upgraded, such as by building new and larger dams. Another major challenge is the large-scale corruption that hinders the proper management of water resources.

AfriForum enables communities to protect themselves against poor service delivery by the state, particularly in terms of water provision. Several AfriForum branches have already established emergency water points where clean drinking water is made available at private sources or repaired municipal boreholes during crisis situations to improve water supply. Expenses that the community have to incur to supply water themselves due to inadequate or no municipal water supply services are claimed back from the relevant municipality.

AfriForum remains committed to research on and striving to reach independent solutions and privatisation of water systems under the management of the state (as custodian of the country's water resources). For the civil rights organisation it is an increasingly important function to find solutions to the demand for water.

AfriForum launched the #CleanWater initiative already in February 2013. This yearly report is compiled with the aim of providing the public with reliable information about the quality of South Africa's drinking water and sewage. The project is aimed at positive changes in the management of drinking water and treated sewage across South Africa, and also at holding the specific officials accountable. This year it is even more important because of the COVID-19 pandemic and because research found a link between this disease and sewage systems. This allows us to identify focus areas.

According to the World Health Organization, approximately 4 million people – most of whom are younger than five years – die every year of diseases that can be attributed directly to polluted water. This is more than 330 000 people per month or 10 000 people per day; 400 people per hour or seven people every minute ... or one person every eight seconds.

South Africa is not unique in the water challenges that are facing us. The water shortage forces us as consumers to think anew about water and how we are consuming it. The Western Cape specifically was forced to think deeply with water restrictions of 50 litres per capita per day (ℓ/c/d) in

2018. The global average water consumption is 180 ℓ/c/d, compared with South Africa's average of 235 ℓ/c/d, according to the Department of Water and Sanitation (DWS).¹ We are witnessing water shortages across South Africa since 2018.



Community members collecting water at one of Cape Town's springs near Table Mountain (2018).

South Africa will have to change its way with regard to water utilisation. Research must be conducted to find techniques and methods to use water for multiple purposes. This means that the same litre of potable water that is made available to consumers should not be used once only and then flushed away – it should have an appropriate second and third function.



AfriForum's Parys branch taking water samples at a sewage plant's outflow.

¹ Department of Water and Sanitation. 2017. *Benchmarking of water loss, water use efficiency and nonrevenue water in South African municipalities (2004/05 to 2015/16)*. Available at <https://africacheck.org/wp-content/uploads/2018/04/National-benchmark-2017-09-12-final.pdf>. Pp. iii – iv.

THE FACTS

Section 24 of the South African Constitution provides for an environment that is not harmful to the health or well-being of people. It aims to conserve the environment for present and future generations and to prevent pollution and ecological degradation. It is also aimed at enhancing environmental conservation and ensuring ecologically sustainable development.

Section 27(1)(b) stipulates that everyone has the right to access to sufficient water and that this right must be enhanced progressively.

In terms of Section 156 and Part B of Schedule 4 to the Constitution, municipalities have executive authority over and the right to

administer water and sanitation services. This right is limited to potable water supply systems and local wastewater and sewage disposal systems. The DWS is responsible for managing and developing water provision and water resources.

The DWS released its last official Blue and Green Drop Report in 2012. AfriForum therefore decided to monitor the quality of drinking water and treated sewage in South Africa themselves.



THE PROJECT

AfriForum recognises the importance of water quality for human consumption and the role that it plays in the ecosystem. This is why the #CleanWater initiative was launched in 2013 to annually test drinking water and sewage.

AfriForum again succeeded this year in enabling more than 140 branches across South Africa to test their municipal drinking water and sewage as part of the 2020 blue and green drop project. Drinking water (blue drop) and treated sewage (green drop) were tested from August to October this year so that communities could determine if there are any health risks and whether their drinking water and sewage comply with legal standards. They were accompanied by AfriForum's coordinators and several other interested parties, including municipal officials, the media and service providers. Participants were encouraged to take pictures as proof, enhancing the credibility of the project in this way.

AfriForum believes in improving and fine-tuning the tests every year. The improved testing kit that we used in 2020 was developed in cooperation with the company iWater Solutions and tests for the following pathogens and minerals in an easy, effective way:

- *Escherichia coli* (*E. coli*)²
- Faecal coliform bacteria
- Nitrates³
- Phosphates
- Fluorides

- Total hardness
- Free chlorine
- Iron
- Copper
- Lead
- Nitrates
- Nitrites
- Total alkalinity
- pH
- Ammonia

The test kit now comprises only five tests. It tests more accurately and can detect more substances. The content also has a shelf life of up to two years. The more detailed instruction brochure will ensure the correct storage of the agar.

Prof. Esta van Heerden (Director of iWater and professor of microbial, biochemical and food biotechnology) and her team will also establish a WhatsApp group to which we want to add every AfriForum branch to ensure direct access to the best water experts.

² In terms of SANS: 241 National Standards, there should be no *E. coli* in drinking water.

³ *South African Water Quality Guidelines*. Volume 1: Domestic Water Use, Second edition, 1996.

BLUE DROP RESULTS

AfriForum tested the quality of drinking water in 220 towns between August and October 2020. The watchdog function that organisations like AfriForum performs helped to ensure that most municipalities passed this year's test. It is therefore evident that the pressure that AfriForum applies every year to municipalities are bearing fruits.

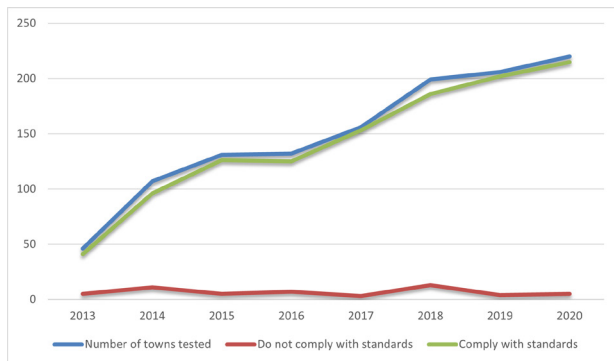
The drinking water of five towns from four different municipalities did not meet the quality standards for drinking water:

1. Boshof – Tokolong Local Municipality (faecal coliform bacteria in a borehole)
2. Brits – Madibeng Local Municipality (high concentrations of lead and nitrates)
3. Delareyville – Tswaing Local Municipality (high concentrations of nitrates)
4. Sannieshof – Tswaing Local Municipality (faecal coliform bacteria and high concentrations of phosphates)
5. Stella – Naledi Local Municipality (high concentrations of nitrates).

The blue drop results since 2013 are indicated in graph 1.

In 2019 four towns from three municipalities provided drinking water to residents that did not meet the minimum standards. The Tswaing and the Naledi Local Municipalities are once again at fault, and communities in these municipalities are faced by health risks for the third consecutive year.

The results of drinking-water quality tests conducted from 2013 to 2019 are also contained in this report with a view to comparing these with the 2020 results.



Graph 1: Blue drop (drinking water) results for 2013–2020

AfriForum immediately warned affected communities not to drink this water. The municipalities were put on terms to immediately address the unsafe water quality. Follow-up samples taken at least seven days after the initial tests indicated that the water is now fit for human consumption.

In Table 1 the towns and cities are listed in which water samples were taken, as well as the municipalities in which these towns and cities are situated.



Table 1: Blue drop results 2013–2020

GAUTENG									
Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Alberton (Randhart)	Ekurhuleni Metro	-	-	-	Clean	Clean	Clean	Clean	Clean
Apies River	Tshwane Metro	Clean	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Bedfordview	Ekurhuleni Metro	-	-	-	-	Clean	Clean	Clean	Clean
Benoni	Ekurhuleni Metro	-	-	-	Clean	Clean	Clean	Clean	Clean
Boksburg	Ekurhuleni Metro	-	-	-	-	Clean	Clean	Clean	Clean
Brakpan	Ekurhuleni Metro	-	-	-	-	Clean	Clean	Clean	Clean
Bronkhorstspuit	Tshwane Metro	-	-	-	-	Clean	Clean	Clean	Clean
Centurion (central)	Tshwane Metro	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Centurion (south)	Tshwane Metro	-	-	-	-	-	Clean	Clean	Clean
Centurion (west)	Tshwane Metro	-	-	-	-	-	Clean	Clean	Clean
Cullinan	Tshwane Metro	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Edenvale	Ekurhuleni Metro	-	-	-	-	Clean	Clean	Clean	Clean
Elsburg	Ekurhuleni Metro	-	-	-	-	-	Clean	Clean	Clean
Fochville	Merapong City LM	-	-	-	-	-	-	Clean	Clean
Florida	Johannesburg Metro	-	-	-	-	-	-	Clean	Clean
Germiston	Ekurhuleni Metro	-	-	-	-	-	Clean	Clean	Clean
Heidelberg	Lesedi LM	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Hennops River Valley	Tshwane Metro	-	-	-	Clean	Clean	Clean	Clean	Clean
Roodepoort	Johannesburg Metro	-	-	-	-	-	Clean	Clean	Clean
Kameeldrift	Tshwane Metro	-	-	-	-	Clean	Clean	Clean	Clean
Kempton Park	Ekurhuleni Metro	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Krugersdorp	Mogale City LM	-	-	-	-	-	Clean	Clean	Clean
Lochvaal	Emfuleni LM	-	Clean	Clean	Clean	-	-	Clean	Clean
Magaliesburg	Mogale City LM	-	Clean	-	-	-	Clean	Clean	Clean
Meyers Park	Tshwane Metro	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Meyerton	Midvaal LM	-	-	-	-	Clean	Clean	Clean	Clean
Moot	Tshwane Metro	-	-	-	Clean	Clean	Clean	Clean	Clean
Nigel	Ekurhuleni Metro	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Pretoria North	Tshwane Metro	-	-	-	-	-	Clean	Clean	Clean
Pretoria East (Garsfontein)	Tshwane Metro	-	-	-	Clean	Clean	Clean	Clean	Clean
Pretoria East (Moreleta Park)	Tshwane Metro	-	-	-	-	Clean	Clean	Clean	Clean
Pretoria East (Waterkloof)	Tshwane Metro	-	-	-	-	Clean	Clean	Clean	Clean
Pretoria West	Tshwane Metro	-	-	-	High phenol and chromium concentrations	Clean	Clean	Clean	Clean

Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Primrose	Ekurhuleni Metro	-	-	-	-	-	Clean	Clean	Clean
Randburg	Johannesburg Metro	-	Clean	Clean	Clean	Clean	-	Clean	Clean
Randfontein	Rand West City LM	-	-	-	-	-	-	Clean	Clean
Rayton	Tshwane Metro	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Springs	Ekurhuleni Metro	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Tedstoneville	Ekurhuleni Metro	-	-	-	-	-	-	Clean	Clean
Vanderbijlpark	Emfuleni LM	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Vanderbijlpark South	Emfuleni LM	-	-	-	Clean	Clean	Clean	Clean	Clean
Vanderbijlpark West	Emfuleni LM	-	-	Clean	Clean	Clean	Clean	Clean	Clean
Vereeniging	Emfuleni LM	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Waverley	Tshwane Metro	-	-	-	-	-	Clean	Clean	Clean
West Moot	Tshwane Metro	-	-	-	Clean	Clean	Clean	Clean	Clean
Westonaria	Rand West City LM	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Zambezi	Tshwane Metro	-	Clean	-	Clean	Clean	Clean	Clean	Clean
Other									
Tuks campus	University of Pretoria	-	-	-	Clean	Clean	Clean	Clean	Clean

WESTERN CAPE

Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Bitterfontein	Matzikama LM	-	-	-	Clean	-	-	Clean	Clean
Bredasdorp	Cape Agulhas LM	-	-	-	-	-	-	-	Clean
Cape Town (Bellville)	Cape Town Metro	-	-	Clean	Clean	Clean	Clean	Clean	Clean
Cape Town (Durbanville)	Cape Town Metro	-	-	-	-	-	-	-	Clean
Cape Town (Gordons Bay)	Cape Town Metro	-	-	-	-	-	-	-	Clean
Cape Town (Kraaifontein)	Cape Town Metro	-	-	-	-	-	-	-	Clean
Cape Town (Strand)	Cape Town Metro	-	-	-	-	-	-	-	Clean
Citrusdal	Cederberg LM	-	Clean	Clean	Clean	-	Clean	-	-
Clanwilliam	Cederberg LM	-	-	-	-	-	Clean	-	-
Darling	Swartland LM	-	-	-	-	-	-	-	Clean
Gansbaai	Overstrand LM	-	-	-	-	-	Clean	Clean	Clean
George	George LM	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Hermanus (Sandbaai)	Overstrand LM	-	Clean	Clean	Clean	-	Clean	Clean	Clean
Hessequa (Still Bay)	Hessequa LM	-	-	-	Clean	Clean	Clean	Clean	Clean
Kalbaskraal	Swartland LM	-	-	-	-	-	-	-	Clean
Klawer	Matzikama LM	-	-	-	Clean	Clean	Clean	Clean	Clean

Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Kleinmond	Overstrand LM	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Ladismith	Kannaland LM	-	-	-	Clean	-	Clean	-	-
Lutzville	Matzikama LM	-	-	Clean	Clean	Clean	-	Clean	Clean
Malmesbury	Swartland LM	-	-	-	-	-	-	-	Clean
Montagu	Langeberg LM	-	-	-	-	-	Clean	Clean	Clean
Mossel Bay	Mossel Bay LM	Clean	Clean	Clean	Clean	Clean	Phosphates >25 ppm ⁴	Clean	Clean
Nuwerus	Matzikama LM	-	-	-	Clean	-	-	Clean	Clean
Oudtshoorn	Oudtshoorn LM	-	-	-	-	Clean	Clean	Clean	Clean
Pearly Beach	Overstrand LM	-	-	-	-	-	Clean	Clean	Clean
Robertson	Langeberg LM	-	-	-	Clean	-	Clean	Clean	Clean
Stellenbosch	Stellenbosch LM	-	-	-	-	Clean	Clean	Clean	Clean
Vanrhynsdorp	Matzikama LM	-	-	Clean	Clean	Clean	-	Clean	Clean
Vredendal	Matzikama LM	Clean	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Vredendal South	Matzikama LM	-	-	Clean	Clean	Clean	Clean	Clean	Clean
Velddrif	Bergrivier LM	-	-	-	-	-	Clean	Clean	Clean
Wellington	Drakenstein LM	-	-	-	-	Clean	Clean	Clean	Clean
Worcester	Breede Valley LM	-	-	-	-	-	-	-	Clean
Other									
Stellenbosch campus (Maties)		-	-	-	Clean	Clean	Clean	Clean	Clean

NORTHERN CAPE

Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Buffelsrivier	Nama Khoi LM	-	-	-	Clean	-	-	-	-
Douglas	Siyancuma LM	-	-	-	-	-	Clean	Clean	Clean
Hartswater	Phokwane LM	-	-	-	-	-	-	-	Clean
Hopetown	Thembelihle LM	-	-	-	-	-	Clean	Clean	Clean
Jan Kempdorp	Phokwane LM	-	-	-	-	-	-	-	Clean
Kakamas	Ka Garib LM	-	-	-	-	-	Clean	Clean	Clean
Kathu	Gamagara LM	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Kamieskroon	Kamiesberg LM	-	Clean	Clean	Clean	Clean	-	-	Clean
Keimoes	Ka Garib LM	-	-	-	-	-	Clean	Clean	Clean
Kimberley	Sol Plaatje LM	Clean	Clean	Clean	Clean	-	Clean	Clean	Clean
Kuruman	Ga-Segonyana LM	Clean	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Nababeep	Nama Khoi LM	-	-	-	Clean	-	-	-	-
Orania	Orania Dorpsraad	-	-	-	-	Clean	-	Clean	Clean
Postmasburg	Tsantsabane LM	-	-	-	Clean	Clean	Clean	Clean	Clean
Prieska	Siyathemba LM	-	-	-	-	-	-	-	Clean
Springbok	Nama Khoi LM	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Upington	Khara Hais LM	-	-	-	-	Clean	Clean	Clean	Clean
Vaalharts	Phokwane LM	-	Clean	Clean	Clean	-	Clean	Clean	Clean
Warrenton	Magareng LM	-	-	-	-	-	Clean	Clean	Clean
Williston	Karoo Hoogland LM	-	-	-	-	-	Clean	-	Clean

⁴ ppm: parts per million

EASTERN CAPE

Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Aliwal North	Walter Sisulu LM	-	-	-	-	-	Phosphates >25 ppm	Clean	Clean
Barkly East	Senqu LM	-	Clean	Clean	Clean	Clean	-	-	-
Burgersdorp	Walter Sisulu LM	-	-	-	-	-	Clean	Clean	-
Cradock	Inxuba Yethemba LM	-	-	Clean	Clean	Clean	Clean	-	-
Elliot	Sakhisizwe LM	<i>E. coli</i>	Clean	Clean	Clean	Clean	-	Clean	Clean
Jeffreys Bay	Kouga LM	Clean	Clean	Clean	Clean	Clean	-	Clean	Clean
Middelburg	Steve Tshwete LM	-	-	-	-	-	Clean	-	-
Molteno	Inkwanca LM	-	-	<i>E. coli</i>	Clean	Clean	Clean	-	-
East London	Buffalo City Metro	-	-	-	-	-	Clean	-	-
Port Elizabeth	Nelson Mandela Bay Metro	Clean	Clean	Clean	Clean	Clean	-	Clean	Clean
Queenstown	Lukhanji LM	-	-	-	-	-	Faecal coliform bacteria >3 000	-	-
Sterkstroom	Enoch Mgijima LM	-	-	-	-	-	Clean	-	-
Stutterheim	Amahlathi LM	-	-	-	-	-	Clean	-	-
Steynsburg	Gariep LM	-	-	-	-	-	Clean	-	-
Tarkastad	Tsolwana LM	-	-	<i>E. coli</i>	Clean	Clean	Clean	-	-

FREE STATE

Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Allanridge	Matjhabeng LM	-	-	-	Clean	-	Clean	Clean	Clean
Bethlehem	Dihlabeng LM	-	-	-	-	Clean	Clean	Clean	Clean
Bloemfontein Central	Mangaung Metro	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Bloemfontein (Fichardt Park)	Mangaung Metro	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Bloemfontein (Hospital Park)	Mangaung Metro	-	-	-	Clean	Clean	Clean	Clean	Clean
Bloemfontein (Pellissier)	Mangaung Metro	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Bloemfontein (Rayton-Heuwelsig)	Mangaung Metro	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean

Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Bloemfontein (Uitsig)	Mangaung Metro	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Bloemfontein (Langenhoven Park)	Mangaung Metro	-	-	Clean	Clean	Clean	Clean	Clean	Clean
Bloemfontein (Wilgehof)	Mangaung Metro	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Bothaville	Nala LM	-	Clean	Clean	Clean	Clean	Phosphates >25 ppm	Clean	Clean
Boshof	Tokologo LM	-	-	-	-	-	Clean	-	Faecal coliform bacteria (in borehole water)
Brandfort	Masilonyana LM	-	-	-	-	-	Clean	-	-
Bultfontein	Tswelopele LM	-	-	Clean	Clean	Clean	No water available	-	-
Dealesville	Tokologo LM	-	-	-	-	Clean	Clean	Clean	Clean
Frankfort	Mafube LM	-	Clean	Clean	Clean	Clean	-	Clean	Clean
Harrismith	Maluti-A-Phofung LM	Clean	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Heilbron	Ngwathe LM	-	-	Clean	Clean	Clean	Clean	Clean	Clean
Hennenman	Matjhabeng LM	-	-	Clean	Clean	5 faecal coliform bacteria	Clean	Clean	Clean
Hertzogville	Tokologo LM	-	-	-	Clean	Clean	Clean	Clean	Clean
Koppies	Ngwathe LM	14 nitrates	4 <i>E. coli</i> and 14 nitrates	Clean	Clean	Clean	<i>E. coli</i> >1 000 cfu ⁵	Clean	Clean
Kroonstad	Moghaka LM	-	-	-	-	Clean	Clean	Clean	Clean
Odendaalsrus	Matjhabeng LM	-	-	-	-	Clean	Clean	Clean	Clean
Parys	Ngwathe LM	-	-	-	-	Clean	-	Clean	Clean
Petrus Steyn	Nketoana LM	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Reitz	Nketoana LM	-	Clean	Clean	Clean	Clean	-	Clean	Clean
Sasolburg	Metsimaholo LM	-	-	Clean	Clean	Clean	-	Clean	Clean
Senekal	Setsoto LM	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Theunissen	Masilonyana LM	-	-	-	-	-	Clean	Clean	Clean
Villiers	Mafube LM	-	-	Clean	Clean	Clean	Clean	Clean	Clean
Viljoenskroon	Moghaka LM	-	-	-	-	25 faecal coliform bacteria	Clean	-	-
Vrede	Phumelela LM	-	-	-	Clean	-	Clean	Clean	Clean
Vredefort	Ngwathe LM	-	-	-	-	Clean	-	-	-
Welkom	Matjhabeng LM	-	-	-	-	Clean	Clean	Clean	-
Wesselsbron	Nala LM	-	-	Clean	Clean	-	Clean	Clean	Clean
Winburg	Masilonyana LM	-	-	Clean	Clean	Clean	Clean	Clean	Clean
Other									
Bloemfontein campus	University of the Free State	-	-	-	Clean	Clean	Clean	Clean	Clean

⁵ cfu: coliform units

MPUMALANGA

Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Amersfoort	Pixley Ka Seme LM	-	-	-	-	-	Clean	Clean	Clean
Badplaas	Chief Albert Luthuli LM	-	-	-	-	-	-	Clean	Clean
Balfour	Dipaleseng LM	-	-	-	-	Clean	Clean	Clean	Clean
Barberton	Mbombela LM	-	-	-	-	-	Clean	Clean	Clean
Belfast	Emakhazeni LM	Clean	Clean	Clean	Faecal coliform bacteria and <i>E. coli</i>	Clean	Clean	Clean	Clean
Bethal	Govan Mbeki LM	-	-	Clean	Clean	Clean	Clean	Clean	Clean
Breyten	Msukaligwa LM	-	-	-	-	-	Clean	Clean	Clean
Carolina	Chief Albert Luthuli LM	-	-	-	-	-	-	Clean	Clean
Charl Cilliers	Govan Mbeki LM	-	-	-	-	Clean	Clean	Clean	Clean
Chrissiesmeer	Msukaligwa LM	-	-	-	-	-	Clean	Clean	Clean
Delmas	Victor Khanye LM	-	-	Clean	Clean	Clean	Clean	Clean	Clean
Dullstroom	Emakhazeni LM	-	-	Clean	Clean	Clean	Clean	Clean	Clean
Ermelo	Msukaligwa LM	Clean	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Evander	Govan Mbeki LM	-	-	-	-	-	Clean	Clean	Clean
Greylingstad	Dipaleseng LM	-	-	-	-	Clean	-	Clean	Clean
Hendrina	Steve Tshwete LM	-	-	-	-	-	-	Clean	Clean
Kaapsehoop	Mbombela LM	-	-	-	-	-	-	-	Clean
Kriel	Emalahleni LM	-	-	-	-	Clean	Clean	Clean	Clean
Leandra	Govan Mbeki LM	-	-	-	-	Clean	Clean	Clean	Clean
Lydenburg	Thaba Chweu LM	Clean	Clean	Clean	High concentration of faecal coliform bacteria	Clean	Clean	Clean	Clean
Machadodorp	Emakhazeni LM	5 cadmium	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Middelburg	Steve Tshwete LM	Clean	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Morgenzon	Lekwa LM	-	-	-	-	Clean	Clean	Clean	Clean
Nelspruit	Lekwa LM	-	-	-	-	Clean	Clean	Clean	Clean
Ogies	Emalahleni LM	-	-	-	-	-	Clean	-	-
Piet Retief	Mkhondo LM	-	Clean	Clean	Faecal coliform bacteria and <i>E. coli</i>	Clean	Clean	Clean	Clean
Sabie	Thaba Chweu LM	-	-	-	-	-	-	Clean	Clean
Secunda	Govan Mbeki LM	-	-	-	Clean	Clean	Clean	Clean	Clean
Standerton	Lekwa LM	-	Colour exceeds limits, but water not unsafe	Clean	Clean	Clean	Clean	Clean	Clean
Stoffberg	Emalahleni LM	-	-	-	-	-	Clean	-	-
Sundra	Victor Khanye LM	-	-	-	-	-	Clean	Clean	Clean

Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Trichardt	Govan Mbeki LM	-	-	-	-	-	Clean	-	Clean
Volksrust	Pixley Ka Seme LM	-	-	-	-	-	Clean	Clean	Clean
Wakkerstroom	Pixley Ka Seme LM	-	-	-	-	-	Clean	Clean	Clean
White River	Mbombela LM	-	11 total organic carbon	Clean	Faecal coliform bacteria and <i>E. coli</i>	Clean	Clean	Clean	Clean
Witbank	Emalahleni LM	-	-	-	Clean	Clean	Clean	Clean	Clean

NORTH WEST

Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Biesiesvlei	Ditsobotla LM	-	-	-	-	-	-	-	Clean
Bloemhof	Lekwa-Teemane LM	-	68 faecal coliform bacteria	Clean	Clean	Clean	Clean	Clean	Clean
Brits	Madibeng LM	-	-	-	Clean	Clean	Clean	Phosphates >50 ppm	Lead and nitrates
Christiana	Lekwa-Teemane LM	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Coligny	Ditsobotla LM	-	4 <i>E. coli</i>	<i>E. coli</i>	Clean	Clean	Clean	Clean	Clean
Delareyville	Tswaing LM	-	-	-	Clean	Clean	Phosphates >100 ppm	Nitrates >25 ppm; phosphates >25 ppm	Nitrates
Groot Marico	Ramotshere Moiloa LM	-	-	-	-	-	Clean	Clean	Clean
Hartbeesfontein	Matlosana City LM	-	-	-	Clean	Clean	-	-	-
Hartbeespoort	Madibeng LM	Clean	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Jouberton	Matlosana City LM	-	-	-	Clean	-	-	-	-
Klerksdorp	Matlosana City LM	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Koster	Kgetlengrivier LM	-	-	-	-	Clean	Clean	Clean	Clean
Leeudoringstad	Maquassi Hills LM	-	-	-	Clean	Clean	Clean	Clean	Clean
Lichtenburg	Ditsobotla LM	-	Clean	Clean	Clean	Clean	-	Clean	Clean
Mahikeng	Mahikeng LM	-	-	-	-	-	Clean	Clean	Clean
Makwassie	Maquassi Hills LM	-	-	-	Clean	Clean	Clean	Clean	Clean
Mooiwoo	Madibeng LM	-	-	-	Clean	Clean	Clean	Clean	Clean
Orkney	Matlosana City LM	-	-	-	Clean	Clean	Clean	Clean	Clean
Ottosdal	Tswaing LM	-	-	-	Clean	Clean	Phosphates >25 ppm	Clean	Clean
Potchefstroom	Tlokwe LM	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Rustenburg	Rustenburg LM	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean

Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Sannieshof	Tswaing LM	-	-	-	-	Clean	Nitrates >10 ppm; phosphates >100 ppm	Phosphates >25 ppm	Phosphate and faecal coliform bacteria
Schweizer-Reneke	Mamusa LM	-	-	Clean	Nitrates above permissible levels	Clean	Phosphates >25 ppm	Clean	Clean
Stella	Naledi LM	-	140 <i>E. coli</i> and 18 nitrates	50 nitrates	Nitrates above permissible levels	Clean	Faecal coliform bacteria >3 000 cfu; phosphates >25 ppm	Nitrates >100 ppm	Nitrates
Stilfontein	Matlosana City LM	-	-	-	Clean	Clean	Clean	Clean	Clean
Swartruggens	Kgetlengrivier LM	-	-	-	-	Clean	Faecal coliform bacteria 3 cfu; <i>E. coli</i> 3 cfu	Clean	Clean
Ventersdorp	Ventersdorp LM	-	Clean	Clean	Clean	Clean	Clean	-	Clean
Vryburg	Naledi LM	-	4 <i>E. coli</i>	Clean	Clean	Clean	Faecal coliform bacteria >3 000 cfu	Clean	Clean
Wolmaransstad	Maquassi Hills LM	-	-	Clean	Clean	Clean	Clean	Clean	Clean
Zeerust	Ramotshere Moiloa LM	-	-	-	Clean	Clean	Clean	Clean	Clean
Other									
Buffelspoort	Madibeng LM	-	-	-	-	Clean	-	Clean	Clean
Potchefstroom campus (Pukke)	North-West University	-	-	-	Clean	Clean	Clean	Clean	Clean

LIMPOPO

Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Ellisras	Lephalale LM	-	-	-	Clean	8 units <i>E. coli</i> per 100 ml	<i>E. coli</i> >2 cfu; Faecal coliform bacteria >2 cfu	Clean	Clean
Groblersdal	Elias Motsoaledi LM	-	-	-	Clean	Clean	Clean	Clean	Clean
Haenertsburg	Greater Tzaneen LM	-	-	-	-	Clean	Clean	Clean	Clean
Leeupoort	Thabazimbi LM	-	-	Clean	Clean	-	-	Clean	Clean
Louis Trichardt	Makhado LM	-	-	-	Clean	Clean	Clean	Clean	-
Marble Hall	Sekhukhune DM	Clean	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Naboomspruit	Mookgophong LM	Clean	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Nylstroom	Lim368 LM	-	-	-	Clean	Clean	Clean	Clean	Clean
Phalaborwa	Ba-Phalaborwa LM	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Potgietersrus	Mogalakwena LM	-	-	-	-	-	-	-	Clean

Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Pietersburg	Polokwane LM	Clean	4 units <i>E. coli</i> per 100 ml	Clean	Clean	Clean	Clean	Clean	Clean
Roedtan	Mookgophong LM	-	-	-	-	-	-	-	Clean
Rooiberg	Thabazimbi LM	-	-	-	-	-	-	Clean	Clean
Thabazimbi	Thabazimbi LM	-	-	-	-	-	-	Clean	Clean
Tzaneen	Greater Tzaneen LM	Clean	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Vaalwater	Lim368 LM	-	-	-	Clean	Clean	Clean	Clean	-
Warm Baths	Bela-Bela LM	Clean	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Other									
Letaba Camp	Kruger National Park	-	-	-	Clean	Clean	Clean	Clean	-
Elephants Camp	Kruger National Park	-	-	-	Clean	Clean	-	Clean	-

KWAZULU-NATAL

Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Hluhluwe	The Big 5 False Bay LM	-	-	-	-	Clean	Clean	Clean	Clean
Ixopo	Ubuhlebezwe LM	-	-	-	-	Clean	-	-	-
Margate	Hibiscus Coast LM	Clean	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Newcastle	Newcastle LM	-	-	Clean	Clean	Clean	Clean	Clean	Clean
Paulpietersburg	eDumbe LM	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Pongola	uPongola LM	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Richards Bay	uMhlathuze LM	-	-	-	-	-	Clean	Clean	Clean
Utrecht	eMadlangeni LM	-	Clean	Clean	Clean	Clean	Clean	Clean	Clean
Underberg	Kwa Sani LM	-	-	-	-	Clean	-	-	-
Vryheid	Abaqulusi LM	-	Clean	<i>E. coli</i>	Clean	Clean	Clean	Clean	Clean

GREEN DROP RESULTS

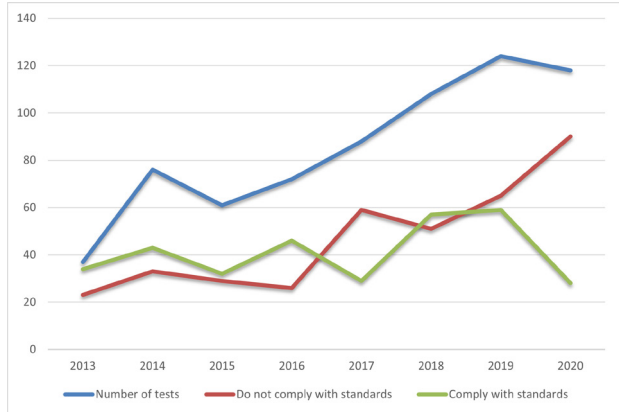
AfriForum tested the sewage treatment plants (STPs) of 118 towns from August to October 2020, of which 90 did not comply with minimum standards, compared to 65 out of 124 STPs in 2019. AfriForum was refused entry to certain plants, and in some cases the plants were completely inactive.

The results of towns' sewage tested in 2013–2019 are included in this report for comparison with the 2020 results.

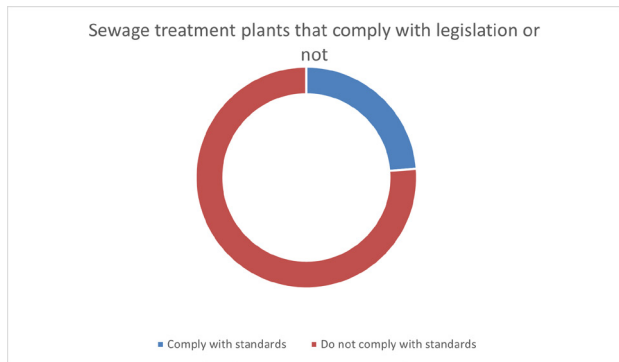
The green drop results for 2013–2019 are shown in graph 2. It is evident that STPs in South Africa are managed poorly and deteriorating fast.

The percentage of STPs that complied with standards in 2020 are shown in graph 3, while the same information is presented in graph 4, but per province.

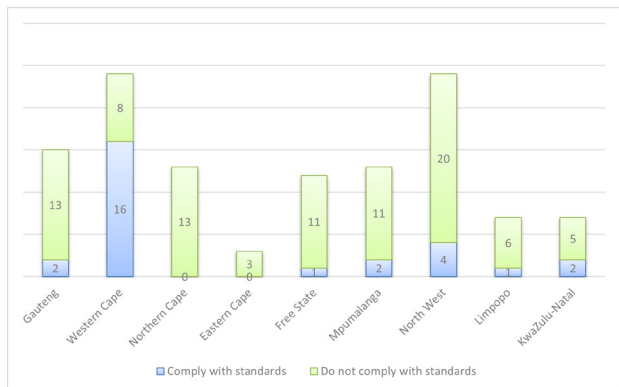
There are 90 STPs that did not comply with South African national water quality standards when AfriForum's project was executed. These standards determine that no more than 1 000 units of *E. coli* may be present per 100 ml of treated sewage. These 90 STPs are indicated in red below.



Graph 2: Green drop (sewage) results for 2013–2020



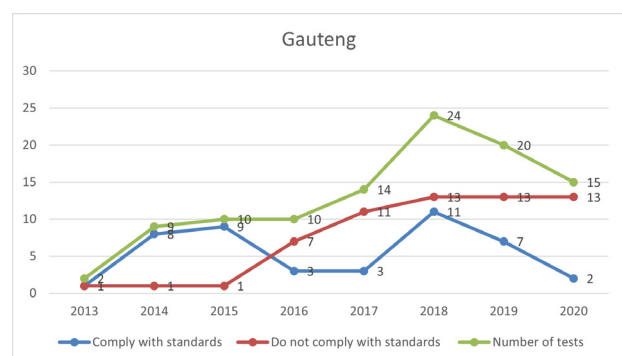
Graph 3: Number of sewage treatment plants that complies or does not comply with sewage requirements



Graph 4: Green drop (sewage) results per province

Table 2: Green drop results for Gauteng (2013–2020)

GAUTENG									
Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Alberton (ERWAT Dekema)	Ekurhuleni Metro	-	-	-	3 900	Clean	Clean	Clean	-
Apies River (Rooiwal)	Tshwane Metro	77 000	85 000	Clean	2 000	15 000	>100 000	>100 000	>10 000
Benoni	Ekurhuleni Metro	-	-	-	-	-	Clean	Clean	-
Brakpan	Ekurhuleni Metro	-	-	-	-	>2 500	Clean	Clean	-
Bronkhorstspuit (Godrich)	Tshwane Metro	-	-	-	-	2 000	>100 000	>100 000	>10 000
Centurion (Suiderland)	Tshwane Metro	Clean	Clean	10 000	100 000	5 500	>100 000	>100 000	>10 000
Cullinan (Cullinan)	Tshwane Metro	-	Clean	Clean	Clean	2 400	>10 000	>10 000	>10 000
Edenvale	Ekurhuleni Metro	-	-	-	-	-	>10 000	>10 000	-
Elsburg	Ekurhuleni Metro	-	-	-	-	-	Clean	Clean	-
Germiston	Ekurhuleni Metro	-	-	-	-	-	Clean	Clean	-
Heidelberg	Lesedi LM	-	Clean	Clean	-	>3 000	Clean	>1 000	>1 000
Roodepoort	Johannesburg Metro	-	-	-	-	-	Clean	-	Access refused
Kameeldrift (Baviaanspoort)	Tshwane Metro	-	-	-	-	-	>10 000	>100 000	>10 000
Kempton Park	Ekurhuleni Metro	-	Clean	Clean	-	-	-	Clean	>1 000
Magaliesburg	Mogale City LM	-	-	-	-	-	Clean	-	Access refused
Midvaal	Midvaal LM	-	-	-	-	-	-	>15 000	Clean
Nigel	Ekurhuleni Metro	-	Clean	Clean	High concentration faecal coliform bacteria	>3 000	-	-	-
Pretoria West (Daspoort)	Tshwane Metro	-	-	-	12 000	15 000	>10 000	>10 000	>10 000
Primrose	Ekurhuleni Metro	-	-	-	-	-	Clean	Clean	-
Randfontein	Randfontein LM	-	-	-	-	>4 000	<i>E. coli</i> >4 000	-	>1 000
Springs	Ekurhuleni Metro	-	Clean	Clean	2 000	>2 000	<i>E. coli</i> >5 000	>5 000	Clean
Vanderbijlpark (Leeukuil)	Emfuleni LM	-	Clean	Clean	Clean	>1 000	>100 000 ⁶	>10 000	>1 000
Vanderbijlpark (Rietspruit)	Emfuleni LM	-	-	-	-	-	>100 000	>50 000	>1 000
Vanderbijlpark (Sebokeng)	Emfuleni LM	-	-	-	-	-	>100 000	>50 000	>10 000
Vereeniging	Emfuleni LM	-	Clean	Clean	Clean	Clean	>1 000	-	-
Westonaria	Rand West City LM	-	-	Clean	2 500	Clean	Clean	-	>10 000

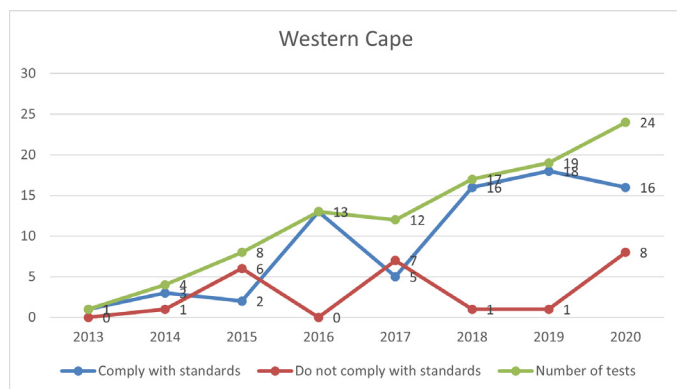


Graph 5: Green drop results for Gauteng

⁶ When AfriForum performed its tests, the Emfuleni Local Municipality's Leeukuil STP only received an estimated 40% of the plant's inflow water and sewage due to blocked pipes in the plant's infrastructure in the greater Tshepiso residential area in Vanderbijlpark.

Table 3: Green drop results for the Western Cape (2013–2020)

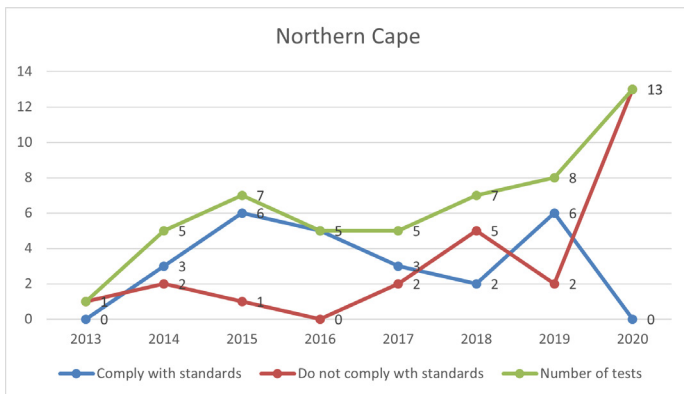
WESTERN CAPE									
Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Bitterfontein	Matzikama LM	-	-	-	-	-	-	Clean	>1 000
Bredasdorp	Cape Agulhas LM	-	-	-	-	-	-	-	>1 000
Citrusdal	Cederberg LM	-	-	-	-	-	Clean	-	-
Cape Town (Clifton)	Cape Town Metro	-	-	-	-	-	-	-	Clean
Cape Town (Scottsdene)	Cape Town Metro	-	-	-	Clean	Clean	>1 000	>1 000	>1 000
Cape Town (Kewtown)	Cape Town Metro	-	-	-	-	50 000	Clean	-	Clean
Cape Town (Macassar)	Cape Town Metro	-	-	-	-	-	-	-	Clean
Clanwilliam	Cederberg LM	-	-	-	-	-	Clean	-	-
Darling	Swartland LM	-	-	-	-	-	-	Clean	Clean
Gansbaai	Overstrand LM	-	-	-	-	>3 000	-	Clean	Clean
George	George LM	-	-	-	Clean	Clean	Clean	Clean	>1 000
Hawston	Overstrand LM	-	-	-	-	-	-	Clean	Clean
Hermanus	Overstrand LM	-	3 600	Clean	Clean	-	-	Clean	Clean
Klawer	Matzikama LM	-	-	2 000	Clean	>1 500	Clean	Clean	Clean
Kleinmond	Overstrand LM	-	Clean	Clean	Clean	Clean	-	Clean	Clean
Ladismith	Kannaland LM	-	-	-	Clean	-	Clean	-	-
Lutzville	Matzikama LM	-	-	1 500	Clean	>2 000	-	Clean	>1 000
Malmesbury	Swartland LM	-	-	-	-	-	-	-	Clean
Montagu	Langeberg LM	-	-	-	-	-	Clean	-	-
Mossel Bay	Mossel Bay LM	-	-	-	Clean	>2 400	Clean	Clean	Clean
Nuwerus	Matzikama LM	-	-	-	Clean	-	-	Clean	-
Oudtshoorn	Oudtshoorn LM	-	Clean	100 000	-	Clean	Clean	Clean	>1 000
Robertson	Langeberg LM	-	-	-	Clean	-	Clean	Clean	-
Stellenbosch	Stellenbosch LM	-	-	-	-	-	Clean	Clean	Clean
Still Bay	Hessequa LM	-	-	-	-	-	Clean	-	>1 000
Vanrhynsdorp	Matzikama LM	-	-	1 500	Clean	>1 500	-	Clean	Clean
Velddrif	Bergrivier LM	-	-	-	-	-	Clean	-	Clean
Vredendal	Matzikama LM	Clean	Clean	8 000	Clean	Clean	Clean	Clean	Clean
Vredendal South	Matzikama LM	-	-	2 000	Clean	>1 500	Clean	Clean	-
Wellington	Drakenstein LM	-	-	-	-	-	Clean	Clean	>1 000
Worcester	Breede Valley LM	-	-	-	-	-	-	-	Clean



Graph 6: Green drop results for the Western Cape

Table 4: Green drop results for the Northern Cape (2013–2020)

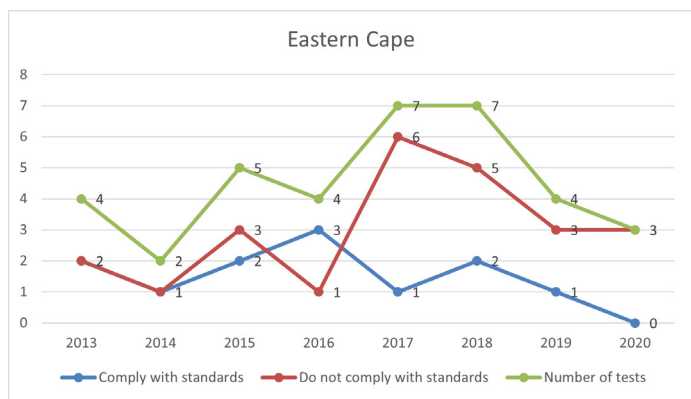
NORTHERN CAPE									
Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Daniëlskuil	Kgatelopele LM	-	Clean	Clean	-	-	-	-	-
Douglas	Siyancuma LM	-	-	-	-	-	-	-	>10 000
Hartswater	Phokwane LM	-	-	-	-	-	-	-	>10 000
Jan Kempdorp	Phokwane LM	-	-	-	-	-	-	-	>10 000
Kakamas	Kai !Garib LM	-	-	-	-	-	-	-	>10 000
Kathu	Gamagara LM	-	17 000	Clean	-	Clean	Clean	Clean	>10 000
Keimoes	Kai !Garib LM	-	-	-	-	-	-	-	>10 000
Kimberley	Sol Plaatje LM	1 600	Rejected	1 500	Clean	-	-	>1 000	>10 000
Kamieskroon	Kamiesberg LM	-	-	-	Clean	-	-	-	>10 000
Kuruman	Ga-Segonyana LM	-	Rejected	Clean	-	Clean	>1 000	Clean	>10 000
Nababeep	Nama Khoi LM	-	-	-	Clean	-	-	-	-
Postmasburg	Tsantsabane LM	-	-	-	-	>10 000	>1 000	Clean	-
Prieska	Siyathemba LM	-	-	-	-	-	-	-	>1 000
Springbok	Nama Khoi LM	-	1 250	Clean	Clean	>1 500	>1 000	>1 000	-
Upington	Khara Hais LM	-	-	-	-	Clean	>2 000	Clean	>10 000
Vaalharts	Phokwane LM	-	Clean	Clean	Clean	-	>1 000	Clean	>1 000
Williston	Karoo Hoogland LM	-	Clean	Clean	-	-	Clean	Clean	>10 000



Graph 7: Green drop results for the Northern Cape

Table 5: Green drop results for the Eastern Cape (2013–2020)

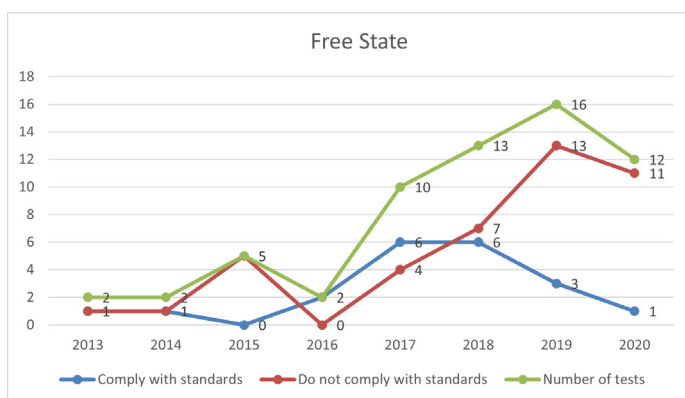
EASTERN CAPE									
Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Barkly East	Senqu LM	-	-	2 000	Clean	Clean	-	-	-
Burgersdorp	Walter Sisulu LM	-	-	-	-	-	Clean	-	-
Cradock	Inxuba Yethemba LM	-	-	-	2 000	>1 000	Faecal coliform bacteria >1 500	-	-
Elliot	Sakhisizwe LM	36 000	Rejected	4 000	-	-	Clean	Clean	-
Jeffreys Bay	Kouga LM	34 000	-	Clean	Clean	High phosphate content >30 000	<i>E. coli</i> >1 000	>1 000	>1 000
Langkloof (Joubertina)	Kou-Kamma LM	Clean	11 500	>2 400	-	-	-	-	-
Molteno	Inkwanca LM	-	-	-	Clean	>30 000	Faecal coliform bacteria >1 500	-	-
Port Elizabeth	Nelson Mandela Bay Metro	Clean	Clean	Clean	-	>30 000	-	>1 000	>1 000
Queenstown	Lukhanji LM	-	-	-	-	-	Faecal coliform bacteria >3 000	-	-
Aliwal North	Walter Sisulu LM	-	-	-	-	-	<i>E. coli</i> >50 000	>1 000	>1 000
Tarkastad	Tsolwana LM	-	-	-	-	High phosphate content	-	-	-



Graph 8: Green drop results for the Eastern Cape

Table 6: Green drop results for the Free State (2013–2020)

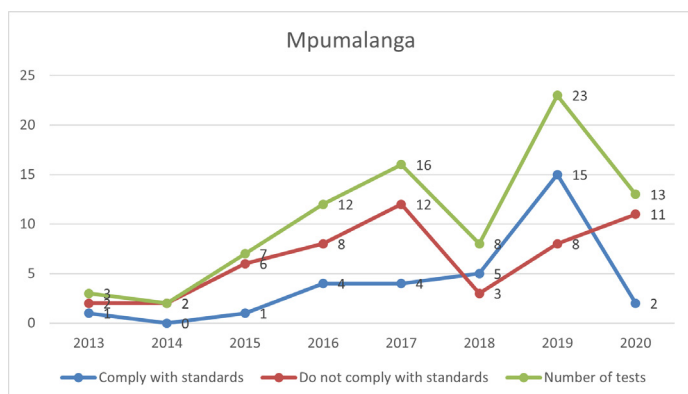
FREE STATE									
Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Bethlehem	Dihlabeng LM	-	-	-	-	Clean	Faecal coliform bacteria >1 000	>10 000	Closed due to upgrading
Bothaville	Nala LM	-	-	-	-	-	<i>E. coli</i> >1 500	>1 000	>1 000
Bloemfontein	Mangaung Metro	-	-	-	Clean	Clean	-	>1 000	>10 000
Bultfontein	Tswelopele LM	-	-	-	-	-	-	>10 000	>10 000
Frankfort	Mafube LM	-	-	-	-	>2 500	Clean	> 5 000	>10 000
Harrismith	Maluti-A-Phofung LM	-	-	-	-	Clean	-	> 2 000	Out of order
Heilbron	Ngwathe LM	-	-	-	-	-	Clean	Clean	>1 000
Hertzogville	Tokoloko LM	-	-	-	-	-	<i>E. coli</i> >1 000 cfu	>10 000	>1 000
Kroonstad	Moqhaka LM	Clean	-	1 000 000	-	-	Faecal coliform bacteria >1 000	>2 000	>1 000
Parys	Ngwathe LM	-	-	-	-	-	<i>E. coli</i> >20 000; 20 000 faecal coliform bacteria	Clean	>10 000
Petrus Steyn	Nketoana LM	-	14 000	1 000 000	-	>3 000	-	-	-
Reitz	Nketoana LM	-	-	2 500	-	>2 500	-	>2 000	>10 000
Sasolburg	Metsimaholo LM	-	-	-	-	Clean	Clean	Clean	Clean
Senekal	Setsotho LM	-	-	-	-	-	-	>4 000	-
Theunissen	Masilonyana LM	-	-	25 000	-	-	Clean	-	-
Villiers	Mafube LM	-	-	-	-	>3 000	Clean	-	-
Viljoenskroon	Moqhaka LM	-	-	-	-	-	Clean	>1 000	-
Vrede	Phumelela LM	-	-	-	-	Clean	-	-	-
Welkom	Matjhabeng LM	-	-	-	-	-	<i>E. coli</i> >1 000	> 10 000	>10 000
Winburg	Masilonyana LM	2 000	Clean	10 000	Clean	Clean	Faecal coliform bacteria >1 000	> 4 000	>1 000



Graph 9: Green drop results for the Free State

Table 7: Green drop results for Mpumalanga (2013–2020)

MPUMALANGA									
Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Amersfoort	Pixley ka Seme LM	-	-	-	-	-	-	Clean	-
Balfour	Dipaleseng LM	-	-	-	-	>2 500	-	Clean	-
Belfast	Emakhazeni LM	19 000	690 000	5 200	>2 400	>5 000	Clean	Clean	>1 000
Bethal	Govan Mbeki LM	-	-	450 000	100 000	50 000	<i>E. coli</i> >1 000	>1 000	Unable to test (water does not flow through plant)
Charl Cilliers	Govan Mbeki LM	-	-	-	-	Clean	-	Clean	-
Delmas	Victor Khanye LM	-	-	Clean	1 500	High phosphate content	-	Clean	-
Dullstroom	Emakhazeni LM	-	-	2 000	Clean	-	Clean	Clean	>1 000
Ermelo	Msuligwa LM	Clean	310 000	590 000	-	1 500	-	Clean	Clean
Evander	Govan Mbeki LM	-	-	-	-	-	-	>1 000	>10 000
Greylingstad	Dipaleseng LM	-	-	-	-	Clean	-	Clean	-
Kriel	Emalahleni LM	-	-	-	-	>1 500	-	-	-
Leandra	Govan Mbeki LM	-	-	-	-	-	-	Clean	>10 000
Lydenburg	Thaba Chweu LM	1 000 000	-	73 400	>1 000	1 500	Clean	>1 000	Unable to test (water does not flow through plant)
Machadodorp	Emakhazeni LM	-	-	-	Clean	-	Clean	Phosphates >10	>1 000
Middelburg	Steve Tshwete LM	-	-	-	Clean	1 500	Phosphates >25	Clean	>10 000
Morgenzon	Lekwa LM	-	-	-	-	>1 500	-	Clean	-
Nelspruit	Mbombela LM	-	-	-	-	-	-	Nitrates >25	>1 000
Piet Retief	Mkhondo LM	-	-	-	>1 000	>1 000	-	Clean	Clean
Secunda (Kinross)	Govan Mbeki LM	-	-	-	2 000	Clean	Clean	>1 000	>10 000
Secunda (Trichardt)	Govan Mbeki LM	-	-	-	-	-	-	-	>1 000
Standerton	Lekwa LM	-	-	100 000	50 000	30 000	<i>E. coli</i> >1 000	>10 000	>10 000
Volkstrust	Pixley ka Seme LM	-	-	-	-	-	-	Clean	-
Wakkerstroom	Pixley ka Seme LM	-	-	-	-	-	-	Clean	-
White River	Mbombela LM	-	-	-	Clean	Clean	-	Clean	-
Witbank	Emalahleni LM	-	-	-	4 000	High phosphate content	-	>5 000	>10 000

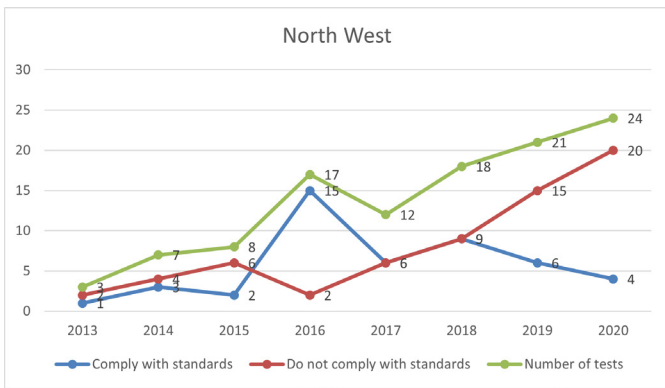


Graph 10: Green drop results for Mpumalanga

Table 8: Green drop results for North West (2013–2020)

NORTH WEST									
Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Biesiesvlei	Ditsobotla LM	-	-	-	-	-	-	-	>10 000
Bloemhof	Lekwa-Teemane LM	-	-	-	Clean	-	<i>E. coli</i> >1 000; 1 000 faecal coliform bacteria	>1 000	>1 000
Brits	Madibeng LM	-	-	-		Clean	Clean	Clean	>1 000
Buffelspoort	Madibeng LM	-	-	-	-	-	-	Clean	>10 000
Christiana	Lekwa-Teemane LM	-	-	3 500		Clean	<i>E. coli</i> >1 000; 1 000 faecal coliform bacteria	>10 000	>1 000
Coligny	Ditsobotla LM	-	4 <i>E. coli</i>	<i>E. coli</i>		Clean	Clean	>100 000	>10 000
Delareyville	Tswaing LM	-	-	-		-	-	Clean	>1 000
Groot Marico	Ramotshere Moiloa LM	-	-	-	-	-	-	>1 000	>1 000
Hartbeespoort	Madibang LM	-	-	-		>3 000	<i>E. coli</i> >10 000	Clean	>1 000
Klerksdorp	Matlosana City LM	-	>40 000	>1 000		High phosphate content	Clean	>1 000	>1 000
Koster	Kgetlengrivier LM	-	-	-	-	Clean	<i>E. coli</i> >5 000	>1 000	>1 000
Lichtenburg	Ditsobotla LM	120 000	59 000	>2 000	Clean	-	-	>50 000	>1 000
Mahikeng	Mahikeng LM	-	-	-	-	-	-	-	>10 000
Makwassie	Maquassi Hills LM	-	-	-	Clean	Clean	Clean	-	-
Mooiwooi	Madibeng LM	-	-	-	Clean	-	Clean	>5 000	>1 000
Orkney	Matlosana City LM	-	-	-	Clean	-	-	-	Access refused
Ottosdal	Tswaing LM	-	-	-	-	High phosphate content	<i>E. coli</i> >1 000; 1 000 faecal coliform bacteria	>10 000	-
Potchefstroom	Tlokwe LM		Clean	Clean	-	High phosphate content >2 000	Clean	Clean	>10 000
Rustenburg	Rustenburg LM	-	Clean	>1 000	Clean	-	<i>E. coli</i> >4 000	>5 000	Clean
Sannieshof	Tswaing LM	-	-	-	-	-	<i>E. coli</i> >1 000; 1 000 faecal coliform bacteria	-	Clean
Schweizer-Reneke	Mamusa LM	-	-	-	-	High phosphate content	-	>10 000	Clean
Stella	Naledi LM	-	>100 000	>1 000	>2 000	-	<i>E. coli</i> >1 000	-	>1 000
Stilfontein	Matlosana City LM	-	-	-	Clean	-	Clean	>1 000	>1 000
Swartruggens	Kgetlengrivier LM	-	-	-	-	Clean	Clean	>1 000	-

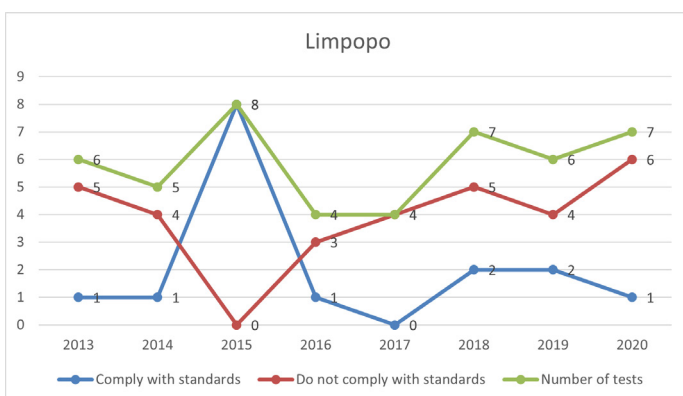
Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Ventersdorp	Ventersdorp LM	-	-	-	-	-	-	-	>1 000
Vryburg	Naledi LM	>10 000	Clean	Clean	Clean	High phosphate content	<i>E. coli</i> >1 000; Faecal coliform bacteria >1 000	>1 000	>10 000
Wolmaransstad	Maquassi Hills LM	-	-	-	>1 000	-	Clean	Clean	Clean
Zeerust	Ramotshere Moiloa LM	-	-	-	Clean	-	-	>10 000	>1 000



Graph 11: Green drop results for the North West

Table 9: Green drop results for Limpopo (2013–2020)

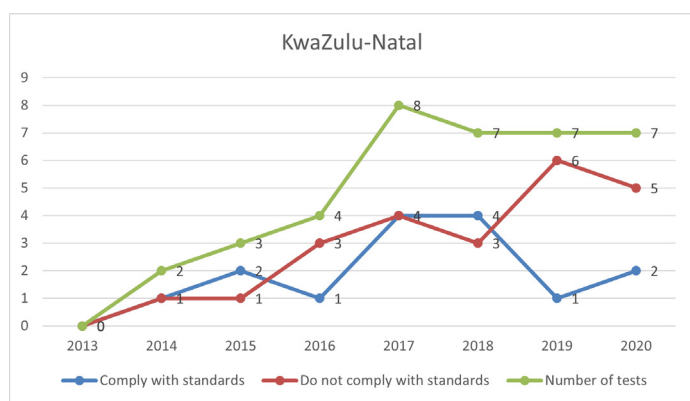
LIMPOPO									
Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Ellisras	Lephalale LM	-	-	-	-	High phosphate content >15 000	<i>E. coli</i> >100 000; faecal coliform bacteria >100 000	>1 000	>1 000
Groblersdal	Elias Motsoaledi LM	-	-	-	>1 000	-	-	-	>1 000
Leeupoort	Thabazimbi LM	-	-	Clean	-	-	-	-	-
Marble Hall	Ephraim Mogale LM	17 000	Clean	Clean	-	-	-	-	>1 000
Naboomspruit	Mookgophong LM	1 000 000	1 000 000	Clean	-	>2 500	<i>E. coli</i> >100 000; faecal coliform bacteria >100 000	>1 000	>10 000
Nylstroom	Lim368 LM	-	-	-	>1 000	>1 000	<i>E. coli</i> >100 000; faecal coliform bacteria >100 000	>1 000	>1 000
Phalaborwa	Ba-Phalaborwa LM	110 000	1 300	Clean	3 700	4 000	<i>E. coli</i> >100 000; faecal coliform bacteria >100 000	-	-
Pietersburg	Polokwane LM	-	110 000	Clean	-	-	<i>E. coli</i> >100 000; faecal coliform bacteria >100 000	>1 000	-
Potgietersrus	Mogalakwena LM	1 200	92 000	Clean	-	-	-	-	>10 000
Tzaneen	Greater Tzaneen LM	Clean	-	Clean	Clean	-	Clean	Clean	Clean
Warm Baths	Bela-Bela LM	1 000 000	-	Clean	-	-	Clean	Clean	-



Graph 12: Green drop results for Limpopo

Table 10: Green drop results for KwaZulu-Natal (2013–2020)

KWAZULU-NATAL									
Place	Municipality	2013	2014	2015	2016	2017	2018	2019	2020
Hluhluwe	The Big 5 False Bay LM	-	-	-	-	Clean	-	-	Clean
Ixopo	Ubuhlebezwe LM	-	-	-	-	Clean	-	-	-
Margate	Hibiscus Coast LM	-	-	-	>1 100	>1 100	<i>E. coli</i> >1 000	>1 000	>1 000
Newcastle	Newcastle LM	-	-	10 000	>2 000	>1 500	<i>E. coli</i> >1 000	>1 000	>1 000
Paulpietersburg	eDumbe LM	-	Clean	Clean	Water in tanks is clean	Clean	Clean	>1 000	Clean
Pongola	uPongola LM	-	-	-	>1 200	>4 200	Clean	>2 000	>1 000
Utrecht	eMadlangeni LM	-	-	-	-	-	Clean	Clean	>1 000
Richards Bay	uMhlatuze LM	-	-	-	-	-	Clean	>1 000	-
Underberg	Kwa Sani LM	-	-	-	-	-	-	-	-
Vryheid	Abaqulusi LM	-	Clean	Clean	-	>2 000	<i>E. coli</i> >1 000	>5 000	>10 000



Graph 13: Green drop results for KwaZulu-Natal

The national green drop results show a significant deterioration from 52% to 76% (i.e. 24 percentage points) for 2020, which is quite alarming and must be corrected. An analysis of the results per province is even more worrying. Every province is polluting the environment more than the previous year.

Most rivers in South Africa are being polluted daily, mostly with raw sewage that flows unhindered from manholes, canals and pumping stations. This is also a major problem because the water in these rivers is in most cases used to provide towns with water, as well as for agricultural purposes.

ACTION PLAN

The 2020 report broached several issues with municipalities across the country who are responsible for water quality.

In 2019, AfriForum's branches brought the poor quality of drinking water and sewage during municipalities' public participation processes for integrated development plans to these municipalities' attention. AfriForum branches also compiled action lists and submitted these lists to municipal managers to improve water quality. In this way, AfriForum wants to ensure that municipalities will budget adequately in the coming financial year to be able to manage drinking water and sewage infrastructure effectively.

The 2020 report will be used as a standard against which to measure the same infrastructure in 2020 in those towns and cities in which AfriForum has branches.

To ensure compliance, the following is done:

1. AfriForum keeps a comprehensive performance record or paper trail to keep record of the water quality of towns.
2. Municipalities of which the water quality does not comply with set standards are informed of this in writing, and comprehensive action plans are demanded from these municipalities. The affected municipalities must indicate how and by what date their water quality will comply with all requirements.

3. AfriForum will consider legal action against municipalities that fail to solve the issues. The possibility exists of criminal charges being brought against the administrative officials and that the route of private prosecution is followed.
4. This report will also be submitted to the Green Scorpions for further investigation of sewage plants that do not comply with the requirements.
5. The 2020 report – which comprises eight years' blue and green drop information – will be submitted to the Minister of Water and Sanitation so that AfriForum can discuss and implement strategies with the Minister to address these problems.
6. AfriForum branches will also launch self-help projects to enable communities themselves to solve problems caused by municipalities.

AfriForum believes and trusts that municipalities will cooperate to solve these important issues and to ensuring a safe, healthy environment for all in South Africa.

CONCLUSION

Any deterioration in the quality of drinking water could be life-threatening. This risk is exacerbated because South Africa is still recovering from a serious drought, with a scarcity of water for human consumption, given the high water losses through the water reticulation infrastructure. It stands to reason that agriculture and industry should receive most of the country's available water for cultivation and production.

AfriForum is concerned about the management of the entire water supply chain, but even more so about the management of South Africa's treated sewage. The results of the 2020 survey indicate that there has indeed been an improvement in the quality of drinking water in South Africa. Four towns show an improvement compared to last year's report, but it still is a matter of grave concern that some towns are not provided with clean drinking water. What is most concerning, however, is that the drinking water of four towns do not comply with minimum standards for the second consecutive year. There are also clear signs of mismanagement in North West.

Considering the vast number of sewage pollution complaints from across the country, the green drop results also reflect a significant deterioration at the STPs tested by AfriForum and of which historic records are kept. The country faces very high levels of sewage pollution as a result of poor infrastructure maintenance and incompetent management. This points to a crisis that is threatening communities across South Africa, but has now become life-threatening, for example the Vaal River crisis. South Africa's water resources are experiencing a serious crisis that must be addressed at a national level by the national government. AfriForum is using several remedies to hold municipalities accountable that are badly managed, as in the case of the Rooiwal court case. Following a court case of three years, the Tshwane Metro had no option but to enter

into a settlement agreement with AfriForum in February 2019 on maintenance and repairs at the Rooiwal sewage works. The Metro Council also has to bear the legal costs of this action, and the court order included a maintenance schedule for the maintenance and repairs at the Rooiwal sewage works to be carried out at specific dates. The deterioration of the Rooiwal sewage works was brought to the attention of the Metro Council by members of AfriForum, following which this civil rights organisation launched an urgent court application in October 2016. The Metro promised to report to the court the progress made with regard to the maintenance and repairs but failed to do so. Consequently, AfriForum had to again place the application on the roll for the order to be made final. Driving such a court case is a lengthy, expensive process.

Another problem that increasingly comes to light – especially in Gauteng's major metro areas – is that existing STPs are unable to cope with the growing quantities of sewage. This means that more and more plants are starting to pollute rivers.

AfriForum branches from across South Africa will use all appropriate remedies to ensure that issues of water quality are addressed immediately to protect this valuable resource at all costs. Letters on non-compliance are directed to municipalities, requiring immediate action not only to prevent peoples' lives from being endangered, but also to ensure sustainable water management. Where the minimum standards for drinking water are not maintained, AfriForum will use available remedies, including possible legal action, to compel municipalities to do so.

The 2019 survey will be used for monitoring the same infrastructure as well as others in the future.

Note from the author: It is of the utmost importance to test the quality of our drinking water and sewage on a permanent and continuous basis. We have to protect this critical resource.

