

Overview of current water supply in the Eastern Cape

By Carin Venter

Since 2015, the Eastern Cape has been in the grips of one of the worst droughts in history. While several coastal areas received good rainfall during October this year, many catchment areas saw hardly any improvement.

According to the Department of Water and Sanitation (DWS), provincial water storage levels reached a low of 48,6% on 26 October, compared to 52,6% during the same period in 2019. This meant that water restrictions remained in place in many residential areas, while agricultural endeavours had to continue with limited access to water.

District dam levels

Amathole district: By the end of October, the Amathole district was still under severe strain to continue supplying water to Buffalo City (East London) and surrounding areas. Xilinxha Dam, which supplies water to Ngqamakhwe and Butterworth, was

almost empty, while Bridle Drift Dam, which serves as the main drinking water supply dam for Buffalo City, measured 38,9%. Sandile Dam, used mainly for irrigation purposes, stood at 43,3%, while Nahoon Dam (domestic and industrial supply) was at 40%.

Nelson Mandela Bay Municipality: During October, dams in the Algoa Water Supply System, which supply Nelson Mandela Bay Municipality, increased slightly from 18,5 to 20,1%. At the same time last year, levels stood at 37,2%.

Chris Hani District Municipality: By mid-October, the Klipplaat Water Supply System supplying Queenstown (Komani) dropped to 34,2%, while Macubeni Dam and Xonxa Dam dropped to 79,1 and 93,7%, respectively. Tsojana Dam remained at 92,2%.

Agricultural water supply

Gamtoos Irrigation Board

According to Rienette Colesky, CEO of the Gamtoos Irrigation Board, the major

rainfall periods for the Gamtoos Valley are March/April and October/November. Most producers rely on drip irrigation, while some also make use of pivots for their cash crops. The Kouga Dam is vital for water supply and it has a canal system to distribute bulk water.

According to Colesky, the most critical time of the year for producers in their area is November to February. By the end of October water restrictions were still in place, which meant that producers only received 20% of their allocation. This severely affected all agricultural activities and made it particularly difficult to keep citrus trees alive during the latter part of the year. "There is no guarantee of a harvest and minimal cash crops have been planted. Dairy farming in the Mondplaas area is also becoming increasingly challenging."

Lower Sundays River Water User Association

According to the CEO of the Lower Sundays River Water User Association, Mike Primmer, they primarily operate in the Sundays River Valley, Nelson Mandela Bay Metro (bulk raw water) and the local towns of Kirkwood, Patterson and Addo.

They mainly cultivate citrus, with approximately 75% of the crop destined for the export market. Irrigation is performed by means of drip systems, whereas a few growers still use spray techniques. A very small percentage of producers produce cash crops and some grow lucerne for the purpose of restoring nitrogen levels in soil and as animal fodder.

"The Sundays River Valley has no appreciable catchment area of its own and with the vagaries of the rainfall pattern, it is very difficult for growers to rely solely on natural rainfall for irrigation," says Primmer.



By the end of October the Kouga Dam was 11,59% full. The dam supplies irrigation water to the Kouga and Gamtoos Valleys, as well as drinking water to the Nelson Mandela Bay Metro.

"The agricultural sector of the Sundays River Valley is totally dependent on a canal system for its water supply demands."

Water for the Sundays River Valley originates from the Gariep Dam and is conveyed via a system of weirs, tunnels, and natural watercourses to Darlington Dam. Water is then released through a strictly controlled and measured system into the Sundays River and diverted approximately 46km downstream into the canal system operated by the Lower Sundays River Water User Association. The water is then delivered to dams and canals.

According to Primmer, the water supply was stable at the end of October. There were no restrictive measures in place, dam levels were stable, and the main supply dams were constantly being monitored by the DWS and the association.

Great Fish River Water Users' Association

The Great Fish River Water Users' Association receives its water via the Orange-Fish River transfer scheme, starting at the Teebus tunnel outlet near Steynsburg, which gets its water from the Gariep Dam.

From the Teebus tunnel, the water runs past Cradock into the Elandsdrift Dam. From there a huge volume of water is transferred into the next transfer scheme by means of a concrete canal system, running past Somerset East and into the Small Fish River. From there it runs into De Mistkraal Dam, where the water is divided into a third transfer scheme (Sundays River System).

According to Christo Kotzé, CEO of the Great Fish River Water Users' Association,



Canals and measuring devices in the Grassridge area within the Great Fish River scheme.

the number of hectares listed on the transfer scheme totals 32 600ha, with a total allocation of 413 832 280m³ per year. Agriculture in the area consists mostly of dairy production and the cultivation of maize, wheat, lucerne and pecan nuts. There is also a growing interest in citrus in Cookhouse and Somerset East.

"The Tarka River sub-area is also part of the scheme, but it does not receive any water from the Orange-Fish River scheme, which makes it completely dependent on rainfall in the north-eastern parts of the Karoo," he says. "Kommandodrif Dam, being the scheme's main storage dam, was empty for most of 2019 and measured just 13,24% by the end of October this year. The second storage dam in this catchment

area, Lake Arthur, has been empty since September 2019. It reached a mere 3,9% in October this year."

Water supply is critical between March and May when producers must see the summer crop through, as well as from November to February when rainfall can be patchy.

Although there were no water restrictions in place for the Orange-Fish River scheme at the time of writing, a 75% restriction did apply to the Tarka River System. According to Kotzé, this has had a huge impact on producers, who received only 45% of their allocation during the previous season.

"From September 2019 to February 2020 the dam measured below 3%, which meant that there could not be any releases for irrigation during that time. Complicating matters even more was the fact that the applicable irrigation area did not receive any remarkable rainfall." 🌧️



The main canal off the Great Fish River in the Klipfontein area.

For more information, contact the Gamtoos Irrigation Board on 042 007 0382 or info@gamtooswater.co.za, the Lower Sundays River Water User Association on 042 234 0038 or info@sundaysriverwater.co.za, the Great Fish River Water Users' Association on 048 881 2408 or admin@grootvis.co.za, or visit www.dwa.gov.za.