

HYDROLOGICAL SERVICES NAMIBIA

DAILY FLOOD BULLETIN

21 January 2022

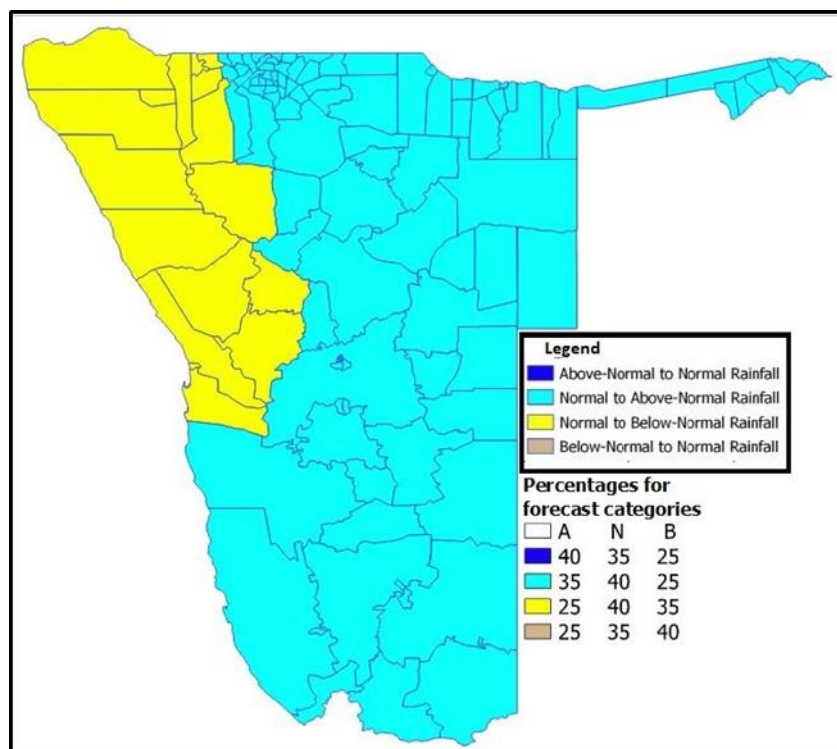
Private Bag 13184, Ministry of Agriculture, Water and Land Reform, Government Office Park, Namibia

The Hydrological Services of Namibia, Ministry of Agriculture, Water and Land Reform would like to use this opportunity to wish all our Esteemed Readers Good Health, and Prosperity for 2022!

We are resuming the distribution of our Daily Flood Bulletin. To readers that do not want to remain on our mailing list, kindly let us know.

Rainfall

Rainfall performance during the first part of the rainy season was very poor over most parts of the country except for the northeastern, southeastern and north-central areas that received above average rainfall.



Seasonal Rainfall forecast for January to March 2022



Enquiries: Ms. Pauline Mufeti, Tel: (+264) 208 7191, Fax: (+264) 208 7256

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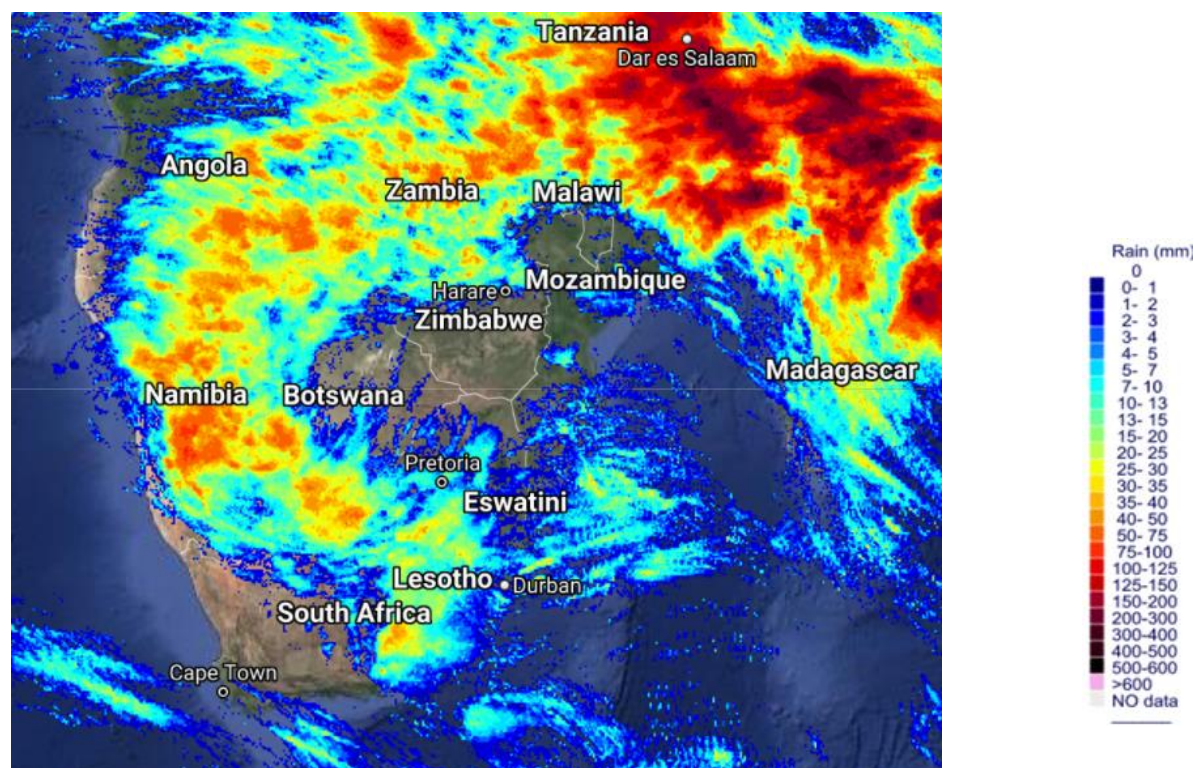
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Satellite images over the past 72 hours indicate heavy rainfall over Namibia's central and southeastern parts.

CHRS iRain-rainfall accumulation for the past 72 hours preceding 08h00 on 21.01.2022

<http://irain.eng.uci.edu/>



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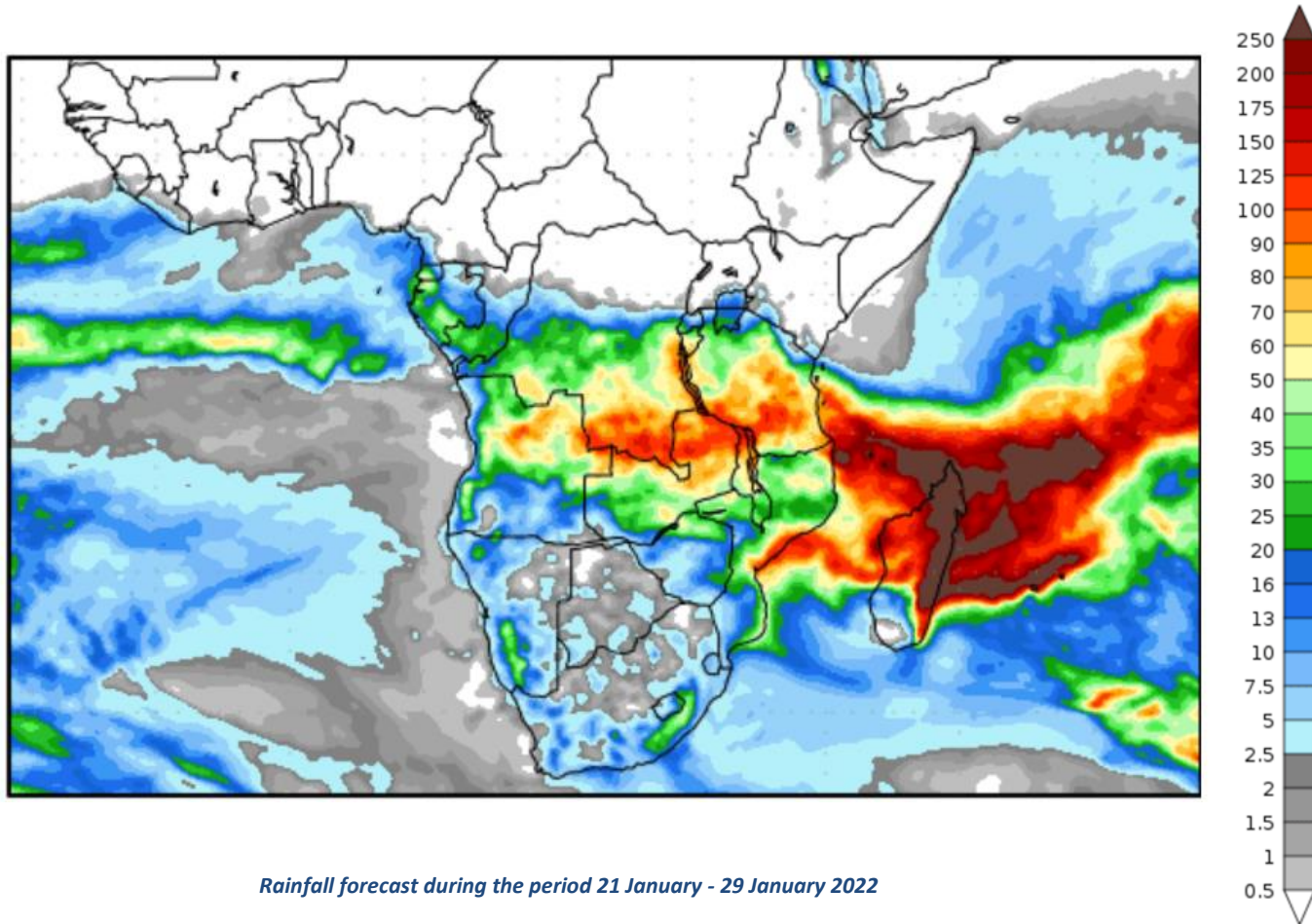
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Forecast by Namibia Meteorological Services: Heavy falls are expected in the southern regions over the weekend.

Observe rainfall forecast from the National Centers for Environmental Prediction from 21 January to 29 January 2022, Outlook for Africa-GDACS/COLA in the figure below.



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River Updates

Flows have been observed in some of the country's central, southern and west flowing ephemeral rivers due to heavy rains in their catchments over the past days.

Rivers in our Capital City, Windhoek, were in flood due to heavy rainfall this past weekend. For example, the Klein Windhoek River went above the 1.2 m mark on 19 January 2022.

High floods were already observed on the Lower Orange River during the first week of January. The situation requires very close monitoring and high level alertness because it looks like we are going to have a serious flood on the Lower Orange River.

The latest update on the situation in the Vaal-Orange system, by courtesy of Dr. Dennis Dlamini (DWS South Africa):

The Vaal, Bloemhof, Gariep and Vanderkloof dams are all above 100 %.

The water levels along Lower Orange River are medium high and are increasing due to the medium high releases from Bloemhof Dam and increasing outflow from Vanderkloof Dam. **The flows are forecast to increase significantly starting over the weekend and possibly rising beyond 3200 m³/s by mid next week.**

From Namibia's side, NamWater made releases at both Naute and Hardap dams this morning:

Naute Dam: 200 m³/s as from 09:00
Hardap Dam: 300 m³/s as from 08:00
500 m³/s as from 10:00

These releases and further rainfall development in the Orange-Fish catchment will add to the ongoing flows in the Fish River and high flows in the lowest part of the Lower Orange River downstream of the Fish-Orange confluence.

The Zambezi and Okavango rivers continue to rise. The Zambezi River at Katima Mulilo recorded 1.29 m while the Okavango River at Rundu recorded 4.14 m this morning. The water levels for the two rivers are lower compared to the same period last year.

Flows in the Kunene River remains low during this time of the year.

Contingency planning for flood risk mitigation and recovery to be activated, especially for flood prone areas as more rains are forecasted for this rainy season.



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See figures in the table below with today's river level readings from our gauging stations and site informants:

River	Site	Water Levels (m)			
		One week before	One day before	Today	Last Year
		14-Jan-22	20-Jan-22	21-Jan-22	17-Jan-21
Zambezi	Katima Mulilo (*)	1.10	1.26	1.29	1.71
Chobe	Chobe Water Villa	-	1.33	1.35	1.28
	Ngoma Gate	-	-	-	-
Kwando	Kongola	2.42	2.38	2.41	2.33
Okavango	Nkurenkuru	-	-	-	1.70
	Rundu (*)	4.00	4.10	4.14	4.39
	Divundu	2.98	3.06	3.10	3.11
Kuseib	Gobabeb	-	-	-	-
	Schlesien	-	-	-	-
Gaub	Greylingshof	-	-	-	-
Fish/Orange	Seeheim	-	-	-	-
	Tses	-	-	-	-
	Ai-Ais	-	-	-	-
	Blouputs (#)	-	-	2.99	2.91
	Sendelingsdrift (#)	-	-	3.57	-
Cuvelai	Shanalumono	-	-	-	-
	Endola	-	-	-	-
	Shahaingu	-	-	-	-
	Shanaimbwengedje	-	-	-	-
Kunene	Ruacana Flows (m³/s) (=)	67.90	58.10	59.00	72.60

(-) no reading/ station down/negative reading

(*) information by courtesy NamWater

(=) information by courtesy NamPower

(#) information by courtesy DWS- South Africa



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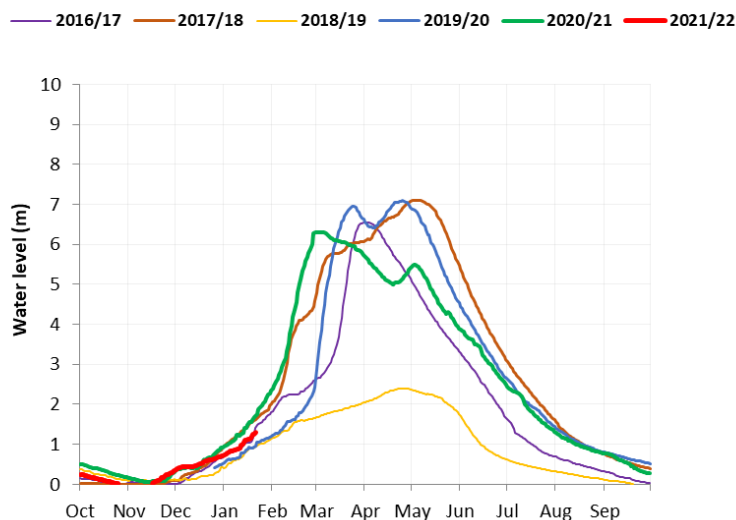
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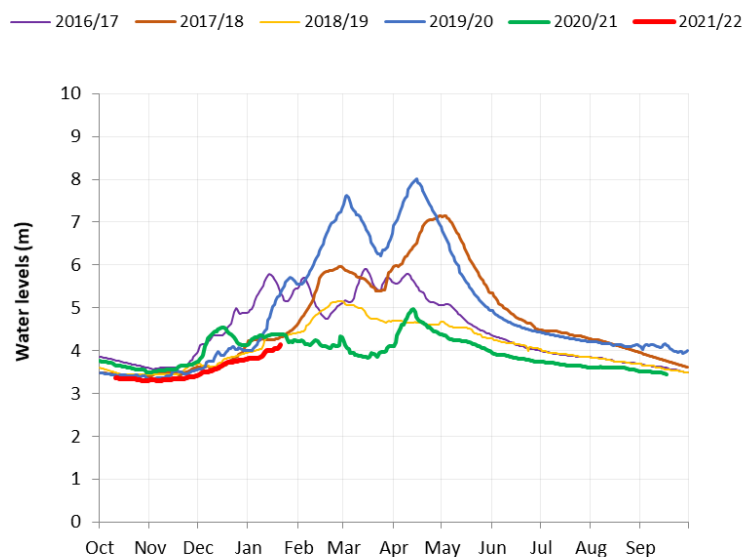
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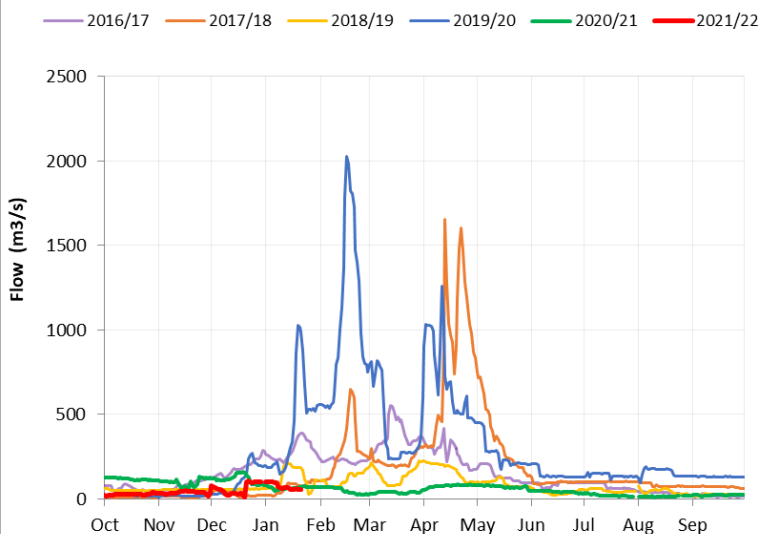
Zambezi River at Katima Mulilo



Okavango River at Rundu



Kunene River at Ruacana



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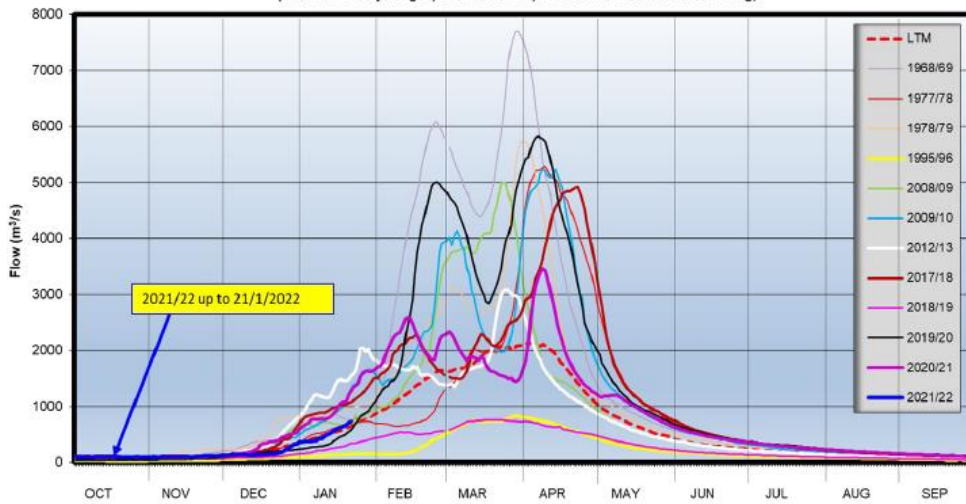
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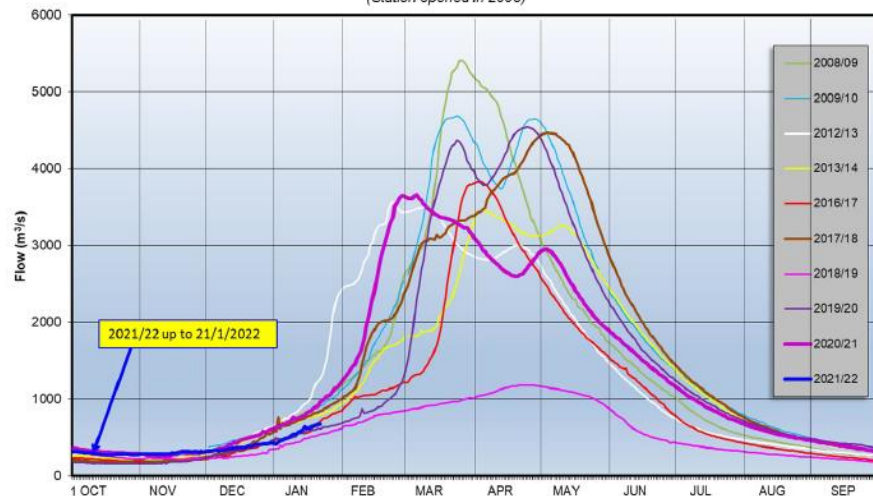
Zambezi River Daily Flow Hydrographs
CHAVUMA MISSION STATION

(Faint-lined Hydrographs added to provide Historical Referencing)



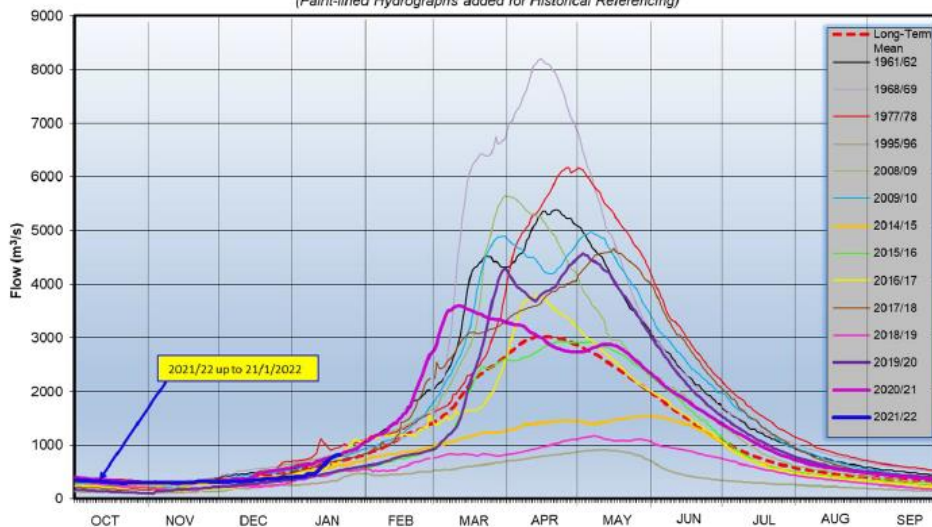
Courtesy of Zambezi River Authority - Daily Hydrological Bulletin (21/01/2022)

Zambezi River Daily Flow Hydrographs
NGONYE RAPIDS (Sioma Falls) STATION
(Station opened in 2005)



Zambezi River Daily Flow Hydrographs
VICTORIA FALLS/BIG TREE STATION

(Faint-lined Hydrographs added for Historical Referencing)



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Dam Levels

The country's major dams received significant inflow due to heavy rains and floods in their catchment areas during the past few weeks.

The content of the country major water supply dams is relatively high and stood 74.7 % on 17 January 2022.

Comparison of the total dam content for the two previous rainy seasons:

Date	Total Dam Content %
17 January 2022	74.7
18 January 2021	82.9
13 January 2020	21.5

Neckartal Dam volume stood at 808.42 Mm³ this morning, equivalent to 94.3 % of its capacity with an inflow rate of 47.9 m³/s.

Naute Dam stood at 100.7% this afternoon, and releases have stopped.

Hardap Dam stood at 72.9 % this afternoon, and release rate was increased to 400 m/s at 21h00 pm from 300 m/s at 9h30 am.

See the latest dam levels provided in the table below, information courtesy of Namwater.

Name of Reservoir	Full Supply Capacity (Mm ³)	Last Season 18/01/2021 % Full Capacity	Last week 10/01/2022 (% Full Capacity)	This week on 17/01/2022 (% Full Capacity)	Today on 21/01/2022
Swakoppoort Dam	63.489	91.1	75.5	74.9	77.2
Von Bach Dam	47.525	88.2	46.2	46.5	46.7
Omatako Dam	43.499	72.8	42.1	39.4	
Friedenau Dam	6.723	73.2	76.2	76.7	85.7
Otjivero Main Dam	9.808	48.7	41.4	41.0	
Otjivero Silt Dam	7.795	32.5			
Tilda Viljoen Dam	1.224	76.7	45.2	44.3	
Daan Viljoen Dam	0.429	100.0	50.6	49.4	
Hardap Dam	294.593	69.8	46.4	47.7	72.9
Neckartal Dam	857.000	93.0	92.5	92.5	94.3
Naute Dam	83.58	105.4	80.4	104.5	100.7
Oanob Dam	34.505	100.9	75.3	74.8	75.3
Dreihuk Dam	15.493	51.5	17.4	17.8	
Bondels Dam	1.103	61.6	0.0	0.0	
Olushandja Dam	45.641	17.3	14.1	15.0	
Omatjenne Dam	5.063	0.0	0.0	0.0	



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