



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

KZN Coastal Recon Strategy Meeting

Status of drought

2 February 2017



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Content

- Rainfall
- Current status
 - Level of KZN DWS dams
- Forecast

Total rainfall (% of long-term mean) for July to December 2016

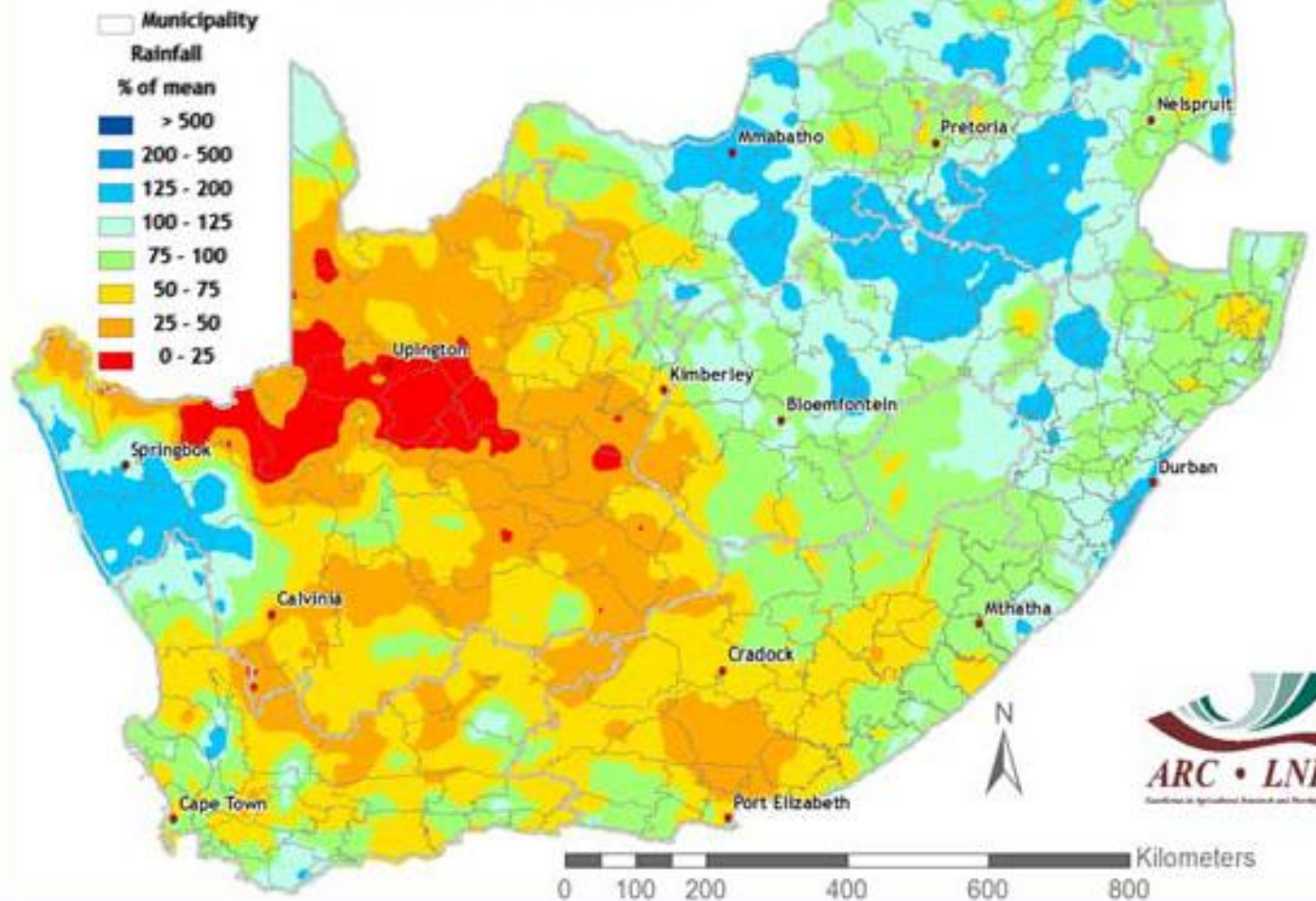
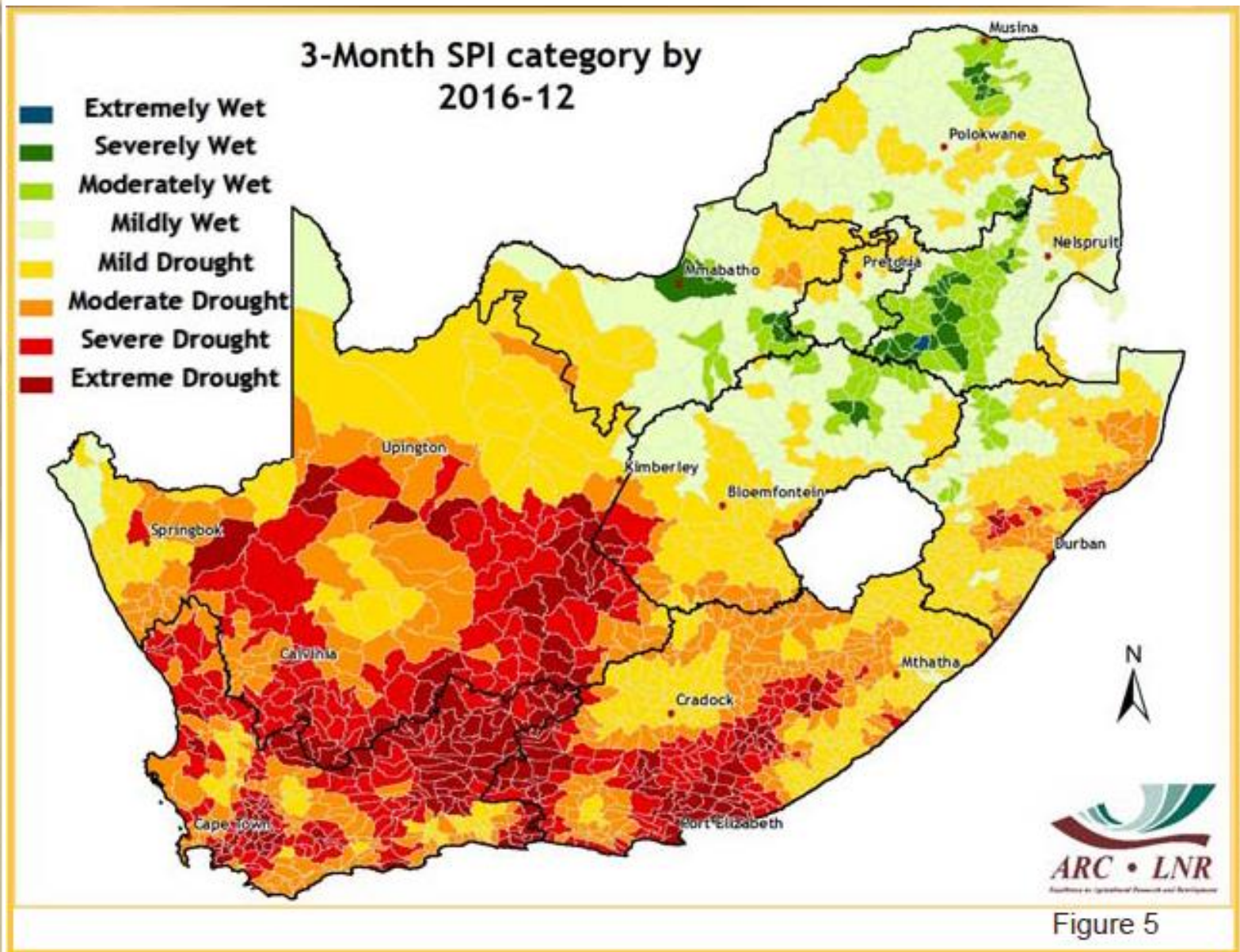
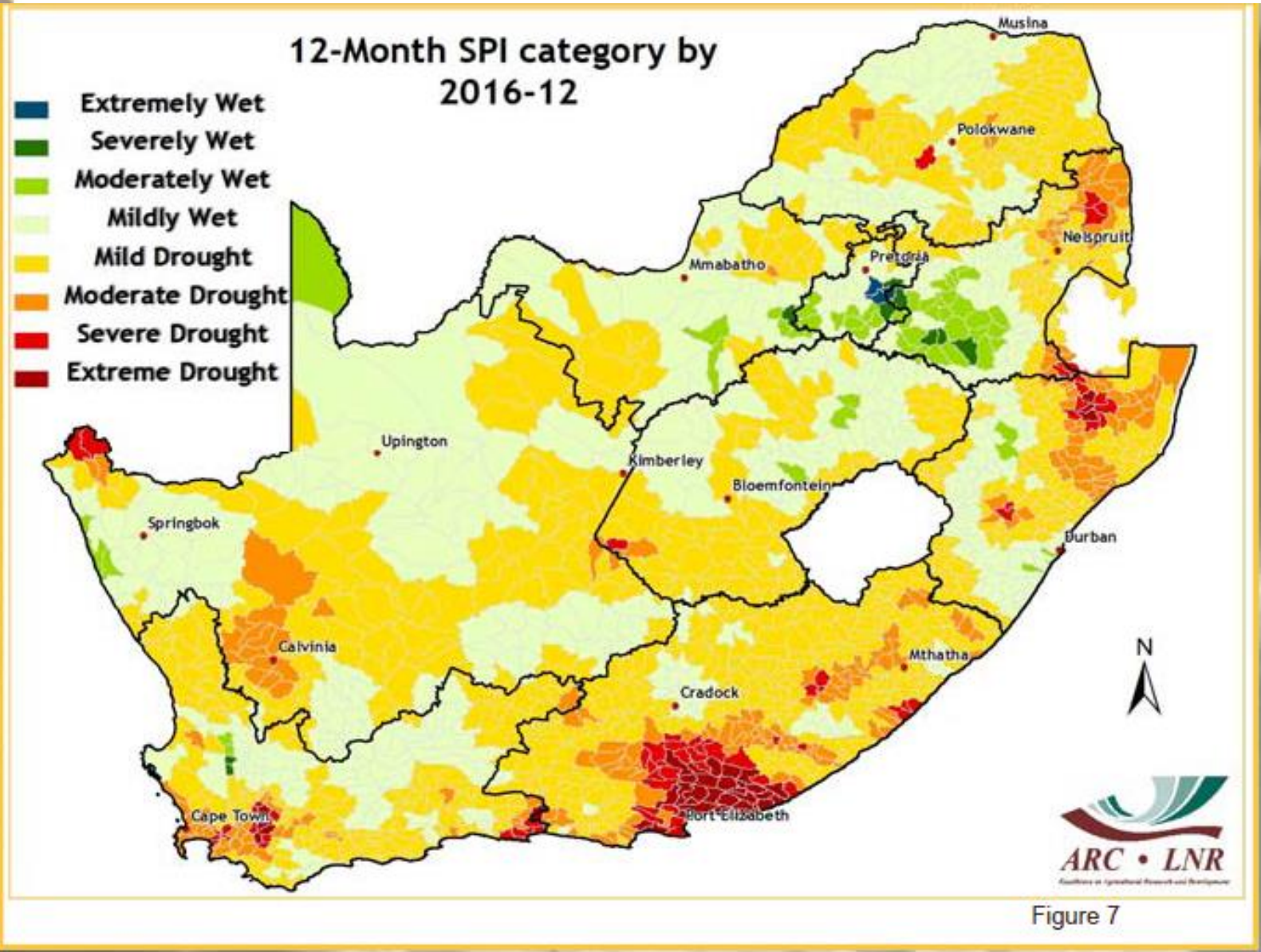


Figure 3

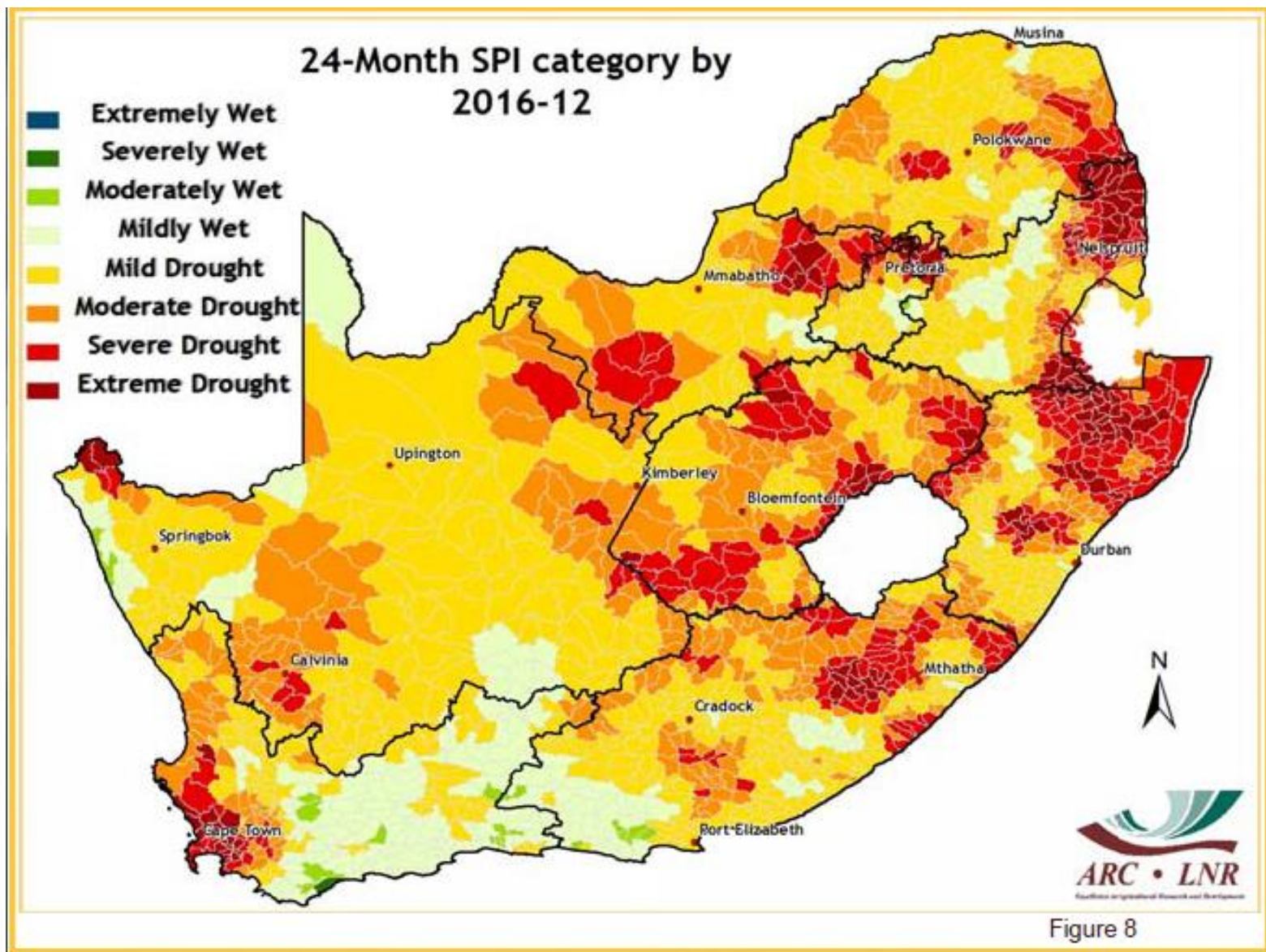
Standard Precipitation Index



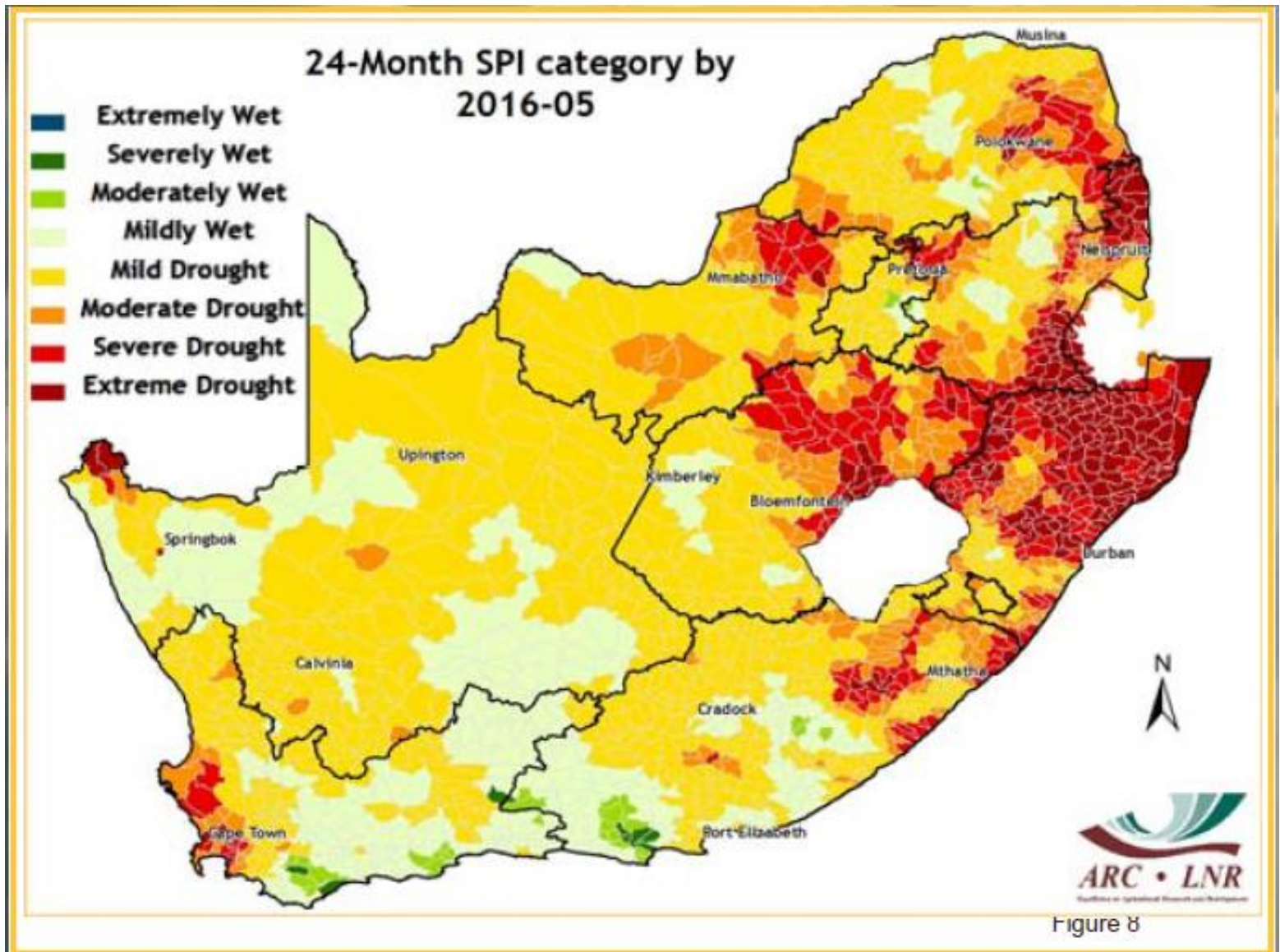
Standard Precipitation Index



Standard Precipitation Index



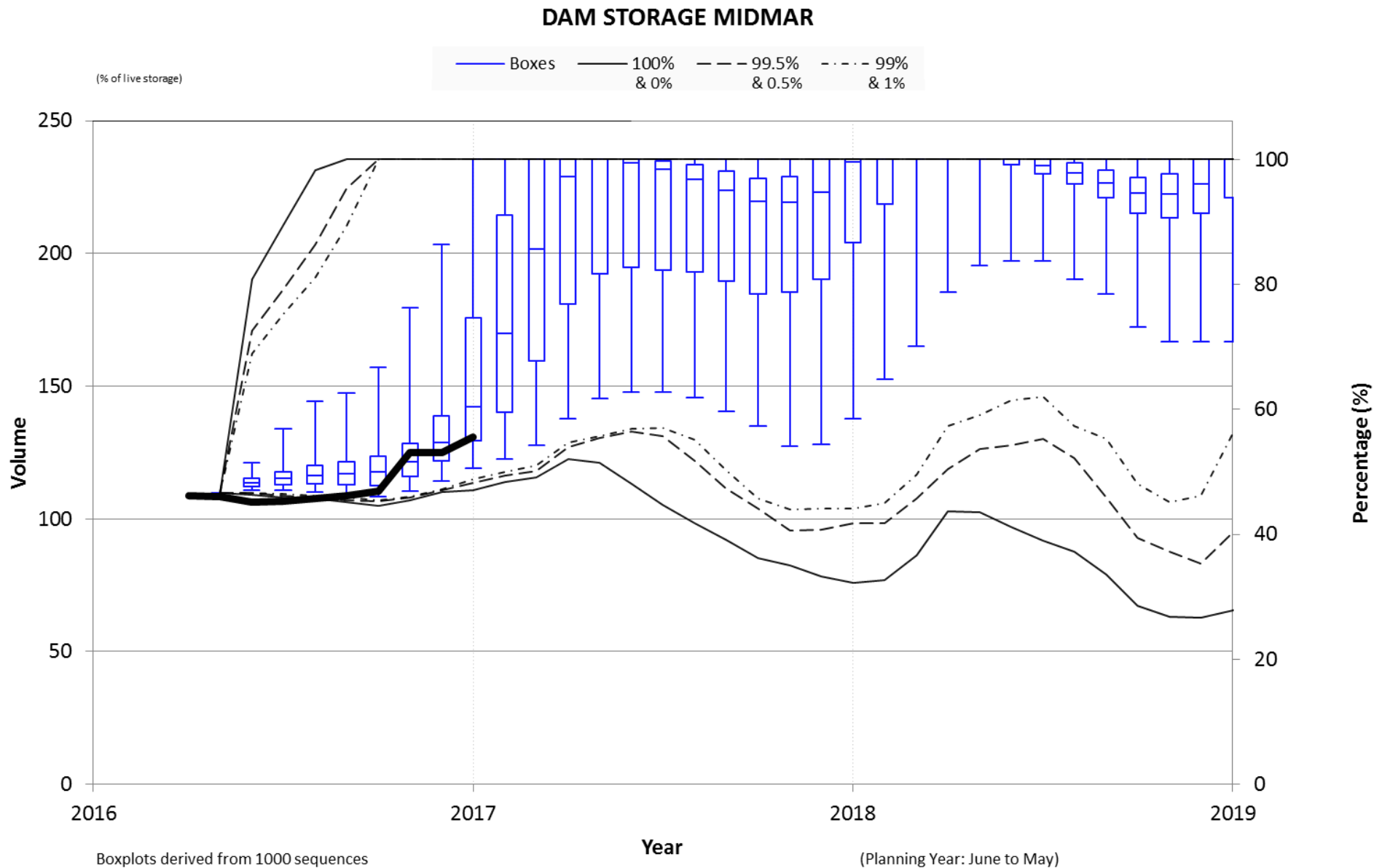
Standard Precipitation Index



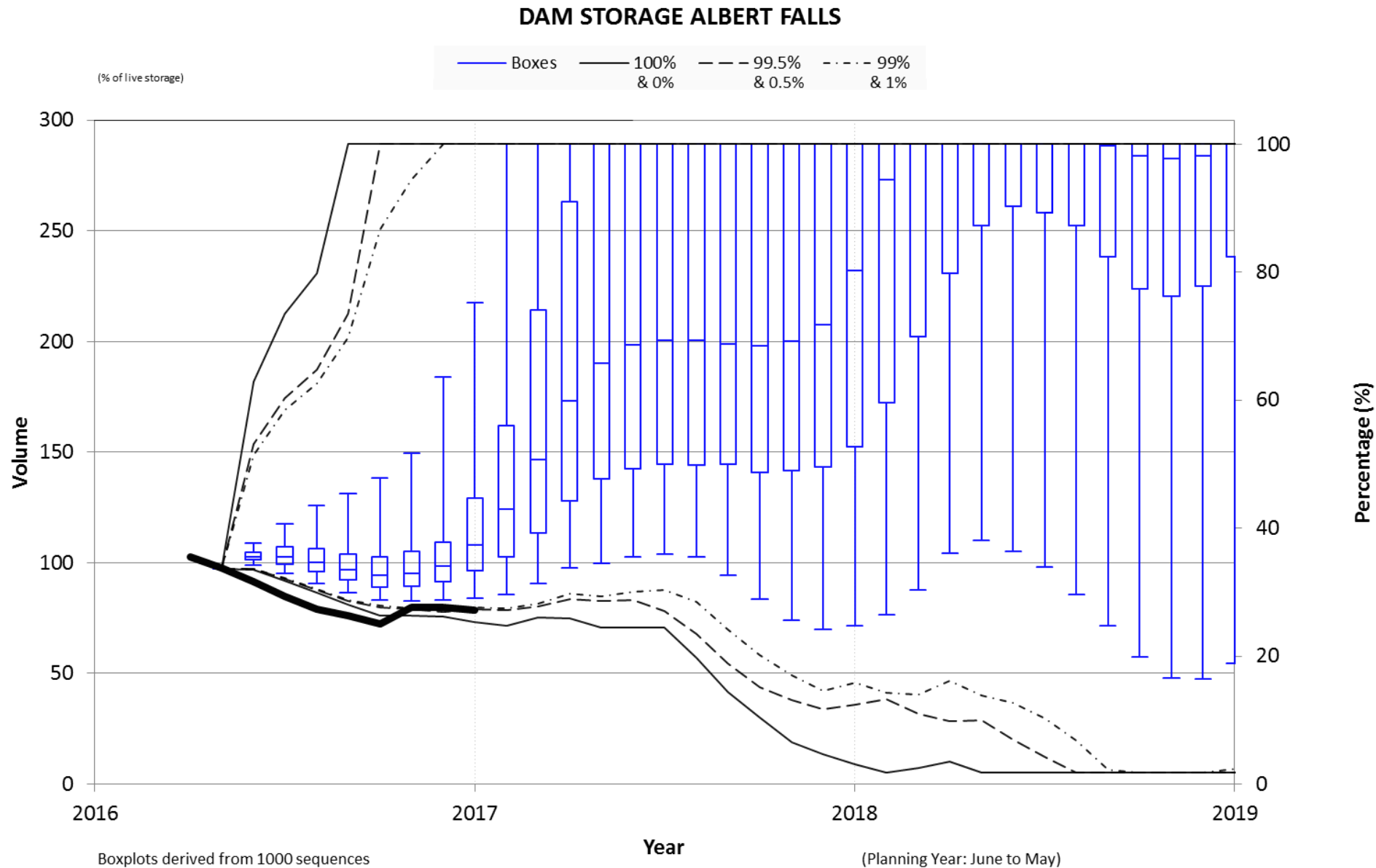
Level of DWS dams

Dam Name	River Name	FSC in	% Capacity									%
		10 ⁶ m ³	Feb-15	Feb-16	Aug-16	Sep-16	Oct 16	Nov-16	Dec-16	Jan-17	Feb-17	
Midmar	Mgeni	235.4	73.8	46.83	45.72	46.05	47.11	48.63	53.16	55.68	58.92	-12.1
Nagle	Mgeni	23.26	85	82.5	68.26	67.57	69.55	69.46	67.27	57.02	75.23	7.3
Albert Falls	Mgeni	288.4	71.8	37.89	27.34	26.09	25.14	24.86	27.63	27.05	25.33	12.6
Inanda	Mgeni	237.4	89.6	80.9	67.71	65.56	64.06	63.87	65.92	62.66	61.19	19.7
Hazelmere	Mdloti	17.66	37.6	35.39	52.92	62.77	64.68	67.87	67.92	66.02	64.56	-29.2
Spioenkop	Tugela	270.4	101.1	58.99	56.87	54.37	51.12	49.95	52.01	52.79	61.81	-2.8
Driel Barrage	Tugela	8.694	95.9	105.04	106.75	99.03	92.82	100.05	97.7	100.05	95.07	10.0
Woodstock	Tugela	373.5	97.4	70.94	74	71.89	67.06	58.07	52.18	49.03	84.88	-13.9
Craigie Burn	Mnyamvubu	22.46	88.3	65.43	52.29	52.81	51.78	54.42	61.16	57	60.24	5.2
Mearns	Mooi	5.163	101.2	103.21	72.91	48.28	48.48	52.38	81.7	97.15	88.35	14.9
Spring Grove	Mooi	139.2	93.9	78.58	57.98	52.82	46.74	41.4	46.13	50.01	55.4	23.2
Ntshingwayo	Ngagane	194.6	81.6	55.54	48.47	45.66	43.67	40.76	41.38	46.62	59.45	-3.9
Zaaihoek	Slang	184.3	93.5	58.98	50.31	47.41	47.13	44.2	44.2	44.2	52.29	6.7
Wagendrift	Boesmans	55.9	100.8	98.98	95.51	99.8	99.98	100.09	100.64	100.93	100.84	-1.9
Goedertrouw	Mhlatauze	301.26	51	27.1	18.83	17.72	17.33	18.24	19.59	18.93	27.2	-0.1
Klipfontein	Wit Mfolozi	18.08	85	19.82	13.86	12.54	12.35	10.38	8.74	13.86	34.22	-14.4
Hluhluwe	Hluhluwe	25.89	60	19.48	19.4	18.46	20.79	20.88	24.69	23.6	22.13	-2.7
Pongolapoort	Phongolo	2 267	62	48.35	40.26	38.93	37.93	36.97	37.96	37.61	38.09	
Total Capacity in 10 ⁶ m ³		4 669	3 399	2 458	2 125	2 053	1 986	1 916	1 961	1 952	2 199	
Percentage		100	72.8	52.7	45.5	44.0	42.5	41.0	42.0	41.8	47.1	10.3

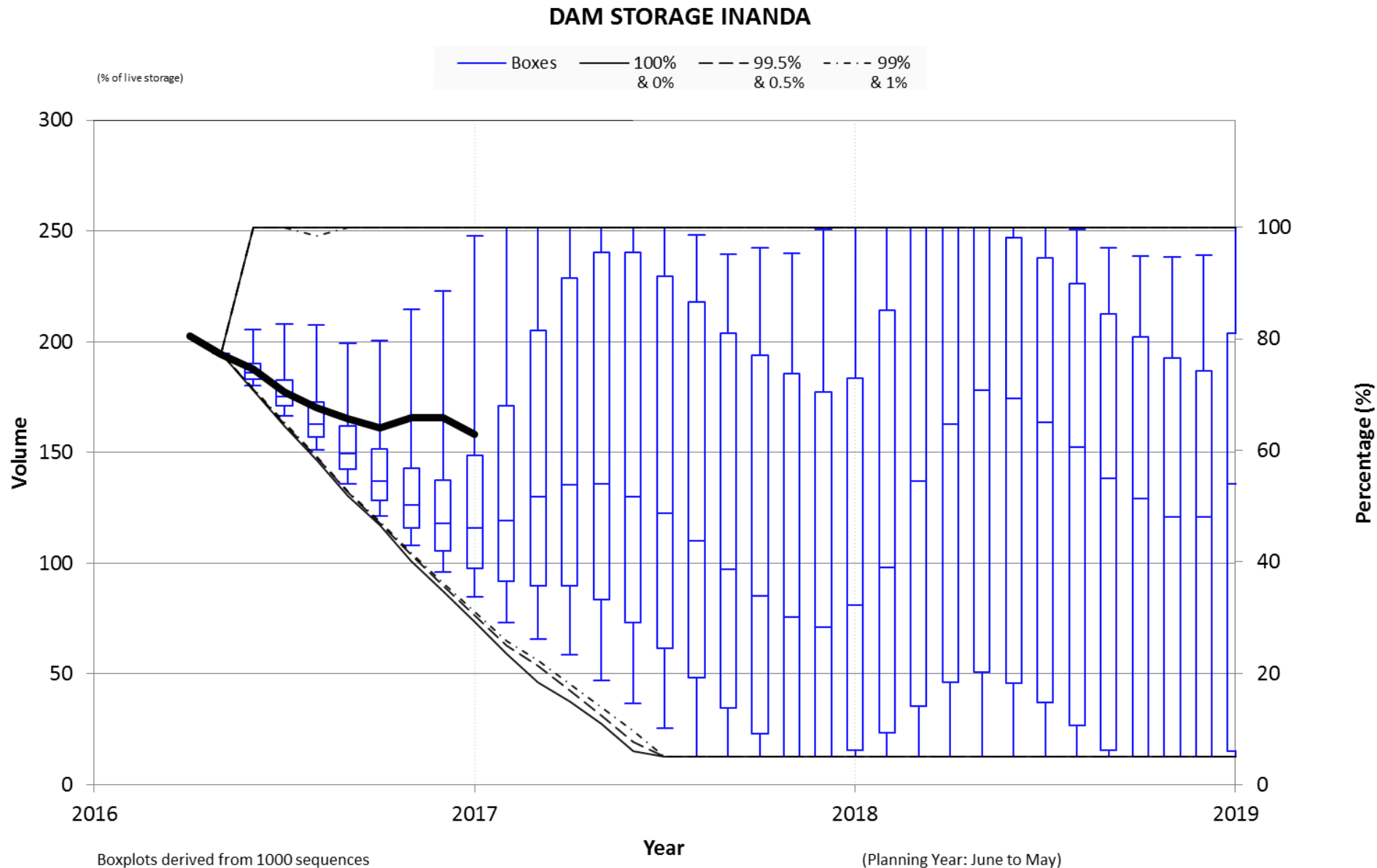
Midmar Dam with Restriction



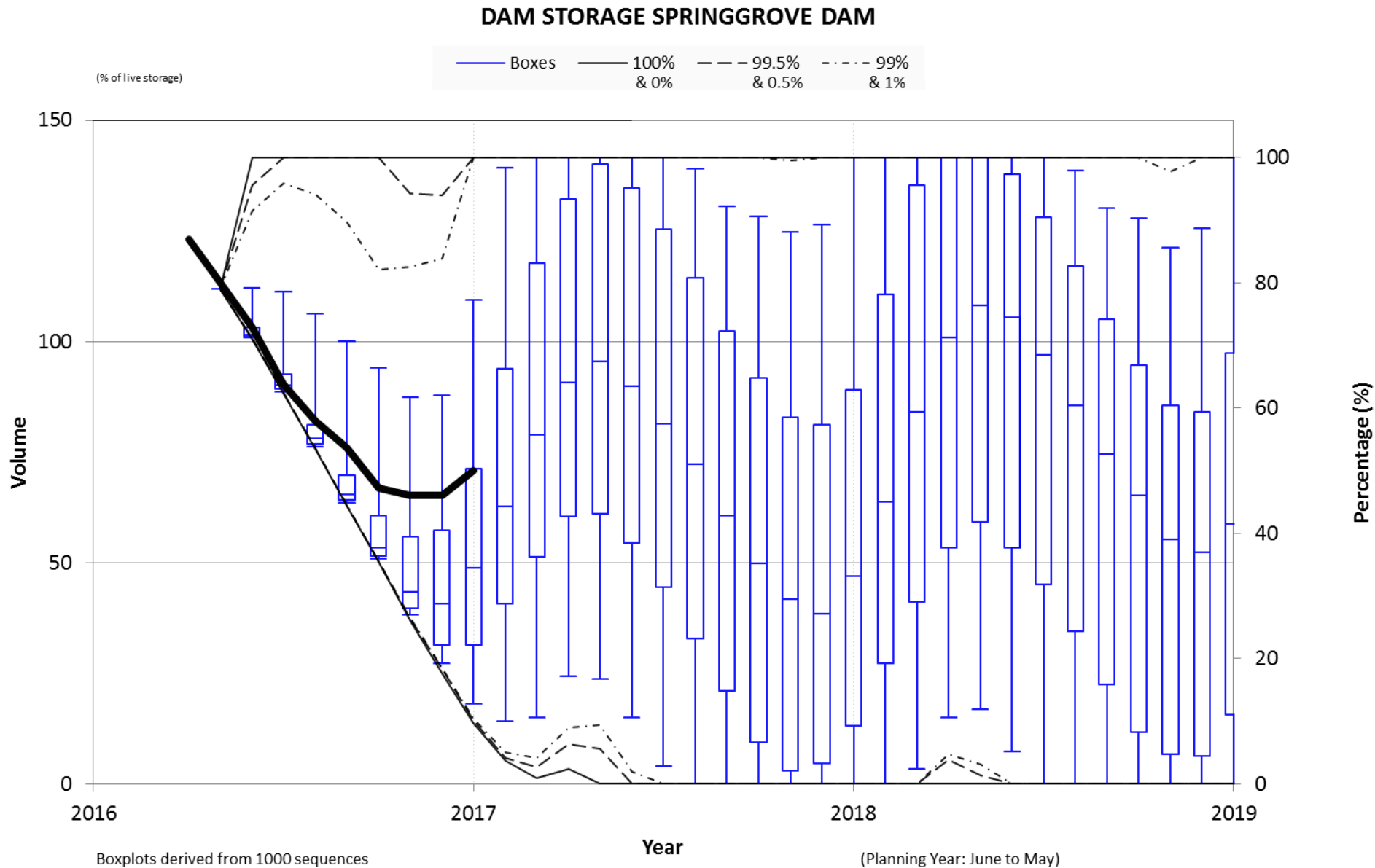
Albert Falls Dam with Restrictions



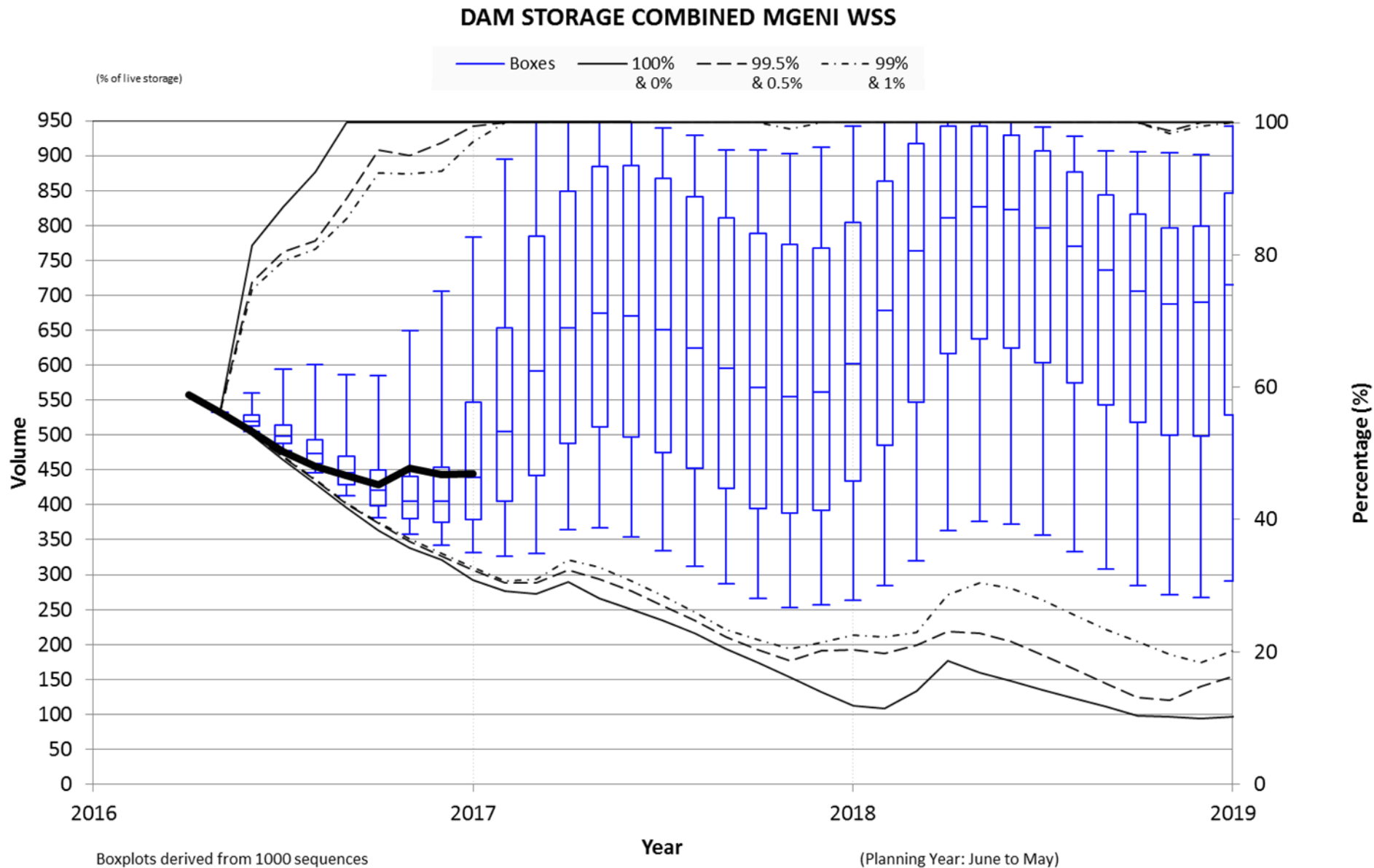
Inanda Dam with Restrictions



Spring Grove Dam with Restrictions

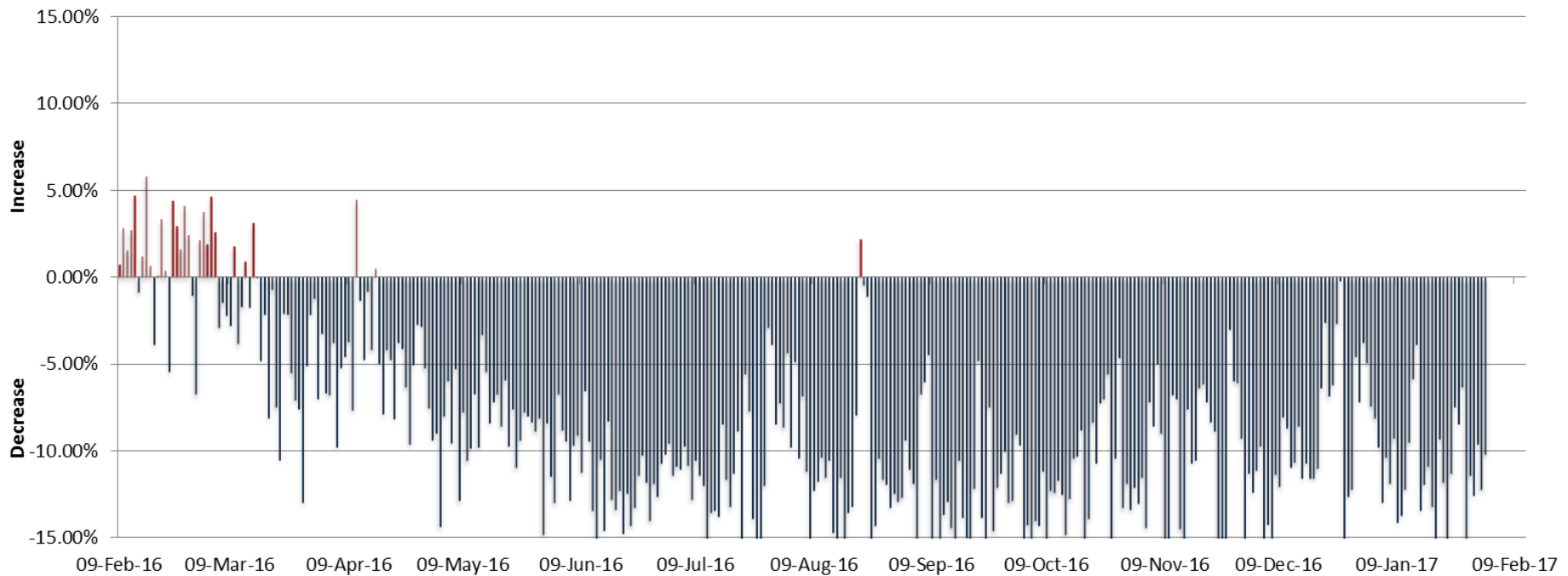


Mgeni Combined Storage with Restrictions

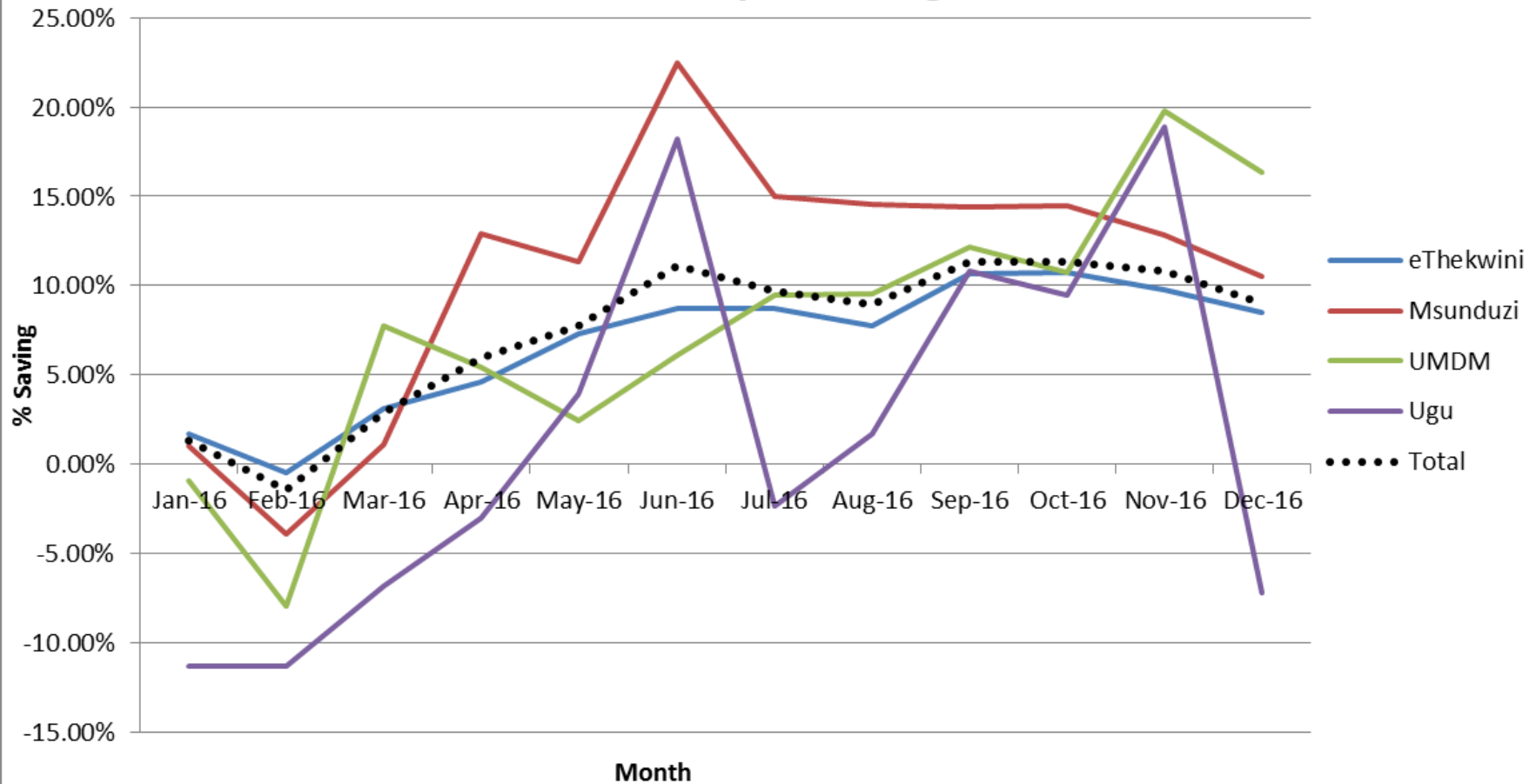


Mgeni Restrictions

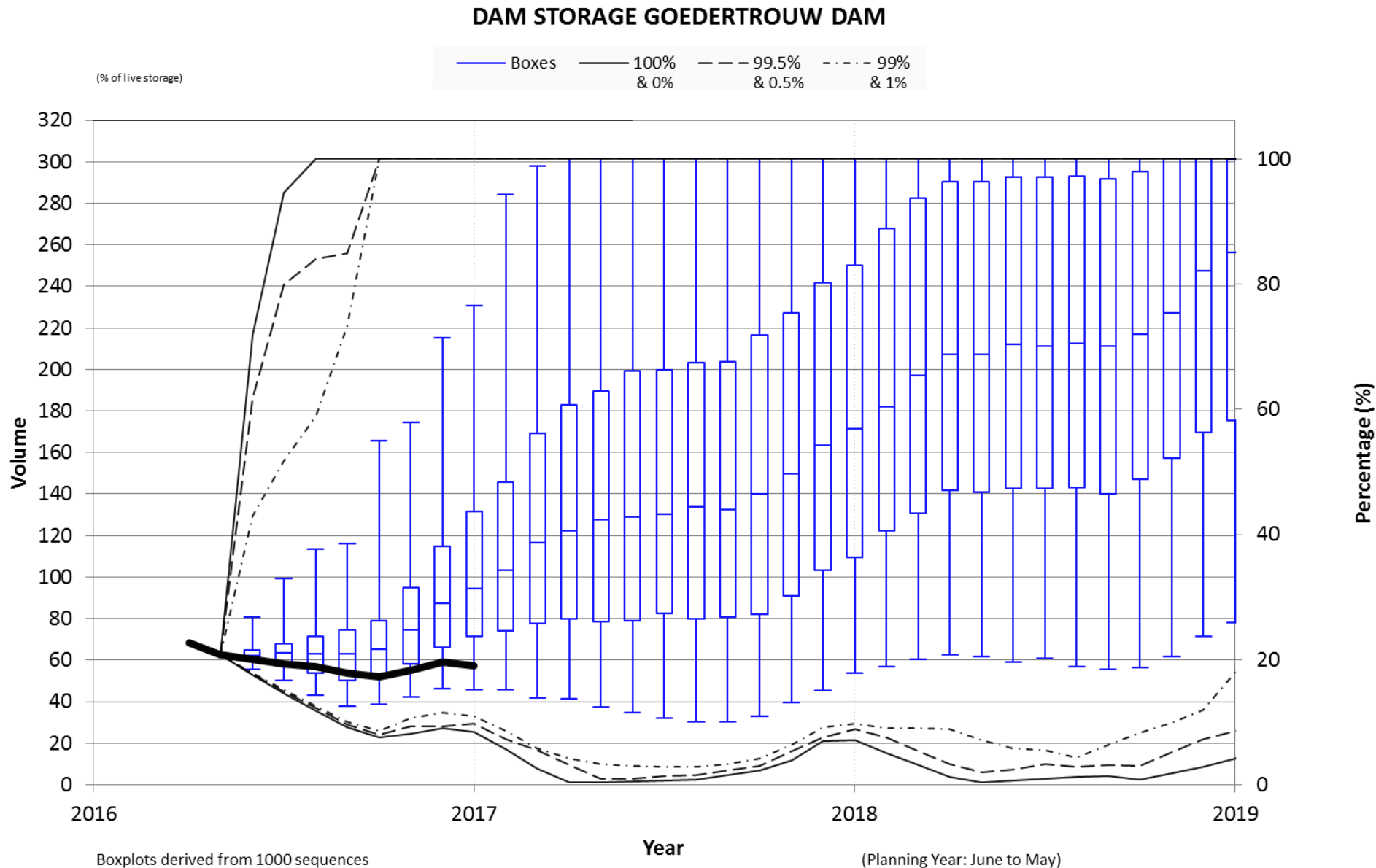
Total Mgeni Sytem % Reduction



Municipal Savings



Current Goedertrouw Dam use levels and 1m³/s Middledrift transfer with restrictions



Seasonal forecast: Rainfall

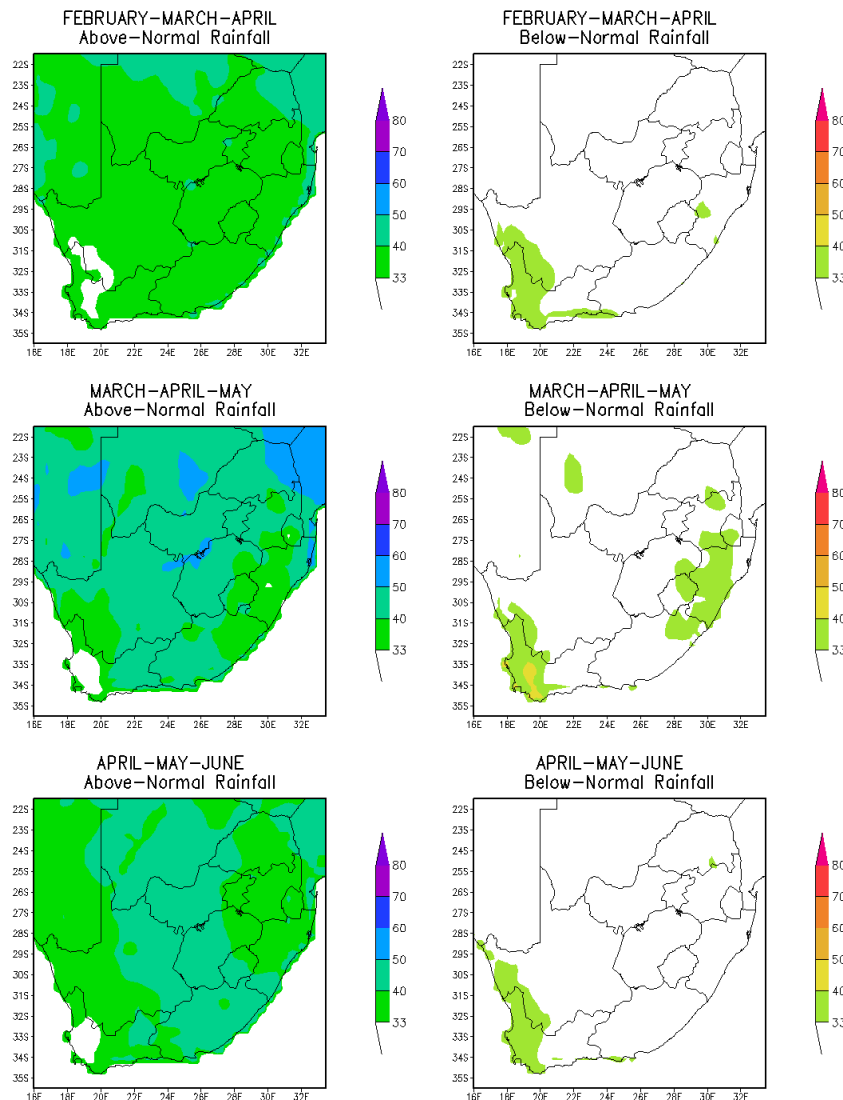
FMA

The forecasting system still indicates that there is a likelihood of **above-normal rainfall** over most the country for the rest of Summer and Autumn, but with a relatively low probability.

MAM

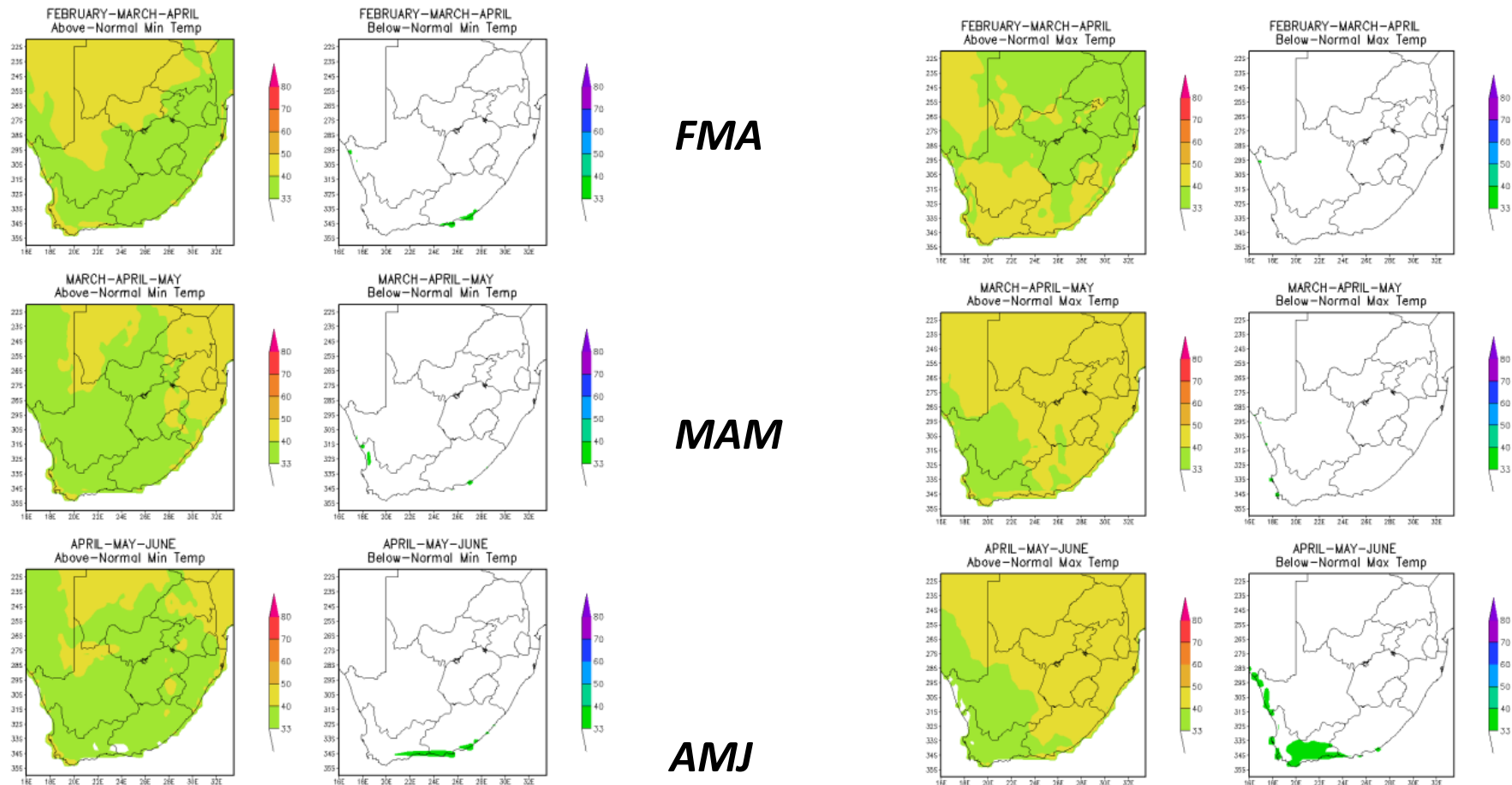
AMJ

It must also be noted that even though wetter conditions are expected throughout Autumn, the climatological trend is that rainfall tends to dramatically decrease over NE during the season.



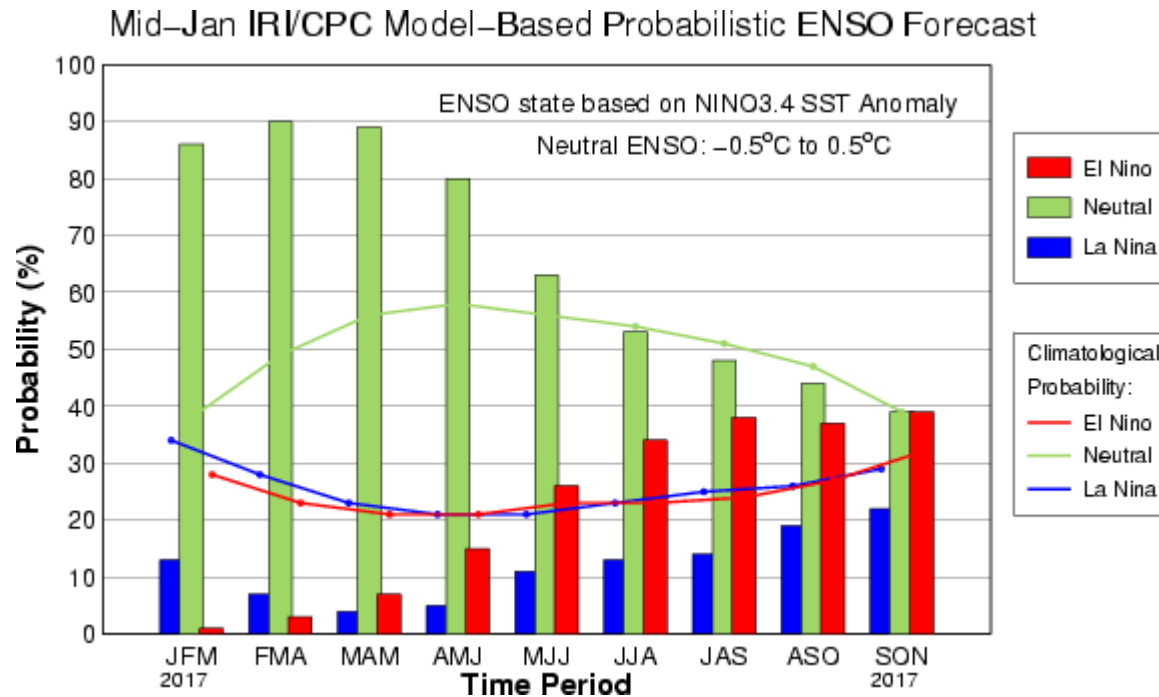
Maximum Temperatures

Minimum Temperatures



Forecasts show a tendency of above-normal temperatures over the country, but with an increasing uncertainty.

Status of ENSO (El Nino / Southern Oscillation)



Update date: 19 January 2017

For the remainder of the Summer and Autumn, ENSO is expected to be in a neutral state

Summary

- ENSO is expected to remain neutral for rest of summer and autumn.
- There is a low likelihood of above-normal rain over most of the country.
- Even though there has been some relief of severe drought in places over E+NE parts, central+ western parts are still burdened with below normal rainfall.



What to expect

- Most of the run of river systems and smaller supply systems should not be constrained by water resource
- Large systems are not yet showing recovery expected
- Will need to monitor levels closely and review restrictions in Mgeni, Mhlathuze and Klipfontein



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Critical medium to long term projects

- Mgeni system – Lower Mkomazi and Mkomazi
- Mhlathuze – Upgrading of Tugela Emergency transfer
- Ugu – Ncwabeni Dam