



Monthly Climate Summary August 2017

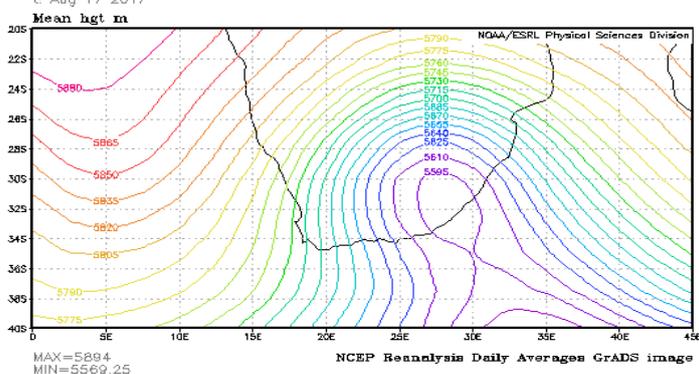


This bulletin gives a brief summary of the dominant synoptic systems responsible for the weather in August. A country-wide analogy of Temperature and Precipitation as recorded by meteorological stations is also presented.

1. SYNOPTIC OVERVIEW

The transition period from winter to summer, our spring, sees a gradual southward movement of both the Atlantic and Indian Ocean High pressure systems. The position of maximum insolation also shifts southwards. The Indian ocean high, however still exerts a dominant influence on the weather. This High, with its associated subsidence, resulted clear skies prevailing for most of the month of August. As a result, high temperatures were experienced at the beginning of the month in most parts of the country which could have been interpreted as the early arrival of summer. These conditions would be disrupted by development of strong upper air troughing by the middle of the month. This troughing evolving into a fully-fledged upper air cut-off low pressure system by the 17th bringing about rains for some parts of the country.

lon: plotted from 0.00 to 45
lat: plotted from -40 to -20
lev: 500.00
t: Aug 17 2017

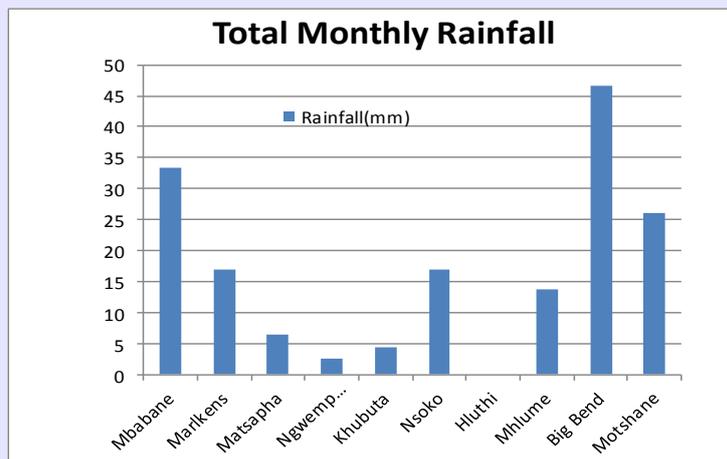


The 500hpa Cut-Off low on the 17th: responsible for the cold Temperatures and precipitation which occurred mid-month.. courtesy of NCEP

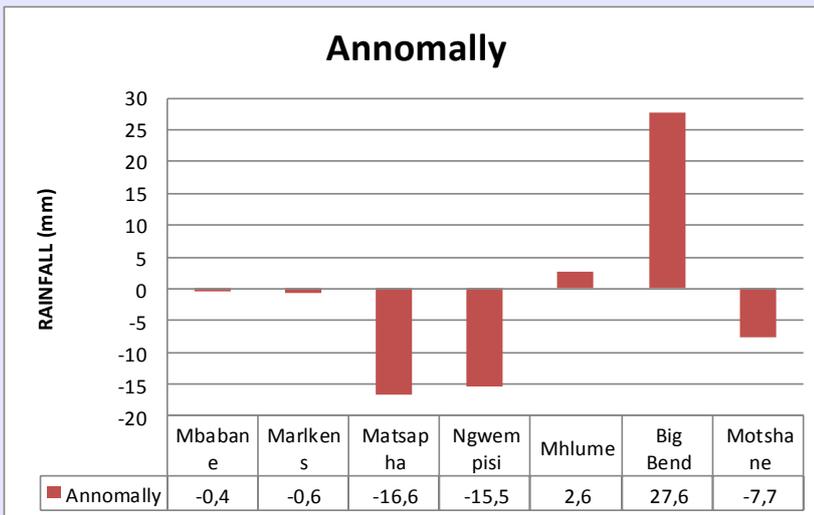
These were accompanied by a drop in temperatures brought about by the onshore flow of cold air from the Antarctica. This onshore flow was as result of the orientation of the surface low-pressure system which was situated over the country. Its position allowed for the cold air to be pumped into the country. The dominant surface subsidence (from the Indian Ocean High whose extension covered Swaziland) would prevail for the remainder of the month raising temperature and bringing in little rainfall.

2. PRECIPITATION STATUS

The month of August received less than normal precipitation. There was on average 5 rainy days in the whole month. Most of the rain was collected around mid-month when the country was under the influence of the cut-off low pressure system, which saw some stations collecting rainfall for three consecutive days. Below is a graphical display showing the amounts of rainfall collected for various parts of the country in the whole month.

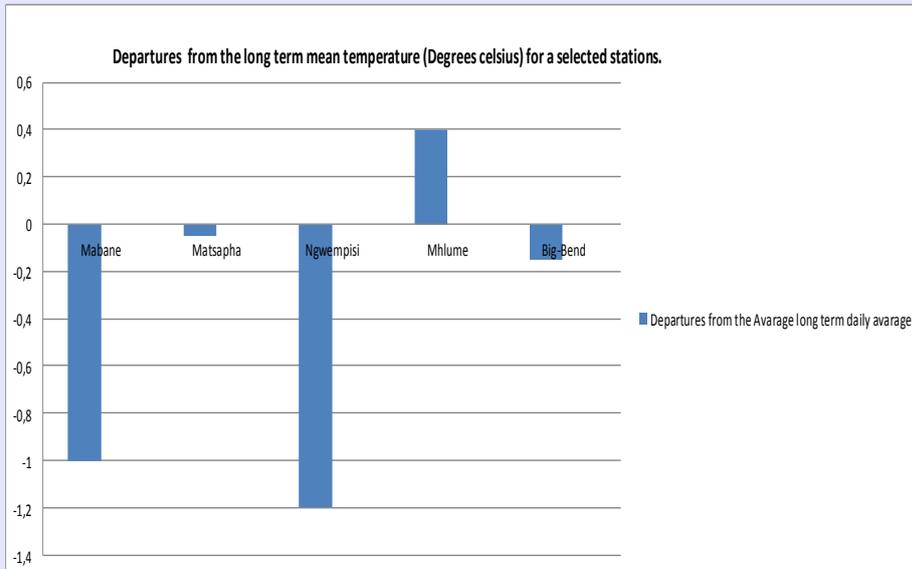


Interestingly, stations situated in the Lowveld were the ones which received rainfall amounts exceeding their 30 year mean. Big-Bend, received a monthly total of 46.6 mm, which was 27.0mm more than its long term mean of 19.0mm for the month of August. It was followed by Mhlume which received a monthly total of 13.8 which was 2.6mm above its long term mean of 11.2 mm.



2. Temperature status

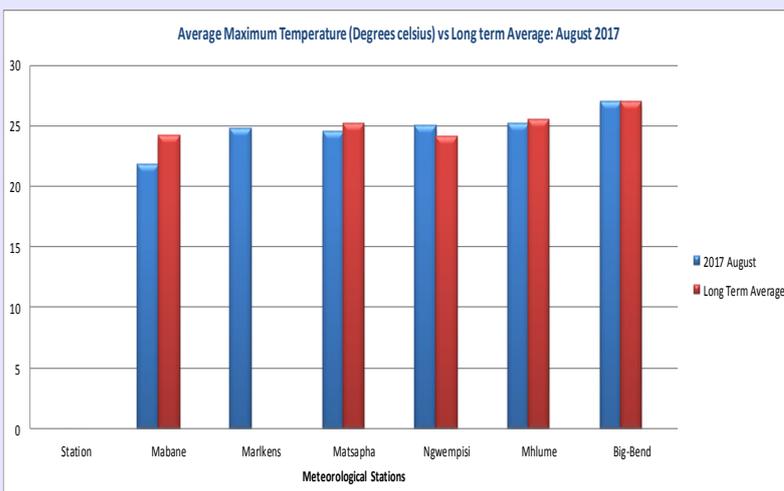
2.1 Average daily Temperature



The month of August was a relatively cooler month when compared to a 30 year average of the years from 1971-2000 for most meteorological station. From the daily mean temperature of five temperature recording only Mhlume in the northern Lowveld returned a daily average higher than its long term mean of 18.6 degrees Celsius at 19 degrees Celsius. Mbabane on the other hand recorded the largest drop in Temperatures, with a daily mean for the month at 15.85 degrees Celsius, a degree away from the long term mean of 16.85 degrees Celsius. The graph above depicts the departures from the long term average daily temperatures for the month of August.

2.2 Average Maximum Temperature

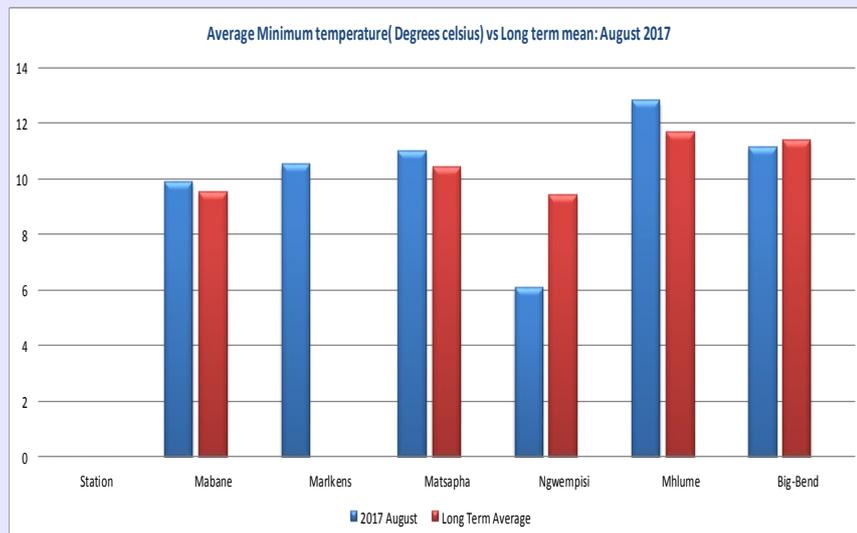
Days were relatively cooler in the reporting month. Most stations recorded a slightly lower maximum temperature compared to the long term average of the same month. Only Ngwempisi



recorded a monthly average maximum temperature hotter than normal with an average of 25 degrees Celsius as opposed to the long term average maximum of 24.2 degrees Celsius

2.3 Average Minimum Temperature

Night-time temperatures in the reporting month did not show a clear trend. Some station did report warmer temperatures than normal where else for some the opposite was true. Mbabane, Matsapha and Mhlume all recorded warmer minimum temperatures while Big-bend and Ngwempisi were cooler.



3. Interesting Statistics for the month

Highest temperature recorded

34.5 Degrees Celsius: Big-bend, 22 August 2017.

Lowest Temperature Recorded

0.5 Degrees Celsius: Ngwempisi, 21 August 2017

Highest 24hr Rainfall collection

44 mm: Big Bend, 27 August 2017

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