

Tuesday, 4 October 2022

## Heatwave to persist in the days ahead

Since Sunday, 2 October, extremely hot and dry conditions have continued to prevail over a large part of the Highveld. The South African Weather Service consequently issued a weather advisory, indicating that heatwave conditions could be expected to persist from Sunday onwards. At the current time, many parts of North-West, northern Free State, Gauteng as well as the eastern highveld of Mpumalanga are registering maximum temperatures in the high 30's, with no immediate prospect of relief in sight.

### What is a heatwave?

A heatwave is a term used to describe a spell of at least a few days (or sometimes longer) of unusually hot, dry conditions over a particular spatial area. Whilst this term is commonly used worldwide, the meteorological agency for each country will typically customize their definition of a heatwave, to suit local conditions. The South African Weather Service (SAWS) has determined, particularly for South African conditions, that for a heatwave to be declared, when “the maximum temperature at a particular station should reach or exceed the average maximum temperature for the hottest month, for three or more consecutive days”. For convenience and ease of use, SAWS regularly updates a national heatwave map, indicating the temperature threshold which needs to be attained or exceeded, for all areas across the country (refer Figure 1).

### What weather systems are contributing to the current heatwave?

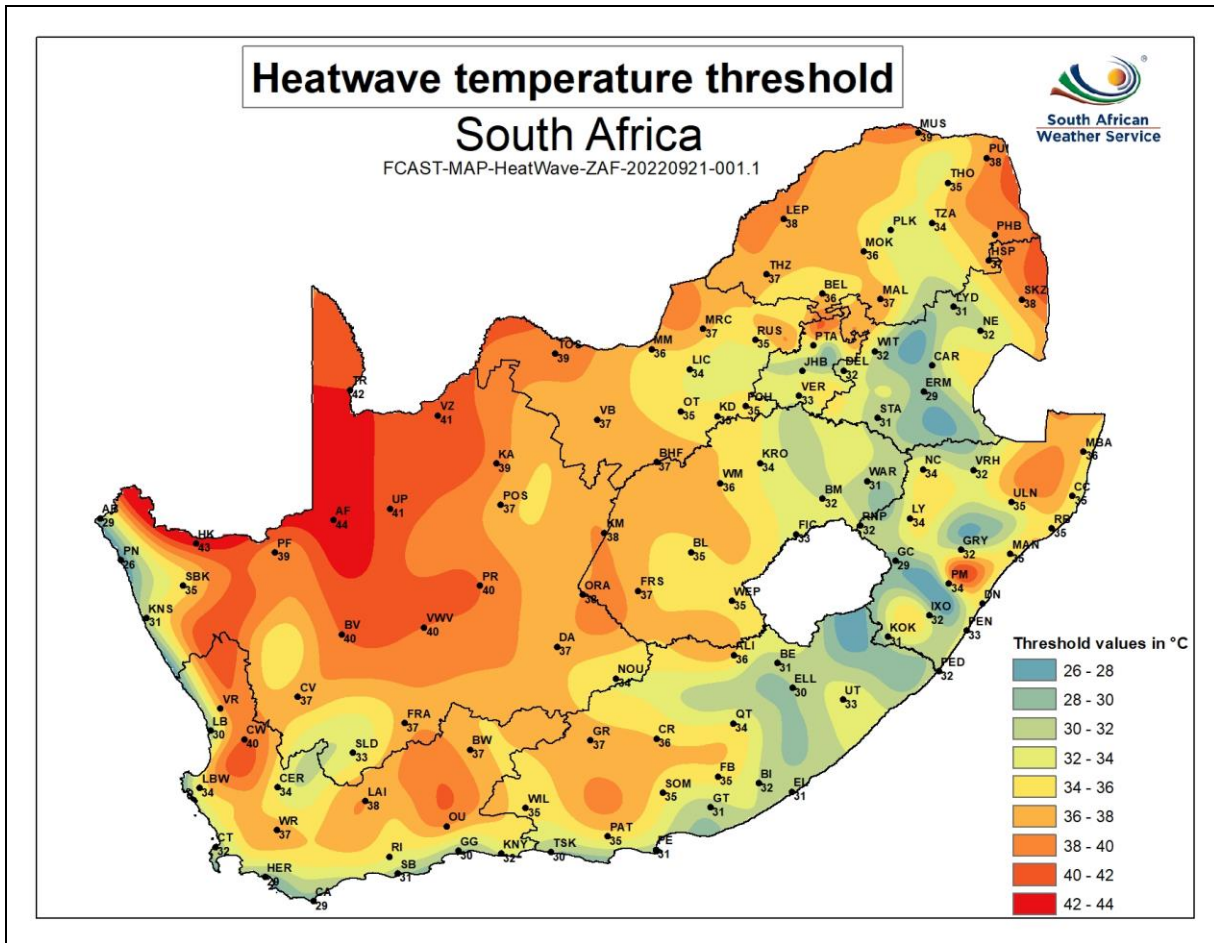
A spell of dry, cloud-free weather over the past few days has allowed maximum levels of sunshine (insolation) to arrive over the interior of the country, with temperatures becoming incrementally higher every day. In addition, a very large upper-air high pressure system, (or anticyclone) has dominated the weather pattern over the southern African subcontinent in the past week, extending over much of Namibia, Botswana and the northern half of South Africa. Apart from this feature blocking the arrival of tropically sourced moisture (and thus delaying the onset of our summer rains), upper-air highs are well-known to be associated with large-scale air stability and sinking airmasses. Such systems inhibit thunderstorm development, but perhaps more importantly in this case, the sinking air heats up quite dramatically.

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**Figure 1:** Heatwave threshold map for South Africa, indicating the maximum temperature to be met or exceeded for 3 or more consecutive days. Source: SAWS

### What precautions should I take during a heatwave?

Good, sensible advice is to ensure that you stay hydrated, by drinking water regularly. It is also best to avoid over-exertion when exercising (sport or leisure activities). In particular, infants and small children should be regularly supplied with fluids, as dehydration can set in very quickly. Similarly, the aged and infirm should also take great care during heatwaves, so as not to over-exert themselves.

Being cognisant of the abundant sunshine during heatwave episodes, the wearing of hats (preferably with a wide brim) as well as eye protection in the form of sunglasses, is highly recommended. Liberally apply sunblock to all exposed skin when spending time in the sun. It is also recommended to stay indoors or in shade, out of direct sunshine between the hours of 11am to 3pm.

### How long will the current heatwave persist?

Heatwave conditions are expected to continue over Gauteng, eastern parts of North-West, the eastern Highveld of Mpumalanga as well as the south-western bushveld of Limpopo from the current time, up to and including Friday, 6 October 2022.

The South African Weather Service will continue to monitor any further developments relating to this weather system and will issue subsequent updates as required. Furthermore, the public are urged and encouraged to regularly follow weather forecasts on television and radio. Updated information in this regard will regularly be available at [www.weathersa.co.za](http://www.weathersa.co.za) as well as via the SA Weather Service Twitter account @SAWeatherServic

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