2016-06-13

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Summary

Above-normal rain has returned to the winter rainfall region after dry conditions in May. Very low rainfall totals over the western parts of the winter rainfall region were concerning, especially due to the weak end to the previous winter rainfall season, resulting in dam levels in the region becoming critically low. The rain that has occurred since the 5th (around 20 mm over the Swartland and around 70 mm in the mountainous areas), together with more to be expected over the region, will certainly have an alleviating effect for agriculture and the water situation in general. Indeed, as more frontal systems are projected to move across the Western Cape during the week, rainfall totals in the mountainous areas may exceed 100 mm, while most of the western wheat production areas may receive in excess of 40 mm of rain, with lower falls over the Ruens towards the southeast.

Continuing the situation established in April and present in May, another upper-air trough deepening over the interior resulted in more rain over much of the central to eastern summer rainfall region. Totals between 10mm and 20 mm have been recorded over large parts of the Free State, North West, Gauteng, western Limpopo and western Mpumalanga on the 12th and 13th, further improving the soil moisture situation following rain in May and April.

While pressures were mostly higher along the mid-latitudes and subtropics, as illustrated by the relatively moist conditions over the interior during the last few days (and reflected in very high values of the Southern Annular Mode), frontal systems still moved across the southwestern parts of South Africa due to the favorable positioning of long-wave troughs in the region, a situation that seems to remain the same over the next few days.

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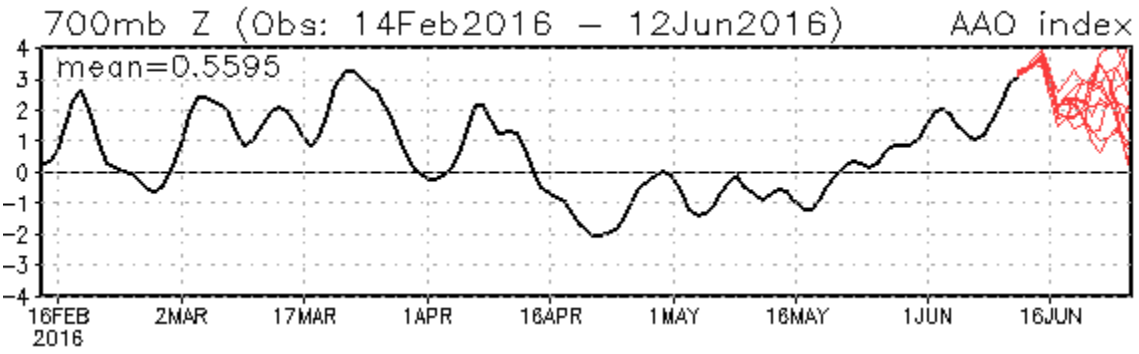
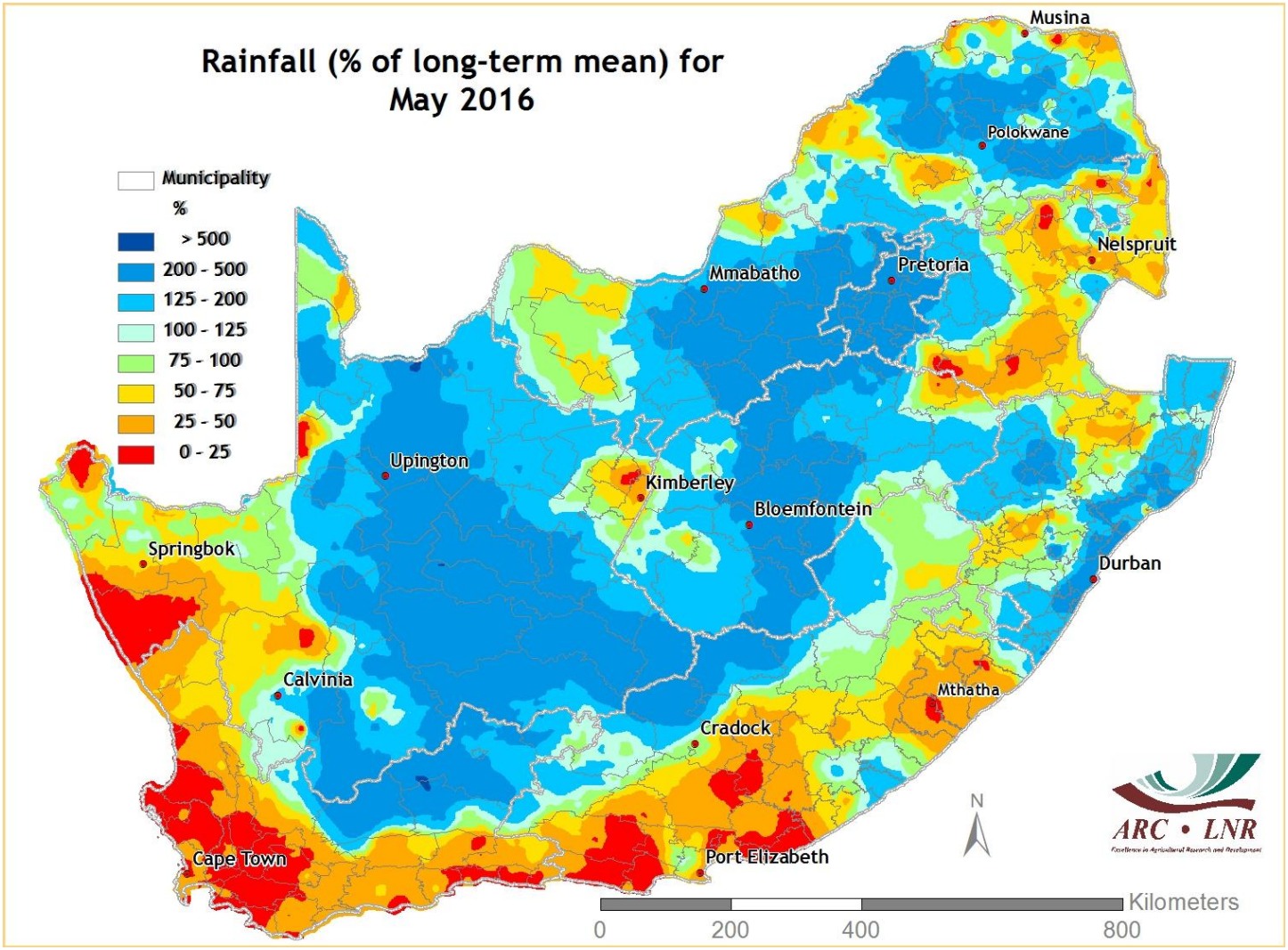


The Annular Mode Website - http://www.atmos.colostate.edu/ao/index.html

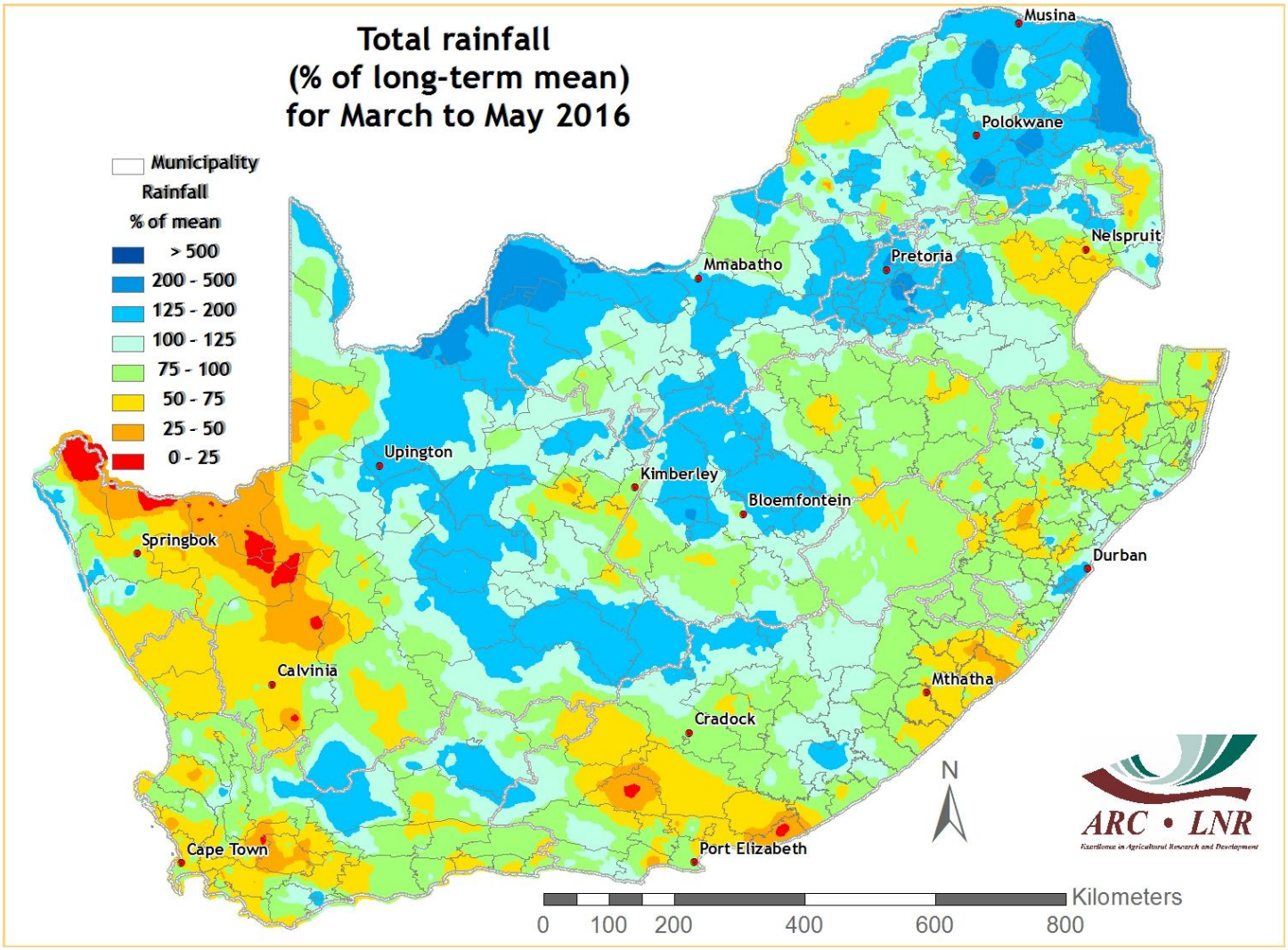
The 2015/16 El Niño has ended: ” *The tropical Pacific Ocean remains in a neutral El Niño–Southern Oscillation (ENSO) state—neither El Niño nor La Niña. Sea surface temperatures across the tropical Pacific have been at neutral levels for the past four weeks, with the central Pacific Ocean having recently cooled to levels close to the long-term average. Temperatures below the tropical Pacific Ocean surface are much cooler than average. In the atmosphere, indicators such as the trade winds, cloudiness near the Date Line, and the Southern Oscillation Index (SOI) are at neutral levels. The latest monthly SOI (+2.8 for May 2016) is the highest value since May 2014.”* - Australian Bureau of Meteorology - http://www.bom.gov.au

Rainfall expressed as percentage of normal: May 2016



Rainfall was above normal over most of the interior and te coast of KwaZulu-Natal. Most of the winter rainfall region received very much below normal rainfall – with totals in most areas not exceeding 25% of the long-term mean.

Rainfall expressed as percentage of normal: March to May 2016



Rainfall was normal to above normal over much of the summer rianfall region during the late part of summer and autumn, but below normal over most of the winter rainfall region.

Overview of expected conditions over South Africa during the next few days

Significant weather events (13 – 19 June 2016)

A continuation of wet and cold conditions over the winter rainfall region will be the most defining feature during the coming week, while cloudy and rainy conditions over the central to northeastern parts will make way for sunny and mild conditions at first, with possible cold to set in by late this week especially over the southern to ventral parts.

As the upper-air trough over the central parts exits the country, clear conditions will set in over the interior. A northwesterly flow over the country – and generally anticyclonic circulation – will result in warming over the Lowveld and mostly pleasant conditions over the interior for this time of the year.

In contrast to the clear and anticyclonic conditions expected over the interior, several frontal systems will result in stormy conditions and low temperatures over the winter rainfall region, with significant rainfall possible over the mountainous areas. With low temperatures setting in with the system, snow will also be possible over the high-lying areas of the southwestern and southern parts of the country towards Wednesday. While some warming is indicated by Friday, another system may result in a recurrence of wet and cold conditions in the southwest and south by the weekend, according to current projections.

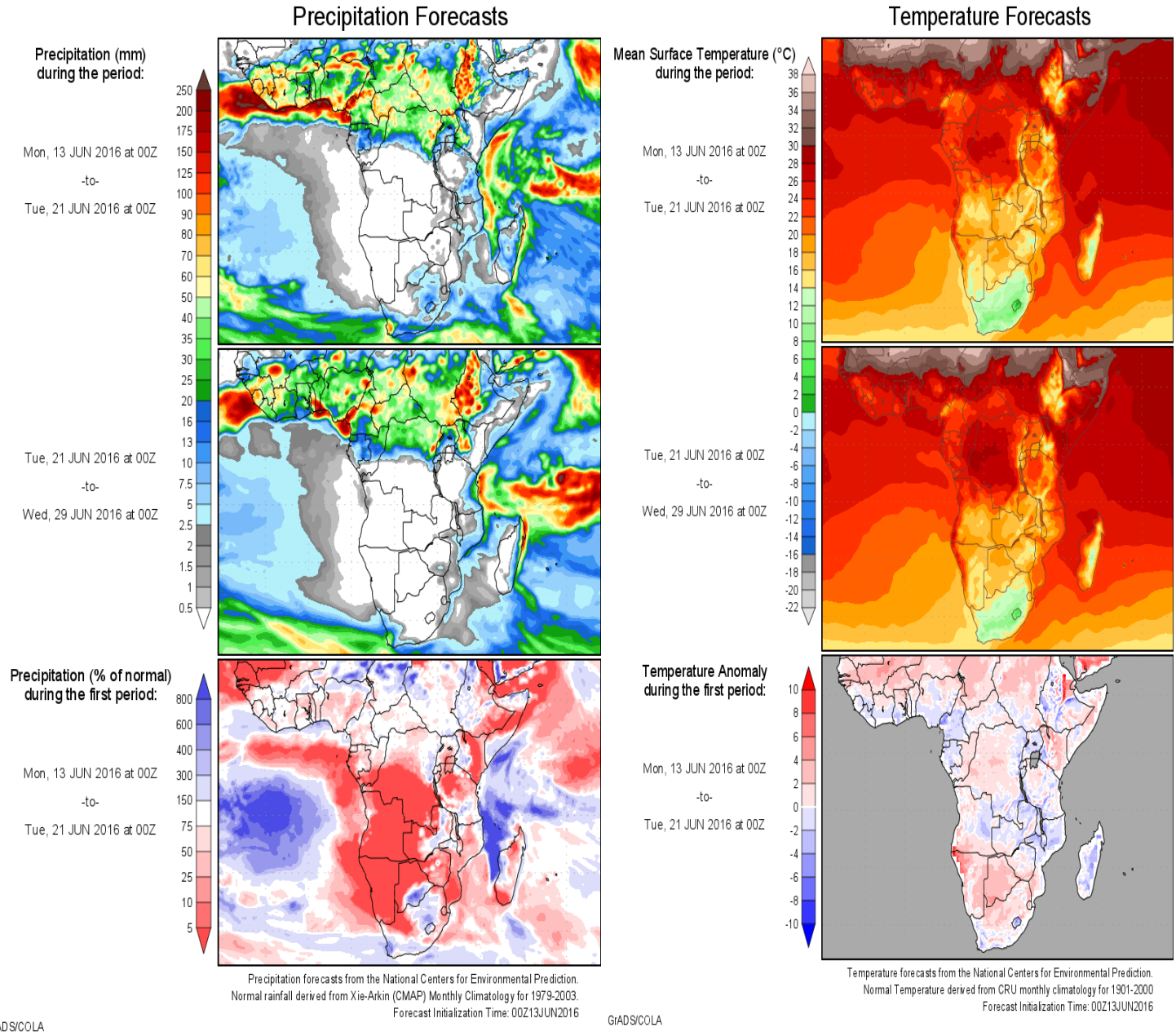
A mostly northerly flow over the interior will result in an increase in daytime temperatures following the wet and cold conditions in the beginning. However, as the cold front causing wet and cold conditions over the southwestern and southern parts move into the interior, low temperatures will once again set in over most parts. The ridging of an anticyclone around the country may once again result in cooler conditions in the northeast too, with increased cloud cover as an on-shore flow starts dominating with the anticyclone towards the east and southeast by the weekend.

On average, temperatures over the interior will be near normal, but below normal over the Drakensberg and winter rainfall region. Rainfall is expected to be much above normal over the western winter rainfall areas as well as the central to eastern summer rainfall region (in association with the rainfall in the beginning of the period). These tendencies are shown in the maps on the following page.

Conditions in main agricultural production regions (13 – 19 June 2016)

***Maize production region*:** Cloudy and cold conditions with showers will clear by Tuesday, with sunny and mild weather to dominate during much of the rest of the period – and frost possible due to lower minimum temperatures associated with clear conditions.

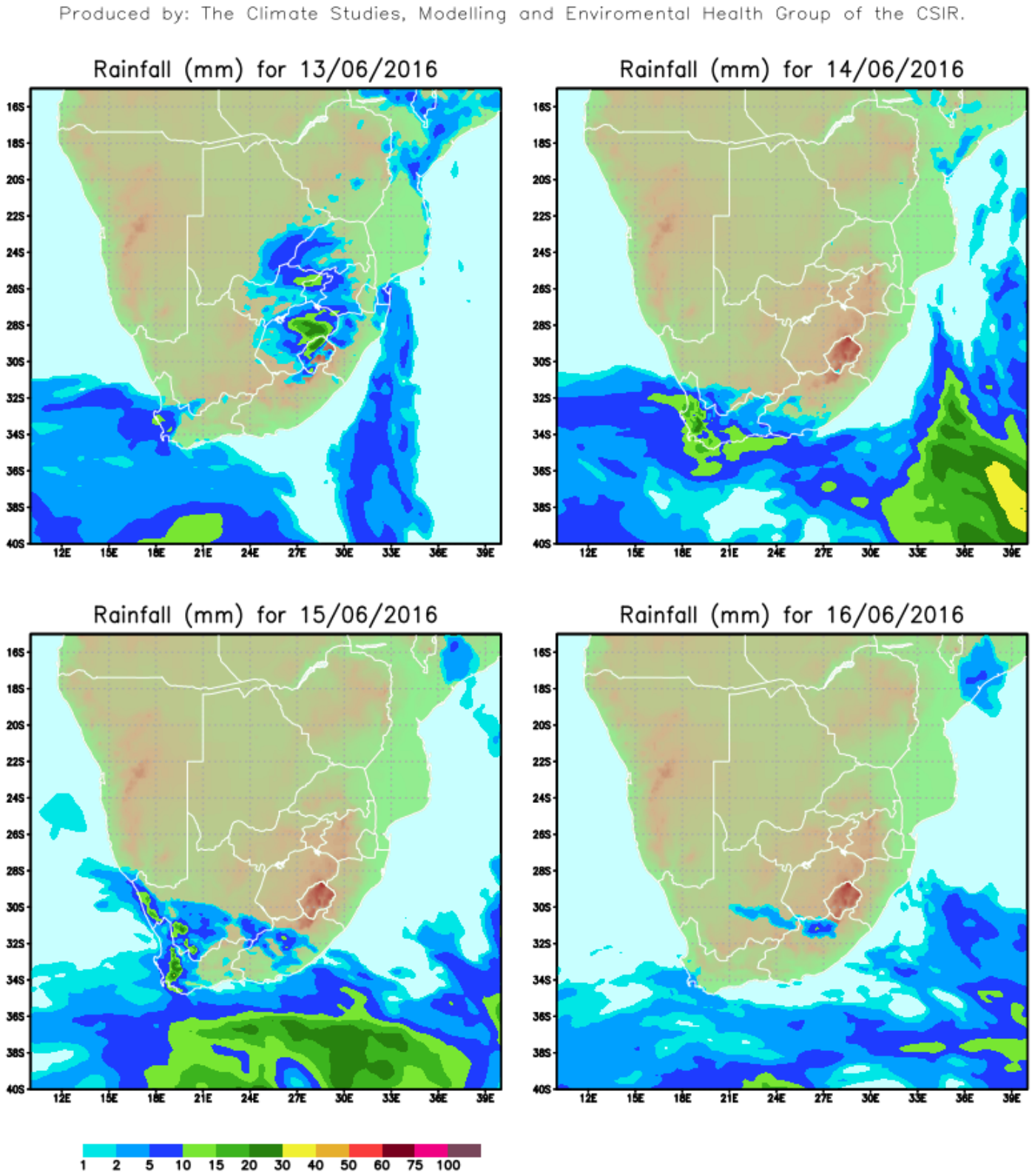
Swartland, Cape Wine Lands and Ruens: Widespread rain and showers, with snow over the high-lying areas, is possible until Thursday and possibly also again by the weekend. Rainfall totals are expected to be high over the western parts and mountainous areas and lower over the southern parts (Ruens/Garden Route) due to the dominant westerly to northwesterly flow associated with the frontal systems moving through. Temperatures will be below normal due to the passage of frontal systems.



Center for Ocean-Land-Atmosphere Studies (COLA) and Institute of Global Environment and Society (IGES) – http://Wxmaps.org

Conditions across South Africa during the next 4 days

Rainfall



Showers over the summer rainfall region, with snow over parts of the Drakensberg, should clear during the day. Frontal systems may result in widespread rain and showers over especially the western winter rainfall areas over the next two days.

Minimum temperatures

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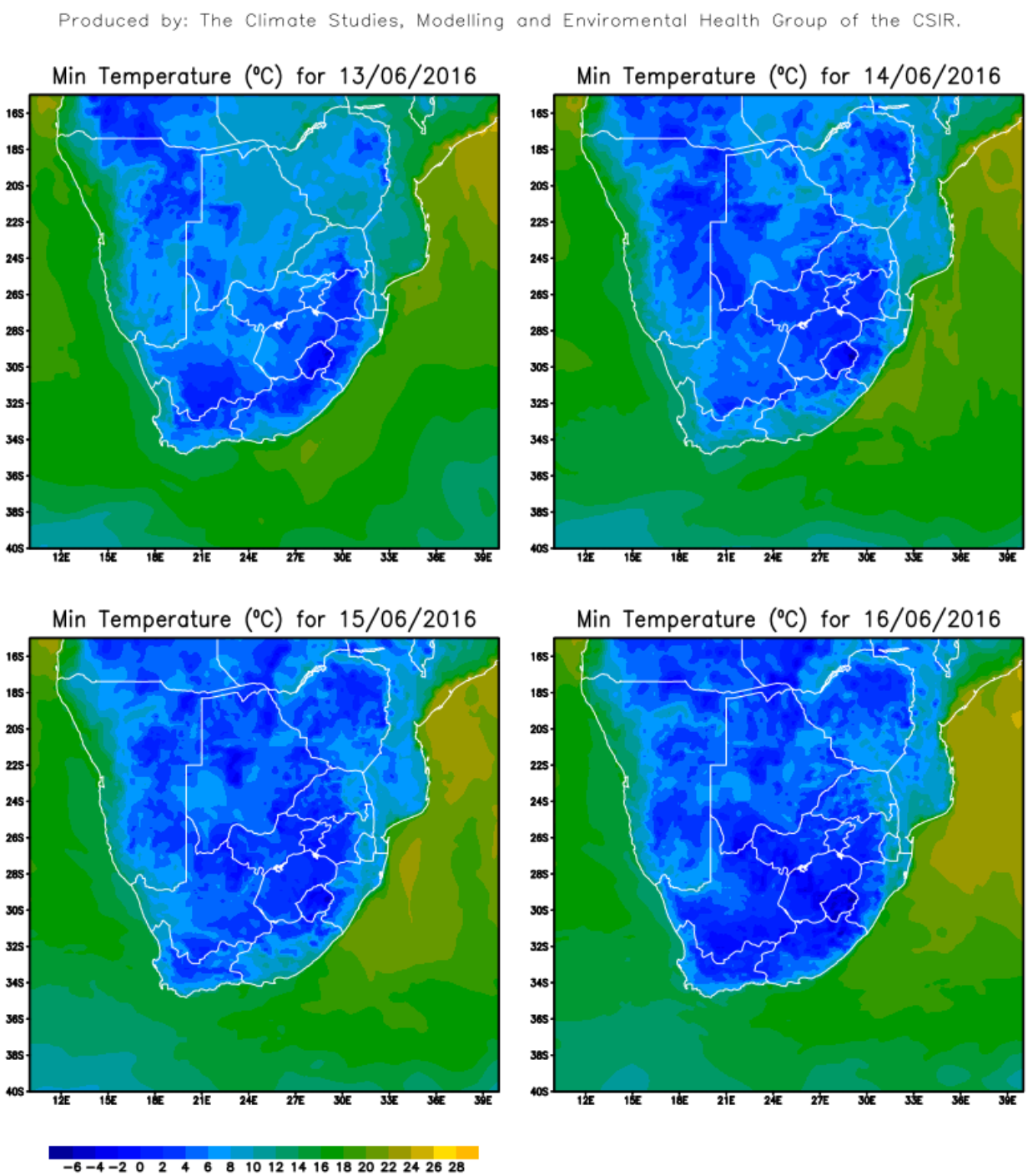
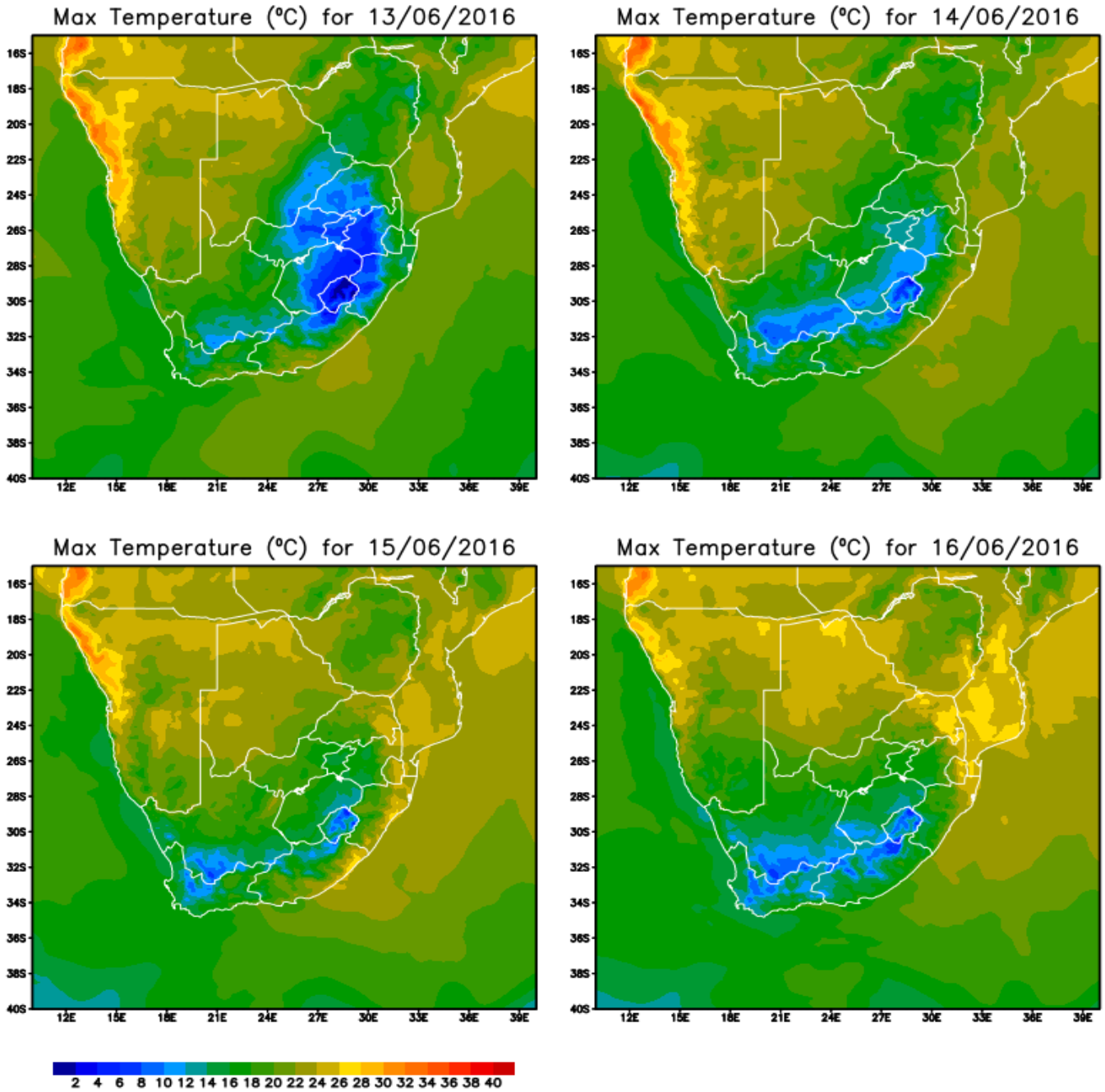


Minimum temperatures will decrease somewhat over the interior as cloud cover diminishes over the next few days. Prefrontal northwesterlies will result in in increase in temperatures in the southwest, before low minimum temperatures will set in once again by Wednesday and Thursday.

Maximum temperatures

Produced by: The Climate Studies, Modelling and Enviromental Health Group of the CSIR.



Maximum temperatures will increase markedly in the northeast as the surface winds turn northwesterly during the week. The southern parts will remain cool to cold during the day. An off-shore flow will result in hot conditions along the central to northern Namibian coast.

Possible extreme conditions - relevant to agriculture

The South African Weather Service issues warnings for any severe weather that may develop, based on much more information (and in near-real time) than the output of one single weather model (GFS atmospheric model - *Center for Ocean-Land-Atmosphere Studies (COLA) and Institute of Global Environment and Society (IGES)* – http://Wxmaps.org)

considered here in the beginning of a week-long (starting 13 June) period. It is therefore advised to keep track of warnings that may be issued by the SAWS (www.weathersa.co.za) as the week progresses.

According to current model projections (GFS atmospheric model) of weather conditions during the coming week, the following may be deduced:

- Some snow is still possible over the Drakensberg by Monday, but should clear by Tuesday.
- Widespread significant rain is possible over much of the western winter rainfall region, with heavy falls possible in the mountains (Boland) on Tuesday and Wednesday.
- There will be a significant drop in temperatures over the southern and southwestern parts of the country between Tuesday and Wednesday. Snow may occur over the high-lying areas by Wednesday.
- An off-shore flow developing over the northeast from Wednesday may increase the chance for the development and spread of wild fires.