



Food Security Early Warning System Agromet Update



2014/2015 Agricultural Season

Issue 05 Month: February

Season: 2014-2015

20-03-2015

Highlights

- **Dry, hot conditions intensify in February in southern half of the region, negatively affecting crops in several areas including South Africa, Lesotho and Zimbabwe**
- **Heavy February rainfall received in parts of Madagascar, Malawi and Mozambique**
- **Dry conditions in early March potentially compromise production prospects in late-planted areas in north-eastern parts of the region**

Regional Summary

Normal to above normal rainfall continued in February in the north-eastern areas, including Malawi, northern half of Mozambique, eastern Zambia, and Madagascar, while well below average rainfall was received in the southern half of the region. Most parts of Botswana, Lesotho, Namibia and South Africa, as well as southern Angola, southern Mozambique, western Zambia and southern Zimbabwe received well below-average rainfall in February (brown colours, Figure 1). For many of these areas, the dry conditions have persisted since January, and the latest analyses indicate that early March was also dry. Temperatures have also been very high in the southern half of the region, thereby increasing stress on crops. Model estimates suggest that the dry spell has greatly reduced the soil moisture available to crops (Figure 2, orange and pink colours), with high likelihood of crop water stress and permanent wilting, particularly for cereals. Reports from several country including Botswana, Lesotho, South Africa and Zimbabwe already indicate the negative impact that the dryness has had on maize crops, with some areas reporting that dry conditions during the critical flowering stage resulted in yield reduction, while other areas reported permanent wilting of crops due to overall excessive dryness.

The high February rains received in the northern areas and Madagascar followed the January torrential rains that caused severe

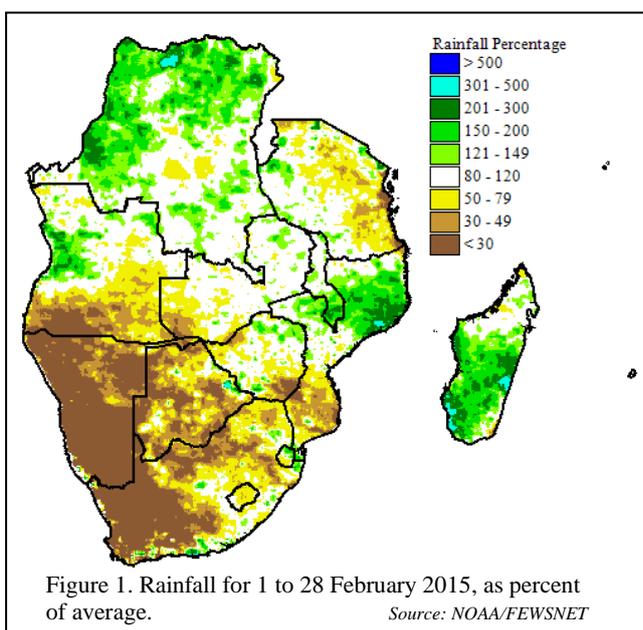


Figure 1. Rainfall for 1 to 28 February 2015, as percent of average.
Source: NOAA/FEWSNET

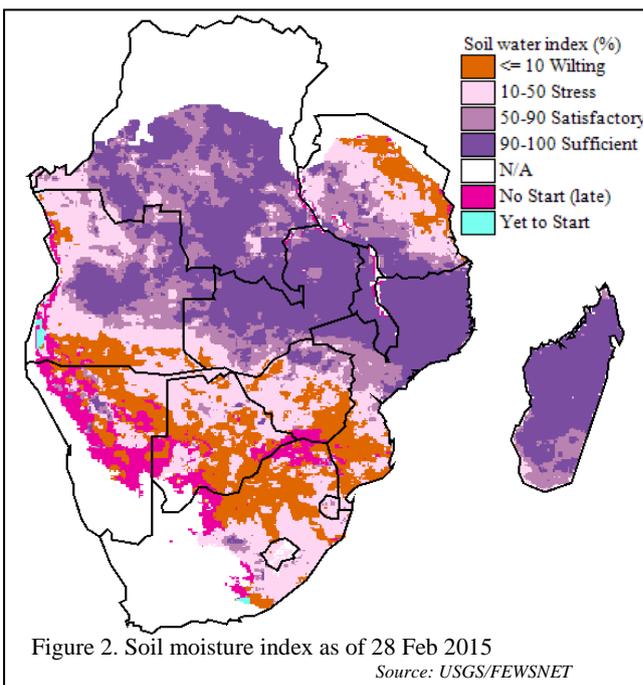
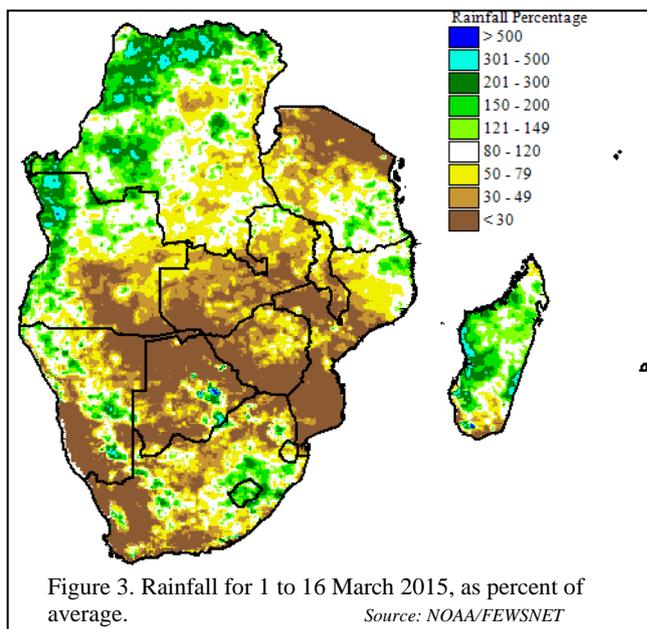


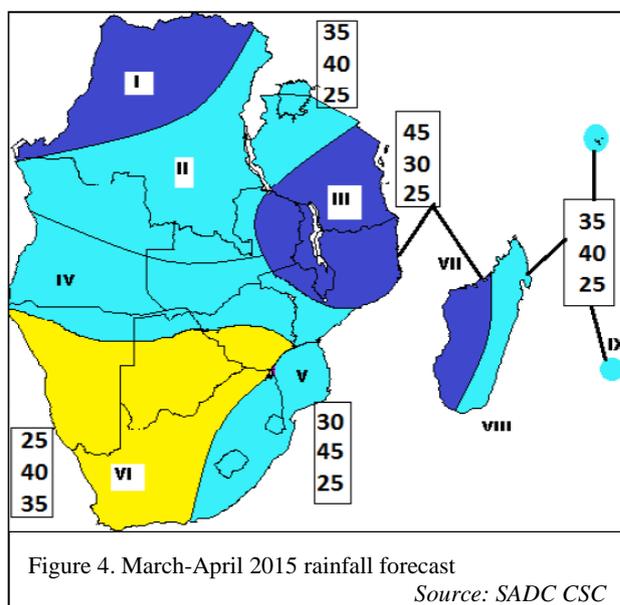
Figure 2. Soil moisture index as of 28 Feb 2015
Source: USGS/FEWSNET

flooding in Malawi, Mozambique and Madagascar. Sustained heavy rains perpetuated waterlogging and leaching of nutrients in some areas such as southern Malawi. In other north-eastern areas such as eastern Zambia and central/northern Malawi, high rainfall raised the prospects of a good outcome for the late-planted crop, which will need the rains to continue until late March or April, in order to successfully reach maturity. In Madagascar, heavy rains due to tropical storms in January and February led to severe flooding, with fatalities, displacement of people, destruction of infrastructure and extensive damage to lowland crops.

More recently, in the first 16 days of March, the rainfall situation changed significantly in some areas (Figure 3). Eastern Zambia, central/southern Malawi, and parts of central Zambia, which had received heavy rains in January and February, received well below average rains in the first half of March (yellow/brown areas, Figure 3). The low rainfall may negatively affect crop yields in parts of eastern Zambia and central Malawi, where good rains were needed until late in the season to enable late planted crops to reach maturity. In contrast, the low rains in southern Malawi and parts of central Mozambique may facilitate reduction of the excessive moisture that resulted in water logging and leaching in Malawi for example. Improved rains in parts of central South Africa and Lesotho (green colours, Figure 3) may help in the improvement of crop conditions in for those crops which had not been severely affected by the preceding dry conditions and still had potential for recovery.



A recent regional rainfall forecast update by the SADC Climate Services Centre (Figure 4) suggests continued chances of above normal to normal rainfall during the March-April period in the north-eastern parts of the region, suggesting that there may be sufficient opportunity for the late-planted crops in this part of the region to reach maturity. However, if the current dry conditions continue in this area (Figure 3) prevail, the forecast rains may come too late to provide relief for crops. In contrast, the forecast calls for normal to below-normal rains in many of the areas already affected by low rains, including the major grain-producing areas in South Africa, and high-intensity livestock areas including Botswana and Namibia. Continued dry conditions in these areas could negatively affect pasture availability in these areas both for the current season and the dry season, as well as further impact crops in South Africa. Readers need to note that the forecast considers rainfall totals over the specified 2-month period, and does not incorporate the probability of dry spells, which can cause crop failure if extended, or intense rainfall from severe weather conditions such as tropical storms, which can cause flooding. The SADC CSC also advises users of the forecast to contact national meteorological and hydrological services for finer details, updates to the forecast, and additional guidance.



National Agrometeorology Summaries

Angola

Well below average rainfall was received in the southern half of Angola during the month of February, particularly in the southern-most parts. This followed the January dryness that occurred in the southern and western areas. Vegetation conditions in these areas were well-below-average by the end of February, according to satellite imagery. The extended dry conditions are likely to have negatively affected crop conditions and seasonal pasture growth in the southern parts of the country. Improved rains fell in the south-west in early March, but dryness continued in the south-east.

Botswana

Well below average rainfall continued in February throughout Botswana, save for a few areas. The poor rains led to moisture stress and crops wilting in some areas. In addition, these low rainfall patterns are likely to affect pasture availability, and satellite imagery is showing well below-average vegetation conditions in most parts of the country. South East Botswana has been experiencing low hydrological conditions due to poor rainfall over the last few years, and the dry conditions in January and February will not provide relief to the hydrological situation.

Lesotho

Lesotho experienced dry spells and poorly distributed rainfall in late January through February. This generally occurred when crops were in the flowering stage, which is a critical stage when water deficits can have the largest negative impact on crops. As a result of the poor rainfall distribution, reports indicate that crops are in poor condition, and production is likely to be affected.

Malawi

High rainfall was received in southern Malawi during the month, exacerbating the waterlogging and leaching that had occurred in many crop fields due to the rains received in January. In contrast, the northern and central parts of the country received near-normal rainfall. Crops ranged from vegetative to maturity stages by end of February. Due to the late onset of rains late last year, extended March rains will be required in many areas in order to allow the crop to reach maturity. However, national reports for early March indicate that dry conditions caused some wilting and premature drying, thereby negatively affecting production prospects. An agromet model run by the Malawi Dept of Meteorology made a preliminary crop production estimate of 3.8 million MT, but this is expected to be revised down due to impacts of the flooding, waterlogging, leaching, the late onset, and the March dryness. Earlier estimates calculated that more than 100,000 tons of maize had been lost due to the flooding.

Mozambique

Well above average rainfall was received in February in the northern and some central parts of the country. This was additional to the heavy rains that had fallen in January and had caused severe flooding in many areas. In contrast, the southern parts of the country received below average rainfall, with most areas getting less than half the normal rainfall (Figure 1). A report from the department of crops and early warning estimated that the floods, together with crop diseases, are estimated to have impacted 1.6% of the national planted area. However, 5% of cropland in the productive Zambezia province was destroyed by the floods. Due to the flooding, replanting had to be done in several areas in the northern and central parts of the country. Hundreds of livestock were also lost or killed, and approximately 30,000 ha of pastures were flooded. The report indicated that crop stage varied significantly, from germination to maturation in northern and central parts of the country, given the late onset of rains, dry conditions, and floods; and crop stage was mainly in the maturation and harvesting stage in the south. The report indicated that despite the negative events

during the season, there were good production prospects this season. Various preparations are currently underway to prepare for the second agricultural season, including distribution of inputs.

Namibia

Nearly the whole of Namibia received very low rainfall in February, with all but a few areas receiving less than 30% of their average rainfall. The low February rainfall, which also follows low rainfall received in January, is likely to negatively impact crops and grazing land. A December national food security report had indicated grazing conditions were already in a poor to fair state, and with the poor rainfall over the last 2 months, grazing conditions are likely to have deteriorated.

South Africa

Most parts of the country received low rainfall in February, after a generally dry January which saw the western and northern parts receiving below average rainfall. The low and inconsistent rainfall over these last few months has negatively affected crops in the main maize producing areas, with crops in some areas showing severe moisture stress and others having reached permanent wilting point. Some areas are still showing good crop stand however, especially fields that were fallow last year with good moisture retention, areas where good rains fell this year, and irrigated areas. Due to the impact of the unfavourable weather conditions, the South Africa Crop Estimation Committee produced a first maize production estimate of 9.67 million MT, which represents a **32%** reduction from last year. The current production estimate may either increase or decrease depending on the outcome of March rains – if rainfall is good in March and resuscitates crops which were not badly affected during the flowering stage or permanently wilted, production estimates may improve. Continued dryness will however result in an even lower production outlook.

Tanzania

In February, below-normal rainfall was received in the north-eastern half of the country, and near normal rainfall in the south-western half. Reports from the national meteorological agency indicate that a long dry spell caused wilting of maize crops in some of the central areas. Generally, crops in unimodal areas were reported to be at flowering stage and in moderate condition by mid-February.

Zambia

By late February, crops in the central region were reportedly at flowering to grain-filling stage, while there was much more variability in eastern Zambia with crops ranging from early vegetative to flowering stage. Good rains fell in the eastern half and central parts of Zambia in February, while the south-western areas experienced dryer than usual conditions, and crops there were reported to be showing signs of moisture stress. Slightly below average rainfall conditions were experienced in the southern areas in February, but the impact on crops was reported to be limited, and in most other parts of the country, crops were in good condition. However, the first half of March experienced well-below average rainfall throughout the country, which could negatively affect production, particularly in the late planted areas in eastern Zambia where consistent rain was needed until April in order for crops to successfully reach maturity and retain good production prospects.

Zimbabwe

The southern half of Zimbabwe received low rainfall in January and normal to below-normal rainfall in February. The low January rainfall negatively affected crops, to the extent that in some cases, the near normal rains in February were too late to resuscitate crops. Although the northernmost parts of the country received above-normal February rainfall, the northern-central parts, which include the main crop-growing areas, received normal to below normal rainfall in February. Most parts of the country received well-below average rainfall in the first half of March, which is likely to negatively affect production prospects, except in areas where crops had already reached maturity, or had already succumbed to permanent wilting.