



# Food Security Early Warning System Agromet Update



## 2014/2015 Agricultural Season

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Season: 2014-2015

13-01-2015

### Highlights

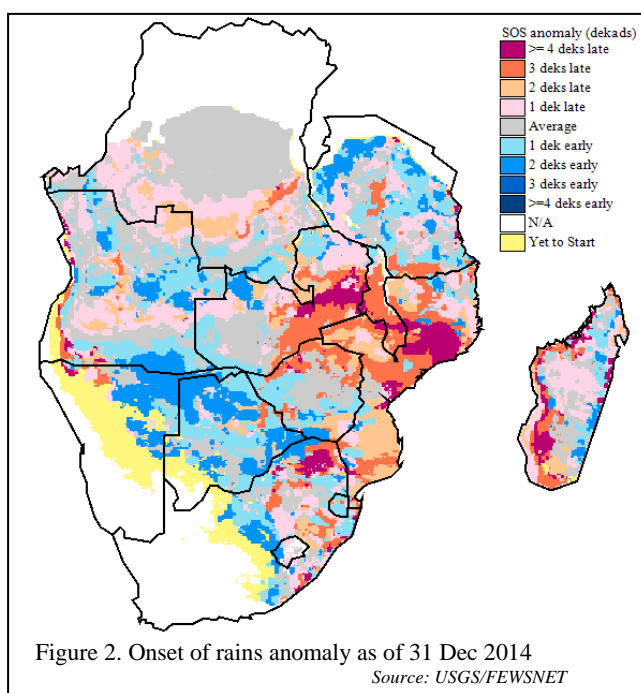
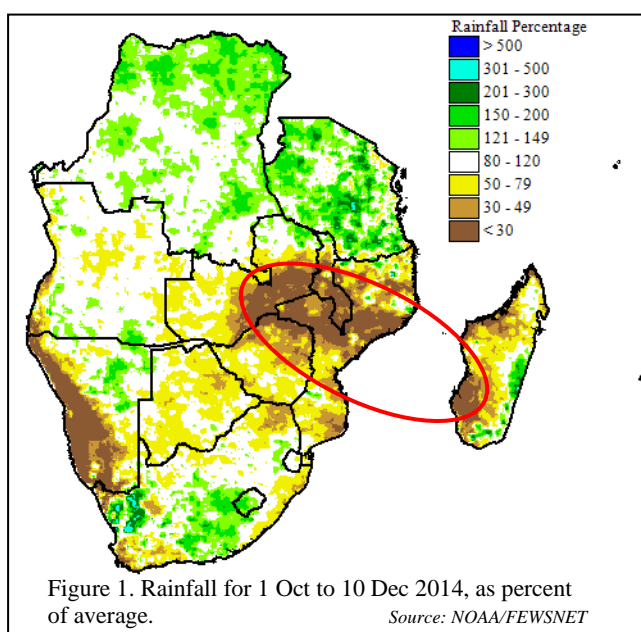
- Rainfall season starts throughout the region after a delay of 30-50 days in some areas
- Heavy rainfall in mid to late December eliminates early-season water deficits in many areas but causes flooding
- Updated regional forecast for January to March predicts normal to below normal rainfall for southern half of the region

### Regional Summary

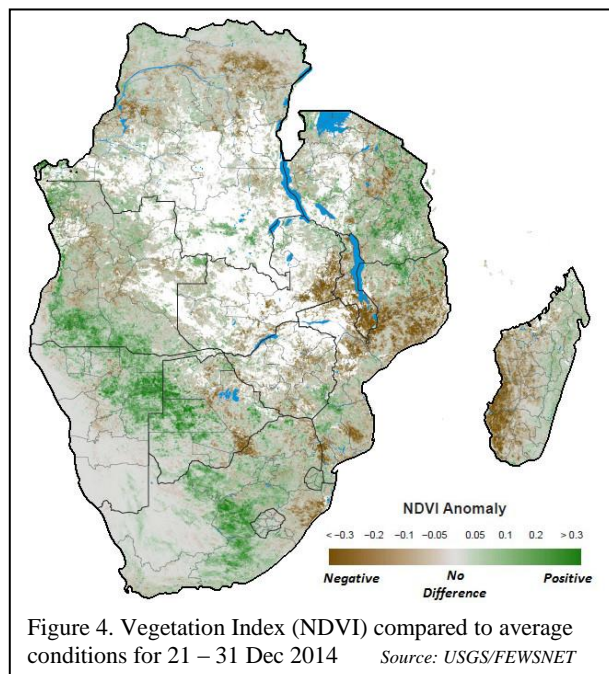
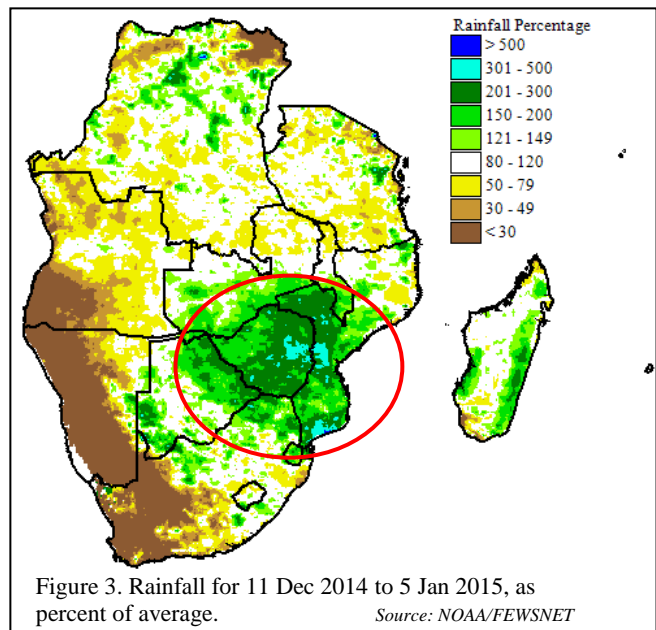
The 2014/2015 season started off with low rainfall in the central and eastern parts of the region, which was subsequently followed by very heavy rainfall in mid-December through early January. From October through early December, low rainfall was received in the eastern/central parts of the region and south-western Madagascar, as shown by the brown colours, and highlighted by the red circle in Figure 1. Areas which were affected by these dry conditions include south-western Madagascar, southern Malawi, central Mozambique, eastern and central Zambia, and northern Zimbabwe. The low rainfall was associated with a delayed and erratic onset of rains. In many of the affected areas, the seasonal onset of rains delayed by 30 to 40 days (maroon and dark orange colours, Figure 2). The delayed onset, and subsequent late planting could shorten the window of time available for crops to grow and mature before the end of the season or before mid-season dry spells set-in, potentially resulting in reduced crop yields and delayed harvests.

Despite the late and erratic onset, there is sufficient time for recovery if good rains occur for the remainder of the season, as happened during the 2013/2014 season. Close monitoring of the remainder of the rainfall season is required.

The erratic rainfall onset was followed almost immediately by very heavy rains which fell



from the second dekad of December, though to early January, as depicted by the green and light blue colours in Figure 3, and highlighted by the red circle. Many areas received more than twice the average rainfall they would normally expect during this time, with a few areas receiving more than 3 times their normal rainfall. Although the rainfall received in this period was, in many areas, sufficient to eliminate the cumulative water deficits, the high amount of water was received over a relatively short duration, which tends to limit the overall agricultural benefit (compared with the rainfall totals). There were reports of flooding and destruction in Madagascar, Malawi, Mozambique and Zimbabwe due to the heavy and intense rains.



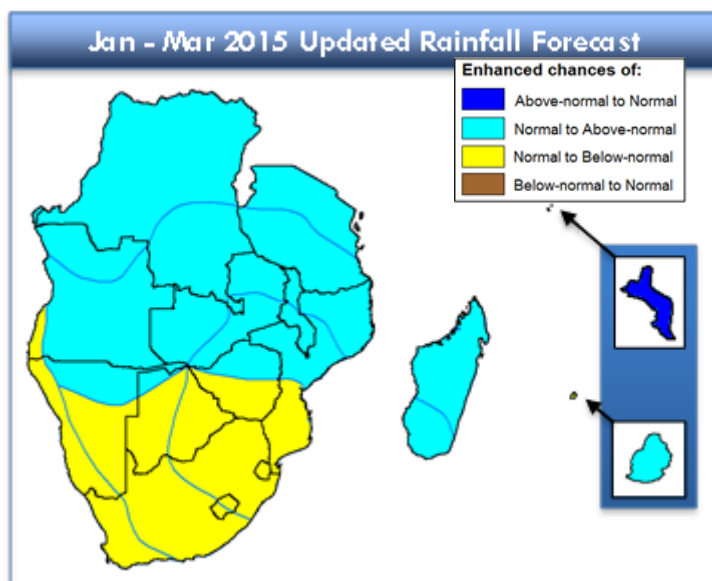
Although many of the delayed-onset-areas received high rainfall from mid-December to early January, not all areas experienced these high rains. The northern half of Malawi, as well as eastern Zambia received near-normal rainfall during this time. While the rains were adequate to facilitate planting, they were insufficient to erase the long-standing water deficits accumulated since the October/November period.

The vegetation response to rainfall patterns observed throughout the region is clearly illustrated in Figure 4. The central/eastern areas affected by the delayed and erratic onset are showing well below-average vegetation conditions (brown colours, figure 4), the result of several weeks to months of anomalously dry conditions. Vegetation status, including grazing condition, is expected to improve over the next few weeks in

response to the recent rainfall highlighted in Figure 3. In addition to the late onset areas in the central/eastern parts of the region, figure 4 suggests that there are other areas that may have been affected by poor rainfall performance, and these include parts of central Angola, northern DRC, south-eastern Botswana, eastern South Africa and southern Mozambique. These areas highlighted in south-eastern Botswana and eastern South Africa have been experiencing long-term hydrological shortfalls due to low rainfall in the last few seasons. In contrast, a few areas are indicating above-average vegetation conditions, with good implications for agricultural productivity and water availability in these areas. These include parts of southern Angola, northern Namibia, central South Africa, and the bimodal areas of Tanzania. A closer look at the vegetation images however shows that some of the productive cropping regions in central South Africa and northern Namibia have below average vegetation conditions, indicating water stress in some locations.

A few areas in the region have reported high temperatures being experienced. Most international forecasts and some national forecasts are predicting above-average temperatures for the January to March 2014 period in most parts of the SADC region. High temperatures increase the amount of

water that crops require, thereby raising the chance of crops wilting if insufficient rain falls. Excessively high temperatures can have negative physiological impacts on crops, livestock and people.



A recent forecast update from the SADC Climate Services Centre is predicting normal to above-normal rainfall in the northern half of the region, and normal to below normal rainfall in the southern half of the region during the January-March 2015 period (Figure 5). Madagascar and Mauritius are also forecast for enhanced chances of normal to above-normal rainfall, while Seychelles is expected to receive above-normal to normal rainfall. The eastern/central areas that were affected by dry conditions in the first part of the season (Figure 1 and 2), are among those expected to receive normal to above-normal rainfall. This implies good

chances of recovery from the dry conditions experienced earlier in the season. However, many of these areas are prone to dry spells, even in the midst of above normal rainfall. As such, continued monitoring will be required in these areas. With the southern half of the region expecting normal to below-normal rainfall, close monitoring, and climate-smart agricultural practices will be required. Many of the southern areas that are tipped for normal to below-normal rainfall in the forecast received near-normal rains in the first half of the season. A few of these areas however had poor rainfall distribution. These include parts of northern and eastern South Africa, eastern Botswana and southern Mozambique.

Oceanic and atmospheric conditions in the Pacific Ocean remain close to El Niño thresholds, with a 62% chance that an El Niño event will occur during the 2014/2015 season, according to a consensus forecast issued in January by US-based climate forecasting centres. This represents borderline chances that El Niño conditions may occur this season. El Niño, a large scale climate phenomenon with global impacts, is often associated with reduced rainfall in some parts of southern Africa. Historically, not all El Niño events have resulted in low rainfall in the region, with some areas being more regularly affected than others.

Users of climate information are advised to contact their national meteorological and hydrological services for climate forecast updates, detailed, agrometeorology-specific interpretation of climate forecasts, and advisories.

## *National Agrometeorology Summaries*

### **Angola**

Relatively good rains fell in the southern parts of the country from November to mid-December, followed by low rainfall through early January in this area, according to satellite-based rainfall estimates. This early-season rainfall is corroborated by above-normal vegetation conditions observed from satellite imagery (Figure 2). South-western Angola has been subject to low rainfall in the last few seasons, with negative impacts on local livelihoods. In the high-cereal-production

central parts of the country, both satellite rainfall estimates, and vegetation imagery are indicating below average rainfall performance and vegetation conditions respectively. Further monitoring is required.

## **Botswana**

Most parts of the country received good rainfall in December, particularly in the second and third dekad of the month. The rains received in November and December were generally sufficient to allow planting. The good rains also led to above average vegetation conditions in several parts of the country including some of the main livestock producing areas. Some areas in the south east are however showing well below average vegetation conditions. The updated national forecast for the January to March 2015 is predicting likelihood of normal to below-normal rainfall in most parts of the country.

## **Malawi**

After experiencing a delay in onset of rains of 30 to 40 days in most areas, Malawi received its planting rains in December. The effective onset of rains occurred in early-to-mid December in southern Malawi, and late December in central and northern Malawi. The good rains received in December improved water resources and pasture availability. Due to the delay in onset, planting was still ongoing in most parts of the country by the end of December, whereas ordinarily, planting would be complete in the south by then. Where planting has occurred, crops were reported to be in good condition. The reduced crop-growing window caused by the late onset will necessitate consistent good rains throughout, until late into the season.

## **Mozambique**

Mozambique received heavy, above normal rains from mid-December through early January. The rains were mostly in the central and southern parts of the country, while the northern part of the country received near normal rainfall in late December, indicating the start of the season there. In general, planting rains were received late in almost the entire country, with a delay of 30 to 40 days in the central and northern areas, while the southern areas experienced a delay of approximately 20 days. By late December, reports indicate that over 80% of planting had been undertaken in the south of the country, approximately 70% in the central parts of the country, and about 50% in the northern parts.

## **Namibia**

Rainfall was generally low in the north-west and north-central parts of the country in November and December, except for early December when heavy rainfall was received in some areas. The low rainfall has led to reduced grazing in parts of the country, with satellite images of vegetation also indicating below average conditions in some of the northern areas. With the national seasonal forecast predicting normal-to-below normal rainfall forecast for the January-to-March in some of these areas, close monitoring will be required.

## **South Africa**

Most areas received good rainfall in December, except for the western and the eastern-most parts of the country. After extended dry conditions and a delayed onset of rains of approximately 30 to 50 days, northern parts of the country finally experienced effective rains in late December. By early December, some central parts of the country were still reported to be experiencing drought conditions, and these resulted in delays in preparations for the summer crop. In general, grazing and



livestock conditions were reported to have improved, although cattle mortality due to drought was reported in the south of the country.

## **Tanzania**

With some exceptions, the rainfall season has generally been progressing well in Tanzania. In the bimodal areas, the short season (*Vuli* season) received good rains in most areas, and as of late December, the crop there was reported to be in good condition, and in the ripening stage. In a few areas in the north-east however, late planted crops were reported to be in average condition at the flowering stage. In the unimodal areas, the crop was reportedly performing well, though still in the early stages of crop development. In some areas in the south however, an extended dry spell in early to mid-December caused wilting and necessitated re-planting.

## **Zambia**

Erratic rainfall patterns between October and December resulted in a 30 to 50 days delay in the effective onset of rains in large parts of central and eastern Zambia, as well as some northern and southern parts of the country. Many of these areas, which include the main grain producing regions in the country, only experienced an onset in mid to late December. Consequently, farmers planted late, and were being advised to plant early maturing varieties due to the considerably shortened crop-growing window now available. Good, well-distributed rains will be required until late into the season in order for crops to reach maturity. Since mid-December, some of the cropping areas received high rainfall in a relatively short space of time, and reports indicate fears that leaching may occur in areas of excessive rainfall.