



# Food Security Early Warning System Agromet Update



## 2016/2017 Agricultural Season

Issue 03 Month: December

Season: 2016-2017

13-01-2017

### Highlights

- Rains improved in many areas that were affected by severe drought last season
- Poor rains have been received in Tanzania and parts of Madagascar, with likely impacts on crop production in affected areas
- An armyworm outbreak has affected the region, with reports of outbreaks in Zambia, Zimbabwe and Malawi. The outbreak in Zambia is particularly severe

### Regional Summary

Between October and December 2016, good rains have been received in many of the areas in the region that were affected by the severe El Niño induced drought in the last 1 to 2 seasons (Figure 1, blue oval #1). These areas include much of Botswana, Zimbabwe, southern Mozambique, Swaziland and the northern half of South Africa, where normal to above-normal rains were received. Further north-west, in much of Angola, Zambia, and southern DRC, rains were generally normal to slightly below normal (Figure 1, red oval #2). Although the total rains received in many areas were slightly below normal, they were likely generally sufficient to allow crop development, as suggested by crop models, particularly given the current early stage of the crop. The north-eastern parts of the region, in particular, most of Tanzania, and parts of northern Mozambique, have received well below average rainfall so far this season, with negative impacts (Figure 1, red oval #3). The severity of the rainfall deficit is such that in many areas the planting rains have been delayed by 40 days or more (dark grey colours, Figure 2), especially in much of central-southern Tanzania. Madagascar has also experienced poor seasonal performance to date, particularly in north-eastern and south-western parts of the country (Figure 1, red ovals #4). In addition, the south-western parts of the region (Figure 1, area 5) have also received well below average rainfall. These include parts of south-western South Africa, western Namibia and south-western Angola. Although many of these areas typically receive very low seasonal rainfall totals, this year's low rainfall comes on the backdrop of a severe multi-seasonal drought. Late November through early January also saw extremely high temperatures in many of the same areas, which resulted in higher water loss through evaporation, as greater potential for heat stress to both crops and livestock.

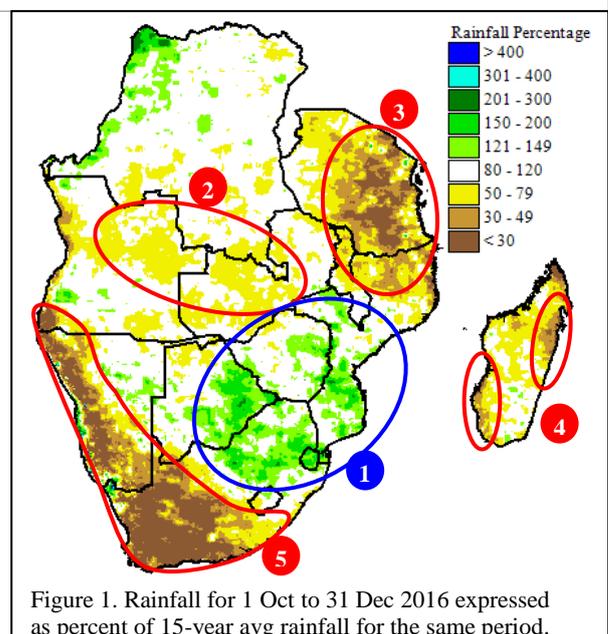


Figure 1. Rainfall for 1 Oct to 31 Dec 2016 expressed as percent of 15-year avg rainfall for the same period.

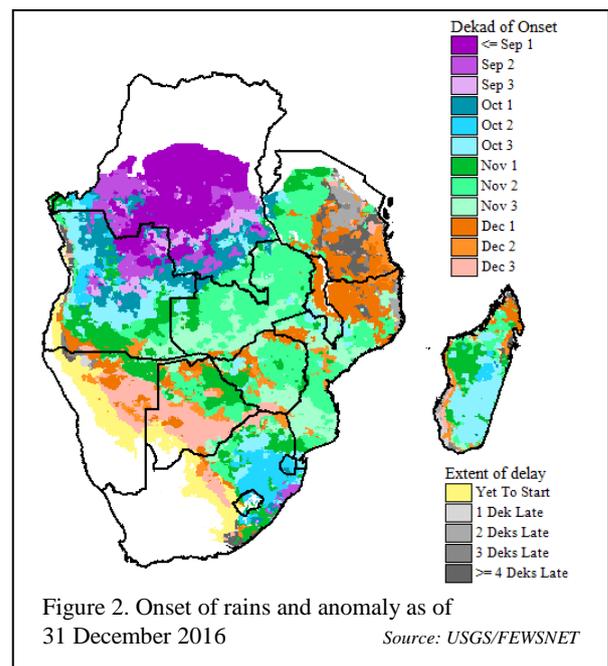


Figure 2. Onset of rains and anomaly as of 31 December 2016

Source: USGS/FEWSNET

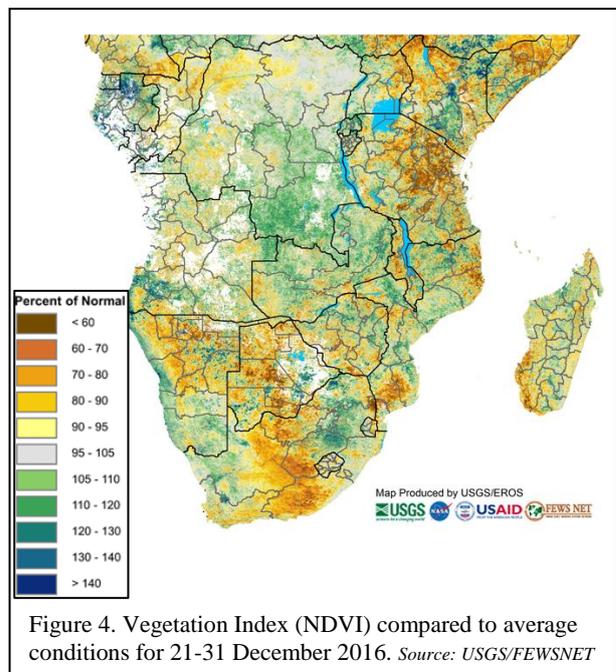
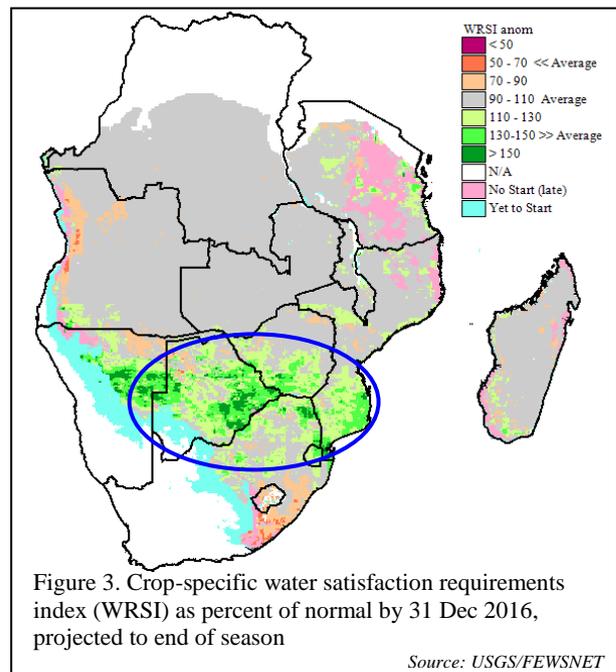
Despite the sub-optimal rains received in several parts of the region during the first half of the season, the seasonal onset of planting rains occurred without significant delay in most areas. Planting rains were received in November in most parts of the region (green colours, Figure 2). Heat stress due to the excessive temperatures that occurred during early December may have negatively affected crops in some areas. Confirmation was received from some countries, such as Mozambique, of the negative impact of these high temperature events in southern Mozambique. In other areas like southern Zambia, field reports indicate that most planting only occurred in late December, thus avoiding the impacts of the early December heat wave.

The rains to date have provided good potential crop production outcomes in many of the southern parts of the region. Water balance models running the water requirements satisfaction index (WRSI) suggest that higher than normal percentage of the water requirements of cereal crops will be met this season, if normal rains fall for the remainder of the season (green-coloured areas in the blue oval, Figure 3). In most other areas, normal crop water availability (grey colours, Figure 3) is expected if average weather conditions occur until the end of the season. In contrast, below average water-related crop performance is expected in south-eastern South Africa, parts of northern Namibia, and parts of Angola, as shown by the orange colours in Figure 3. This is primarily due to the nature of the rainfall patterns that have occurred since the beginning of the season.

Vegetation conditions have improved vastly since November, in response to the moderate to high rains that have been received in many areas. Figure 4 shows in green the areas where vegetation conditions are above average. Vegetation, including pasture, was affected by drought during the 2015/16 season, and has been well below average in most areas. The improved rains this season have helped recovery, but many areas are still showing below average vegetation conditions, as seen by the brown colours in Figure 4. Livestock conditions remain poor in some of the areas that were more severely affected by drought last season, including parts of Zimbabwe and South Africa, and improvement is likely to take several months, if pasture conditions keep improving over the remainder of the season. In parts of South Africa, livestock mortality is still being reported. In Zimbabwe, livestock have been washed away by floods in some areas due to excessive rains.

### Summary of Crop Conditions

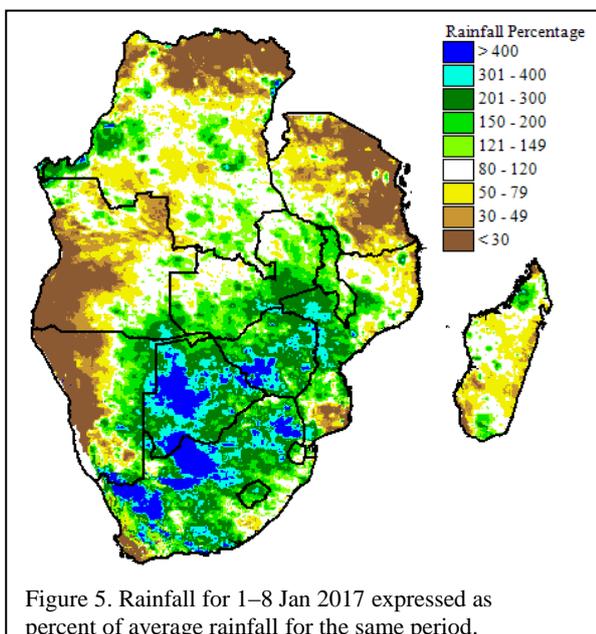
Crop conditions are mixed across the region. Crops in Lesotho were reported to be in average condition, as favourable rains have been received in most parts of the country to date. Madagascar has had a poor season through to December due to very low rainfall in some of the eastern and south-western areas, with negative impacts on rice and maize respectively. Malawi had a slightly delayed onset, particularly in the north, but crops were reported to be in favourable condition. Planting in Mozambique was ongoing by December, with the south having a larger proportion of the intended area planted, while the north and some central areas had



experienced a delay in onset. Very high temperatures in southern Mozambique also reportedly affected crops. The north-eastern half of South Africa has been receiving good rains for much of the growing season, while the south-western half has received below average rainfall and experienced excessively high temperatures. Consequently, crop conditions in the east have been reportedly performing better than those in the western half. Rainfall in Zambia has been generally good, however an infestation of armyworm have affected most districts in the country. Replanting will be required in over 68,000 Ha. Maize crops planted as late as mid-January though, generally have lower yield potential and higher risk of cessation of rains before crops reach maturity. Zimbabwe has received large amounts of rainfall this season, good for crop development in most areas, but flooding, collapse of dams, and washing away of crops has been reported in some areas. Fertilizer shortages have been reported, which, together with incessant rains that have been falling, have resulted in crops being affected by nitrogen deficiency. The continuing rains have also limited weeding operations. This situation is likely to negatively impact harvests.

### Armyworm outbreak

Zambia was affected by a severe outbreak of the *Fall Armyworm*. This pest is new to the southern African region, differing from the *African Armyworm* that has often affected the region in the past, and is reportedly more difficult to control. Reports from the Zambia Disaster Management and Mitigation Unit indicate that as of 9 January 2017, close to 130,000 ha planted to maize had been affected, being approximately 10% of the planted area. Of the affected area, over 68,000 ha may require re-planting. Government efforts to control the outbreak are underway, and 61,000 litres of chemicals for controlling the pest have been dispatched. With 94% of the country's districts affected in varying degrees, including several districts bordering Zambia's eight neighbours in the SADC region, vigilant region-wide monitoring activities are required. The Fall Armyworm was also reported recently as having affected several provinces in Zimbabwe, although information on the number of hectares affected was not yet available. The Migratory Pest Situation bulletin by the International Red Locust Control Organization for Central and Southern Africa also noted that the African Armyworm was reported in Zimbabwe and Malawi, and that the Malawi Ministry of Agriculture was in the process of confirming the identity of a pest similar to the Fall Armyworm that was affecting maize crops.



### Latest rainfall update and forecasts.

Satellite images of rainfall in early January (Figure 5) indicate that widespread above normal rains fell in most parts of the region (green and blue colours), including in many of the south-western parts of South Africa that had been previously dry, bringing some relief. Northern Malawi and some parts of northern Mozambique, where short delays in rainfall and low rainfall had been experienced also received much needed rain. However dry conditions continued in much of Tanzania as well as western Namibia and south-western Angola. Eastern and south-western Madagascar also received below-average rainfall. Short term forecasts through to mid-January are predicting dry conditions to continue over eastern Madagascar, north-western Namibia and south-western Angola, while Tanzania is expected to get some relief with near-normal rainfall expected. In the longer term, SADC CSC recently issued a forecast update for the Jan-Mar 2017 period predicting normal to above normal rainfall in most parts of the SADC region, except

Tanzania, northern Mozambique, northern Madagascar, northern Malawi, eastern DRC and northern Zambia, and Seychelles, where normal to below normal rainfall are forecast.

The good rainfall performance to date, as well as the generally good rainfall forecast in the southern and central parts of the region increases chances for positive production outcomes, from a climatic perspective in the areas noted. However, the armyworm outbreak threatens some reversals of these gains, and continuing low rainfall in Tanzania and parts of Madagascar are likely to impact production there. Dry spells often occur in parts of the region in January and February, and these will also need to be monitored as the season progresses.