



# Food Security Early Warning System Agromet Update



**2019/2020 Agricultural Season**

Issue 03 Month: January

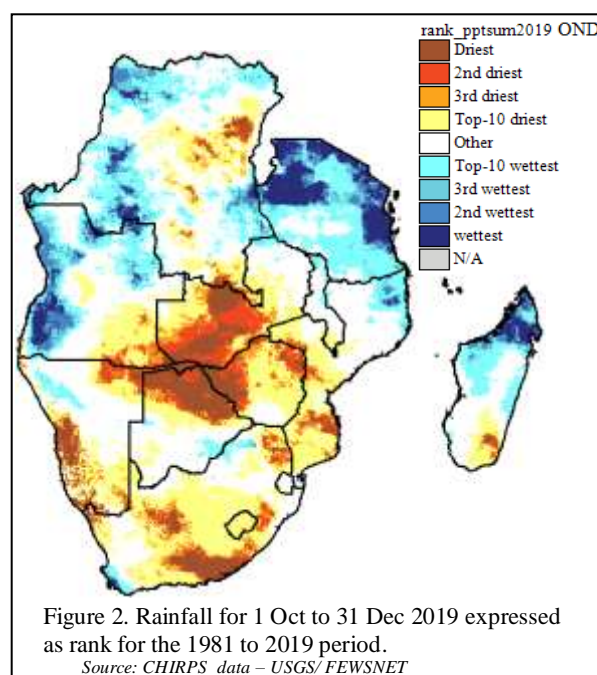
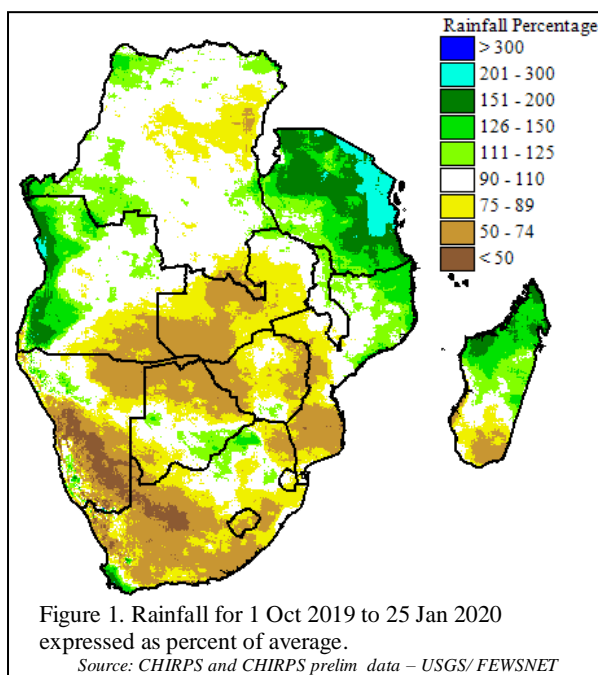
Season: 2019-2020

01-02-2020

## Highlights

- October to December 2019 rainfall was the lowest in central parts of the region since 1981
- Extended dryness in December and January resulted in permanent wilting of crops in southern Mozambique and Zimbabwe
- South Africa's main maize growing areas received good rains during December and January
- Heavy rains continued in northern parts of the region and northern Madagascar, resulting in flooding. Flash flooding was also reported in some of the areas that have been predominantly dry this season, including southern Zambia and western Zimbabwe.

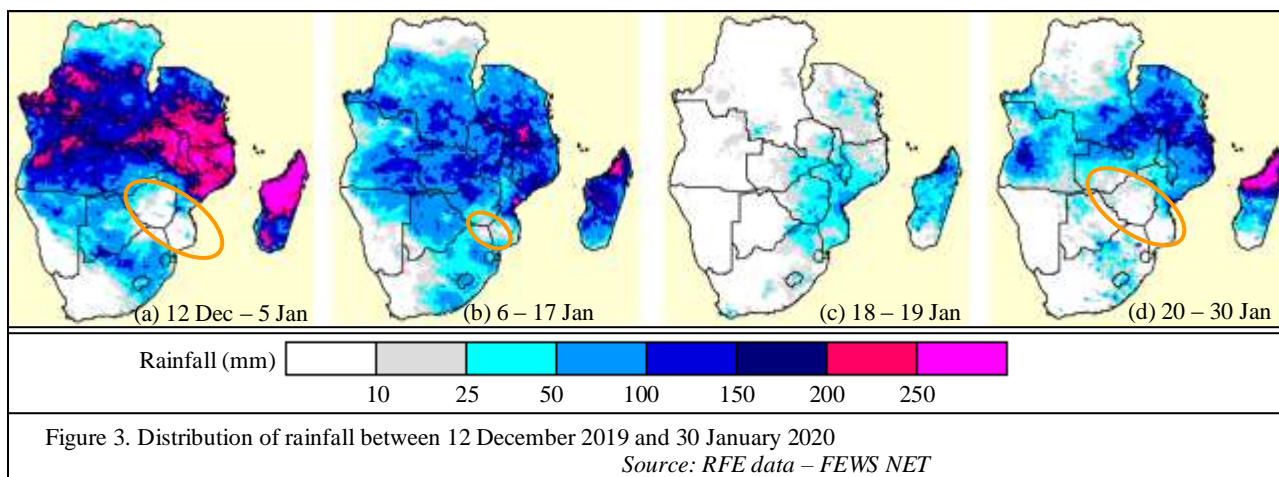
## Regional Summary



Rainfall for the October 2019 to late-January 2020 period has been well below average for many southern and central parts of the region (Figure 1). While there was significant rainfall in early January, the October to December period was extremely dry across many areas. Historical analysis indicates that in most parts of the region, the October-to-December 2019 period was one of the 10 driest seasons since 1981 (Figure 2). This period was also one of the 3 driest seasons in south-eastern Angola, northern Botswana, north-eastern DRC, parts of southern Madagascar and Mozambique, north-eastern Namibia, parts of South Africa, western half of Zambia, and western and northern Zimbabwe. In contrast, Tanzania, northern Madagascar, parts of DRC, part of northern Mozambique and western Angola received well above average rainfall, among the highest for that period in some areas. These dry trends in the central parts of the region and high rainfall trends in the northern areas have been forecast to continue through the second half of the rainfall season.

In some central areas, the dryness being experienced this season follows severe drought conditions that affected agriculture during the 2018/2019 season. These areas include south-eastern Angola, north-eastern Namibia,

northern Botswana, southern Zambia and northern Zimbabwe, where the October 2018 to March 2019 rainfall was also among the driest since 1981.



Rainfall has been poorly distributed through time in some areas, and this has negatively affected crop conditions, particularly in areas where long dry spells accompanied by high temperatures occurred. Most of Zimbabwe, southern Mozambique and northern South Africa received almost no rainfall for a nearly 4-week period between December and January (Figure 3a). In parts of southern Zimbabwe, northern South Africa and southern Mozambique, the period of dryness extended even further, with little to no rainfall in some areas for another 2 weeks (Figure 3b). This dry period followed good mid-November to early December rains, which had afforded farmers an opportunity to plant. Reports however indicate that many farmers in parts of Zimbabwe and southern Mozambique experienced poor germination and in many cases permanent wilting of crops. Farmers with access to sufficient inputs managed to replant their fields in January after widespread rains in early to mid-January (Figure 3b and 3c). Dry conditions returned to southern Zambia, Zimbabwe and southern Mozambique in late January (Figure 3d).

Rainfall in most other parts of the region has been more favourable than that experienced in Zimbabwe and southern Mozambique. Southern Zambia also experienced long dry conditions in December, but received some rainfall in late December. In many cases, the timing of this late December rainfall in southern Zambia prevented permanent wilting of crops, although the water deficits experienced negatively affected crops to some extent. Rainfall has been borderline erratic in southern Zambia, and the possibility of crops wilting remains significant, due to extended dry spells that are occurring there. Lesotho, southern half of South Africa, and southern Madagascar have also received well below average rainfall over much of the season. Much of southern Angola and northern Namibia, which experienced severe droughts in several of the last few seasons, have received more favourable rainfall through mid-January. However, seasonal rainfall totals to date remain below average in the eastern parts of these two areas, and over most of Namibia. After several below average rainfall seasons, favourable rains have been received in central South Africa and south-eastern Botswana since December. Although these rains heralded a late start of the season, they have been consistent and conducive to crop growth, particularly in some of the main maize-growing areas of South Africa. In many areas, crops need rainfall through the March/April period in order to increase chances of a good harvest.

The repeat droughts that have occurred in many parts of the regions over the last few years, together with dry conditions currently being experienced in some areas have resulted in low river, dam and groundwater levels in some areas. In Namibia for example, the dams that supply the central parts of the country were reported to be at 15.5% at the end of December, compared to 35.4% the year before. For the agricultural sector, low water levels affect irrigation and livestock. Gardening after the rainy season is a significant source of agricultural produce for many households in some of the areas affected by the October – December 2019 poor rains, and lack of water for irrigation affect such post-rainfall-season agricultural activities.

The northern parts of the region have experienced well above average rainfall this season. The October-to-December 2019 rainfall totals in northern Tanzania, northern Madagascar, parts of DRC and western Angola were among the highest since 1981. High rainfall has continued in some of these areas into January, resulting

in some reports of flooding for several parts of the region, including northern and central Madagascar, Tanzania, northern Mozambique, DRC, and Angola. High intensity rainfall events of short duration also resulted in flash flooding and damage in some of the areas that have been predominantly dry this season, including parts of western Zimbabwe and southern Zambia.

Vegetation conditions improved in most parts of the region after December and early January rainfall. Above average vegetation conditions were noted in most areas (Figure 4). However, below average conditions persist in some areas where poor rainfall was received, including southern Madagascar, southern Mozambique, much of Zimbabwe, and southern Zambia. Additionally, below average vegetation conditions were also noted in the western half of South Africa, Lesotho, Namibia, and parts of southern Angola. These poor vegetation conditions indicate the effects of poor rainfall, and in some cases long-term drought conditions that have persisted over two or more years. This has resulted in poor grazing conditions and subsequent livestock deaths, as well as poor crop conditions in cropping areas. Atypically high numbers of drought-related livestock deaths have been reported in Angola, Botswana, northern Namibia, and south-western Zimbabwe over the past few months.

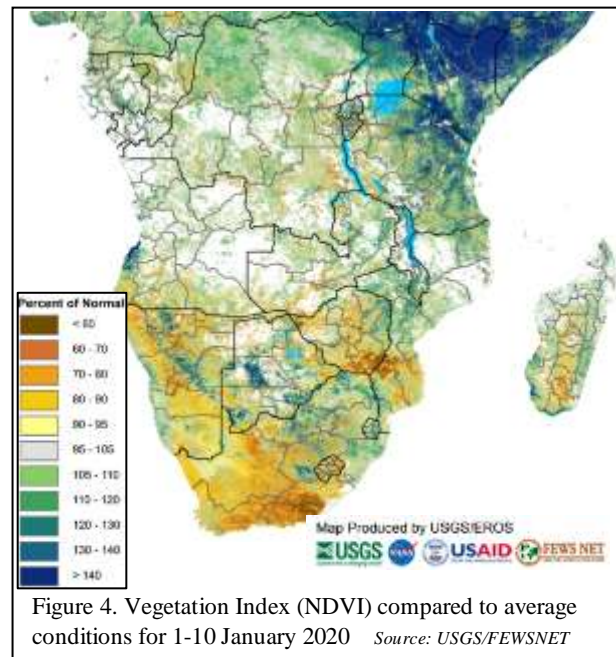


Figure 4. Vegetation Index (NDVI) compared to average conditions for 1-10 January 2020 *Source: USGS/FEWSNET*

For some crop growing areas already severely affected by the early season dryness, including Zimbabwe and southern Mozambique, there are low chances for an agricultural recovery, from an agrometeorological perspective, given the relatively short time remaining till the normal end of the rainfall season. The likelihood of low rainfall and high temperatures through the remainder of the season as predicted by seasonal forecasts for some of these already affected areas further raises the risk for negative impacts on crops and livestock. Continuation of low rainfall may further affect grazing and water availability for livestock, in areas where high levels of drought-related livestock mortality have already been recorded. Additionally, some areas have already experienced permanent wilting of crops, which significantly increases the likelihood of overall crop production shortfalls in such areas. In contrast, some crop producing areas in the region have been receiving favourable rainfall since December, which may help to improve crop yields in those areas if the favourable rains continue until crop maturity.