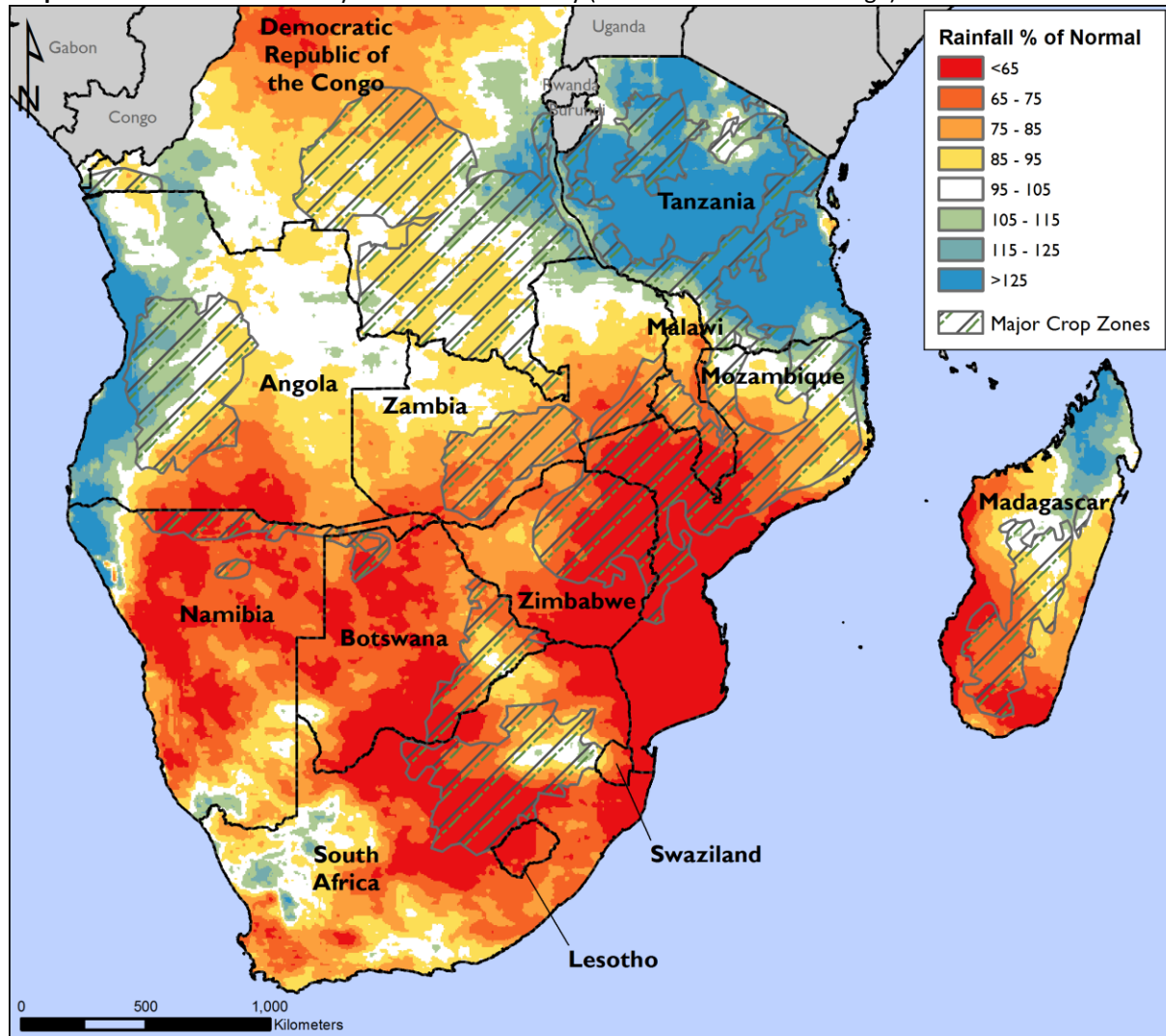


## Illustrating the extent and severity of the 2015-16 drought

A severe drought, related to El Niño, is ongoing across the Southern Africa region. This drought has limited crop production and exacerbated the current lean season. While April/May harvests will provide some temporary relief, [food insecurity during the 2016/17 consumption year is expected to be severe](#). This report presents a series of maps which illustrate the extent and the severity of the drought as well as its impacts on water availability, crop and rangeland conditions, food prices, and food security. For a more detailed narrative and analysis of the drought's current and expected impacts on food security, please visit [www.fews.net/south](http://www.fews.net/south).

**Map 1.** October 2015 – February 2016 rainfall anomaly (% of the 1982-2011 average) for Southern Africa

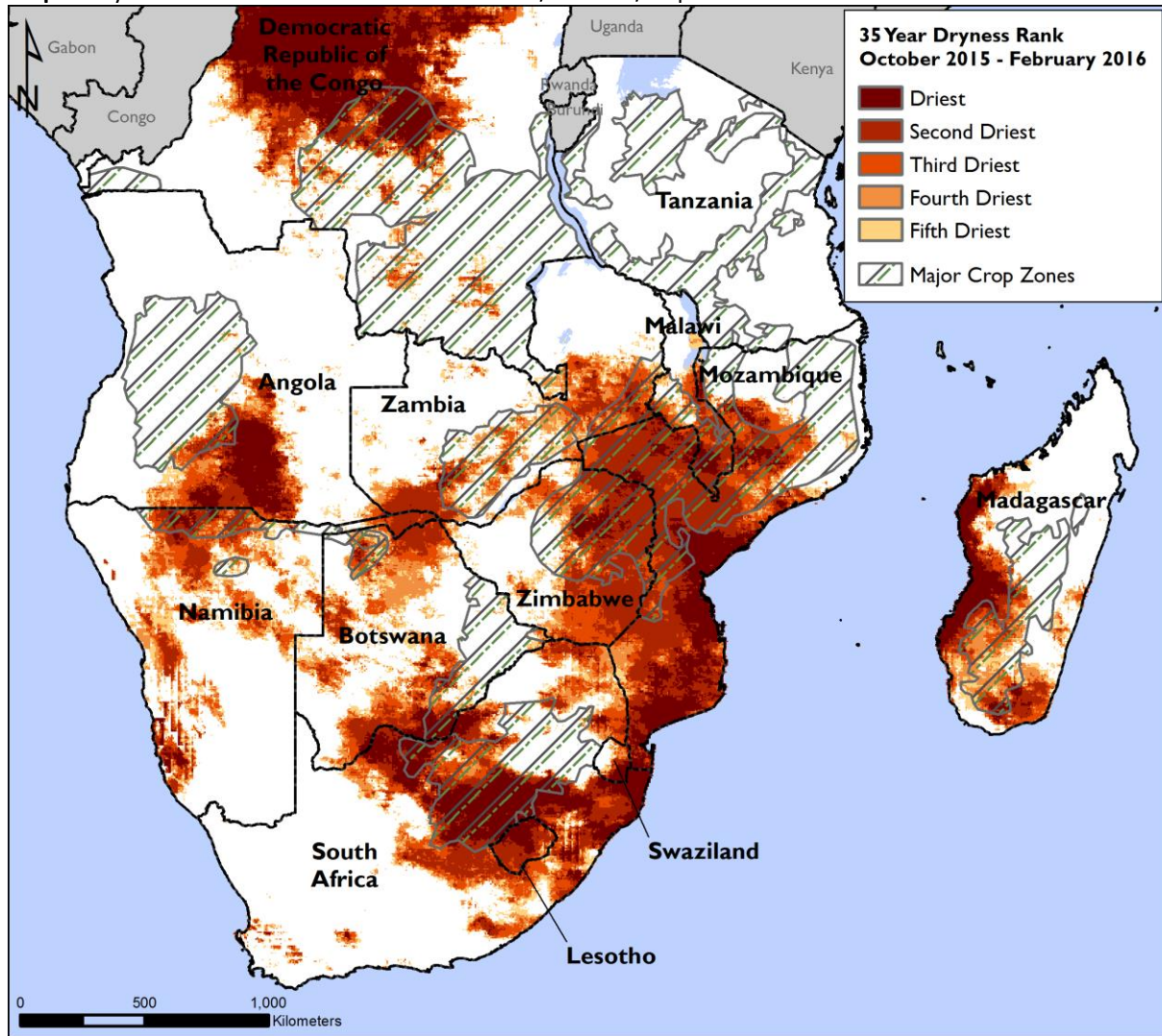


Source: FEWS NET/USGS CHIRPS

Note: Major crop zones are defined as the main production areas for the country's primary crop. The identified areas are not necessarily surplus producing areas and are spatially generalized for presentation and calculation purposes.

This map illustrates how rainfall between October 2015 and February 2016 deviated from the 1982-2011 average across the Southern Africa Region. During this period, rainfall was less than 75 percent of average across most of Mozambique, Zimbabwe, Botswana, Namibia, Swaziland, Lesotho, and South Africa as well as significant portions of Zambia, Malawi, Angola, and Madagascar. The major agricultural season for Southern Africa runs from October/November through April and this abnormal dryness has occurred in many important cropping areas.

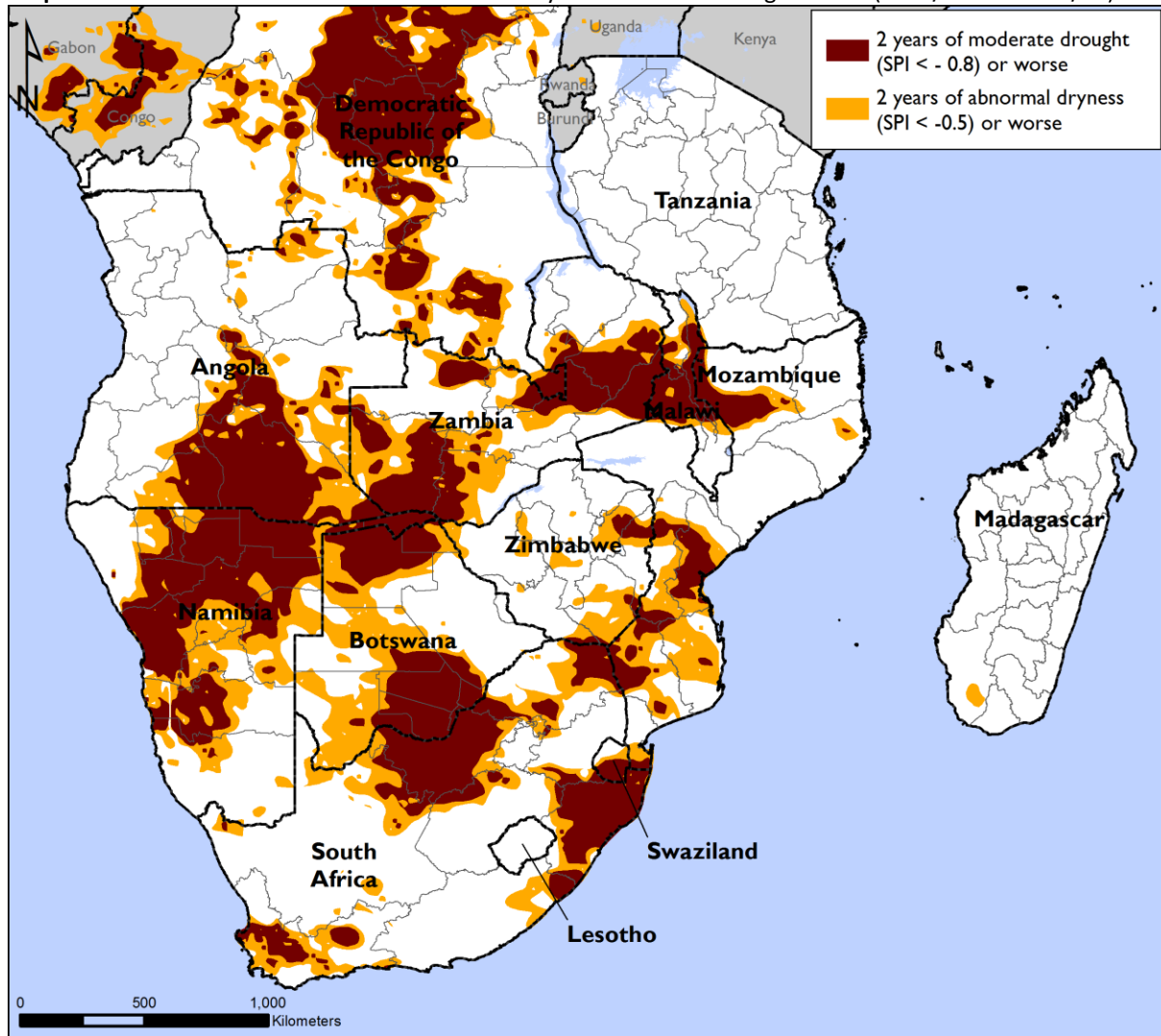
**Map 2.** Dryness rank of current season within 1981/82-2015/16 period



Source: FEWS NET/USGS [CHIRPS](#)

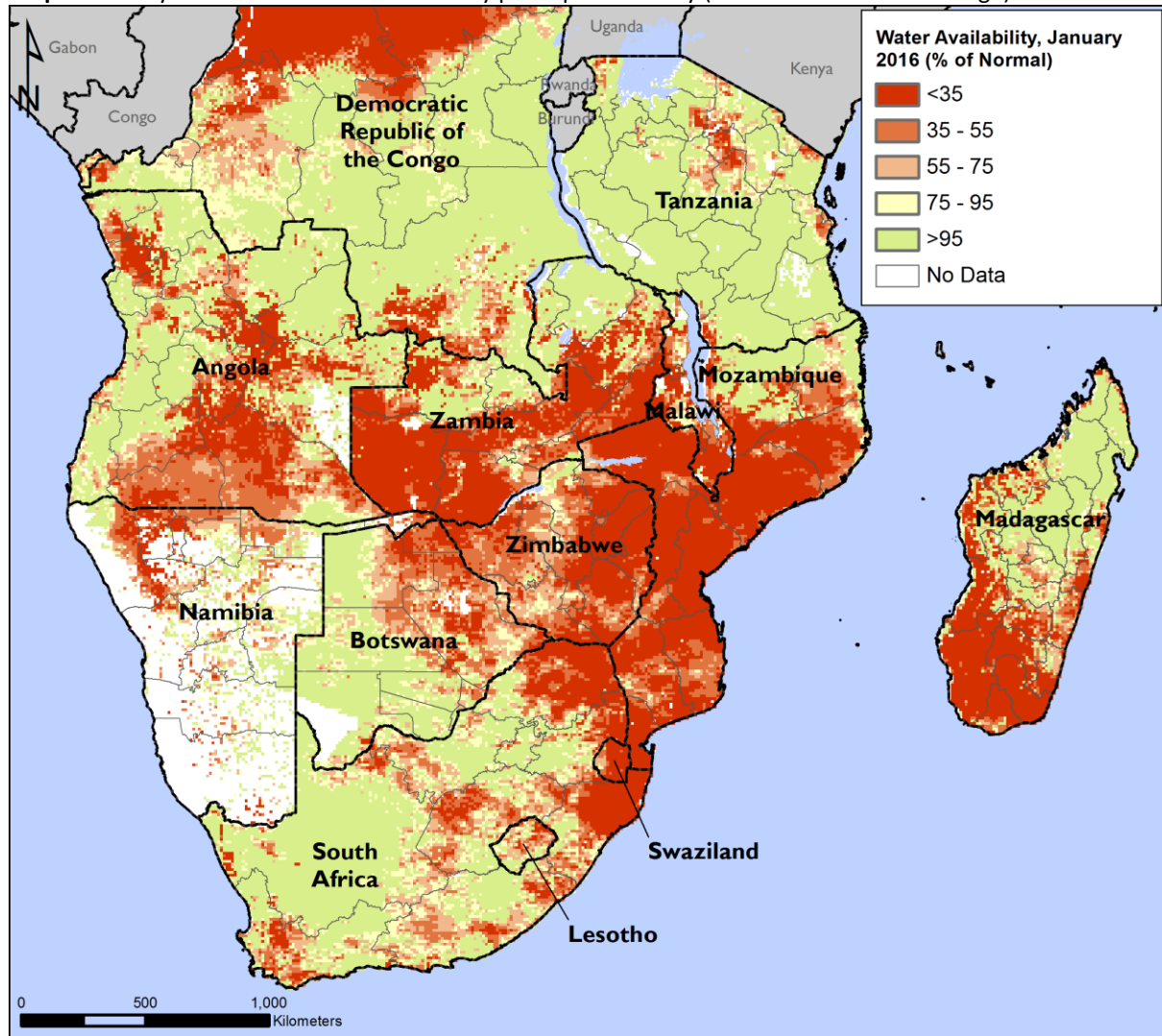
*Note: Major crop zones are defined as the main production areas for the country's primary crop. The identified areas are not necessarily surplus producing areas and are spatially generalized for presentation and calculation purposes.*

This map highlights areas where the current season has been one of the five driest seasons in the past 35 years. Large areas of central and southern Mozambique, southern Malawi, Zimbabwe, South Africa, Lesotho, southern Angola, northern DRC, and western Madagascar have experienced the driest or second driest year on record. Smaller areas of Namibia, Zambia, Botswana, southern Madagascar, and Swaziland have also experienced historic dryness.

**Map 3.** Areas which have received two consecutive years of below-average rainfall (2014/15 and 2015/16)Source: FEWS NET/USGS [SPI](#)

This map highlights areas of the region which have received two consecutive years of atypically poor rainfall. Rust-colored areas have experienced two consecutive years of moderate drought (defined as a Standardized Precipitation Index [SPI] of < -0.8) or worse. Orange areas have received two consecutive years of abnormal dryness (defined as an SPI of < -0.5) or worse. The fact that last year was also dry in many areas is exacerbating the impacts of this year's drought on crop conditions, pasture/forage regrowth, and water availability.

Note that the map above does not fully illustrate the likely impact of the two poor seasons on crop production. This is because in some areas, like Zimbabwe, central Mozambique, southern Malawi, and parts of southern Zambia, 2014/15 rainfall was near normal but the distribution of this rainfall over the season was so poor that crops were negatively affected.

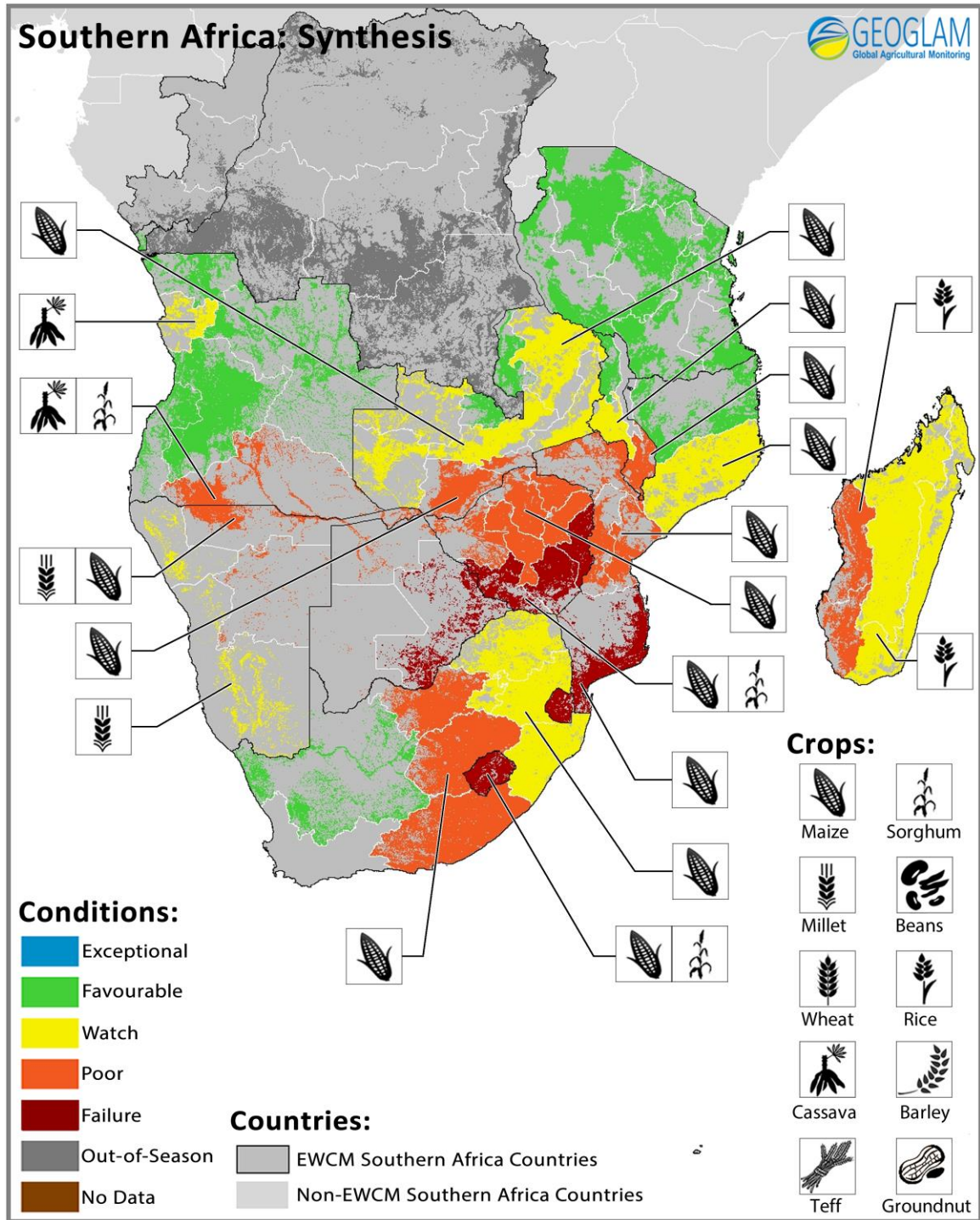
**Map 4.** January 2016 surface water availability per capita anomaly (% of the 1982-2015 average)

Source: FEWS NET/NASA

This map illustrates the outputs of a surface water availability model run by NASA as part of the [FEWS NET Land Data Assimilation System \(FLDAS\)](#). This model incorporates data on rainfall, humidity, winds, soil type, and temperature to estimate surface water availability and compare it to the 1982-2015 historical record. These data suggest severe surface water deficits (less than 35 percent of average) in much of Zambia, Malawi, Zimbabwe, and Mozambique as well as smaller (but still significant) areas of Madagascar, South Africa, Botswana, Angola, and Swaziland.

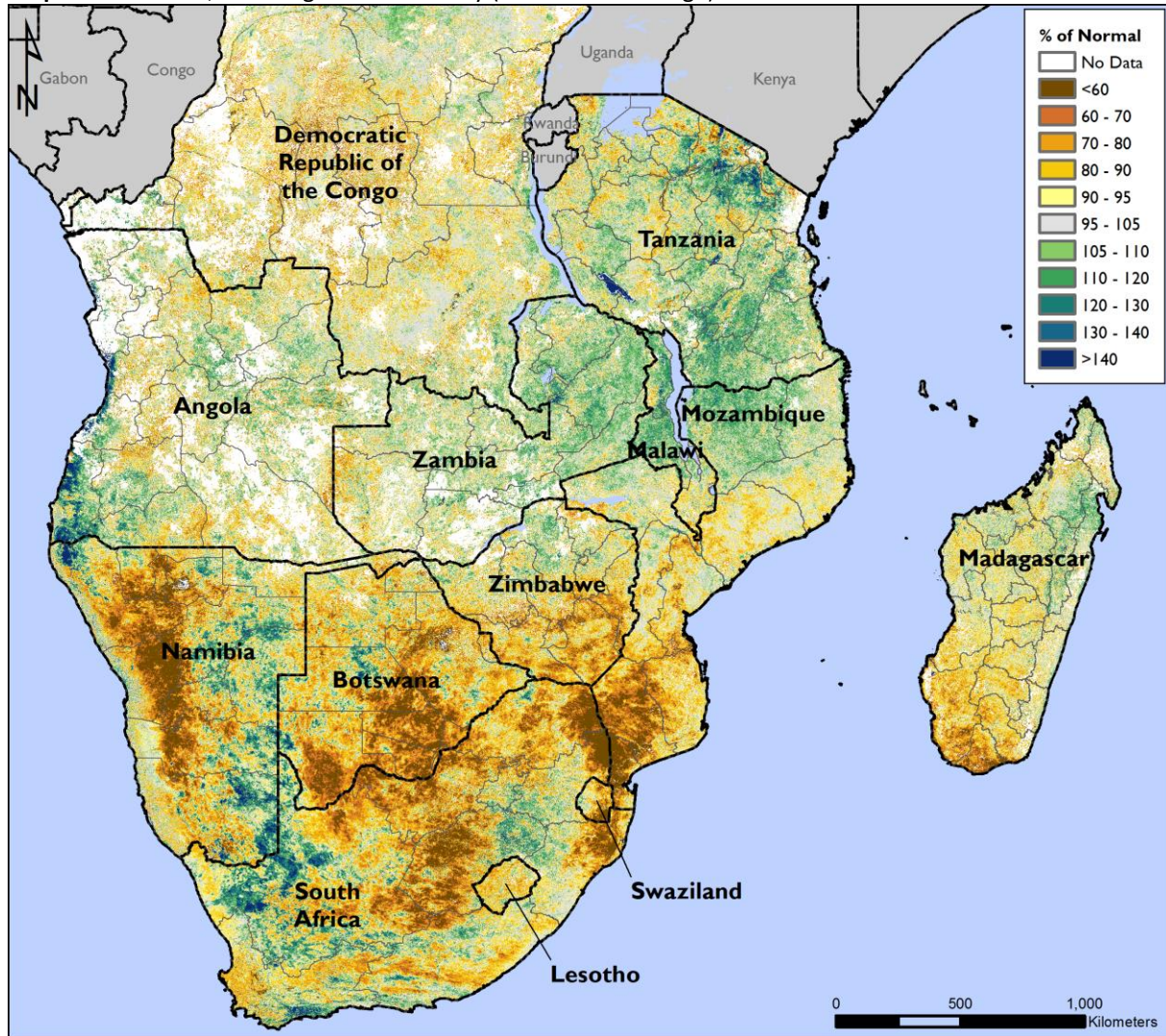
Note that heavy rainfall was received during the first two weeks of March in eastern Botswana and neighboring areas of southwestern Zimbabwe and southwestern Zambia. Though this rainfall is unlikely to improve crop production at this late date in the season, it is likely to have a positive effect on water availability in these areas.

Map 5. Crop conditions as of early March 2016



Source: GEOGLAM Early Warning Crop Monitor

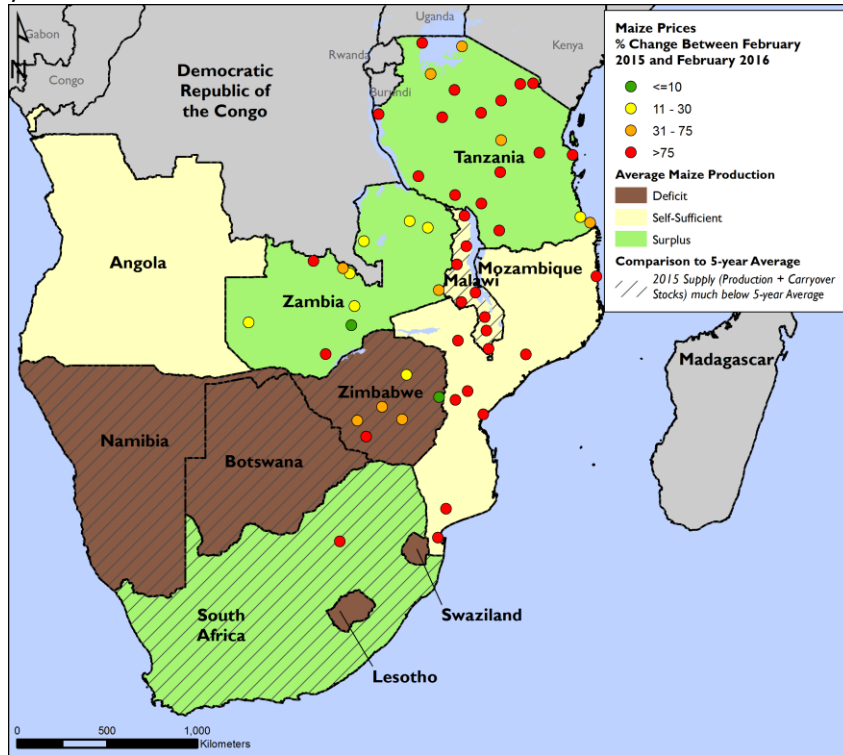
Map 5 presents crop conditions in Southern Africa as classified by the [GEOGLAM Early Warning Crop Monitor \(EWCM\)](#). The EWCM is a consensus based, multi-agency effort in which experts from FEWS NET, JRC, WFP, Agricultural Research Council of South Africa, and the University of Maryland assess a range of inputs, including remotely sensed imagery and field reports, to classify current crop conditions. As of February 28, the EWCM classified maize crop conditions as “Failure” in Lesotho, Swaziland, southern Mozambique, southern Zimbabwe, and eastern Botswana. Crop conditions were classified as “Poor” in western Madagascar, southern Zambia, southern Malawi, northern Namibia, and many surplus producing areas of South Africa, Zimbabwe, and Mozambique.

**Map 6.** March 1-10, 2016 vegetation anomaly (vs. 2001-10 average)

Source: FEWS NET/USGS

This map uses [eMODIS Normalized Difference Vegetation Index \(NDVI\)](#) to estimate the current health and density of vegetation compared to average. In addition to informing an assessment of crop conditions, these data are a good indicator of pasture/forage availability for livestock. Early March imagery indicates that vegetation conditions are significantly below-average in central Namibia, Botswana, South Africa, southern Zimbabwe, southern Mozambique and southern Madagascar. These poor vegetation conditions are particularly concerning given that little rain is typically received between April and September.

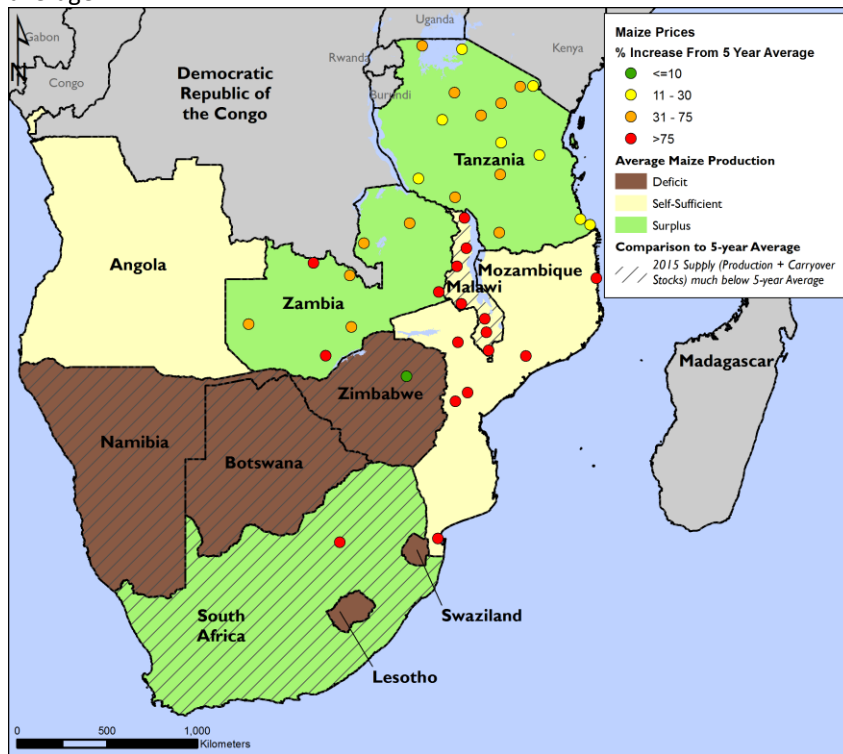
**Map 7a.** February 2016 retail maize grain prices compared to the previous year



Source: FEWS NET

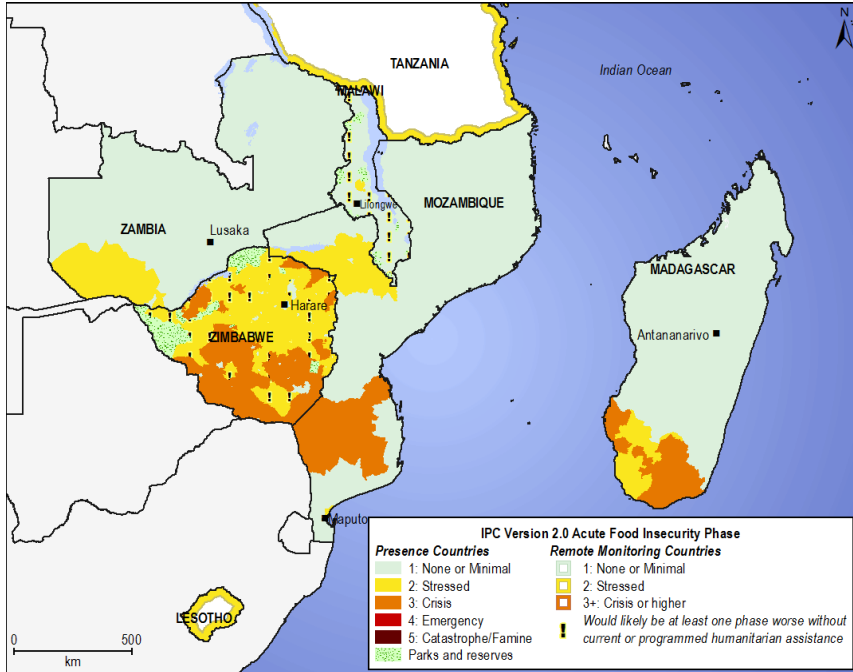
Maps 7a and 7b illustrate February 2016 retail maize grain prices in Southern Africa compared to last year and the five-year average. Maize grain prices have increased by more than 75 percent compared to last year on more than half of the markets monitored by FEWS NET. Prices are also significantly above the five-year average (e.g., > 30 percent) on 30 of the 39 markets with at least a 5-year historical time series. Prices are especially high in Malawi and Mozambique where prices in all monitored markets are more than 75 percent above both the respective five-year average and 2015 price levels. These high prices are primarily a result of below-average 2015 maize production and very poor prospects for 2016 crop harvests. Depreciation of many regional currencies has also played a role.

**Map 7b.** February 2016 retail maize grain prices compared to the 5-year average



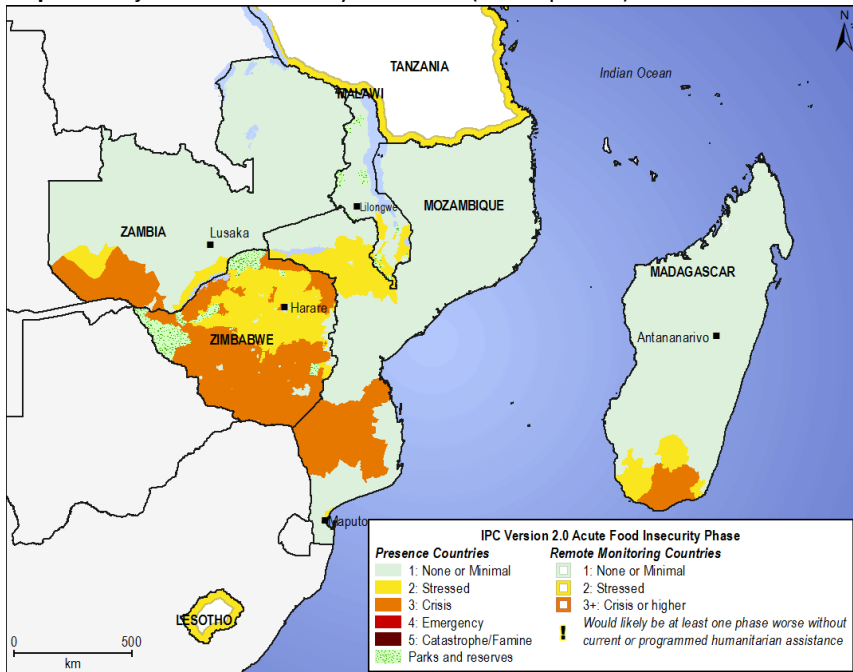
Source: FEWS NET

**Map 8a.** Current food security outcomes (February 2016)



Source: FEWS NET

**Map 8b.** Projected food security outcomes (Jun-Sep 2016)



Source: FEWS NET

Two consecutive below-average rainy seasons have significantly impacted crop and livestock production, cereal prices, water availability, and livelihoods within the Southern Africa region. As a result, FEWS NET analysis has identified atypical levels of acute food insecurity across the Zimbabwe, Malawi, Mozambique, Zambia, Lesotho, and Madagascar (Map 8a). Partner analysis suggests atypical needs also exist in other drought affected countries. Overall, FEWS NET estimates that nearly four million people currently face Crisis (IPC Phase 3) or worse across the region. This includes countries not covered by FEWS NET, such as Namibia, Botswana, and Swaziland. This total includes nearly one million people in Malawi, and at least half a million people each in Zimbabwe, Mozambique, and Madagascar.

June to September is usually the region's most food secure period of the year, when food stocks are at their highest levels and staple food prices are low. However, given the severity of the ongoing drought, and the impacts of two consecutive dry seasons improvements in food security following April/May harvests are expected to be short lived. By the June to September period widespread Crisis (IPC Phase 3) is considered likely (Map 8b) and the size of the food insecure population will have returned to current levels.

Beyond September, the combination of reduced income, limited food stocks, limited water availability, and sharp increases in staple food prices is likely to drive a major food security crisis in Southern Africa. Needs are likely to peak between November/December 2016 and February/March 2017 and the size of the food insecure population is likely to at least double compared to current levels.