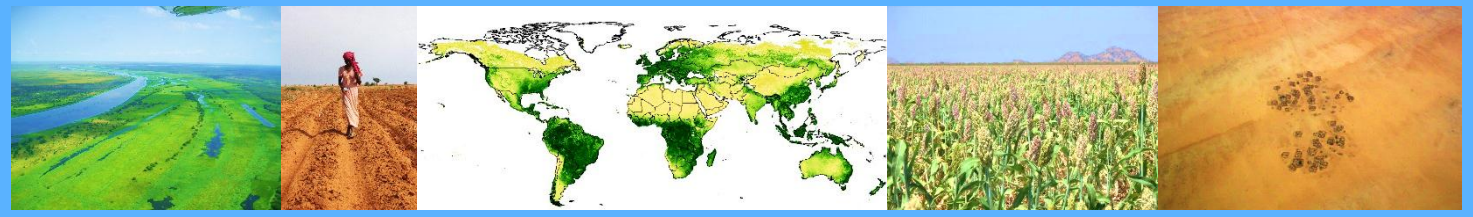

Southern Africa

The 2014-2015 Rainfall Season

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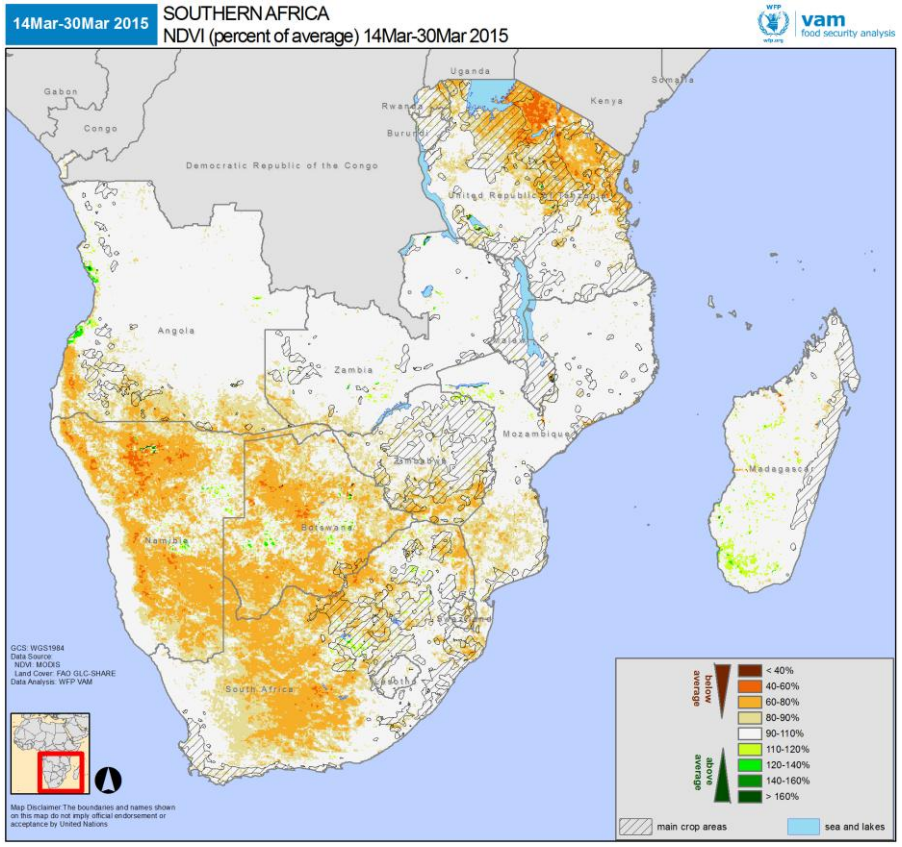
HIGHLIGHTS

- The 2014-2015 growing season is coming to a close in Southern Africa and further rainfall will not significantly change the current seasonal outcomes. Overall, the season has been characterized by extensive rainfall deficits resulting in markedly below average end of season vegetation.
- There has been a **sharp decline** in the **regional maize production**: **South Africa**'s 2015 production is down **32%** on last year's bumper crop. **Zimbabwe** maize production may drop by as much as **40%** from the average with a likely cereal deficit between **1.0-1.3 million MT**. Most other countries will also see production fall. Last season's bumper crop and large stocks will help to minimise some of the negative effects.
- Crop production deficits were caused by poor rainfall distribution during the season:
  - In the **early stages** (October-November), there were significant **rainfall deficits** and **delays** to the start of the growing season in the border areas of Mozambique, Malawi, Zambia and Zimbabwe. The crop-growing regions of eastern South Africa and Madagascar were also affected.
  - From **mid January** to **late March**, **drier than average conditions** affected the key development stages of the staple maize crop in most of the region, particularly in eastern South Africa, Botswana, Namibia, Zimbabwe, Malawi and southern Mozambique.
- Continuous **heavy rainfall** during **mid December to mid January** led to **flooding** along the Shire river in Malawi and the lower Zambezi in Mozambique, affecting up to 800,000 people. This also caused further **damage to croplands** and additional loss of production.

SOUTHERN AFRICA SEASONAL ANALYSIS – 2014/2015



Vegetation index in late March 2015 as a percent of a 12 year average (orange shades for below average vegetation, green shades for above average vegetation). This represents vegetation conditions at the late stages of the maize growing cycle and conveys a broad indication of seasonal performance.

End of Season Status

Country	Maize Crop Performance
Zimbabwe	50% drop relative to last year (40% relative to 5 year average). Cereal deficit between 1.0 to 1.3 million tonnes
South Africa	32% drop relative to last year (21% relative to 5 year average). Reduced exports.
Namibia	33% drop relative to last year. Also poor grazing and pasture
Lesotho	30% drop relative to last year and 5 year average
Swaziland	20% drop relative to last year
Malawi	28% drop relative to last year, 123,000 tonnes maize deficit
Zambia	17-25% drop relative to last year, enough for national requirements, positive export ability

Tentative estimates of end of season maize crop performance for Southern Africa countries. ***More details further below.***
Source: Governments, WFP Country Offices, FAO HQ and FAO Southern Africa Regional Office

Overall, the 2014-2015 season in Southern Africa has been characterized by extensive rainfall deficits across most of the region. The early January 2015 flooding in southern Malawi and northern Mozambique resulted from heavy but circumscribed rains. In fact, rainfall deficits affected the 2014-2015 growing season from the outset, leading to severe delays in the start of the growing season. Good rainfall from mid December to mid January was followed by further pronounced deficits lasting until March, which impacted the production of the region's crops as well as its pastoral and grazing resources.

The impact of the poor rainfall season is revealed in the far below average vegetation greenness in the run-up to the harvest. Severe effects can be noticed in the drier areas of the region, such as Namibia, Southern Angola, Botswana and western South Africa caused by persistent, season-long rainfall deficits. In other, predominantly agricultural areas, impacts arise from a delayed start of the season coupled with rainfall deficits during crucial, sensitive stages of maize (the region's staple crop) development. In Malawi, Mozambique and Madagascar there was additional damage to croplands from flooding and heavy rainfall.

Major Features of the 2014-2015 season

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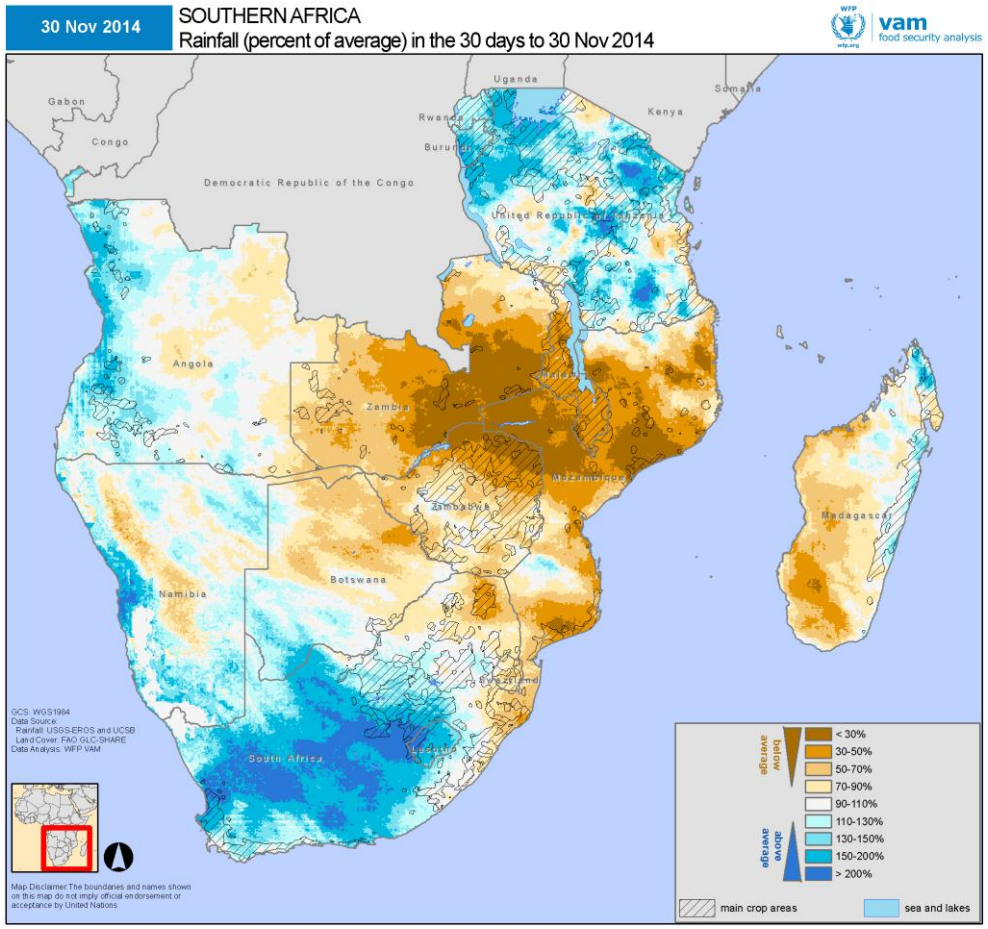
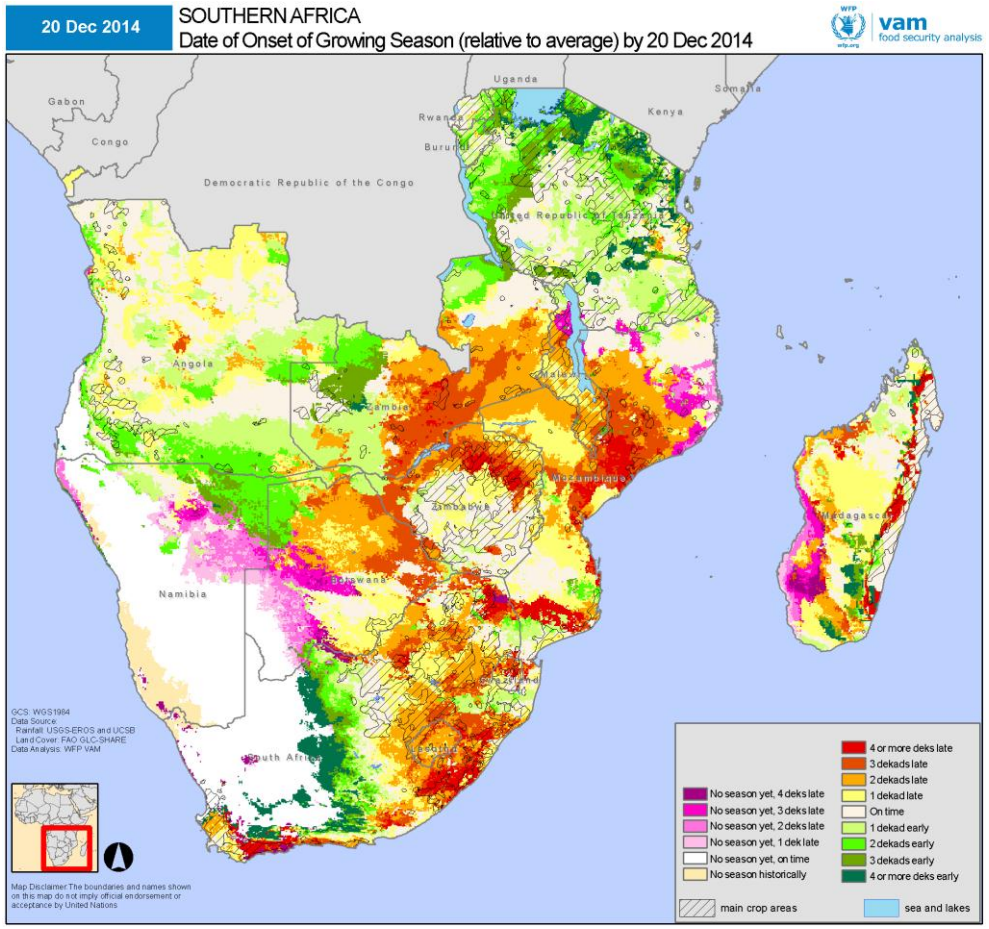
SOUTHERN AFRICA: EARLY SEASON 2014/2015

October to early December: a poor start to the season





Left: November 2014 rainfall compared to average

Orange shades for below average, blue shades for above average rainfall.

Right: Variations in the start of the growing season with respect to average (delays in reds and oranges, earlier starts in green shades)

Note strong rainfall deficits and ensuing delays in the start of the season

Large rainfall deficits lasting from late October to mid-December caused severe delays in the start of the growing season, in an area extending from eastern South Africa to Botswana, Zimbabwe, Mozambique and Zambia.

These delays reached five weeks in parts of Zambia, Zimbabwe and Mozambique, and three-to-four weeks in South Africa's grain-producing regions. Where more moderate delays were registered, early rainfall was below average.

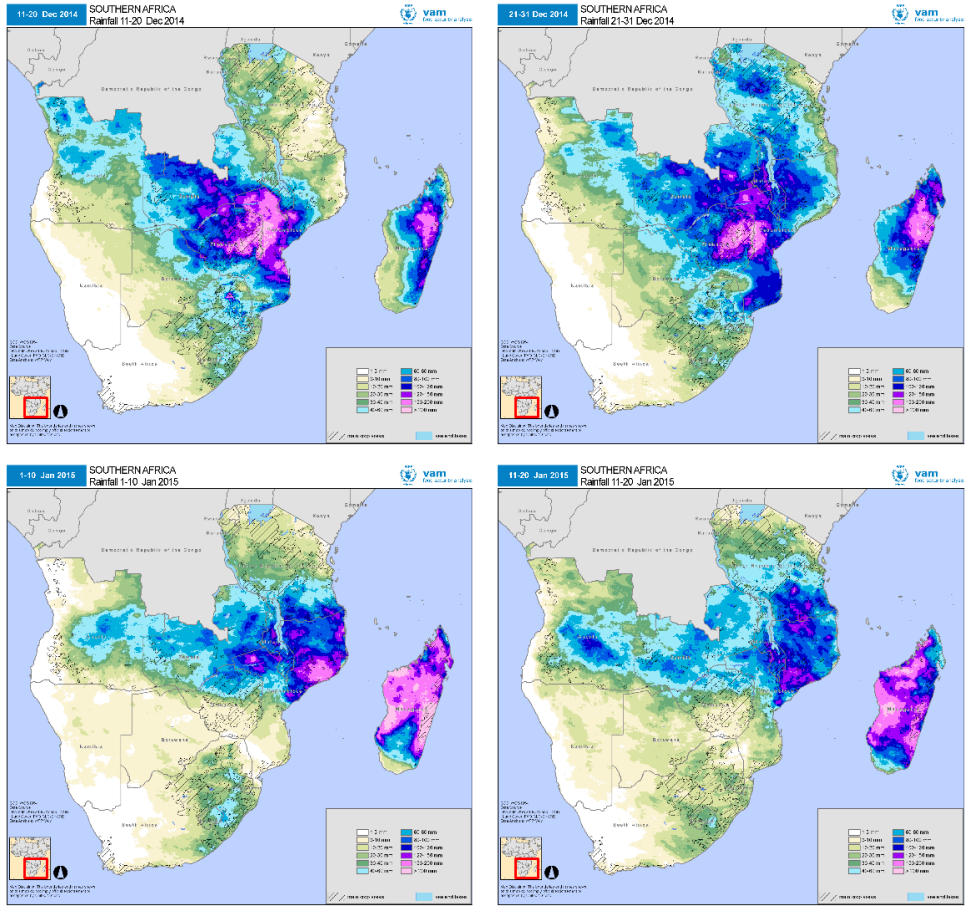
Impacts – Shift of key stages of crop development to later, drier stages of the season. Later harvest led to a longer hunger gap, though the previous season's bumper crop had boosted household stocks and economic access was favourable.

December-January: Flooding in Malawi and Mozambique

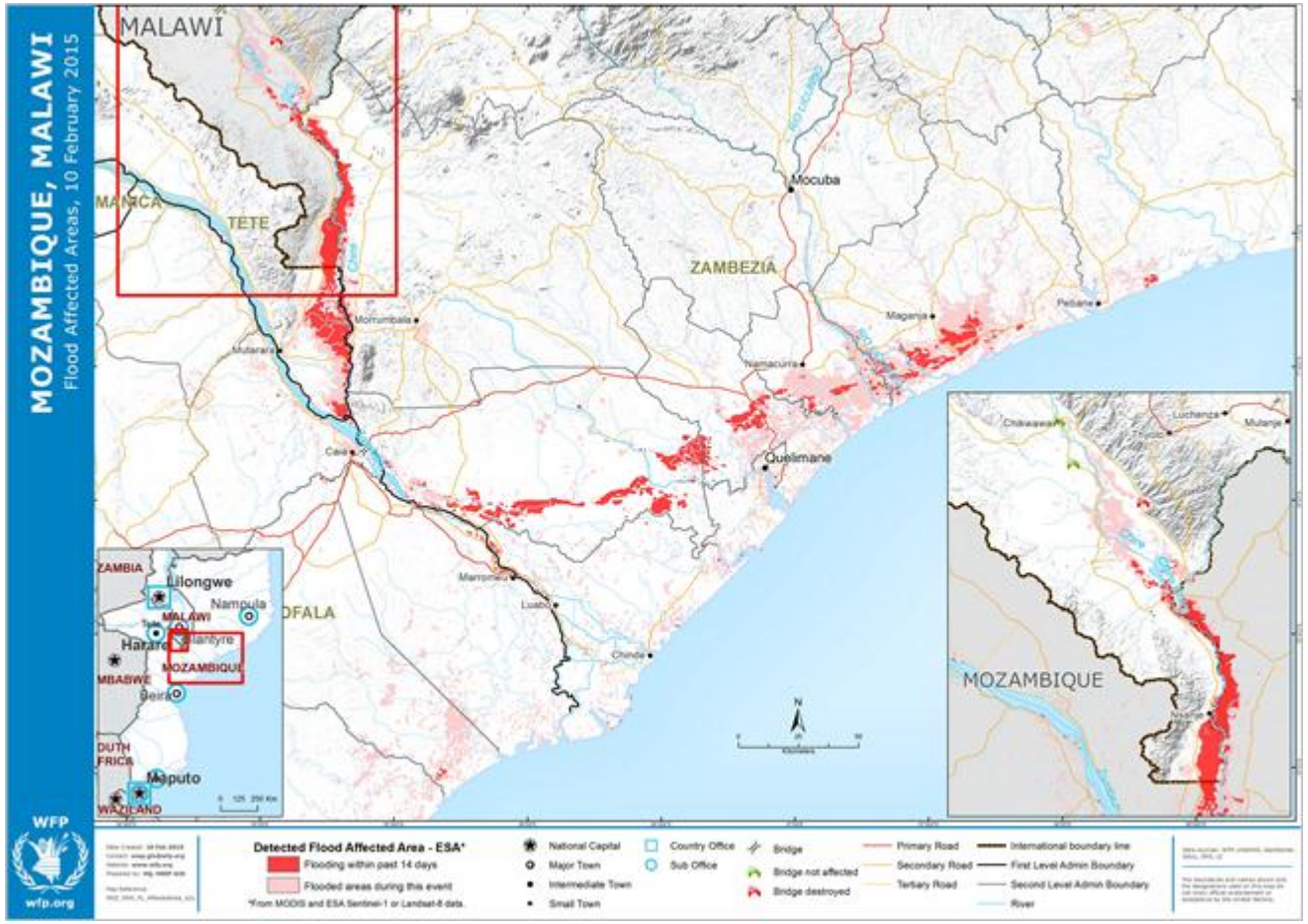
From mid-December to mid-January, very heavy persistent rainfall in Malawi and in Mozambique's Zambezia region led to flooding along the Shire and Zambezi rivers. The persistent heavy rainfall saturated the soil, which was then unable to absorb the very intense rain that fell in early January. This led to further flooding along the Shire and lower Zambezi rivers, as well as in Zimbabwe and Madagascar.

Impacts: OCHA figures indicate flooding affected 800,000 people (640,000 in Malawi, 160,000 in Mozambique) of whom 280,000 were displaced (230,000 in Malawi, 50,000 in Mozambique).

Cropland losses have also been significant (a reported 65,000 ha in Mozambique and 64,000 ha in Malawi). Localized damage also occurred in Zimbabwe.



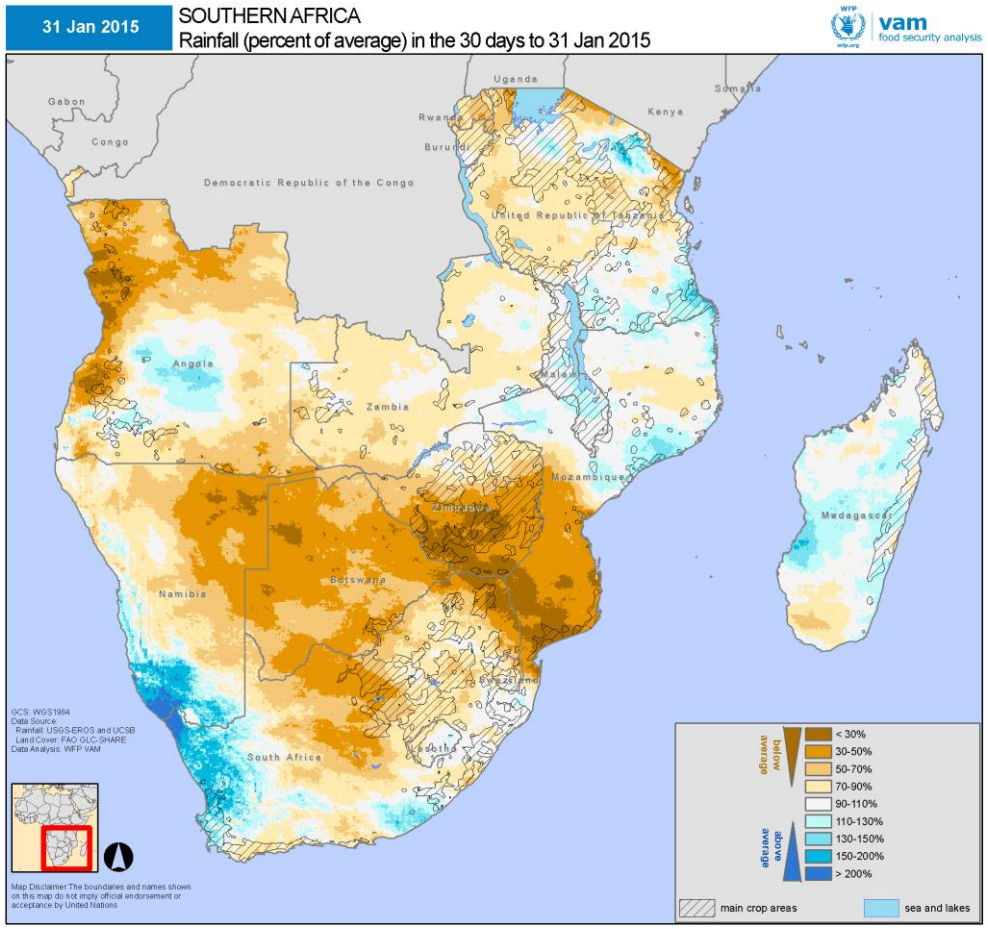
10 day rainfall amounts from second dekad December 2014 to second dekad January 2015 in Southern Africa. Persistent, heavy and intense rainfall can be seen over Malawi, northern Mozambique and Madagascar throughout the period

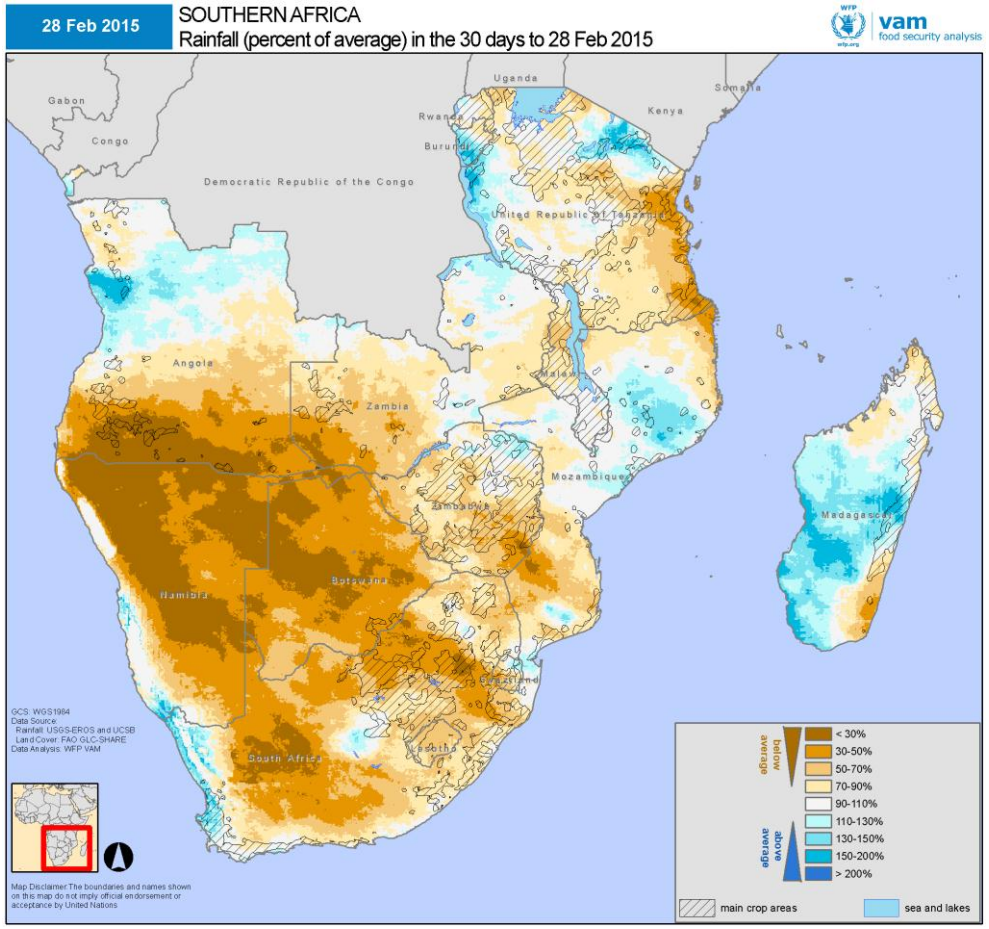


Satellite derived flood extent map along the Shire and Zambezi rivers. Source WFP (OMEP-GIS)

SOUTHERN AFRICA: CORE SEASON 2014/2015

January-February: Generalized dryness across the region





Left: January 2014 rainfall compared to average

Right: February 2014 rainfall compared to average

Orange shades for below average, blue shades for above average rainfall.

Note widespread strong deficits during both months

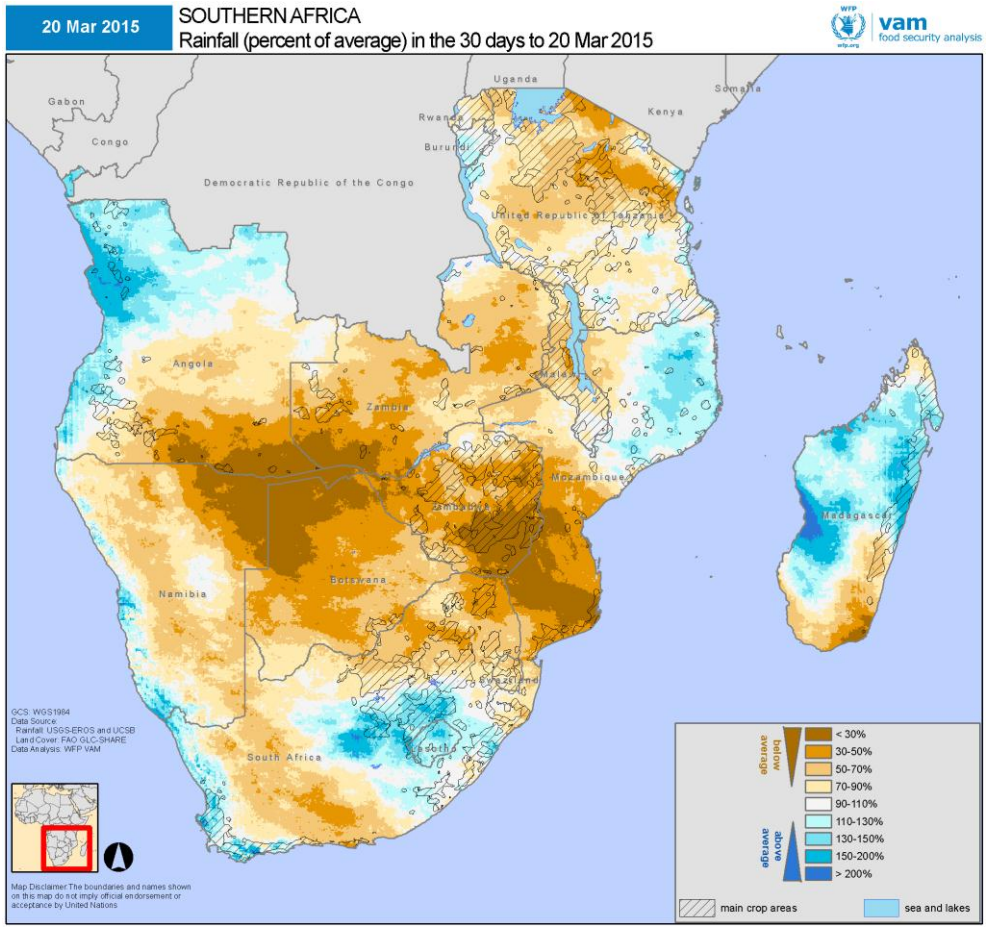
The flowering and early grain filling stages of maize (the region's staple crop) take place during this period and are particularly sensitive to moisture deficits: even moderate shortages of rain can cause serious impacts on maize yield.

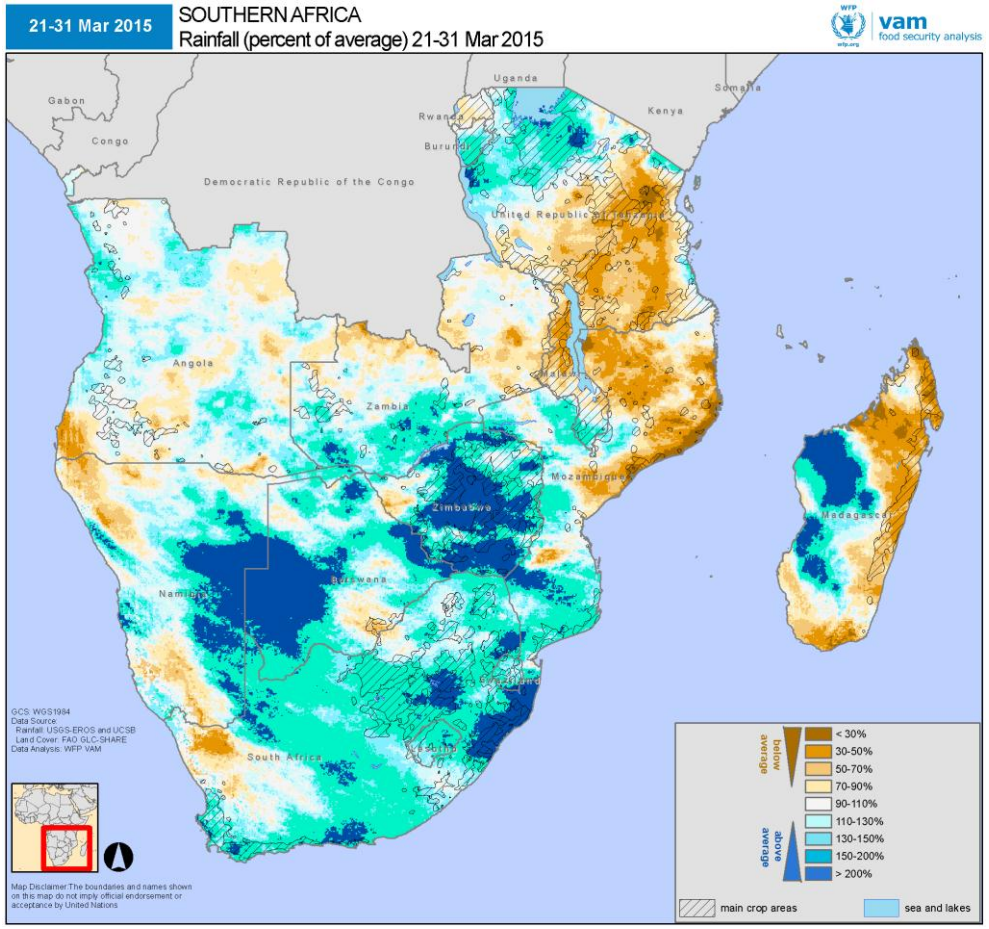
Large proportions of the region's grain producing areas suffered severe rainfall deficits during this period, particularly in eastern South Africa, southern Zimbabwe and southern Mozambique. Botswana, Namibia and southern Angola also suffered a pronounced lack of rain. Large deficits affected Zambia and Malawi later, during March.

Impacts – Significant drop in crop yields accompanied by reductions in the proportion of planted area harvested. Significant impacts expected for pastoral livelihoods and livestock in Botswana, Namibia and southern Angola.

SOUTHERN AFRICA: CORE SEASON 2014/2015

March: Dryness continues, later rains too little, too late





Left: February 20th to March 20th 2015 rainfall compared to average

Right: March 21st-30th 2015 rainfall compared to average

Orange shades for below average, blue shades for above average rainfall.

Note widespread strong deficits during late February and early/mid March, followed by wetter than average conditions in late March.

In case of severe rainfall deficits during flowering and gain filling, subsequent rainfall can do little to reverse the damage. During this season, as many areas had delayed starts, it could be that late rains might benefit late sown crops whose flowering had occurred later than usual. However, pronouncedly drier than average conditions prevailed until the second dekad of March, and the better rains that fell in late March across most of the region (except for northern Mozambique and Tanzania) provided little if any relief for crops. Moderate relief may take place in pastoral areas where grasslands can make use of these late rains.

Impacts – No significant improvement in crop production perspectives. Minor localized improvement in pasture and grazing conditions.

Outcome: Generalized deficits in regional cereal production

South Africa: the preliminary maize production forecast estimated the 2015 harvest to be the worst in eight years, with a drop of 21 percent compared to the average of the last five years and 32 percent down on last year's bumper crop, mostly through reduced yield.

Recent revisions have provided only a marginal improvement: total maize production for the current season is expected to be 9.66 million tonnes (see government report).

The country may just remain a net exporter, though amounts available for export will be restricted.

Swaziland and **Lesotho** are expected to have been similarly affected.

Malawi: Large late February and March rainfall deficits damaged crop performance and reduced production adding to the damage and cropland loss due to early January flooding and heavy rainfall.

The government estimates a drop in maize production of 27 percent compared to last year's production and 20 percent compared to the five-year average. The maize deficit is expected to be 123,000 tonnes for a national requirement of 3mi tonnes.

Namibia: Crop production is expected to drop by 30 percent compared to the long-term average. Grazing availability for livestock will be significantly affected given compounding effects from poor previous seasons.

Zimbabwe: An estimated 1.5 million ha were planted with maize. Preliminary government assessments have estimated that 0.3 million ha will be written off, leaving 1.2 million ha to be harvested. This is likely to be a maximum amount, since some southern districts may have suffered heavier planted area losses.

Assuming a maize yield between 0.5 to 0.6 tonnes/ha, maize national production will be between 600,000 to 700,000 tonnes.

Zimbabwe's Farmers' Union expects production to be 700,000 tonnes. This is a 50 percent drop from the previous bumper crop and 40 percent lower than the 2009 - 2013 average. Other more optimistic estimates point to maize production of 900,000 tonnes.

In all, the cereal deficit for Zimbabwe is expected to range from at least 1.0mi tonnes to about 1.3mi tonnes :

> This is based on a national cereal requirement (including animal feed) of 2.2 million tonnes, considering a small grain production of 110,000 tonnes, plus current stocks of 160,000 tonnes and the above-mentioned maize production scenarios

Zambia: Initially favourable prospects faded with drier-than-average conditions that lasted until mid-March. Severe delays in the start of the season pushed maize crop sensitive stages into later, drier periods. Current forecasts predict a drop of at least 17–25 percent from last year's bumper crop, though output is likely to be close to the five-year average. Large stocks from previous seasons allow the country to cover its requirements (about 2 million tonnes) and probably contemplate exports.

The Season: Month by Month

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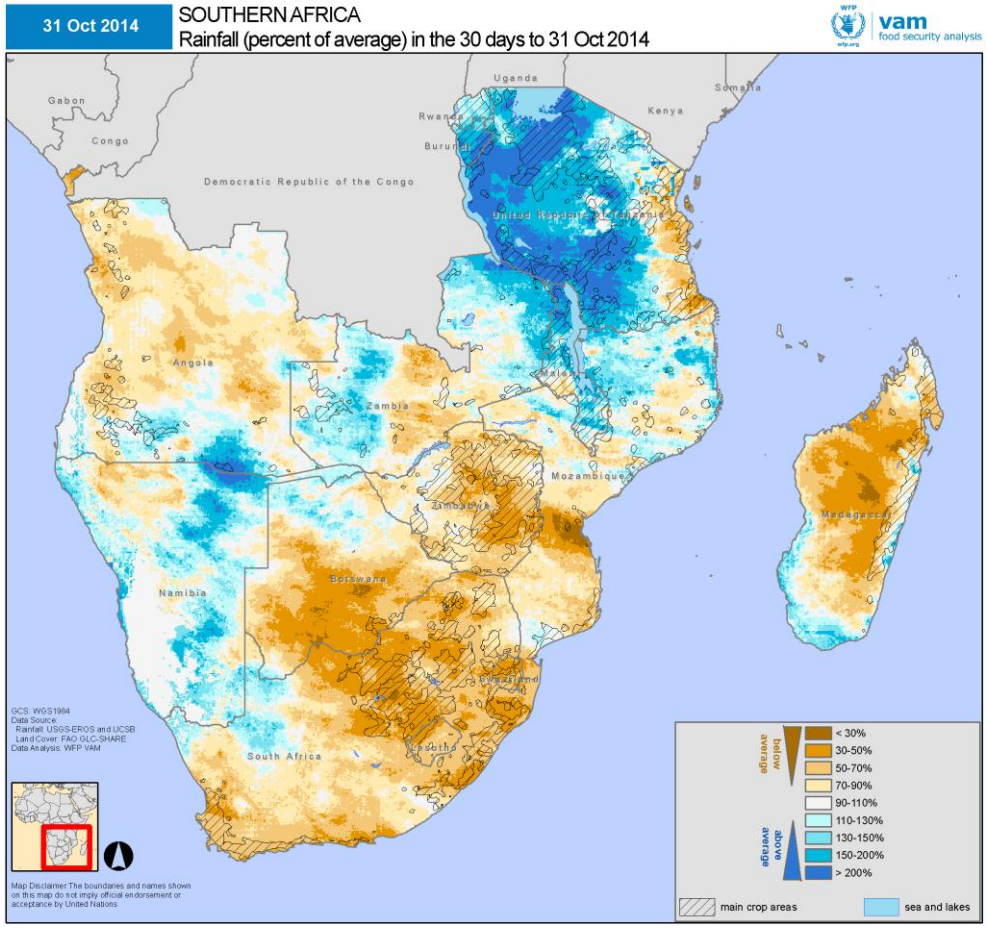
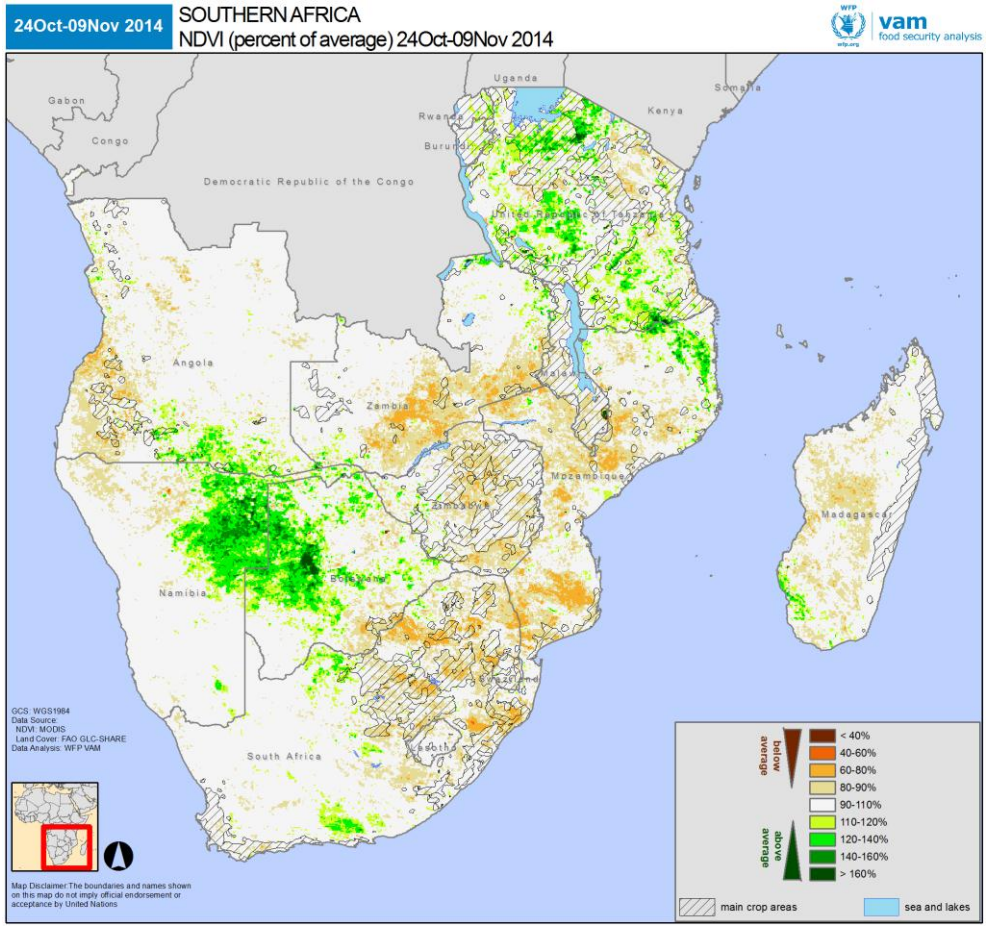
SOUTHERN AFRICA SEASONAL ANALYSIS – 2014/2015





October 2014 rainfall as a percent of a 20 year average (left). Brown shades for below average rainfall, blue shades for above average seasonal rainfall

October 2014 vegetation index as a percent of a 12 year average (right). Orange shades for below average, green shades for above average vegetation.

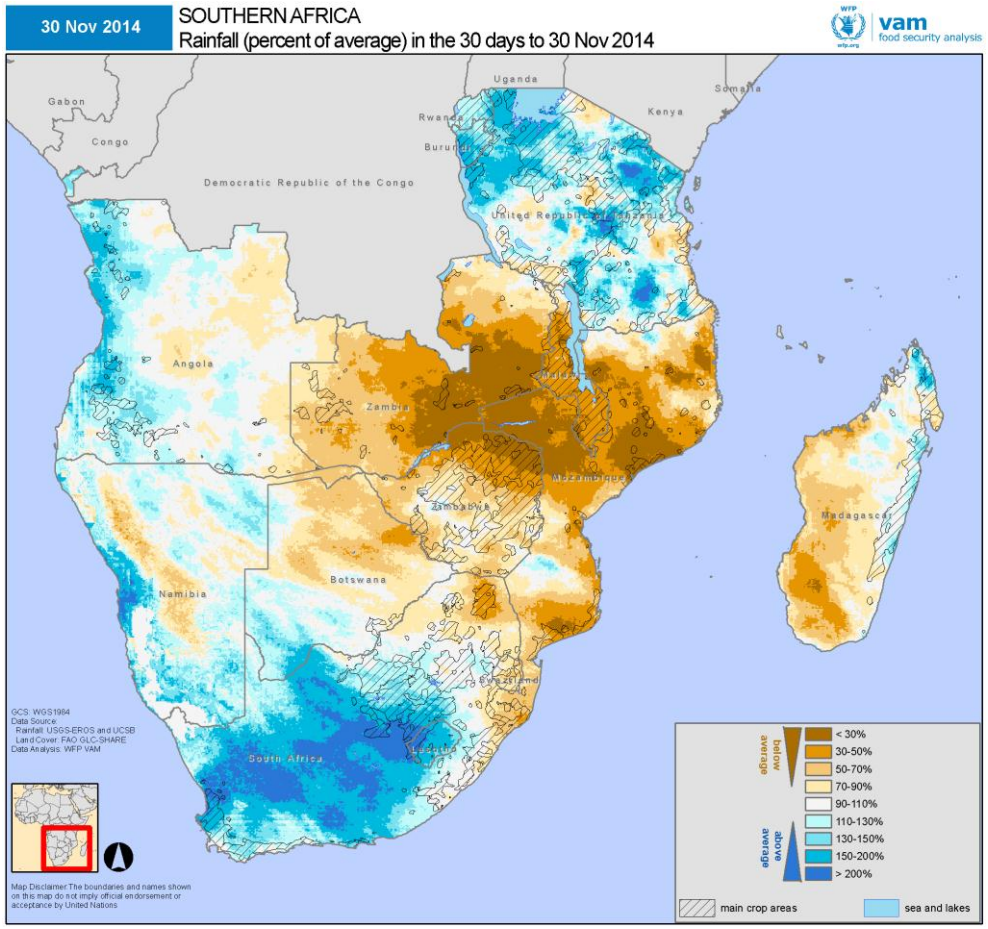
Hashed pattern indicates main agricultural areas.

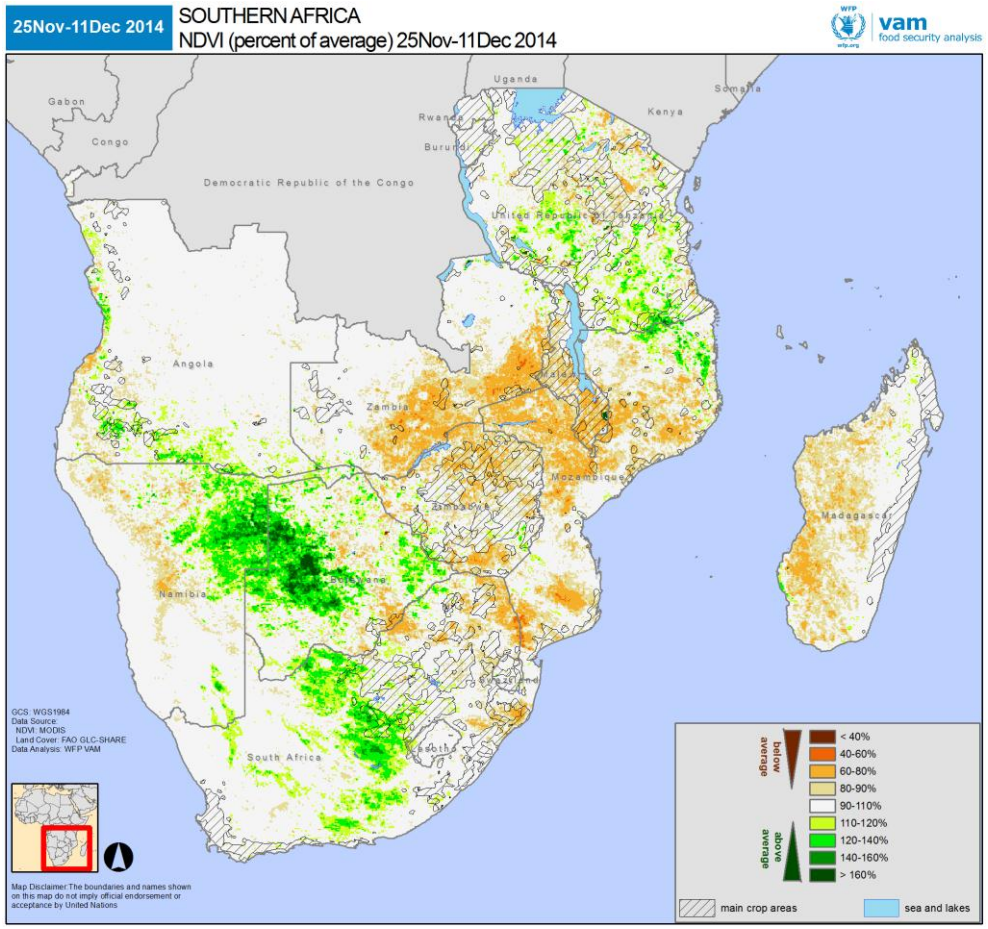
October 2014

In October, rainfall across the most of the region was below average, setting the tone for the first stage of the 2014–2015 season. By contrast, Tanzania enjoyed above-average rainfall during this month, as did southern Angola and NE Namibia.

The lower-than-average rainfall caused vegetation deficits, which started to spread across the rainfall deficit areas. Contrasting conditions were evident in Tanzania. Rainfall in the semi-arid regions of southern Angola, Namibia and Botswana led to a (typically) strong response from savannah grasslands, resulting in noticeably above-average vegetation levels.

SOUTHERN AFRICA SEASONAL ANALYSIS – 2014/2015





November 2014 rainfall as a percent of a 20 year average (left). Brown shades for below average rainfall, blue shades for above average seasonal rainfall

Late November 2014 vegetation index as a percent of a 12 year average (right). Orange shades for below average, green shades for above average vegetation.

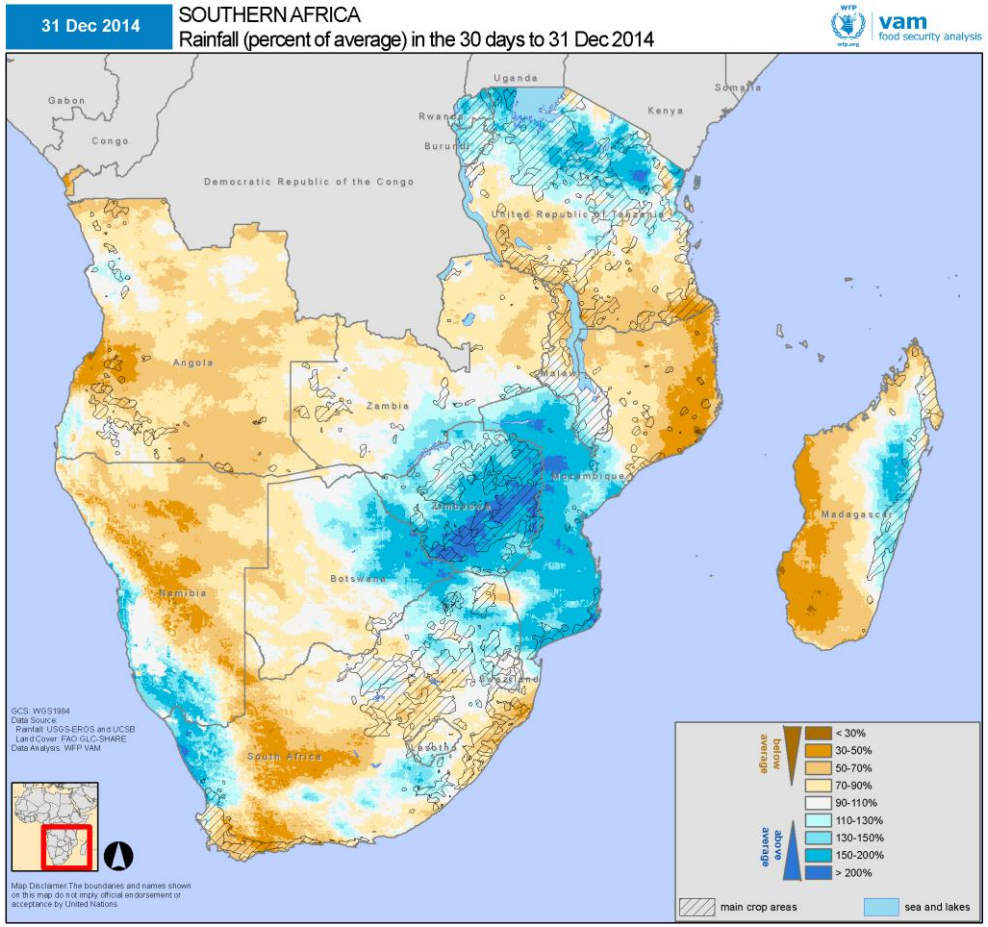
Hashed pattern indicates main agricultural areas.

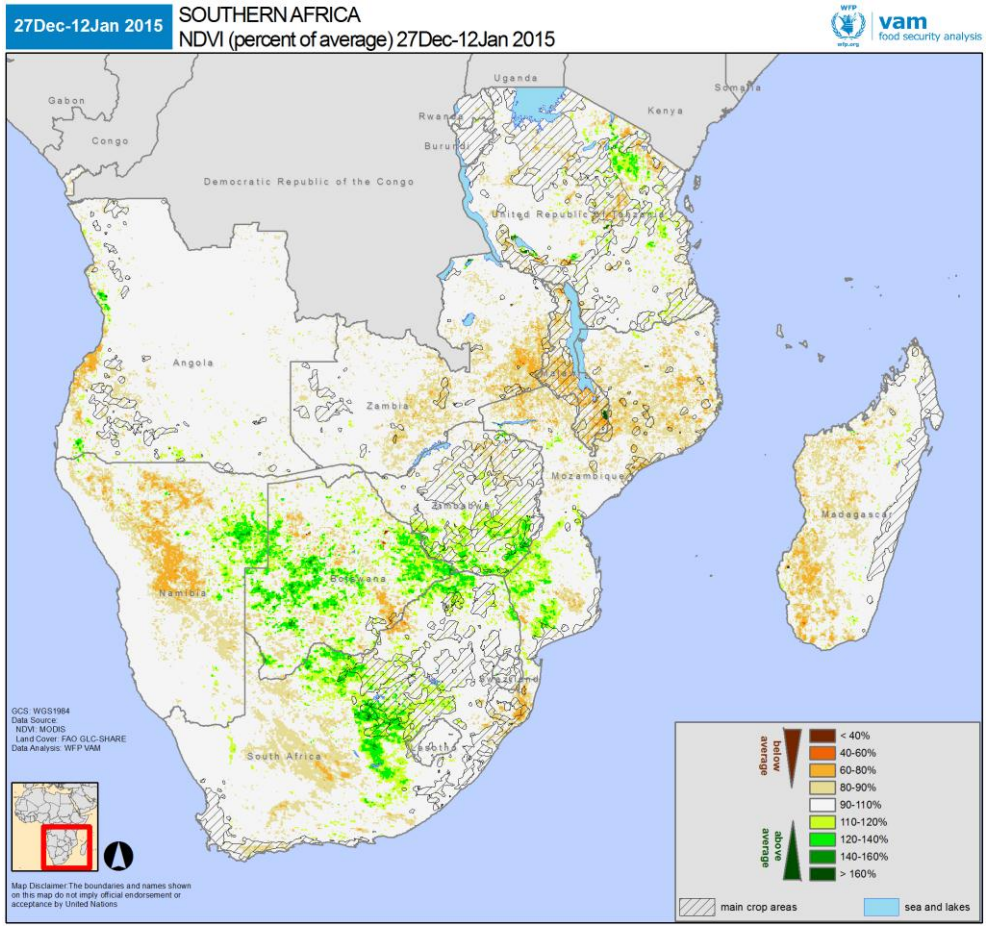
November 2014

During this month there were very pronounced rainfall deficits across Zambia and northern Mozambique, with many areas receiving less than 30 percent of the long-term mean rainfall. In contrast, there was significant rainfall across western and central South Africa, allowing the growing season to start. However, major grain-producing regions of the country remained under deficit conditions.

As a result, below average vegetation levels spread out and intensified, signalling increasing problems for the normal start of the growing season. Western and central South Africa showed a good response to the recent rainfall while above-average vegetation in Namibia and Botswana looked set to continue for a while.

SOUTHERN AFRICA SEASONAL ANALYSIS – 2014/2015





December 2014 rainfall as a percent of a 20 year average (left). Brown shades for below average rainfall, blue shades for above average seasonal rainfall

Late December 2014 vegetation index as a percent of a 12 year average (right). Orange shades for below average, green shades for above average vegetation.

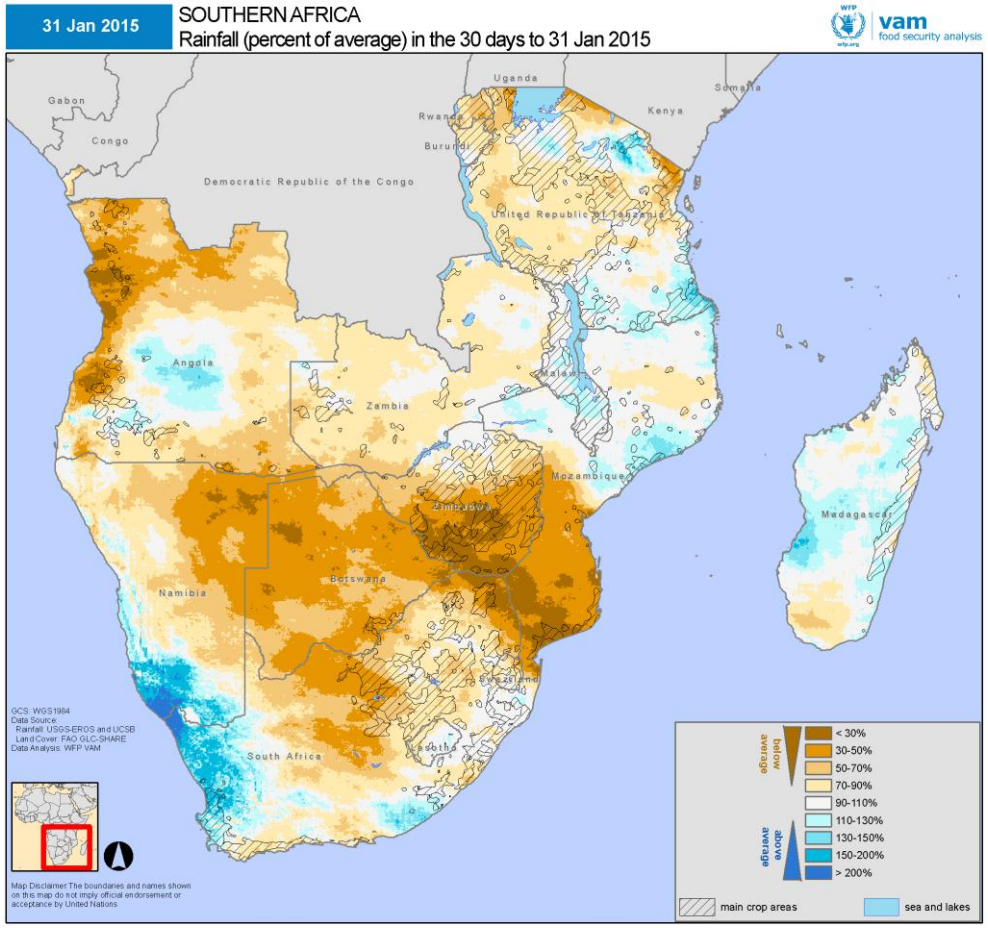
Hashed pattern indicates main agricultural areas.

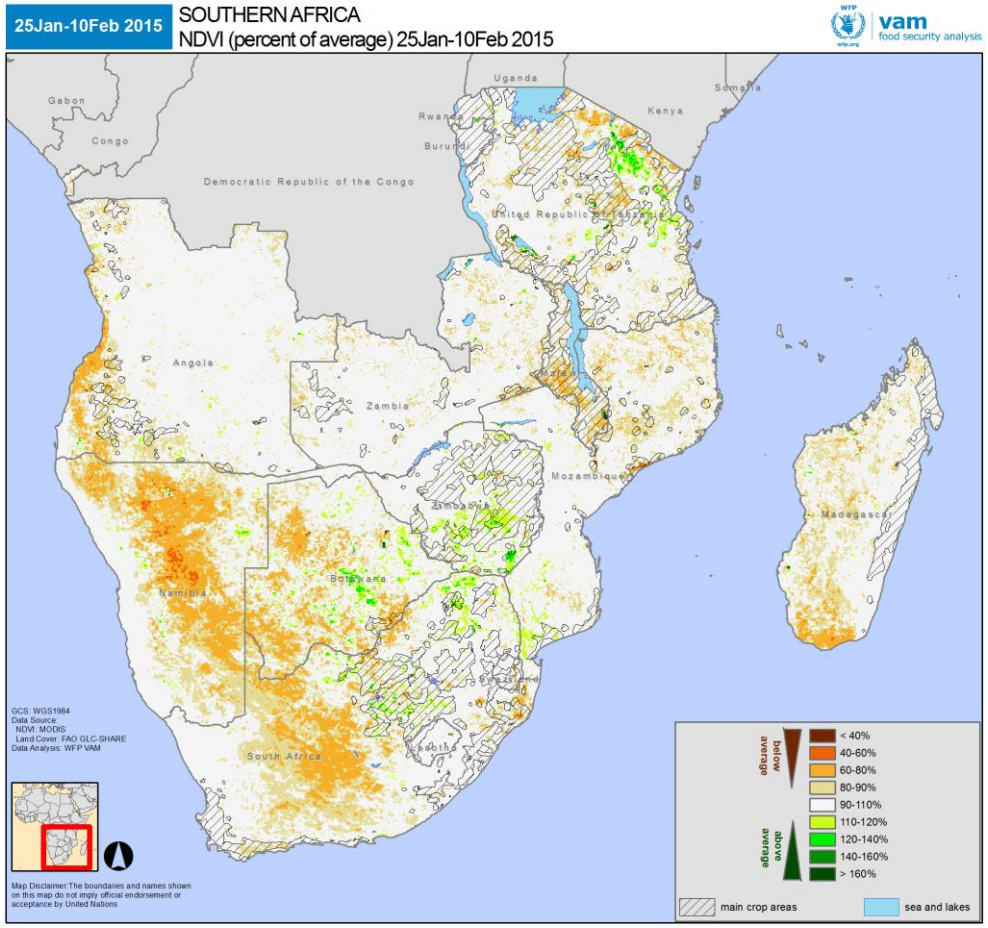
December 2014

December was characterised by intense rainfall mainly across southern-central Mozambique, Zimbabwe and eastern Botswana allowing for a recovery from the previous deficits. Northern Tanzania continues to receive good rainfall. Poor rainfall was still registered across northern Mozambique and Zambia.

Some improvements in vegetation conditions were detected in areas receiving intense rainfall during December, signalling a good response to the rainfall. Below-average vegetation levels remained in Zambia, Malawi and northern Mozambique. Vegetation in Namibia and Botswana remained above average.

SOUTHERN AFRICA SEASONAL ANALYSIS – 2014/2015





January 2015 rainfall as a percent of a 20 year average (left). Brown shades for below average rainfall, blue shades for above average seasonal rainfall

Late January 2015 vegetation index as a percent of a 12 year average (right). Orange shades for below average, green shades for above average vegetation.

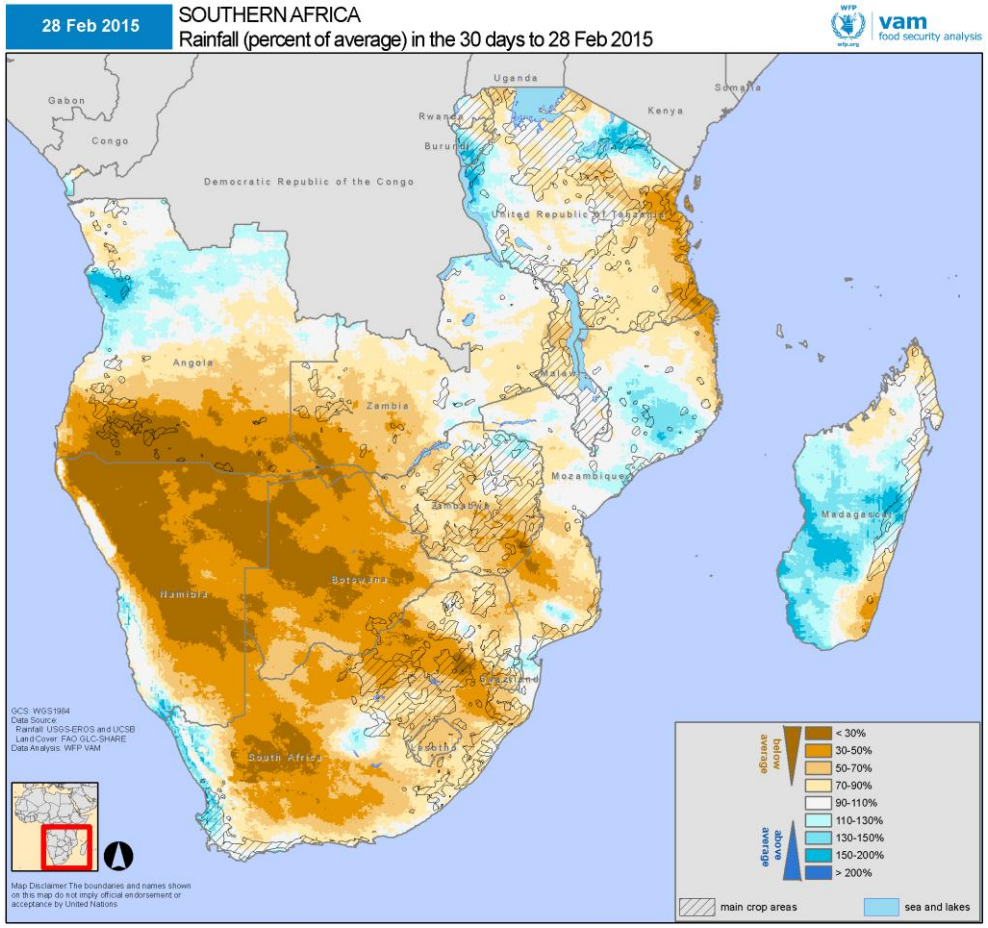
Hashed pattern indicates main agricultural areas.

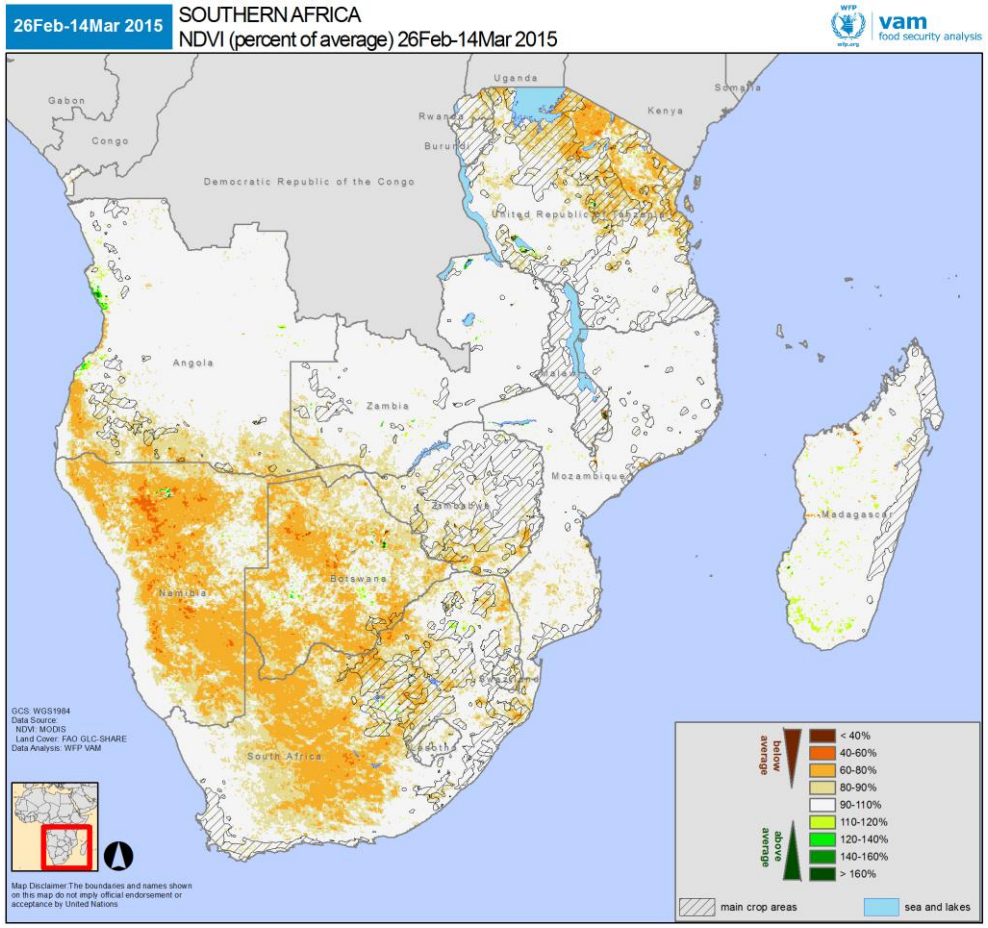
January 2015

January brought pronounced rainfall deficits across large areas of the region, particularly in southern Mozambique, southern Zimbabwe, Botswana and Namibia. There were moderate deficits in Zambia and Tanzania, with near-average conditions in northern Mozambique and southern Tanzania.

As a result, vegetation conditions in Namibia, Botswana, and South Africa worsened to below average levels. Previous improvements seen in Zimbabwe and southern Mozambique were lost, although some vegetation recovered in areas affected by localized heavy rains and flooding.

SOUTHERN AFRICA SEASONAL ANALYSIS – 2014/2015





February 2015 rainfall as a percent of a 20 year average (left). Brown shades for below average rainfall, blue shades for above average seasonal rainfall

Late February 2015 vegetation index as a percent of a 12 year average (right). Orange shades for below average, green shades for above average vegetation.

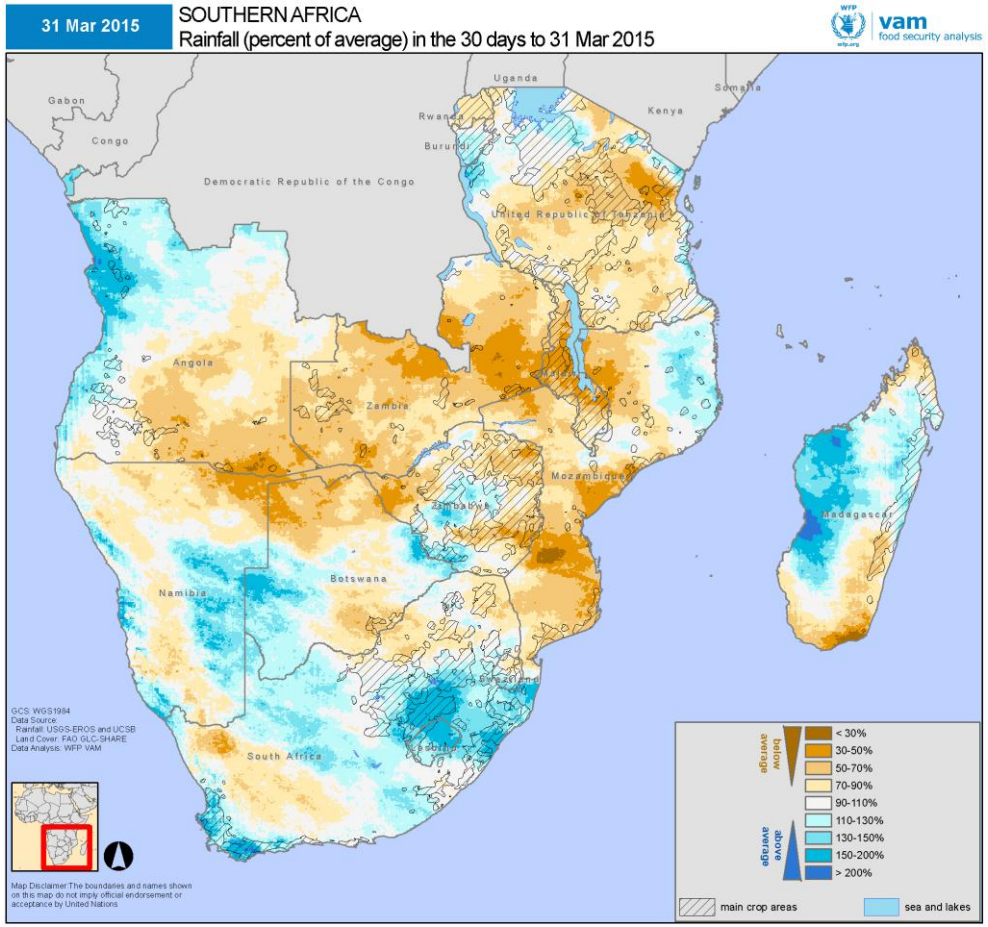
Hashed pattern indicates main agricultural areas.

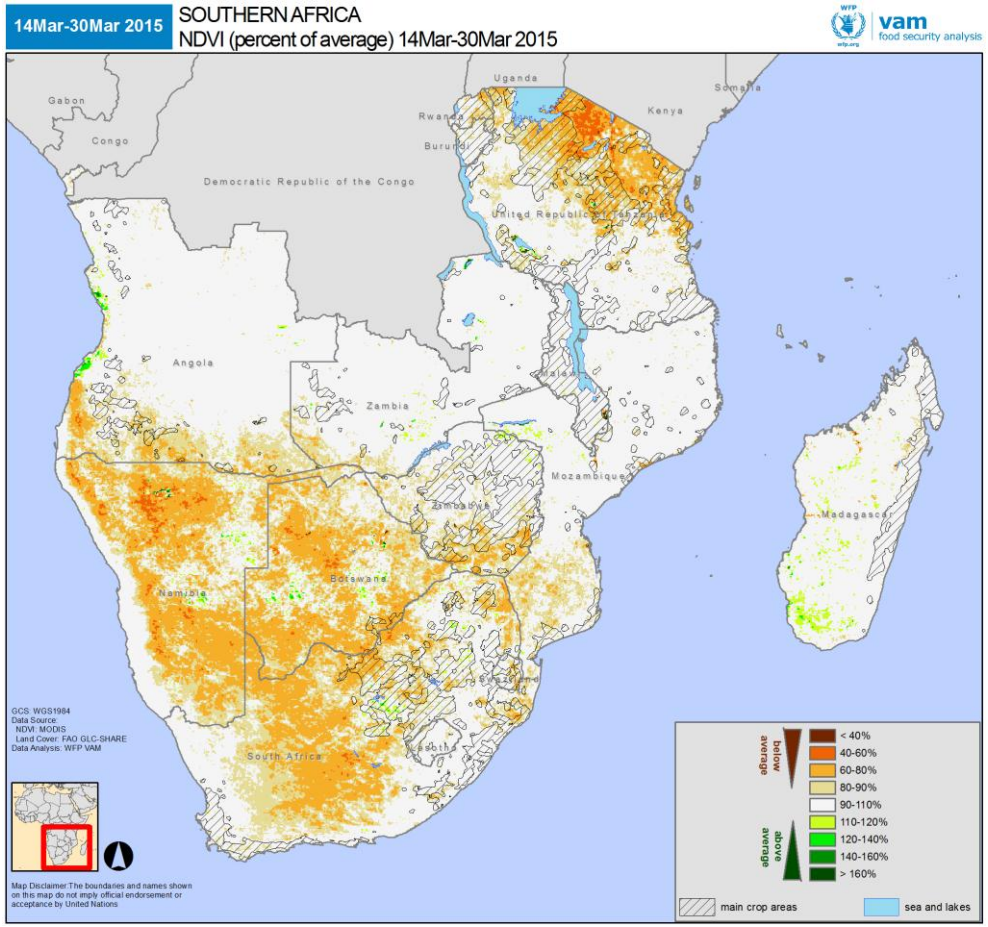
February 2015

Major deficits continued to affect the region, particularly in Namibia, Botswana, South Africa. Deficits also affected southern Mozambique and Zimbabwe and, to a lesser degree, Zambia and Malawi. The flowering and first grain filling stages of the maize crop take place this month – rainfall deficits at this time usually have significant impact on the maize production.

As a result, by late February/early March, vegetation conditions were pronouncedly below average across the whole region, including northern Tanzania which was affected by poor eastern Africa rainfall patterns. As these were the conditions at the late stages of the staple maize crop development, they provide strong indications of generalized poor crop performance across the region.

SOUTHERN AFRICA SEASONAL ANALYSIS – 2014/2015





March 2015 rainfall as a percent of a 20 year average (left). Brown shades for below average rainfall, blue shades for above average seasonal rainfall

Late March 2015 vegetation index as a percent of a 12 year average (right). Orange shades for below average, green shades for above average vegetation.

Hashed pattern indicates main agricultural areas.

March 2015

Rainfall deficits continued to spread during the first three weeks of March, affecting particularly in the Angola-Namibia-Botswana border area as well as southern Mozambique and southeastern Zimbabwe. This situation changed in the last ten days of March which brought sizeable well above average rainfall amounts across most of the region. Although this improved the monthly rainfall balance, it brought no improvement to the crop status. There maybe some moderate improvement in grasslands and grazing resources as a result.

April rainfall though better than average, was too low in absolute terms to make any further difference.

Data Sources:

Rainfall: CHIRPS, Climate Hazards Group, UCSB

Vegetation: MODIS NDVI, EOSDIS-NASA

Land Cover: FAO GLC-Share

Processing:

VAM software components, ArcGIS

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