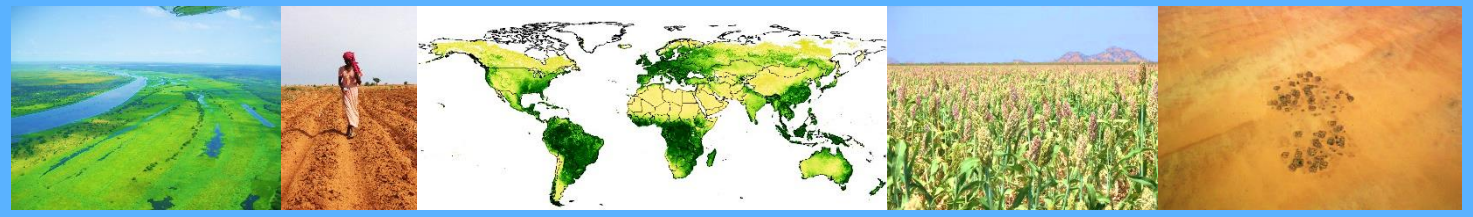

South Sudan: The 2015 Rainfall Seasonal Analysis

September 2015

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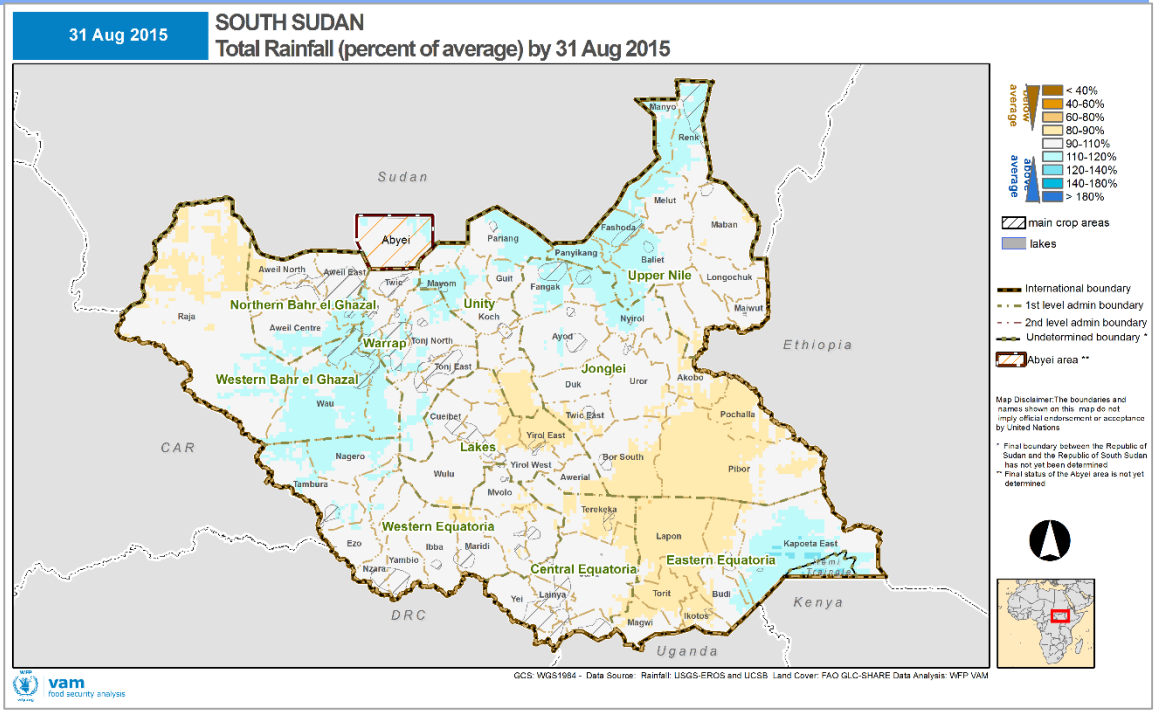
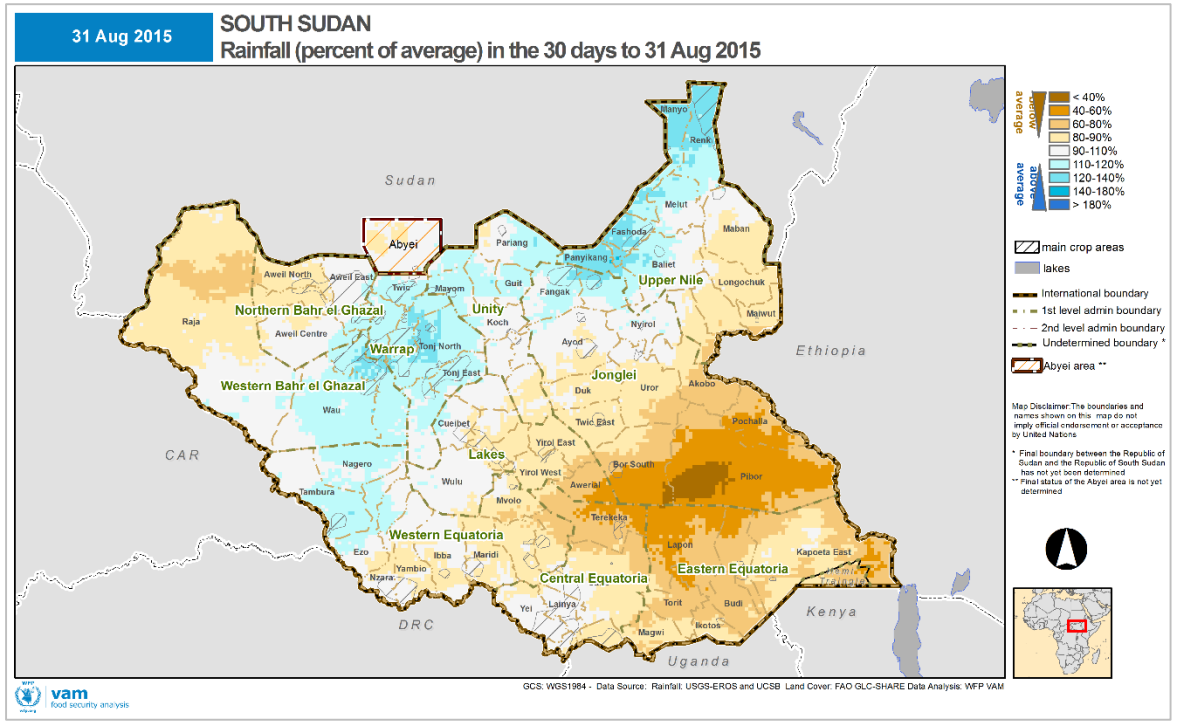
HIGHLIGHTS

- The growing season of 2015 in South Sudan started well due to early favourable rainfall, with earlier than average or timely planting across most of Western Equatoria, Greater Bahr-el-Ghazal, northern areas and Upper Nile. In Central Equatoria and some eastern areas of the country, moderate delays were noticed, but without much consequence.
- The rainfall season continued normally across the country until late June. Field reports indicate that in bimodal areas (west and south west), first-season harvests have started, and second-season activities are underway, as rainfall remained close to average until now.
- However, in July and August, significant rainfall deficits extended across Jonglei, eastern Lakes, Eastern Equatoria, and Central Equatoria. A continuation of these conditions may have serious impacts on crop performance in these regions.
- A developing El Nino event and pessimistic forecasts for September to December rainfall in the northern half of the country, raise the possibility of drier than average conditions affecting late maturing crops in Lakes, West Bahr-el-Ghazal and Upper Nile. Perspectives for the second season planting in the Greater Equatoria are less clear. So far the season is developing normally in some areas but continued monitoring is required.

SOUTH SUDAN SEASONAL ANALYSIS - 2015



Map 1: *Seasonal cumulative rainfall until end of August 2015, as a percentage of the 20-year average. Hashed pattern indicates main agricultural areas. Brown shades indicate below-average rainfall; blue shades indicate above-average seasonal rainfall.*



Map 2: *30 days cumulative rainfall until 31 of August 2015, as a percentage of the 20-year average. Hashed pattern indicates main agricultural areas. Brown shades indicate below-average rainfall; blue shades indicate above-average seasonal rainfall.*

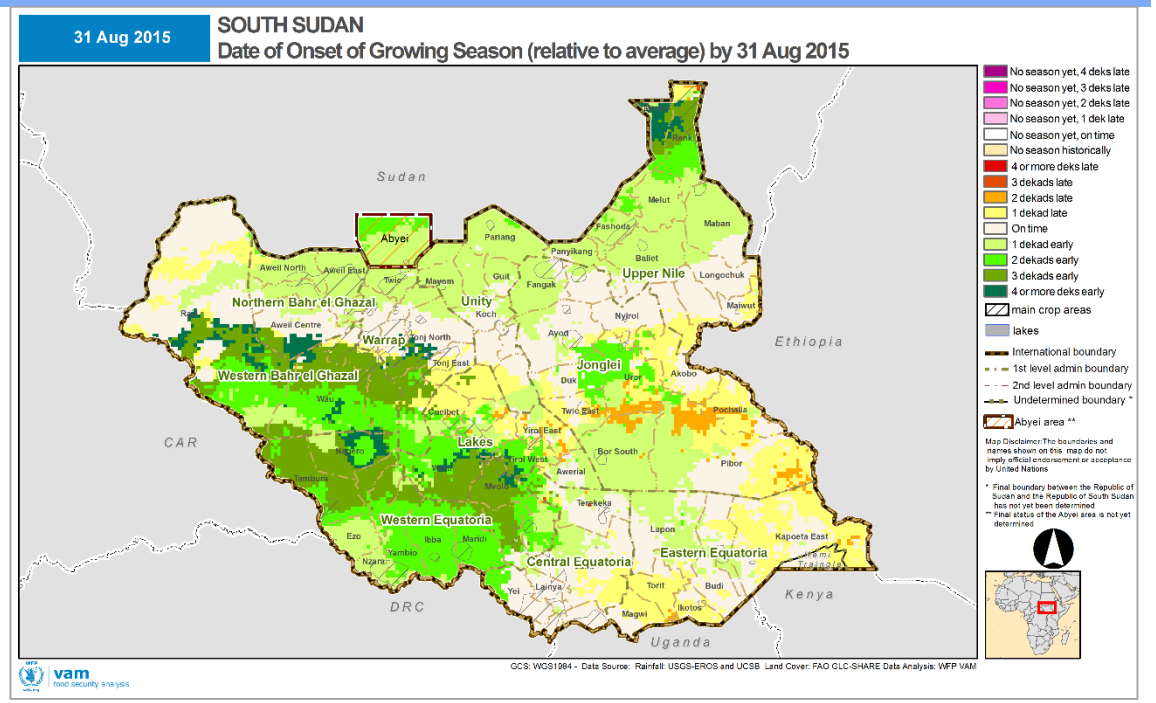
Seasonal rainfall performance

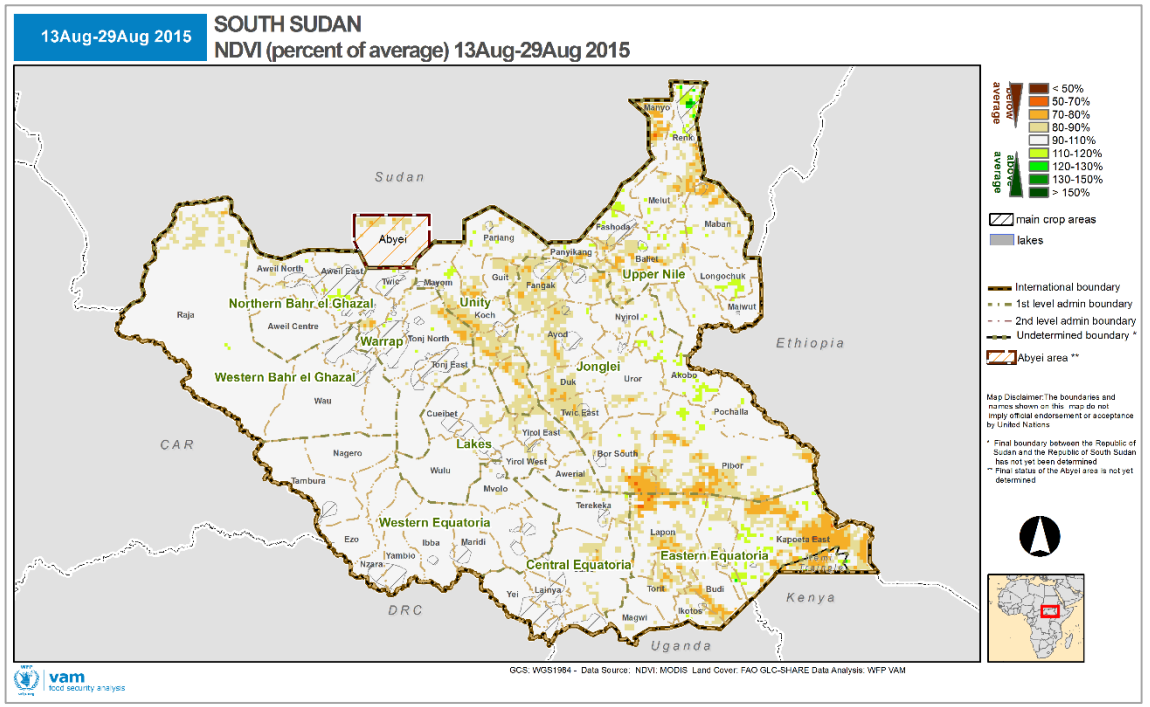
Until end of August, seasonal rainfall was moderately above average in western and northern parts of the country (Western and Northern Bahr el Ghazal states, as well as Upper Nile state) and moderately below average in south-eastern regions (south and east of Jonglei and areas of Central and Eastern Equatoria States). This broadly favourable rains are expected to have a positive impact on the agricultural season. This is in line with field reports information.

However, a closer look at recent rainfall performance reveals strong rainfall deficits during the month of August (see Map 2) across most of Jonglei, East Equatoria, as well as parts of Lakes and Central Equatoria. In fact, these deficits have started from early July – this agrees with field reports of rainfall irregularity, prolonged dry spell observed in Unity State, Jonglei (Uror and some parts of Nyirol), Eastern Equatoria (greater Kapoeta, part of Magwi and Ikwoto counties) and Central Equatoria. In addition, there was a short dry spell reported in Western Bank Counties of Panyikang, Fashoda and Manyo.

The impact of these deficits on the seasonal total rainfall (Map 1) is not so apparent since the early season rainfall (up to June) was quite favourable and above average.

SOUTH SUDAN SEASONAL ANALYSIS - 2015





Left: Date of onset of the growing season compared to average. Pinks and yellows to reds for delayed growing seasons, green shades for earlier than average growing seasons.
Right: Late August 2015 Vegetation Index as a percentage of the 12-year average. Hashed pattern indicates main agricultural areas. Orange shades for below-average; green shades for above-average vegetation.

Onset of Season and Vegetation Status

The growing season has started earlier than usual in western areas (Western Equatoria and Greater Bahr-el-Ghazal) as well as along the border with Sudan and in Upper Nile state, due to good rains during the earlier stages of the season. In central and eastern areas (Central Equatoria, parts of Jonglei) the season started moderately later than usual, due to drier than average conditions in April. Overall, no significant perturbations of the planting dates are noticeable.

The recent drier than average conditions in July and August, led to below average vegetation developing along the north, central and eastern parts of South Sudan (Upper Nile, Unity, Jonglei and East Equatoria). This tendency has been worsening progressively as the season advances. This ties in with field reports of prolonged dry spells affecting the crop performance in Upper Nile, Unity State, Jonglei, Eastern Equatoria and Central Equatoria. In addition it will impact negatively the planting of the second season crops in Central Equatoria. Preliminaries results from FSNMS Round 16 (July 2015) indicates that the majority of HHs (41%) report shortage of rain as the main challenges of crop production this season, followed by pests and diseases, reported by 18%, and shortage of seeds reported by 16%.

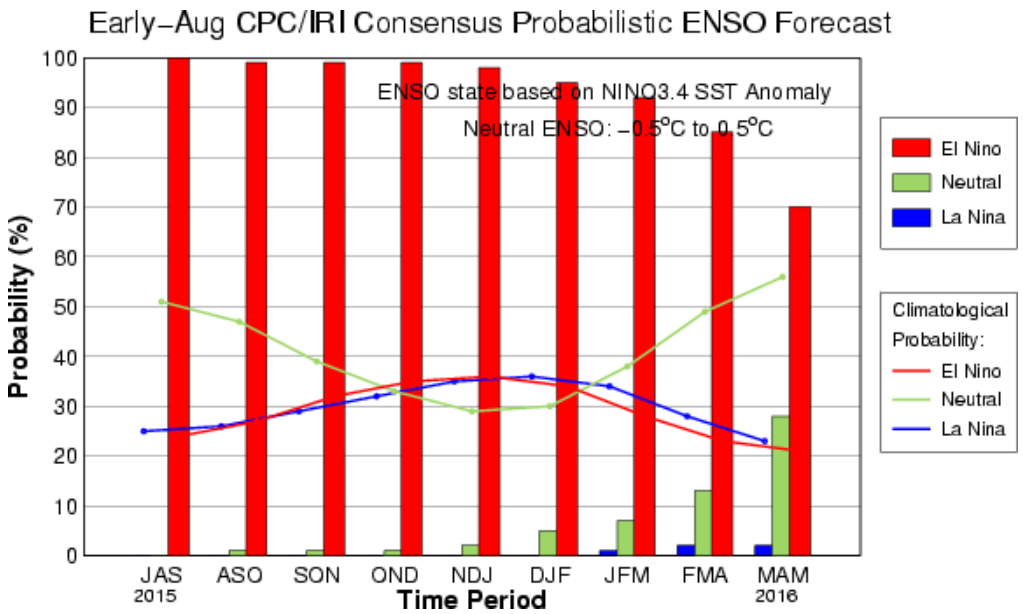
In the bimodal rainfall areas of western South Sudan, the vegetation conditions indicate a normal season and the first-season harvests are underway.

SOUTH SUDAN SEASONAL ANALYSIS - 2015

The El Nino Event of 2015-2016

An El Nino event is officially active since March 2015. After remaining at relatively weak levels until May 2015, it is now intensifying and should peak in the last quarter of 2015 and disappear from February 2016 onwards.

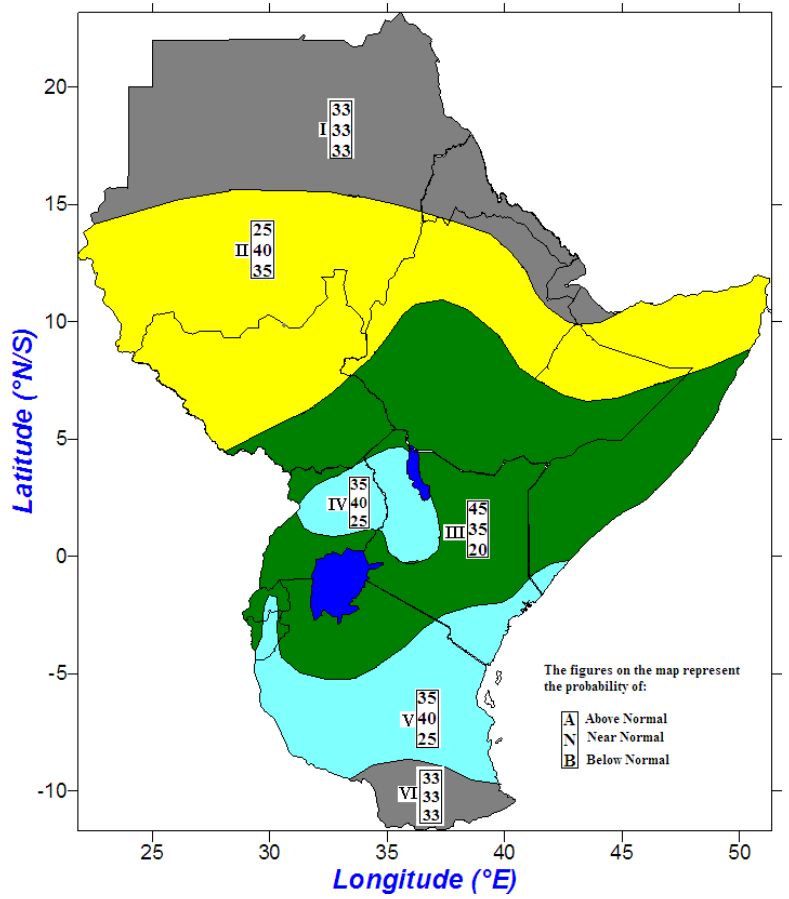
Historically, El Nino events have an impact on South Sudan leading to growing season rainfall deficits and poor vegetation development. The recent drier than average conditions observed in South Sudan could be related to impact of the current El Niño



Probability of an El Nino event (red bars) vs neutral conditions (green) and La Nina (blue). El Nino probabilities remain above 90% throughout the Sahelian growing season.

Rainfall forecasts for September-December 2015

According to GHACOF 41, for the coming September to December 2015 period, there is increased likelihood of near normal to below normal rainfall forecast for most of South Sudan (Zone II) except the south-east where there is Increased likelihood of above normal to near normal rainfall. If these forecasts are realized, this may impact negatively on development of late maturing crops in Lakes, Upper Nile, and West Bahr-el-Ghazal, but provide favourable conditions for the second crop season in most of Great Equatoria States. Note, however other forecasts are somewhat more pessimistic.



Seasonal rainfall forecasts for September to December 2015 rainfall – GHACOF – 41.

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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