FEWS NET
FAMINE EARLY WARNING SYSTEMS NETWORK

WEST AFRICA Seasonal Monitor

October 25, 2017

Rainfall deficits in September in Mauritania and Senegal may affect crops

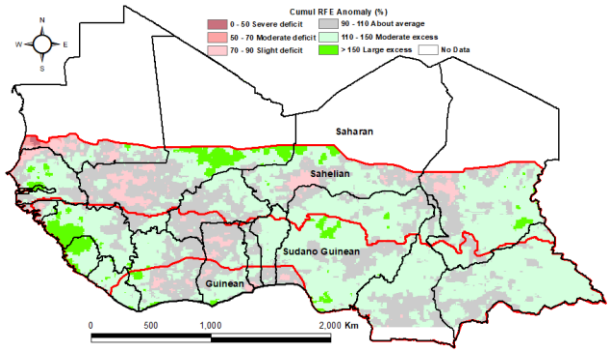
KEY MESSAGES

- The seasonal rainfall has been globally average to above average **(Figure 1 and Figure 2)** over most of the region, but September rainfall has been below average over most of the Sahelian zone with pockets of severe deficits in areas of Senegal, Mauritania, Niger and Chad.
- September rainfall deficits are damaging to crops as the timing coincides with the grain filling phase when crops are particularly vulnerable to dryness. These deficits are likely to result insignificant crop and pasture production shortfalls when combined with long dry spells (**Figure 3**).
- The severe rainfall deficit and very long dry spells that northern Senegal and southwestern Mauritania already experienced in July, coupled with the September dryness and bad rainfall distribution is likely to have an impact on crop and range performance **(Figure 4 and Figure 5)**.
- The ITF continues its southward retreat **(Figure 4),** and will likely pull out of the Sahelian zone by mid-October marking a timely end of the growing season.
- The medium-term forecast for the next two weeks (October 23rd– October 30th) calls for light to moderate rainfall over the Gulf of Guinea countries and the rest of the region will be dry.

UPDATE ON SEASONAL PROGRESS

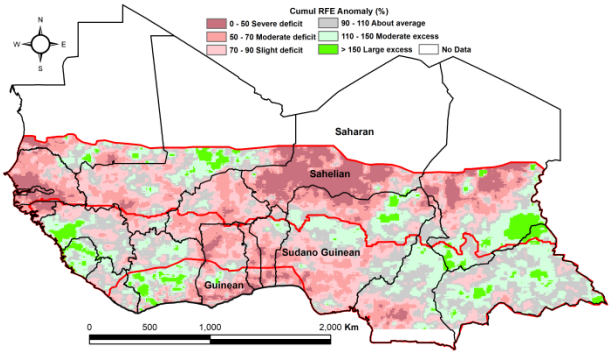
- The Intertropical Front's (ITF) continues its southward retreat, practically leaving the northern half of the Sahelian zone to the dry season. It is south of its climatological position over the entire region (**Figure 3**).
- The major season in the bi-modal zone has been very good and despite some limited fall armyworm damage an average to above average harvest is expected. The "minor growing season" in the bi-modal zone started in late August but rainfall remained below average till the end of the second dekad of September. Moderate to heavy rains during the third dekad of September and first dekad of October have brought a significant improvement. Based on the medium term forecast moderate to heavy rainfall is expected through the rest of October and will be very beneficial to the minor season crops. This is an area where

Figure 1: Total rainfall estimate (RFE) in mm, 1st and 2nd dekads of September



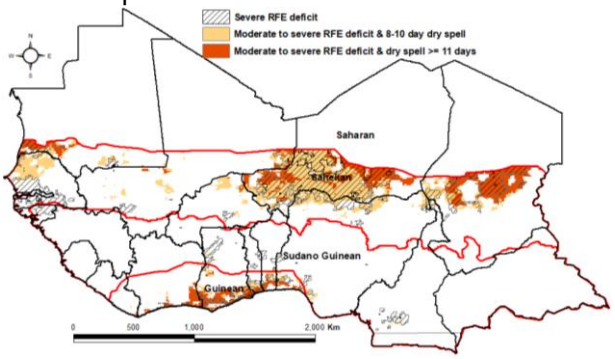
Source: *USGS/FEWS NET*

Figure 2: Rainfall estimate (RFE) anomaly compared to the 2006-2015 mean, for September



Source: *USGS/FEWS NET*

Figure 3: Areas affected by long dry spells and rainfall deficit in September



Source: *USGS/FEWS NET*

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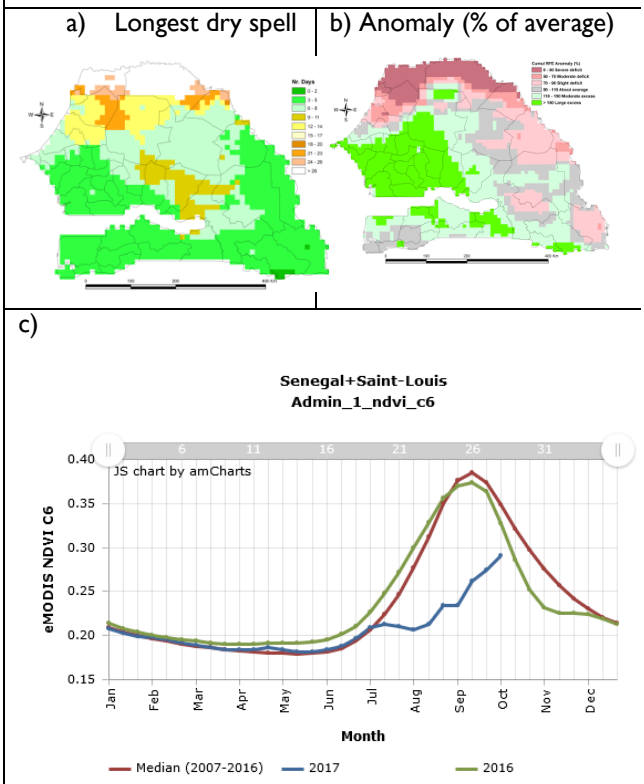
crops are not photoperiod sensitive and rainfall that is almost always beyond crop water requirements. A couple of moderate rainfall events within the first half of November are highly probable. Therefore, the minor season outcome is likely to be average despite a dryness experienced at the beginning.

- For the rest of the Sudano-Guinean, out of the bi-modal zone, the growing season has been good. Despite the rainfall deficits experienced in September in Ghana, Togo, Benin and part of southern Nigeria the season outcome is expected to be at least average based on the recent crop assessment missions.
- For the Sahelian zone areas affected by September rainfall deficit and bad time distribution include most of the regions of Tillaberi, Tahoua, Maradi, Zinder and Diffa in Niger, the western part of the Lac region, the northern part of Batha Est and Wadi Firra regions in Chad (Fig. 3). These areas will experience crop and range production shortfall and the impact of rainfall deficit and bad distribution on crop productivity could be divided into the following categories:
    1. Extremely low yield for the red hatched areas
    2. Very low yield for the yellow hatched areas
    3. Low yield for the yellow non-hatched and hatched non-colored areas

Pastures are not affected the same way as crops since the biomass must have reached its peak by late August and early September in the rainfall deficits affected part of the Sahelian zone. However, pastoralists should be affected not by the lack of pastures but by the surface water shortages. Therefore, for pastoralist stationed in rainfall deficit and bad time distribution are expected to start their southward migration earlier than normal toward better pastures and surface water resources areas.

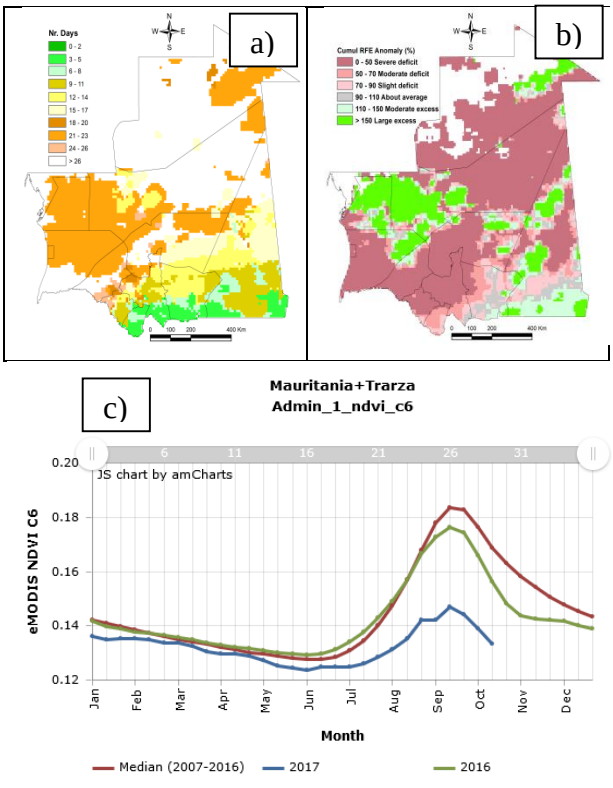
The western part of the Sahelian zone, northern Senegal and southwestern Mauritania, experienced rainfall deficit and significantly long dry spells **(Figure 4 and Figure 5)**. This part of the region again experienced in September deficits and bad time distribution of rainfall. This has resulted into too short of a season making the northern Senegal-southwestern Mauritania area in worse conditions that indicated by the above classification that was only based on September conditions. Therefore, crop and range performance in northern Senegal and many areas in Mauritania should vary from complete failure to extremely low yield.

Figure 4: July rainfall and seasonal NDVI in Senegal



Source: *USGS/FEWS NET*

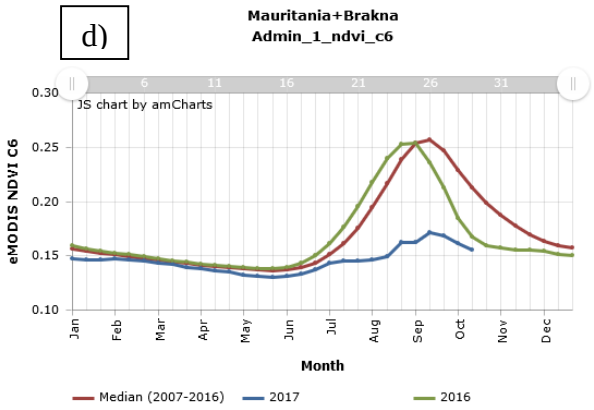
Figure 5 July rainfall and seasonal NDVI in Mauritania



- Fall armyworm presence was reported in several countries during a mid-September PREGEC meeting held in Conakry, Guinea. These were Nigeria, Niger, Chad, Burkina Faso, Benin, Ghana, Mali, Cote d'Ivoire, Gambia and Togo. At the time the damage was minimal due the above average rainfall that kept the pest infestation at a low level. CILSS, FAO and the concerned countries have teamed up for a close monitoring of the pest.

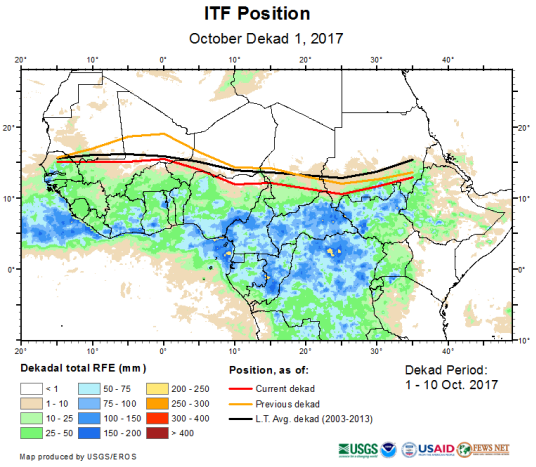
FORECASTS

- The short and medium-term NOAA/CPC's forecasts call for moderate to heavy rains over the Gulf of Guinea countries.
- The October seasonal forecast from the NOAA-NCEP calls for climatology over the region.



Source: *USGS/FEWS NET*

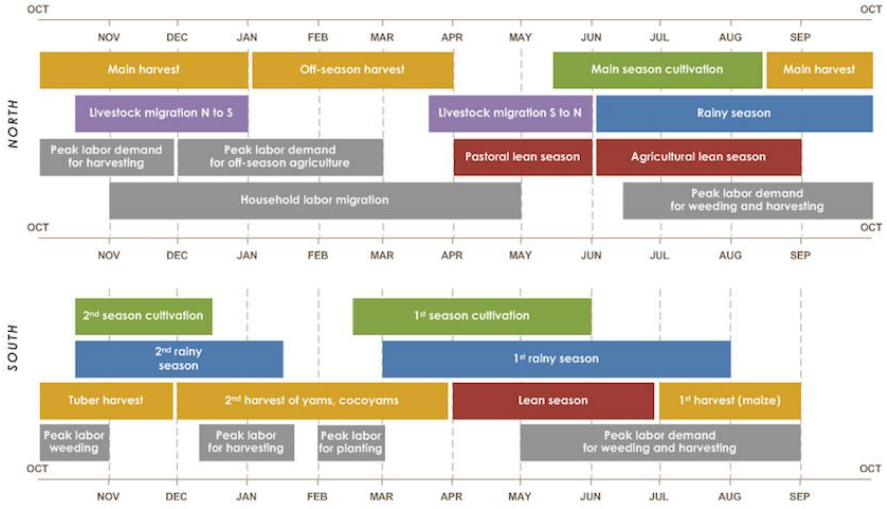
Figure 6: Intertropical Front (ITF) position compared to climatological average in 1st dekad of October



Source: *USGS/FEWS NET*

More information on remote sensing can be found at: http://www.cpc.ncep.noaa.gov/products/african_desk/cpc_intl/ and http://earlywarning.usgs.gov/?l=en

SEASONAL CALENDAR IN A TYPICAL YEAR



Source: *FEWS NET*