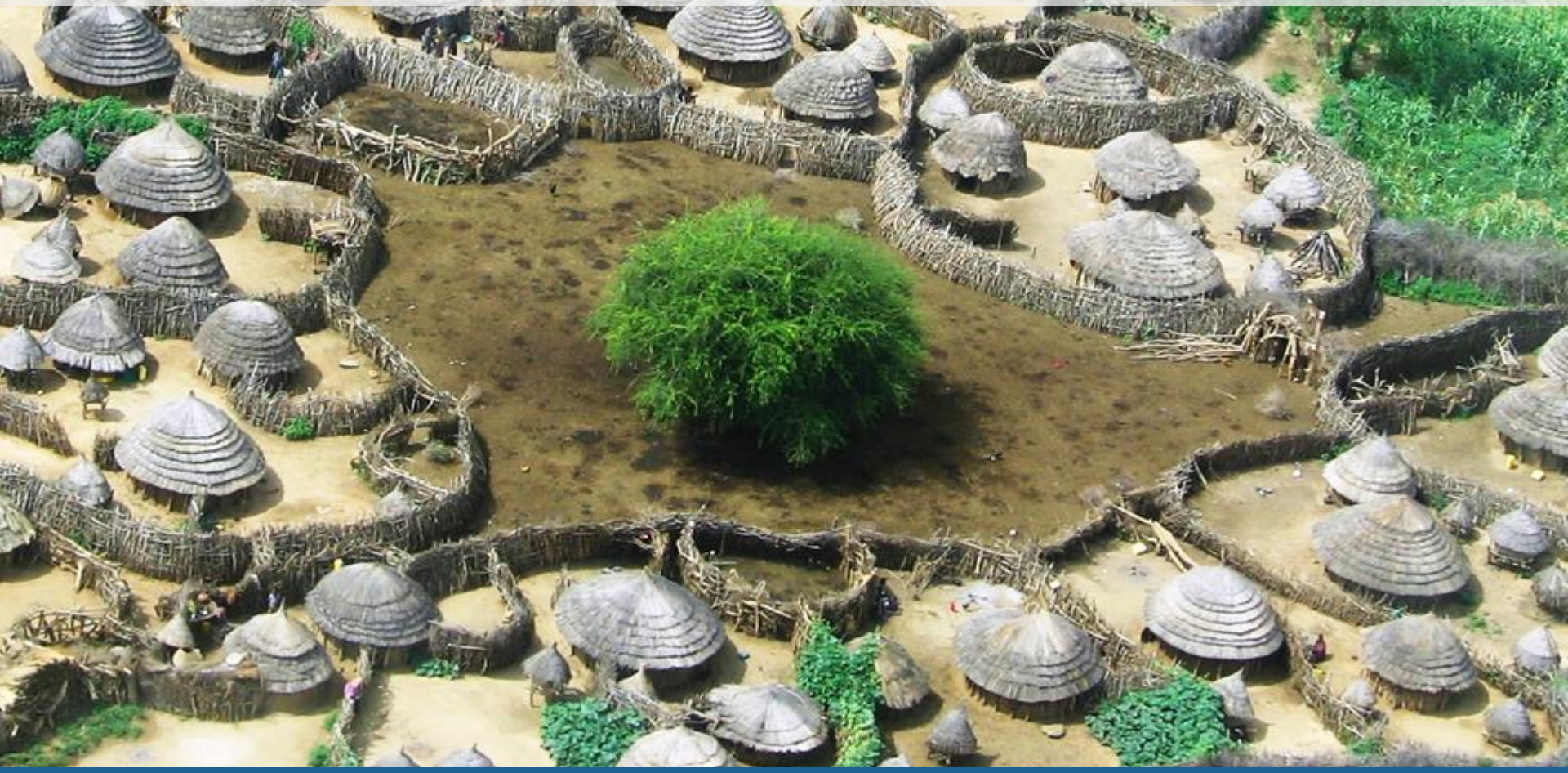
East Africa Season 2019



April 2019

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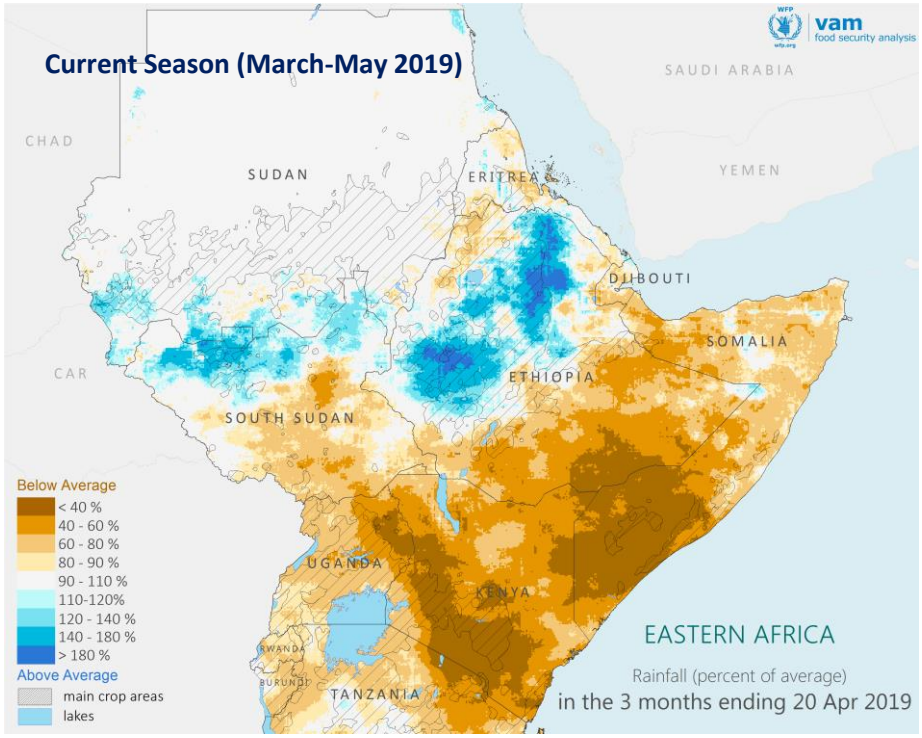
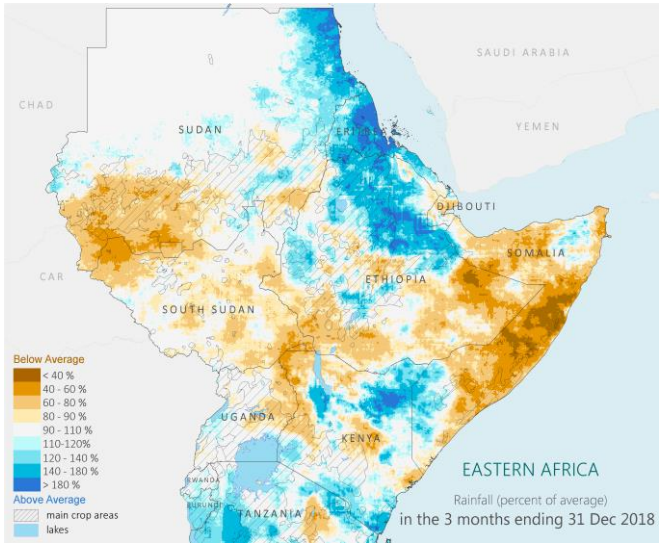
HIGHLIGHTS

- Persistent dryness has affected most of East Africa since early 2019, leading to severe rainfall deficits that are likely to endure through the current March to May rainfall season.
- In Somalia, conditions are worse than in the same period of 2017 and are only surpassed by the devastating drought of 2011. A poor performing previous season will compound problems affecting in particular pastoralist communities.
- Southern and western areas of Kenya are enduring the most intense drought of at least the past 37 years. In bimodal cropping areas of Uganda and Tanzania, substantial production shortfalls will affect the first season crops. Elsewhere (unimodal Uganda, South Sudan), the start of the agricultural season is significantly delayed.
- Conditions should remain drier than average until early May but are forecast to improve from mid May into July and possibly until September. This should improve conditions in areas where the growing season continues until later in 2019 (northern and eastern Uganda, South Sudan).
- However, for areas of the region where rains usually end in May, there are little if any prospects for an improvement in current perspectives – crop production losses and sparse pasture and water resources for pastoralists.

March to May 2019: Rainfall





Persistent dryness has affected East Africa (except for north and western Ethiopia) since early 2019, with some areas of the region registering severe rainfall deficits that are likely to endure through the current March to May rainfall season.

The critical driver here is the failure of the early rains in March, a pattern that continued through April, leading to intensifying rainfall deficits across Kenya, SE Ethiopia and Somalia.

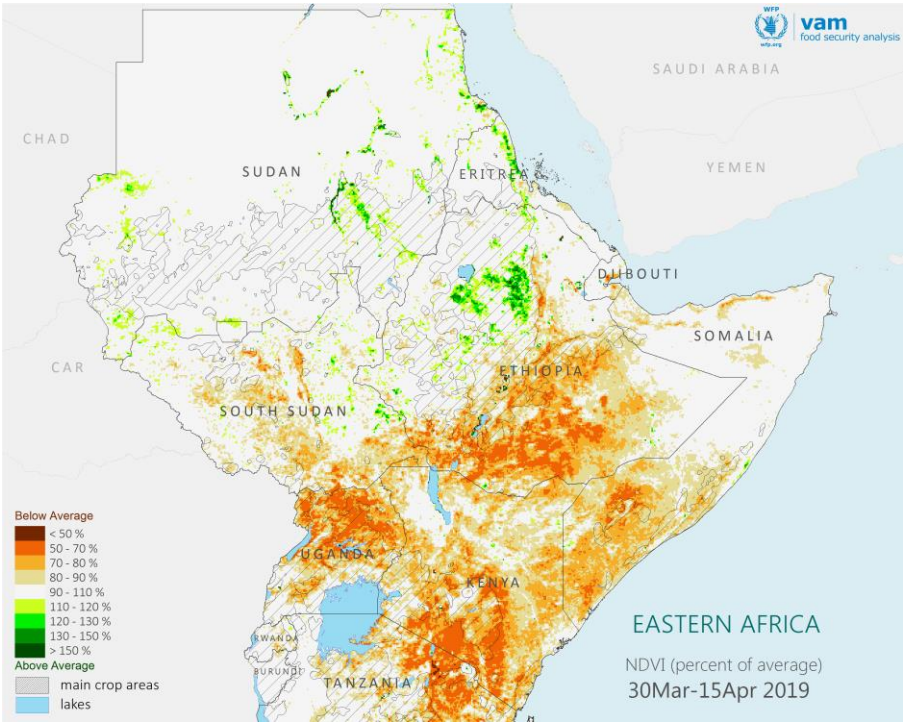
April contributes more than half of the total rainfall of the March to May rainfall season, the most important of the two seasons in bimodal areas of East Africa (Kenya, Somalia, SE Ethiopia, southern Uganda).

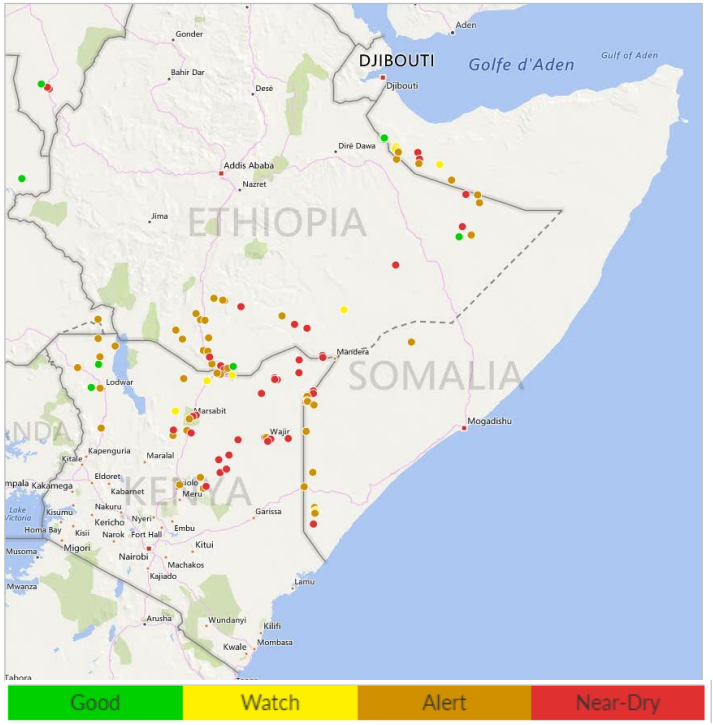
Considering these dry conditions may last into early May in areas of the region, serious impacts on crop production, pasture and water availability can be expected.

Impacts are most severe in Somalia and Kenya – Somalia endured a fairly poor previous season (Oct-Dec) which will worsen the effects of the current event and it is in Kenya that the current drought has been most extreme.

Elsewhere, in bimodal areas of Uganda, the first cropping cycle has already been affected by dry conditions leading to production losses in the coming harvest. In Karamoja, the situation is of some concern, with noticeable delays in the start of the planting season. Similar delays are being felt in South Sudan. In these regions, the length of the rainfall season may allow recovery provided rainfall improves in the next few weeks.

March to May 2019: Vegetation Cover





The impacts of rainfall deficits on vegetation cover are now fairly evident across the region as evidenced by satellite NDVI images for the first half of April.

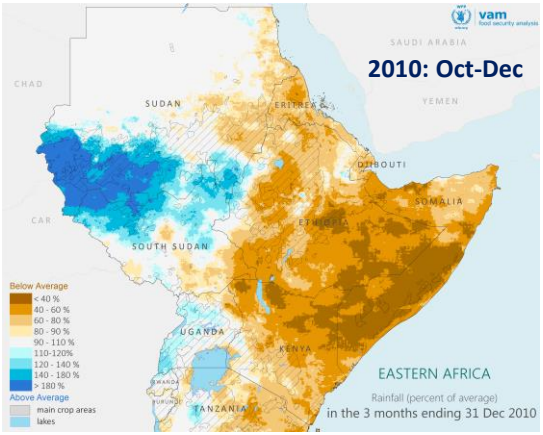
Areas affected include the southern half of Somalia, most of Kenya, but particularly its southern regions, the southeastern half of Ethiopia, most of central and northern Uganda, in tight correspondence with rainfall deficit patterns.

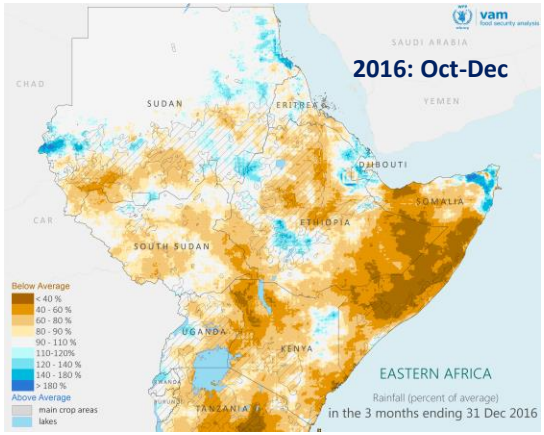
Vegetation cover is well below average in these areas and the situation is expected to worsen as the map on the left doesn't include the vegetation response to continued dry conditions in the second half of April.

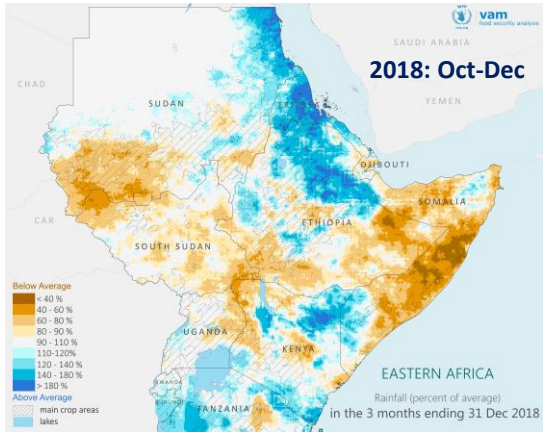
This equates with widespread crop water stress, lack of moisture to enable start of the cropping season and planting failures that will lead to significant production losses across most of the region for the crop cycle ending in May-June.

Pasture and water resources are also severely depleted across the region (map above right) putting severe stress on pastoralist communities, in particular where the previous season has been poor (Somalia).

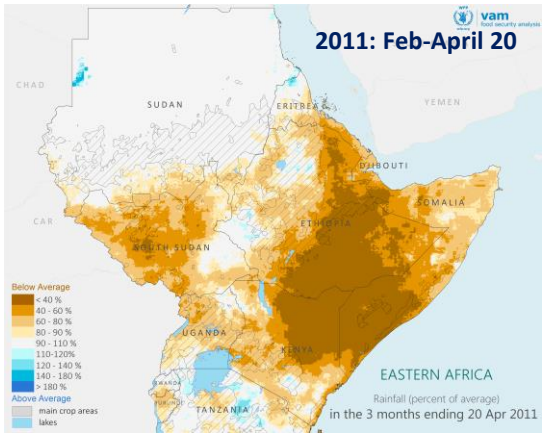
Historical Context

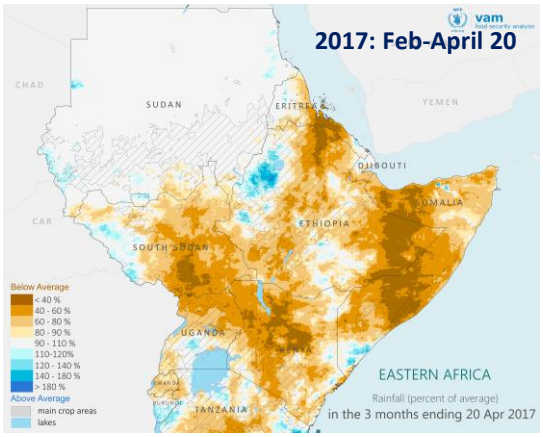


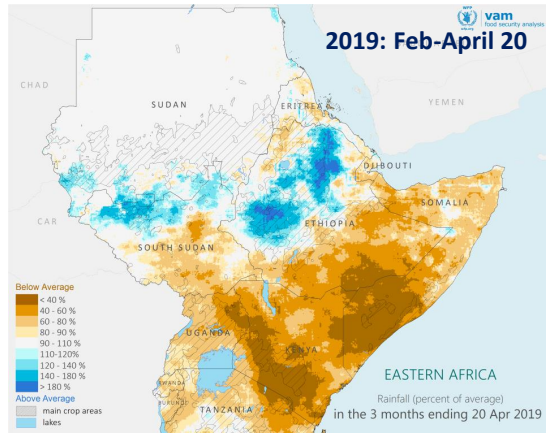




Rainfall as percent of average: Browns drier than average, blues wetter than average







A comparison of the current event against major regional droughts in the recent past is useful to properly frame the magnitude of the event and how impacts may unfold across the region in 2019.

We compare the Oct-Dec season (2018 against 2010 and 2016) and for Feb-May (2019 with 2011 and 2017 up to April 20).

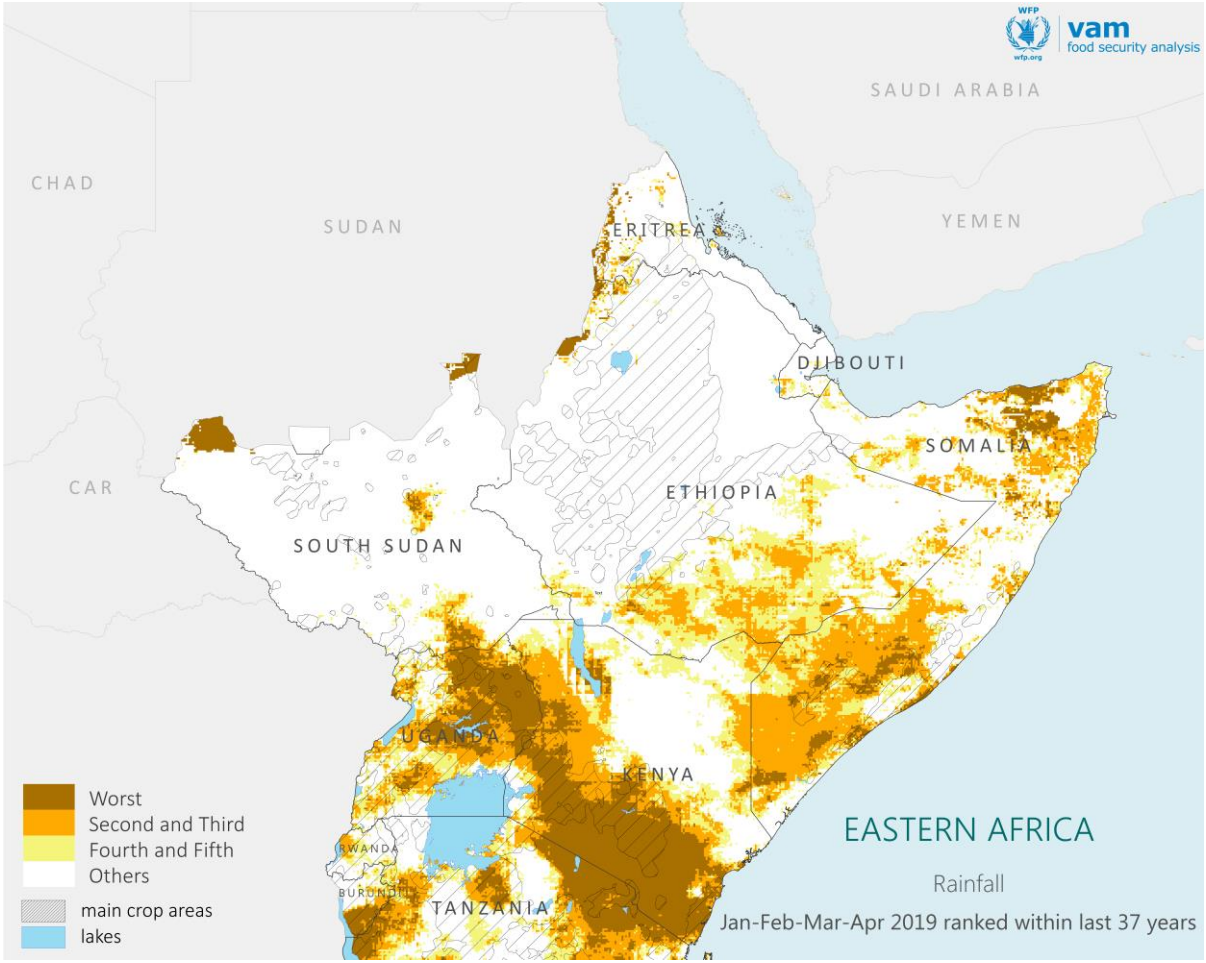
Clearly Oct-Dec 2018 performed much better than the two references, except for Somalia where performance in some areas was more comparable with 2010 and 2016.

For the Feb-May period, 2019 broadly sits between 2011 and 2017 in terms of extent and intensity of the drought.

However, over southern and NW Kenya, the situation is by far worse than in any of the two reference years. For southern Somalia the situation is comparable to that of 2011.

Hence 2019 so far, is part of the most extreme droughts in the recent record.

Historical Context



Rainfall in the four months ending April 20, 2019, as a rank in the 37 year record.

To convey the intensity of the current drought and to identify areas of greater concern, the ranking of the current season in the past 20 years was mapped.

The map shows where the rainfall in the 4 months ending in April 20, 2019 is the lowest, second/third lowest or fourth/fifth lowest within the last 37 years (since 1982).

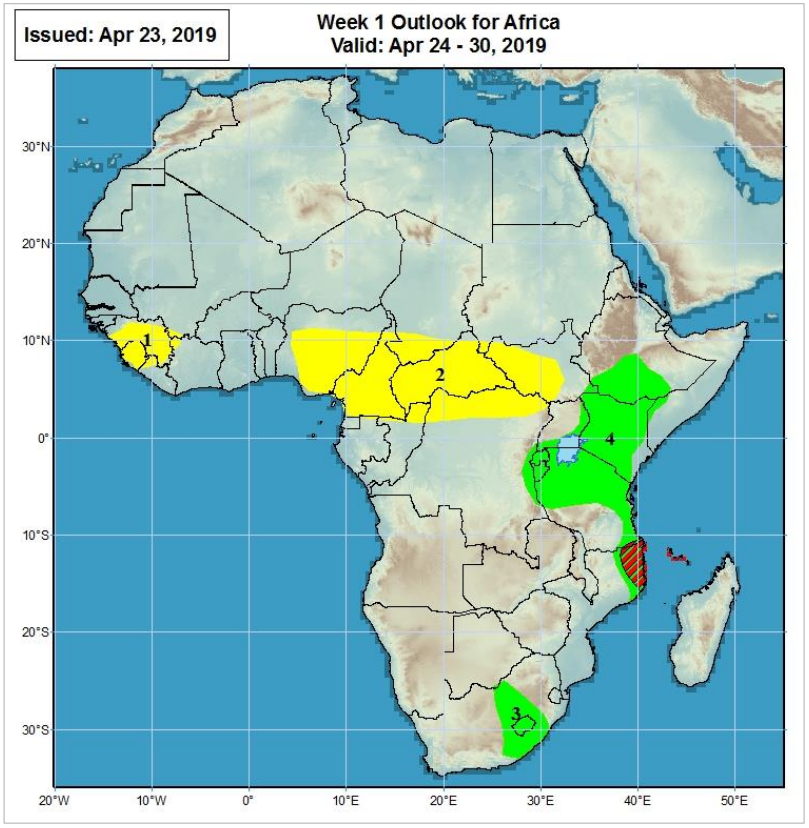
For a large area extending along southern Kenya and northern Tanzania into western Kenya and eastern and central Uganda, the 2019 season up to now is the driest on the recent record.

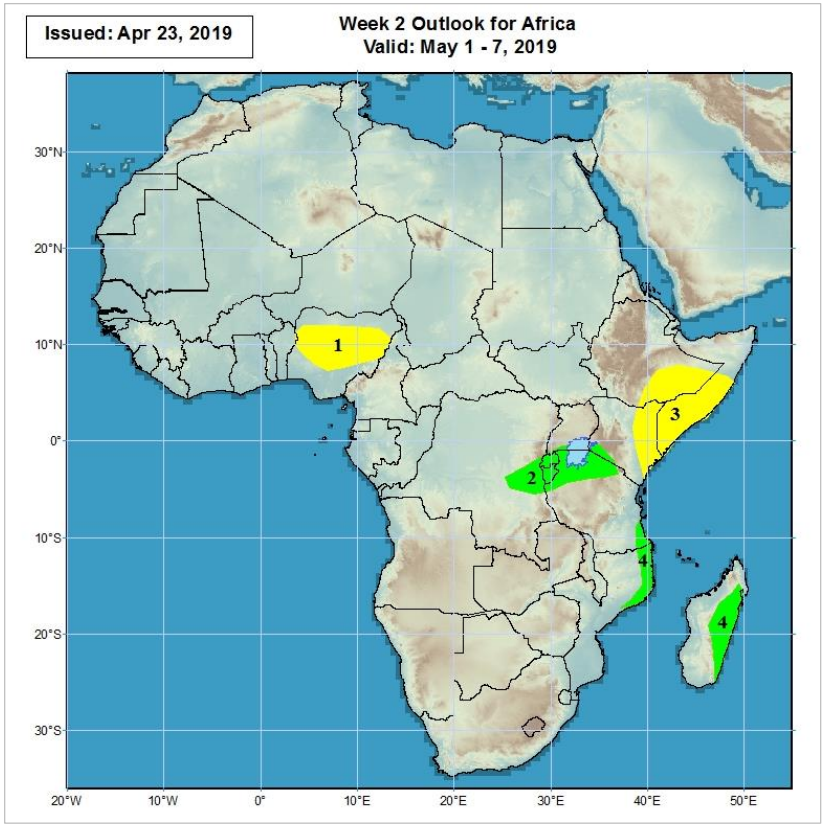
Impacts may be unprecedented where the current cropping season is about to end (e.g. southern Kenya).

In Somalia, only the 2011 season has fared worse than the current one, but there are already localized areas in the south and in the Puntland / Somaliland border where rainfall has been the lowest on record.

Though rainfall in May can improve the picture in terms of rankings and extremes, significant impacts on food security and livelihoods, particularly pastoral ones, are already locked in and unlikely to improve in a significant way.

Short term forecasts



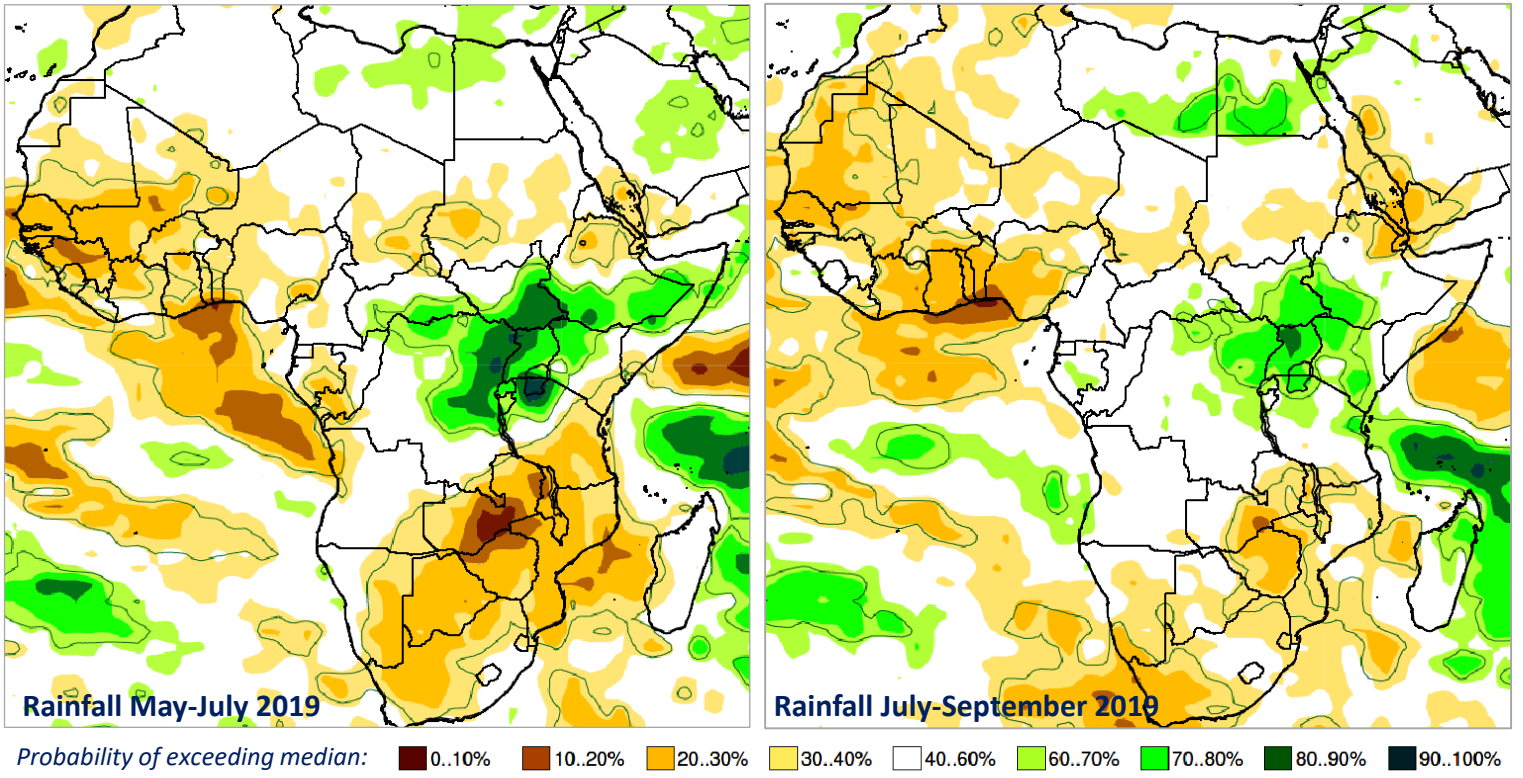


Rainfall forecasts for Africa for the weeks of April 17-23 and April 24-30. Yellow (green) areas denote expectations of below (above) average rainfall

The extremely low rainfall in the first 20 days of April agrees with a variety of forecasts that consistently predicted a much drier than average month. More recent forecasts for the final week of April (map above left), signal an improvement with a return to average rainfall and wetter than average conditions in Tanzania and Kenya. This is judged to be too little, too late, in particular considering that drier than average conditions are likely to return in early May (map above right).

Perspectives for a degree of recovery in pasture and crop performance are now very remote, since there is too little time in the season left, even if rainfall were to recover to average levels. Severe impacts on pasture and water resources should now be taken as the most likely outcome, in some areas (Somalia) compounded by the previous season poor performance.

Long Term View: Seasonal Forecasts



Forecasts for rainfall in May-July (left) and July-September (right). Green shades: increasing likelihood of wetter than average conditions. Orange hades: increasing likelihood of drier than average conditions
Source: ECMWF

Rainfall forecasts for the period from May to September point to a change in rainfall patterns across East Africa.

Wetter than average conditions are forecast for May to July for a wide area from NE DRC to south Sudan, southern Ethiopia, Uganda, western Kenya and NW Tanzania. This is forecast to continue through July to September.

If realized, this may lead to wetter conditions in the last stages of the March to May rainfall season in bimodal areas, which will allow some recovery in pasture conditions but is likely too late to improve crop production.

It would also lead to good conditions in Uganda (second season or single season in Karamoja and North) and South Sudan.

This pattern is seen in forecasts from a number of institutions, which should increase confidence in the projected outcomes. However, the situation will still require close monitoring.

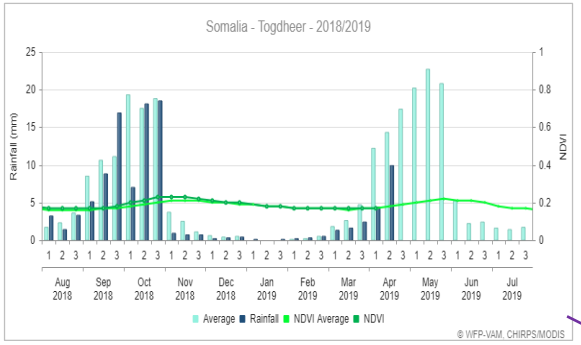
Drier than average conditions forecast for Sudan and northern Ethiopia are less consensual across various forecasts and the more likely scenarios remain less well defined.

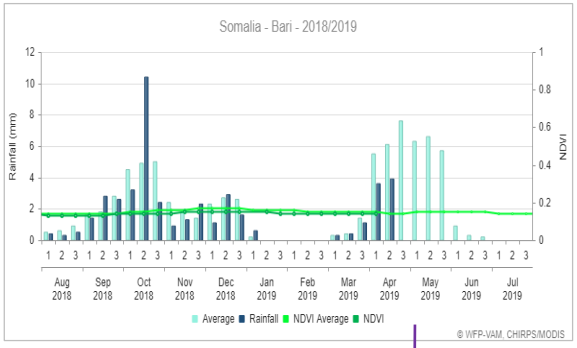
Somalia Focus

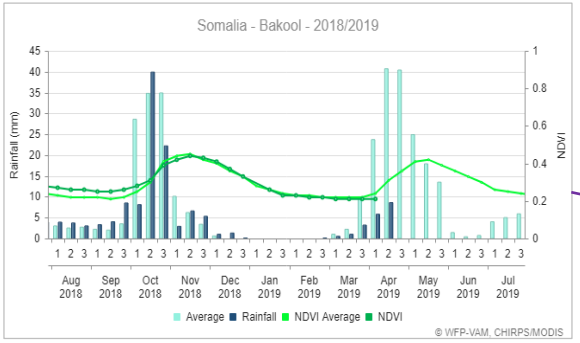
The charts provide an overview of the rainfall and vegetation in the previous and current season.

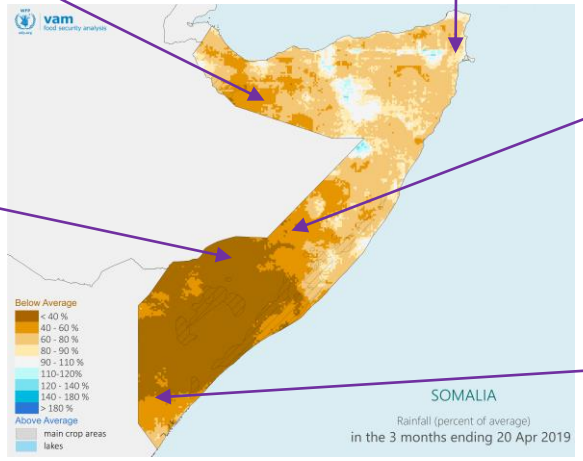
Somalia endured a fairly poor Deyr season in late 2018, with significant rainfall deficits particularly in central areas of the country (see Bay, Hiraan and Galgaduud) where late season rainfall failed to provide substantial recovery.

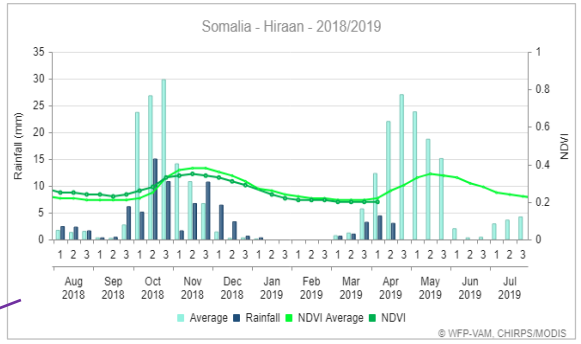
The current Gu season (March-May) got off to a bad start, with significant rainfall deficits affecting the southern third of the country in particular. This is likely to continue into early May, which implies that even if rainfall recovers in May and beyond, it will be too late to provide a meaningful recovery from severe impacts on crop production and pasture resources. The exception might be areas in Somaliland and Puntland, where May provides the bulk of the seasonal rainfall, but here a rapid and major improvement in rainfall amounts and distribution is required.

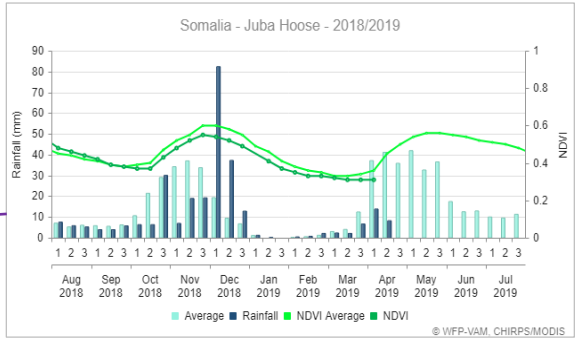












Kenya Focus

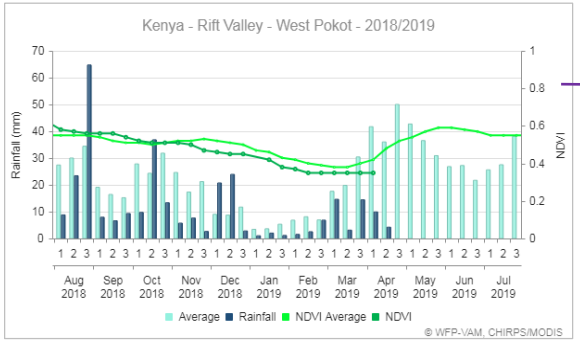
The charts provide an overview of the rainfall and vegetation in the previous and current season for selected districts of Kenya.

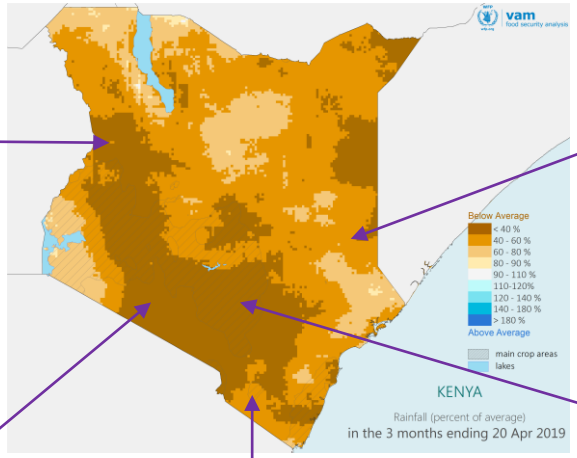
The performance of the previous season was variable: even if overall seasonal totals were close to average, distribution was irregular in a few areas, e.g. Garissa and Kitui where heavy late rainfall came to late to provide growing season conditions.

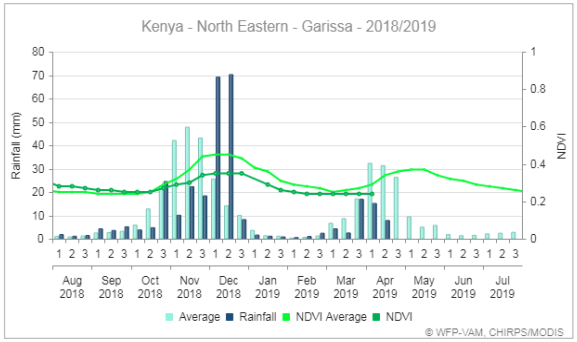
For Kenya, current season rainfall has been persistently below average since late December and this may continue into early May in spite of some improvement in late April.

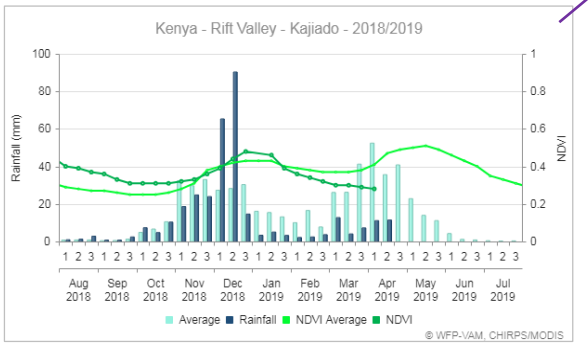
A possible improvement in the rainfall in late April that might extend into May onwards can provide a measure of recovery in districts where the rainfall season extends well into 2019 – this will be limited to the central districts of the Rift Valley province, Nyanza and Western provinces.

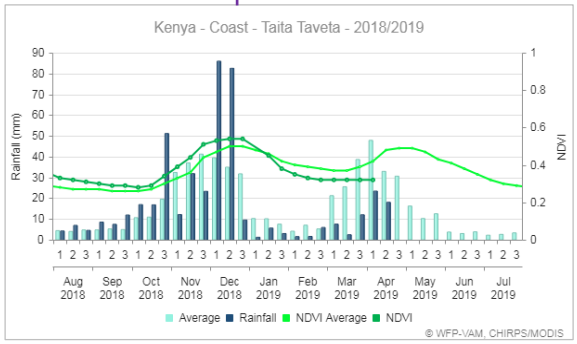
Elsewhere (southern Rift Valley, Coast, Eastern) negative impacts are already locked in as there is little rainfall after end of April (see charts below).

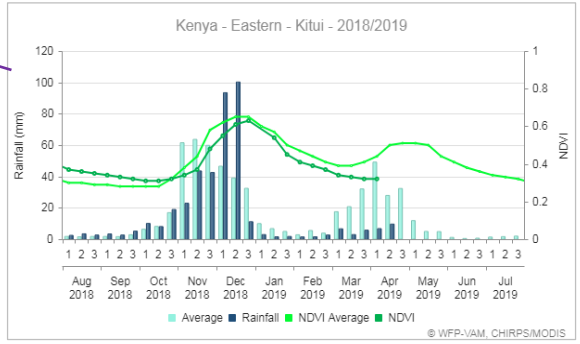








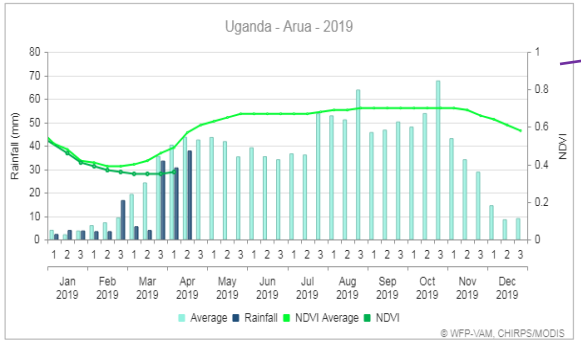


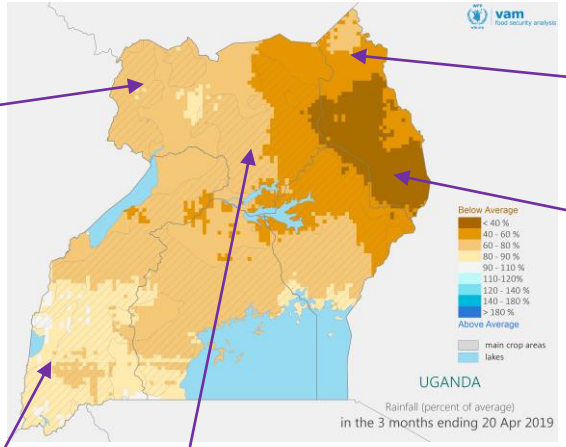


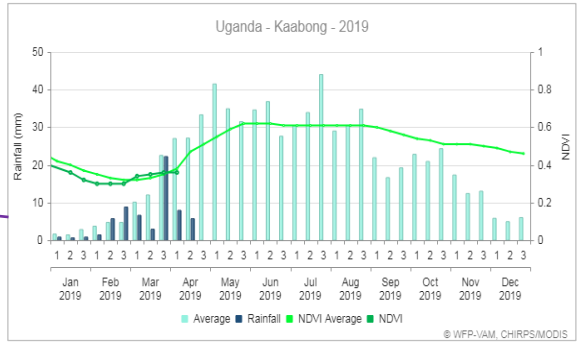
Uganda Focus

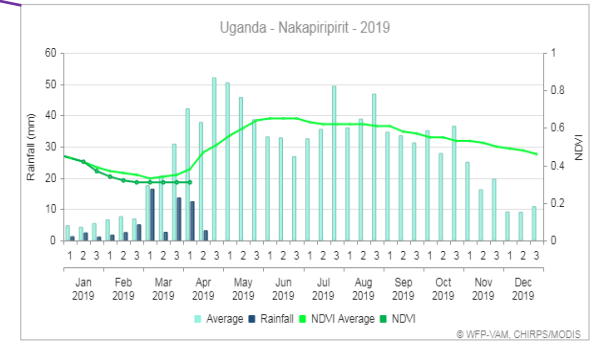
Areas in the north of Uganda have a similar situation to Karamoja and have a similar diagnostic: persistently drier than average conditions from early 2019. So far, this corresponds to the early stages of the season and given the length of the rainfall season there is time for recovery provided rains improve substantially from May onwards.

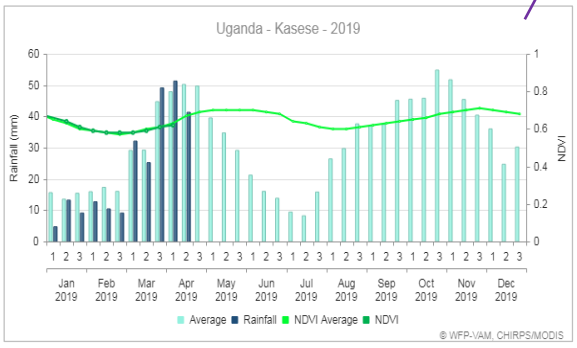
In southern and central areas, dryness has affected a significant part of the first rainfall season (roughly March to May-June); due to significant delays in the planting phase and continued moisture stress, impacts on production can be expected.

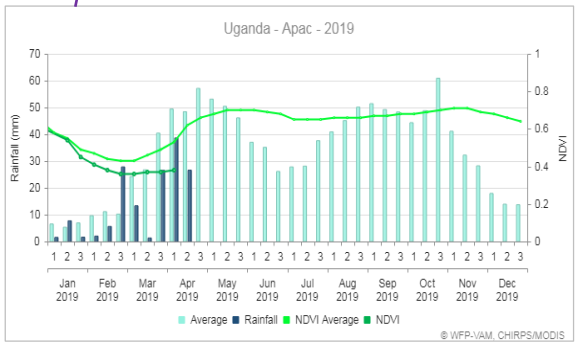








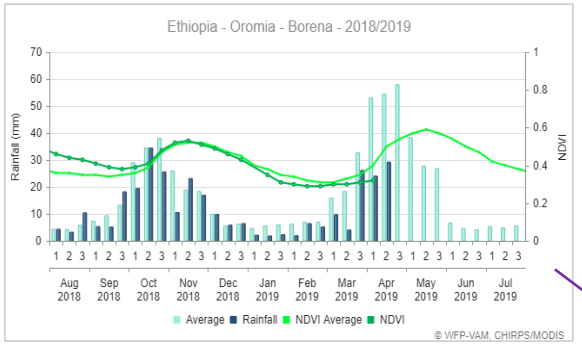


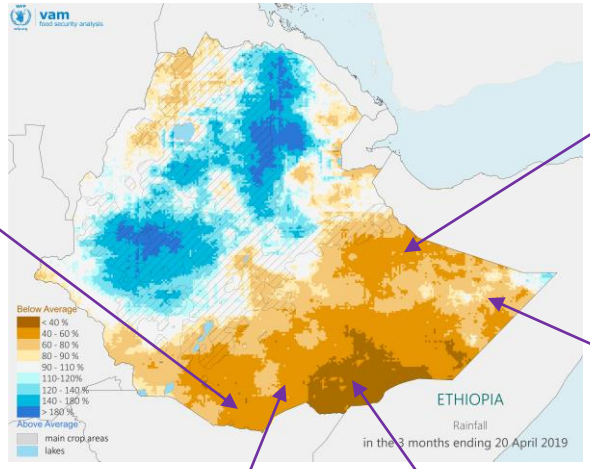


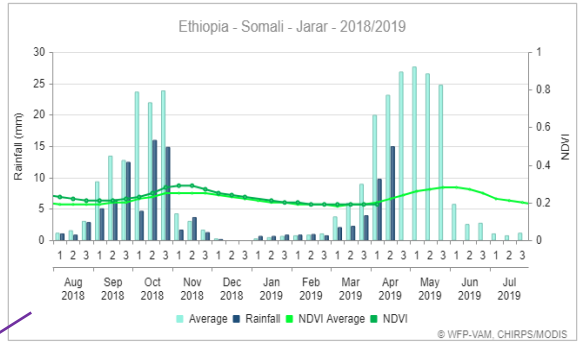
Ethiopia Focus

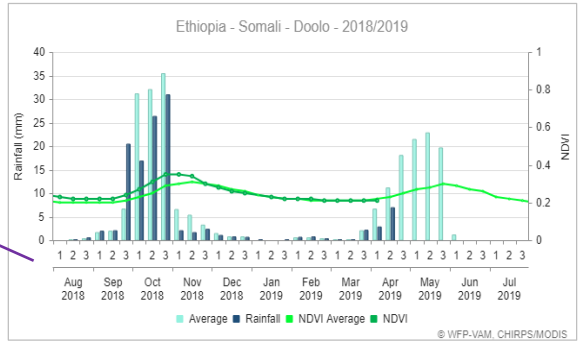
Ethiopia is facing the same kind of problems as other countries in the region. The problems are confined to its southeastern areas, mainly the Somali region and southern areas of Oromia region.

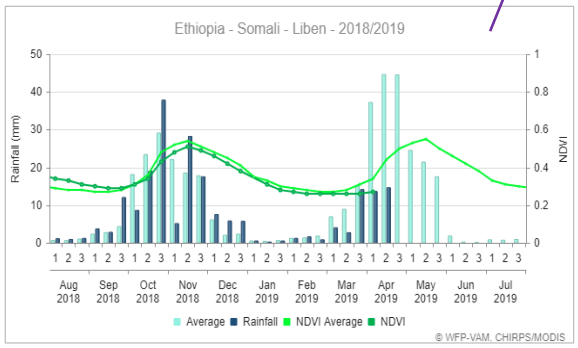
As in other areas, rainfall has been much below average and there is little time left to enable a recovery in case rainfall would improve significantly. A potential rainfall improvement from mid May onwards might only help the more eastern and northern areas of the Somali region (Jarar and Doob) where May provides the bulk of the seasonal rainfall. However, this is not very likely

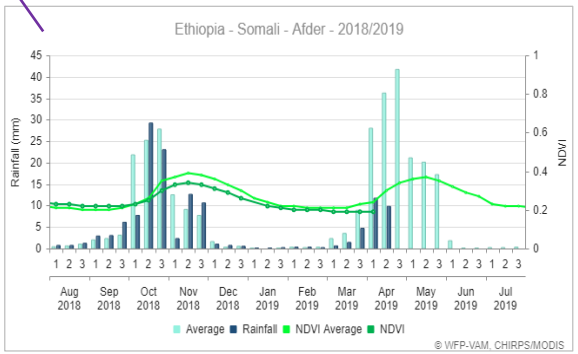












FOR FURTHER INFORMATION:

Rogerio Bonifacio

rogerio.bonifacio@wfp.org

+39 06 6513 3917

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wfp.org

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