



World Food Programme



Food and Agriculture Organization of the United Nations

Persistent drought in Somalia leads to major food security crisis

The European Commission's Joint Research Centre (JRC), the Famine Early Warning Systems Network (FEWS NET), the Food and Agriculture Organization of the United Nations (FAO) and the United Nations World Food Programme (WFP) are deeply concerned about the impact of the recent and persistent drought in Somalia. The latest extreme drought that hit Somalia during the 'Deyr' rainfall season in the last quarter of 2016 came after an already poor 'Gu' season from March to May. Combined with factors including high food prices, trade disruption, population displacement and insecurity, this drought is having a very severe impact on the food security of millions of people in the coming months, and could be exacerbated by a forecast poor 'Gu' rainfall season in 2017.

Somalia endured an extreme drought during the October-December 'Deyr' rainfall period (Fig. 1). Across most of the country, a persistent lack of rainfall led to extensive failures of the growing season, and record low vegetation cover and soil moisture conditions. The impact of the 'Deyr' season drought is amplified by the effects of the poor rains during the previous March to May 2016 'Gu' rainfall season. This had already led to significant losses in crop and pasture production, and weakened the capacity of households to deal with a shock of this magnitude.

This drought is part of a wider-scale event that includes central, coastal and northern Kenya, southern Ethiopia and, to a lesser degree, other areas of the Great Horn of Africa. In areas of central and northern Somalia, the current drought is more intense than that of 2010, which played a major role in the 2010-2011 food crisis humanitarian disaster. The failed rainy season is linked to the La Niña climate phenomenon combined with exceptionally warm sea surface temperatures in the western Pacific and eastern Indian Ocean. This combination typically causes low rainfall levels in the eastern parts of the Horn of Africa.

As a result of the drought, the January 'Deyr' harvest estimates provided by FEWS NET and the Food Security and Nutrition Analysis Unit - Somalia (FSNAU) indicate extremely low levels of crop production in Southern and Central Somalia (75% below the 5-year average). The drought is already producing severe water and pasture shortages in pastoral regions, including southern and central areas, Puntland and parts of Somaliland. In the north of Somalia, parts of the Sanaag, Bari, Sool and Nugal districts have experienced repeated poor rainy seasons, severe loss of livestock, and a severe reduction in milk production.

As shown in Fig. 1, for large parts of the country the 2016 cumulated seasonal soil moisture was among the lowest recorded (brown) or very low (orange) in the past 35 years (1982 – 2016), according to FEWS NET data. These cumulated soil moisture deficits manifest in a long period of poor pasture conditions for pastoralists.

High-resolution satellite imagery provides detailed maps of fields which have either not been planted or where crops have failed in the most productive areas in Lower Shabelle. As can be seen in Fig. 2, in 2016 only irrigated fields in the proximity of the Lower Shabelle river show green

vegetation (green areas) at the end of the Deyr season, while more peripheral irrigated areas and rain-fed areas to the north and to the south are completely dry (orange areas).

During the dry January to March 'Jilaal' season, the food security situation is expected to further deteriorate: as meager household stocks become depleted, livestock prices continue to decline and food prices increase above the already very high levels of recent months. Falling household purchasing power will lead to increased difficulties in meeting basic food needs.

The FSNAU-FEWS NET countrywide seasonal assessment (conducted in December 2016 and made public on 2 February 2017) finds that more than 2.9 million people will likely face Crisis and Emergency (IPC Phases 3 and 4) food security conditions until June 2017. This represents more than a two-fold increase compared to six months ago. The northern inland pastoral livelihood zone in northern Somalia, agropastoral Bay and southern Bakool are expected to face the most severe food security situations. At present, FSNAU-FEWS NET estimates that 363,000 children under 5 are acutely malnourished, of which 71,000 are severely malnourished and in need of urgent nutrition support. 'Critical' rates of Global Acute Malnutrition (GAM 15-30%) among children 6 to 59 months were found in most areas surveyed.

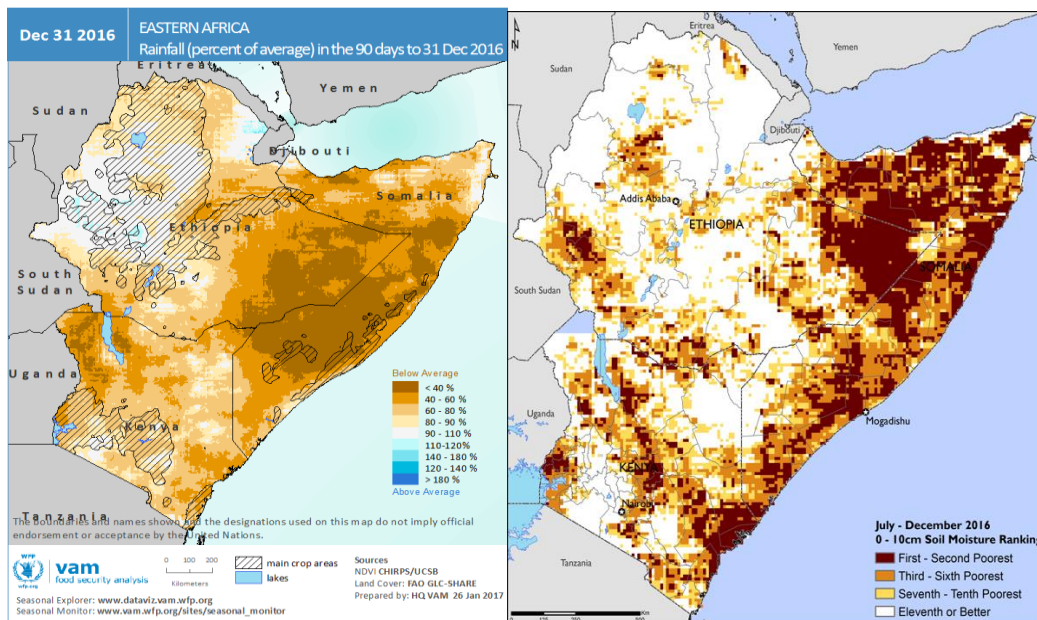


Fig 1: October –December cumulated rainfall anomaly in percentage (left) and cumulated July-December soil moisture level rankings (right) for the top 10 cm of soil. Somalia is clearly the most directly affected country, while large areas in coastal and central Kenya and in the Ethiopian Somali province are in a similar situation. (Source: WFP and FEWS NET/NASA FLDAS)

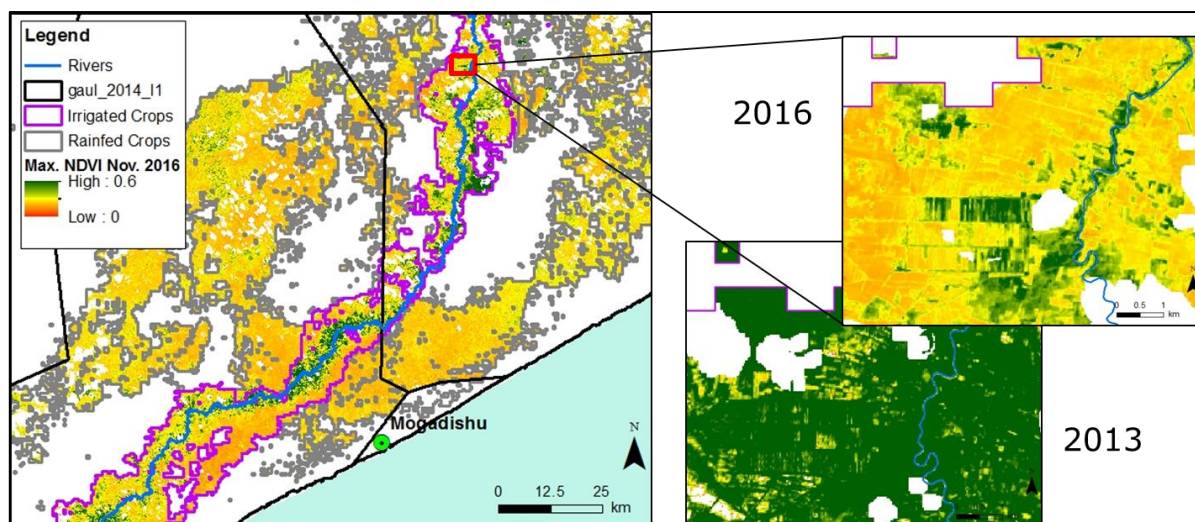


Fig. 2: Vegetation greenness of the main agricultural areas of Southern Somalia along the Shabelle River in November 2016. The orange areas are dry fields which are normally at the peak of the crop cycle in this season. The green belt (left) in the middle corresponds to irrigated fields next to the Shabelle River. Less than half of the irrigated area (pink polygon) is actively producing in 2016. To the right, the expanded views of an irrigated area show that, except for some larger fields next to the river, most plots are dry. The same area is also shown for a normal season (2013) (Source: JRC, with Landsat 8 data processed in Google Earth Engine, land cover provided by the FAO's Somalia Water and Land Information Management (SWALIM) project)

The next 'Gu' rainfall season will occur from March to May 2017, and is typically the more productive season of the year. Good rainfall performance would be crucial to prevent further impacts and to allow households to start recovering.

However, based on a balance of current forecast information (ECMWF, NOAA CPC, UKMet, IRI¹) and analysis of long-term records (blog.chg.ucsb.edu/?p=148), the outlook for the coming 'Gu' season is pessimistic, with a significant likelihood of below-average rainfall performance, especially during the first half of the season, and consequently another potentially poor harvest at the outset of the long dry season that will extend into October 2017. The information sources mentioned above are also the basis for the Greater Horn of Africa Consensus Outlook Forum which, in its [latest statement released on 8 February 2017](#), expresses similar concerns about the next rainy season.

A statistical forecast for the 2017 'Gu' rains, based on January sea-surface temperatures, is presented in Fig. 3. This forecast is based on research explicitly carried out to support East African food security decision-making in situations similar to those of 2010/2011. Since the 1980s, 'Gu' rains in Somalia have declined precipitously, with poor rainfall levels in most years since 1999. While good rains were received during the El Niño-like 2010 and 2013 'Gu' seasons, current sea-surface conditions (Fig. 4) are similar to those associated with dry years – warm west Pacific sea-surface temperatures appear alongside cool or neutral conditions across the equatorial eastern Pacific. The associated statistical forecast (Fig. 3) is for a -0.8Z standardized anomaly $\pm 1.1Z$.

¹ ECMWF: European Centre for Medium-Range Weather Forecasts. CPC: Climate Prediction Centre. UKMet: United Kingdom Meteorological Office. IRI: International Research Institute for Climate and Society.

While conditions may change between now and March 2017, current climate conditions indicate an elevated chance of below-average rains, at least in part of the country. Current January rainfall anomalies continue to indicate low rainfall over East Africa and the Indian Ocean (Fig. 5). This pattern may persist.

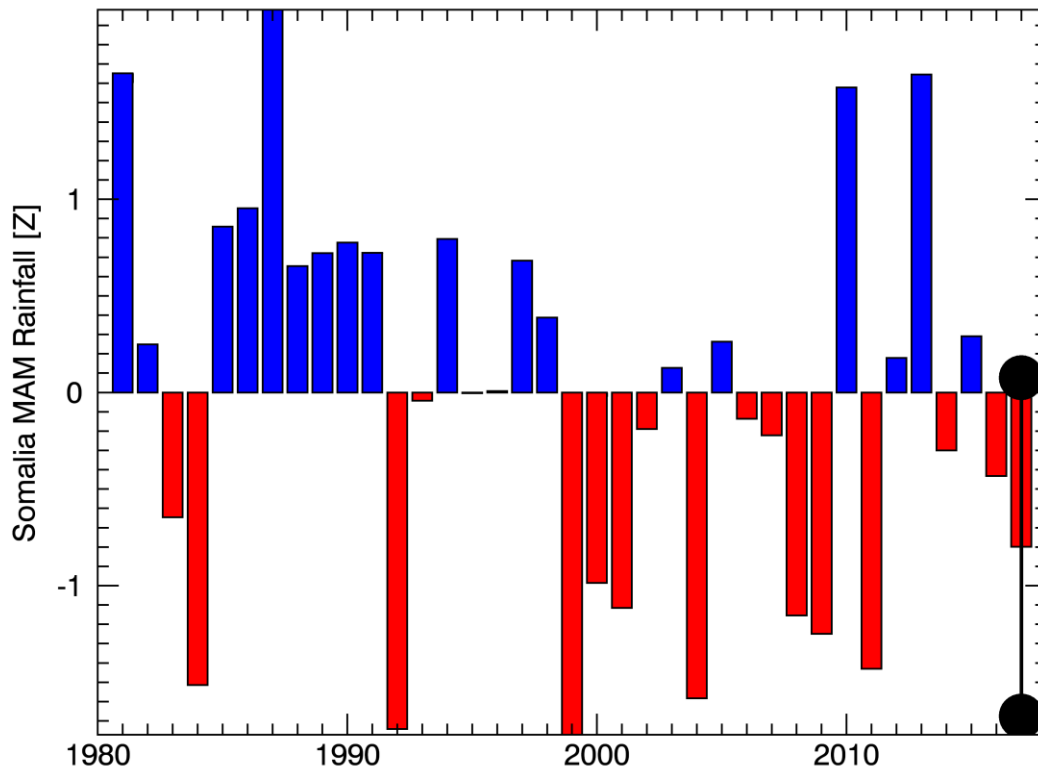


Fig.3: Time series of observed 1981-2016 Gu rains, together with a statistical forecast for 2017. The black line and circles denote the 2017 forecast and 80% confidence intervals. (Source USGS/CHG/FEWS NET)

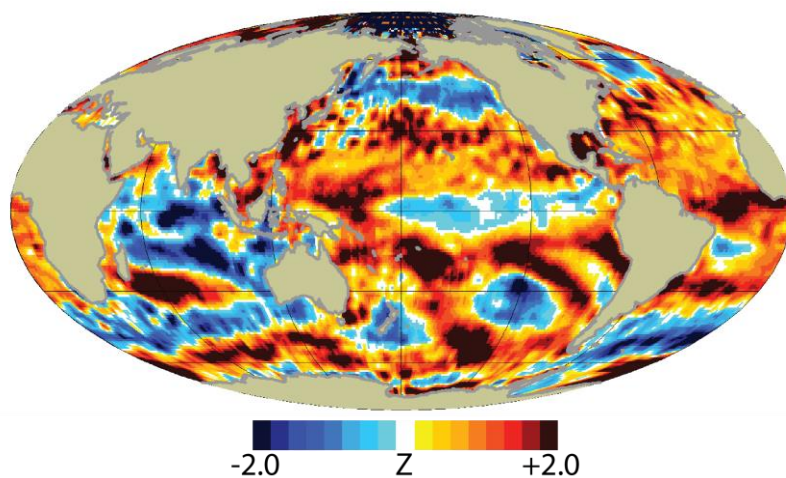


Fig. 4: Standardised January NOAA Optimum Interpolation sea-surface temperature anomalies. (Source USGS/CHG/FEWS NET)

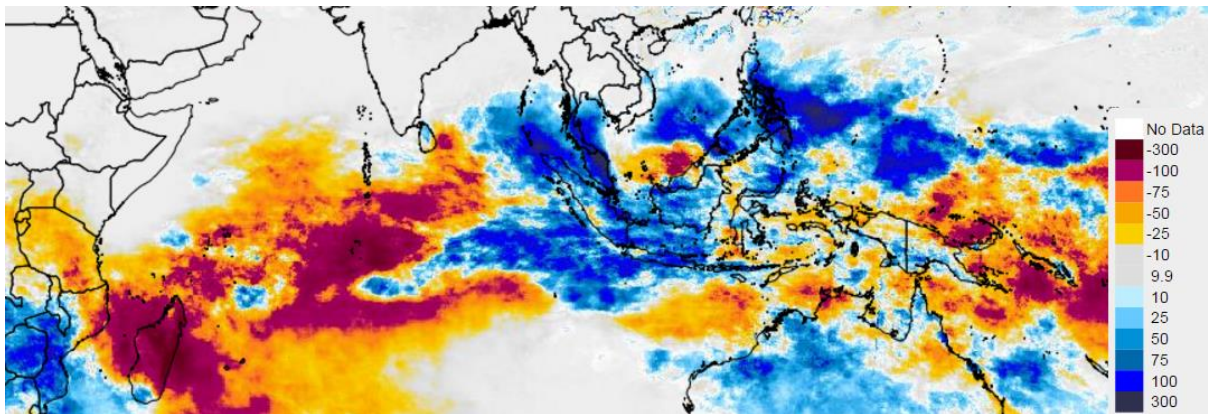


Fig. 5. January 2017 rainfall anomalies (Source USGS/Climate Hazards Group/USGS).

The implications of a third consecutive drier-than-average rainfall season are bleak: the combined impact of successive crop failures, trade disruption due to insecurity and restricted access to humanitarian assistance may lead to a humanitarian disaster on the scale observed in 2010-2011. Very large numbers of people could require urgent humanitarian assistance, with the most vulnerable populations in the worst-affected areas facing an increased risk of famine.

Humanitarian partners should urgently prepare themselves to scale up their interventions in response to food insecurity levels and food insecure population numbers in Somalia and neighbouring regions, which are likely to be at their highest levels since the 2010-2011 disaster.

Based on the drought impact evidence included in this statement and on the more detailed food security and nutrition information included in the multi-agency assessment released on 2 February 2017, the following actions are of highest priority:

1. provision of urgent and substantial food assistance to help currently food-insecure households and support the most affected livelihoods. Response activities to be planned on the detailed IPC analysis outcomes that were issued on 2 February 2017;
2. updating of emergency response for agro-pastoral communities, intensification of advocacy and resource mobilisation to address the impact of an extended post-2016 “Deyr” harvest lean season. For pastoral communities, provide updates of contingency plans to face continued severe shortages in livestock forage and drinking water;
3. continued close monitoring of the dry January to March “Jilaal” season and the next “Gu” rainfall season to inform decision-making on programming and targeting;
4. increase awareness of the need for a regional approach to address the effects of drought that are becoming more frequent and intense, and to ensure adequate access to populations in need of assistance.

This statement reflects a shared view of current conditions and the likely evolution of the situation in Somalia by major actors involved in global food security monitoring and early warning and will contribute to the global report on food crises being prepared in the context of the Global Network against Food Crises.

Further details can be obtained from the following reports:

[FSNAU-FEWS NET Joint Technical Release February 2017](#)

WFP Seasonal Monitor:

<http://documents.wfp.org/stellent/groups/public/documents/ena/wfp290212.pdf>

FEWS NET/FSNAU Somalia Food Security Alert: <http://www.fews.net/east-africa/somalia/alert/january-16-2017>

FEWS NET East African Drought Atlas: <http://www.fews.net/east-africa/special-report/february-3-2017>

FAO GIEWS: <http://www.fao.org/3/a-i5258e.pdf>,
<http://www.fao.org/giews/english/index.htm>

European Commission's in-house science service, Joint Research Centre – Global food security in 2016: https://ec.europa.eu/europeaid/sites/devco/files/report-food-crisis-jrc-20160425_en_.pdf

Climate Hazards Group statistical forecast: <http://blog.chg.ucsb.edu/?p=148>

GEOGLAM [Early Warning Crop Monitor Report](#)

GHACOF 45th announcement: http://www.icpac.net/wp-content/uploads/GHACOF45_Statement.pdf