



October to December 2017 Climate Outlook for South Sudan – FAO's Key Messages¹

Based on 47th Greater Horn of Africa Climate Outlook Forum (GHACOF 47)
Zanzibar Beach Resort, Zanzibar, United Republic of Tanzania, 21st-22nd August 2017

Introduction:

The Forty Seventh Greater Horn of Africa Climate Outlook Forum (GHACOF 47) was convened from 21st to 22nd August 2017 at Zanzibar Resort Beach, Republic of Tanzania by the IGAD Climate Prediction and Applications Centre (ICPAC) to formulate a consensus on regional climate outlook for the October to December 2017 rainfall season over the Greater Horn of Africa region (GHA) under the Theme “**Preparedness for potential El Niño event and related impacts**”. The Forum workshop was supported by AfDB, UNDP, USAID, UNISDR, ACMAD and DFID and hosted by the Government of the United Republic of Tanzania. The workshop was attended by over 250 participants from IGAD member states (Burundi, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, South Sudan, Sudan, Tanzania and Uganda), scientists from regional climate centres and climate information users from agriculture and food security, disaster risk, water resources, energy, marine and oceanography, and media.

Methodology:

The forum scientists and climate experts examined the Ocean-Atmospheric processes and evolving large scale and regional scale circulation systems such as the current and evolving Sea Surface Temperature (SST) anomalies over global oceans; high probability for neutral ENSO and Indian Ocean Dipole (IOD) phases that have significant implications on climate over the GHA during October to December 2017 period. Guidance and valuable forecast inputs were drawn from a wide range of sources including the World Meteorological Organisation's Global Producing Centres (WMO-GPCs), Met Office, the International Research Institute for Climate and Society (IRI), African Centre of Meteorological Applications (ACMAD), the US Geological Survey (USGS) and the National Meteorological and Hydrological Services (NMHSs) of the Greater Horn of Africa.

The forecasting capability allows for prediction of departures from mean conditions and the establishment of probability distributions that indicate the likelihood of above-, near-, or below-normal rainfall patterns and areas with similar outlook are grouped into zones I, II, III, IV, V and VI in Figures 1 and 2 below.

The potential implications of the climate outlook on agriculture and food security, livestock, water resources, disaster risk management for each forecast zone were discussed and mitigation strategies for each zone developed by participants for their respective countries and sectors. The rainfall and temperature outlooks for October to December 2017 for various zones within the GHA region are given in Figures 1 and 2 respectively.

Consensus Climate Outlook for South Sudan (October to December 2017 rainfall season):

Generally, the October to December 2017 rainfall performance over most parts of South Sudan is predicted to be near normal. However, some areas in the South and South-western part of South Sudan are forecast to receive above-normal rainfall during the October to December 2017 period.

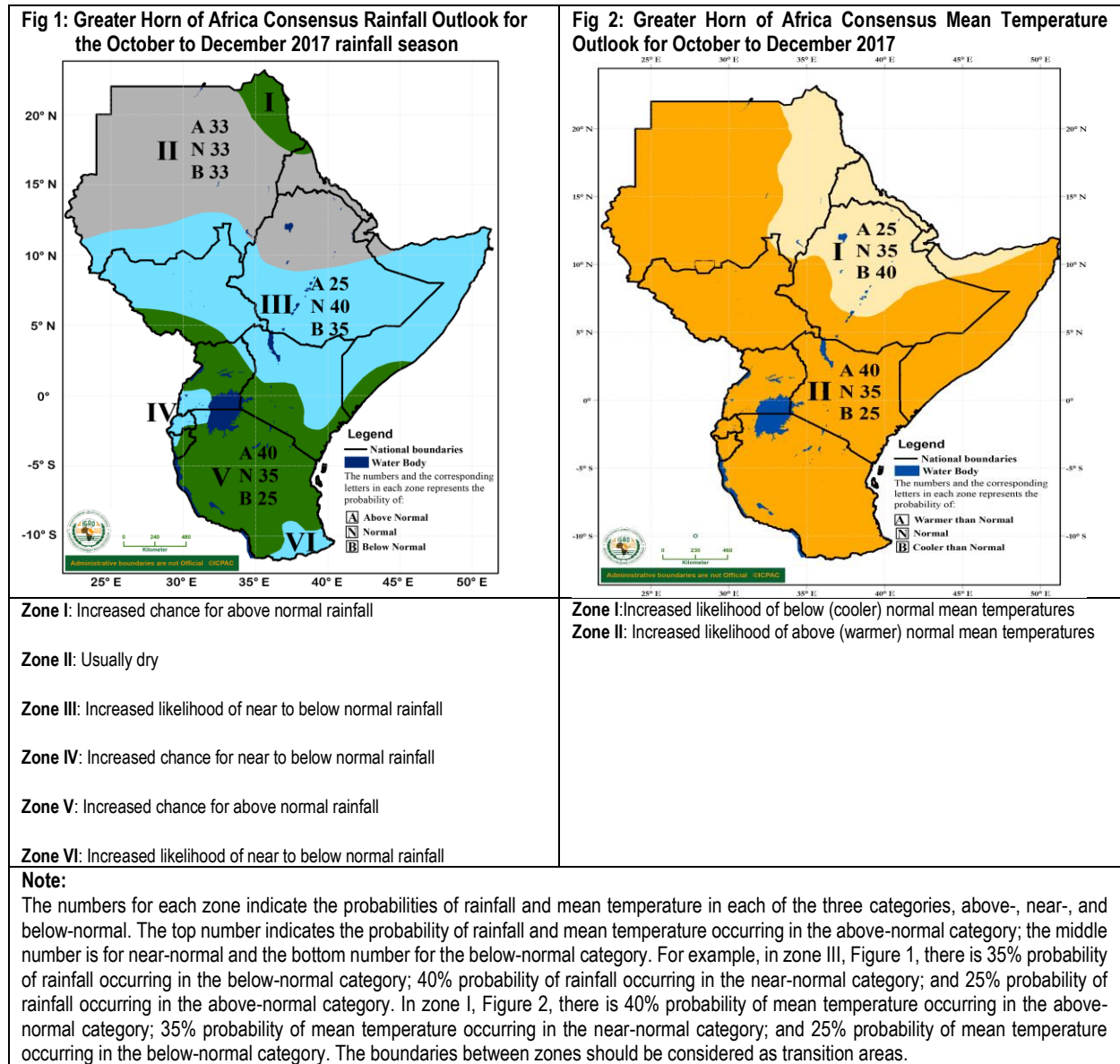
Specifically:

- Ezo, Yambio, Nzara, Ibba, Maridi, Yei, Lainya, Kajo-keji, Magwi and parts of Ikwoto are forecast to receive above-normal to normal rainfall during the October to December 2017 rainfall period (Figure 1, Zone V).
- The rest of the areas in South Sudan are forecast to receive near-normal to below-normal rainfall during the October to December 2017 period (Figure 1, Zone III).
- With the exception of the north-eastern parts of Renk County, the rest of South Sudan is forecast to experience above-normal to near-normal mean temperatures during the October to December 2017 period (Figure 2, Zone II).

¹ Produced by the SAFaNIS Team with financial support from the EU, DFATD and DFID.

- Extended dry periods are expected in October, but November is expected to have shorter dry spells compared to average.

Note: Although the outlook is relevant for the October to December 2017 period and for relatively large areas, there is possibility for local and month-to-month variations to occur as the season progresses. It is possible that episodic dry spells might occur in areas forecast with above normal rainfall, and episodic flash floods may occur in areas forecast with normal to below normal rainfall performance. Updates will be provided by the South Sudan Meteorological Department.



Agriculture and food security sector implications of June to September 2017 rainfall outlook:

- a) Positive implications of increased chance for above normal rainfall in October to December 2017 for south-western areas:
- This is likely to favor production of second season crops in the cassava and maize growing zone (greenbelt areas) if the prevailing security situation allows access to farmland.
 - The increased water discharge to the Nile River and its tributaries due to higher rainfall upstream is likely to increase fish volumes and present an opportunity for fishing in and along the Nile Basin, thus improving household protein consumption.

b) Negative implications of increased chance for above normal rainfall in October to December 2017 for south-western areas:

- Although favorable for crop production in South-western areas, continued heavy rains over these areas would increase the risk of flooding in lowlands, especially in the western flood plain areas and along the course of the Nile River.
- Physical access to remote areas and markets will be disrupted by deteriorated feeder roads due to muddy conditions. This will lead to an increase in the cost of transportation and result in higher food prices.

c) Implications of increased likelihood of near to below normal rainfall in October to December 2017 for the rest of South Sudan:

- The near to below normal rainfall amount forecast over most parts of South Sudan during the October to December 2017 period is likely to continue sustaining pasture growth as well as recharge of water *hafirs* and surface watering points in pastoral and agro-pastoral areas. This will further sustain livestock body conditions and milk supply for consumption and sale.
- Livestock are most likely to remain around homesteads longer due to availability of pasture and water. This will most likely reduce incidents of conflict over grazing and water resources among pastoralist communities.
- Incidents of livestock diseases are more likely to increase due to favourable climatic conditions (high temperature and humidity) and this is likely to increase pastoral households' expenses on herd treatment and vaccination.

d) Implications of increased likelihood of above (warmer) normal mean temperatures in South Sudan

- Warmer than average temperatures and normal to enhanced rainfall forecast in most parts of the country is likely to increase incidences of crop diseases and pest proliferation and infestation, thus affecting crop productivity. This may also favour increased infestation by the Fall Armyworm (FAW) which has already been confirmed in the country's main agricultural areas.

Recommended mitigation actions:

- Participatory and continuous crop monitoring approach should be adopted in order to provide early warning for early action, especially with the threat of the Fall Armyworm (FAW).
- Promote planting of early maturing crop varieties to take advantage of the remainder of the rainy season.
- Timely agronomic practices like weeding, gap-filling, water and soil conservation measures are recommended to enable farmers to take advantage of favorable weather conditions in the country.
- Advocate for timely harvest and proper post-harvest practices to farmers so as minimize crop losses.
- Promote water harvesting for dry season crop production, especially vegetables.
- Establishment and/or rehabilitation of on-farm physical structures to improve drainage of excess water in flood-prone areas and moisture retention structures in low rainfall areas.
- Livestock surveillance systems should be activated for early detection, identification and reporting of any animal health risks for timely intervention.
- Vaccination against Contagious Bovine Pleuropneumonia (CBPP) and Black Quarter is recommended to minimize livestock loss.