



STATEMENT FROM THE FORTY NINTH GREATER HORN OF AFRICA CLIMATE OUTLOOK FORUM (GHACOF 49): 13-14 MAY 2018, KEMPINSKI PALACE HOTEL, DJIBOUTI

Summary

June to September constitutes an important rainfall season over the northern sector and the western parts of the equatorial sector of the Greater Horn of Africa (GHA) region. The regional consensus climate outlook for the June to September 2018 rainfall season indicates increased likelihood of above normal rainfall over much of the northern sector and increased likelihood of near normal rainfall over parts of the coast and the western areas of the equatorial sector. For the rest of GHA, June to September period is a dry season and these areas are expected to remain generally dry during June to September 2018. The highlands of the equatorial sector are expected to experience cool and cloudy conditions during June to September 2018 period.

The World Meteorological Organisation (WMO) and the major global climate centres have noted a slow rise of Sea Surface Temperatures (SSTs) over the equatorial Pacific Ocean. However, SSTs are expected to remain near normal through the forecast period. The Indian Ocean Dipole (IOD), which also has significant influence on regional climate, is also expected to remain in the neutral phase. The influence of these ocean processes will be modulated by regional circulation patterns especially monsoonal winds, Somalia Jetstream, together with the influence of topography and large inland water bodies. Updates on the El Niño Southern Oscillation (ENSO) conditions will be provided regularly by WMO and the major climate centres.

The climate outlook is relevant for seasonal timescale and cover relatively large areas. Local and month-to-month variations might occur as the season progresses. While sporadic heavy rainfall is most probable over much of the monsoonal regions, extended dry spells and below normal rainfall may occur in areas with an increased likelihood of above normal rainfall. ICPAC will provide regional updates on regular basis while the National Meteorological and Hydrological Services (NMHSs) will provide detailed national and sub national climate updates.

The Climate Outlook Forum

The Forty-ninth Greater Horn of Africa Climate Outlook Forum (GHACOF49) was convened from 13th to 14th May 2018 at Kempinski Palace Hotel, Djibouti, Republic of Djibouti by the IGAD Climate Prediction and Applications Centre (ICPAC) and partners to formulate a consensus regional climate outlook for the June to September 2018 rainfall season over the GHA region. The GHA region comprises Burundi, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, South Sudan, Sudan, Tanzania and Uganda. The forum reviewed the state of the global climate system including the developing neutral El Niño-Southern Oscillation (ENSO) conditions, SSTs over Atlantic and Indian Oceans and IOD phase, and considered their impacts on the GHA during June to September 2018 rainfall season. Users from sectors such as disaster risk management, agriculture and food security, health and water resources as well as non-governmental organisations and development partners actively participated in the formulation of mitigation strategies of the potential impacts of the consensus climate forecast in their respective specific sectors.

Guidance and valuable forecast information was drawn from a wide range of sources including the World Meteorological Organisation's Global Producing Centres (WMO GPCs) and National Meteorological and Hydrological Services. These inputs were combined using deterministic and probabilistic modelling alongside expert analysis and interpretation to obtain the regional rainfall forecast for the period June to September 2018.

Methodology

The forum examined the prevailing and predicted SSTs over the Pacific, Indian and Atlantic Oceans as well as other global, regional and local climate factors that affect the rainfall evolution during the season. These factors were assessed using dynamical and statistical models as well as expert interpretation. The regional consensus climate outlook also included inputs from National climate Scientists who participated in the Pre-COF 49 Capacity Building Training Workshop that was hosted by ICPAC from 7th to 11nd May 2018. Additional inputs were obtained from various global climate Centres including WMO GPCs and the International Research Centre for Climate and Society (IRI). The current capability of seasonal to inter-annual climate forecasting allows prediction of departures from mean conditions on a large-scale basis, bearing in mind scales of processes which contribute to regional and sub-regional climatic conditions. The experts established probability distributions to indicate the likelihood of above-, near-, or below-normal rainfall for each zone. Above-normal rainfall is defined as within the wettest third of recorded rainfall amounts in each zone; near-normal is defined as the third of the recorded rainfall amounts centred around the climatological median; below-normal rainfall is defined as within the driest third of the rainfall amounts. Climatology refers to a situation where any of the three categories have equal chances of occurring. Probability distributions for temperature are also established. The rainfall and temperature outlooks for June to September 2018 for various zones within the GHA region are given in Figure 1 and Figure 2 respectively.

Rainfall Outlook for June to September 2018

The rainfall outlook for various zones within the GHA region is given in Figure 1 below.

- Zone I:** Increased likelihood for above normal rainfall
- Zones II:** Increased likelihood of near normal to above normal rainfall
- Zones III:** Usually dry during June to September

Temperature Outlook for June to September 2018

The temperature outlook for various zones within the GHA region is given in Figure 2 below.

- Zone I:** Increased likelihood for above to near normal mean temperature
- Zones II & IV:** Increased likelihood of near normal to below normal mean temperature
- Zones III:** Increased likelihood for near normal mean temperature

Note:

The numbers for each zone indicate the probabilities of rainfall in each of the three categories, above-, near-, and below-normal. The top number indicates the probability of rainfall occurring in the above-normal category; the middle number is for near-normal and the bottom number for below-normal category. For example, in Zone I in Figure 1, there is 40% probability of rainfall occurring in the above-normal category; 35% probability of rainfall occurring in the near-normal category; and 25% probability of rainfall occurring in the below-normal category. It is emphasised that boundaries between zones should be considered as transition areas.

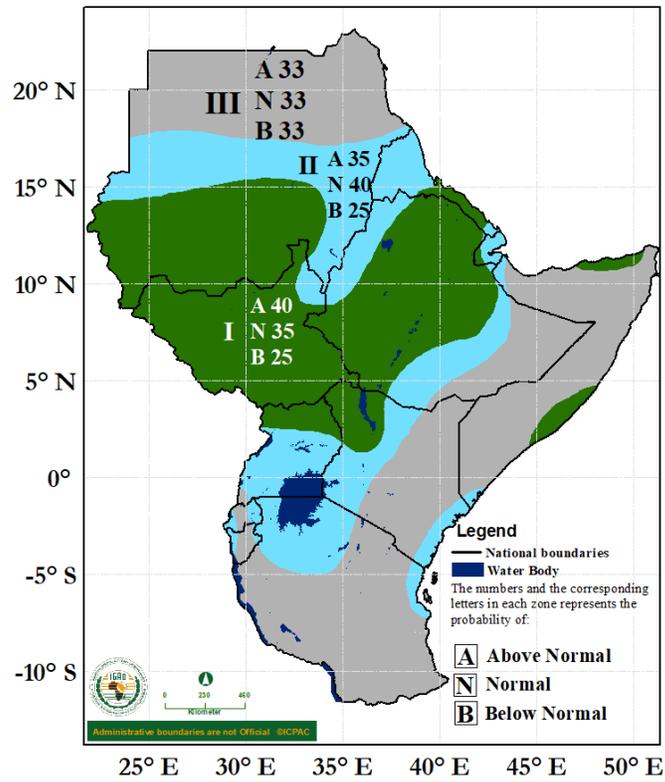


Figure 1: GHA Consensus Rainfall Climate Outlook for the June to September 2018 rainfall season

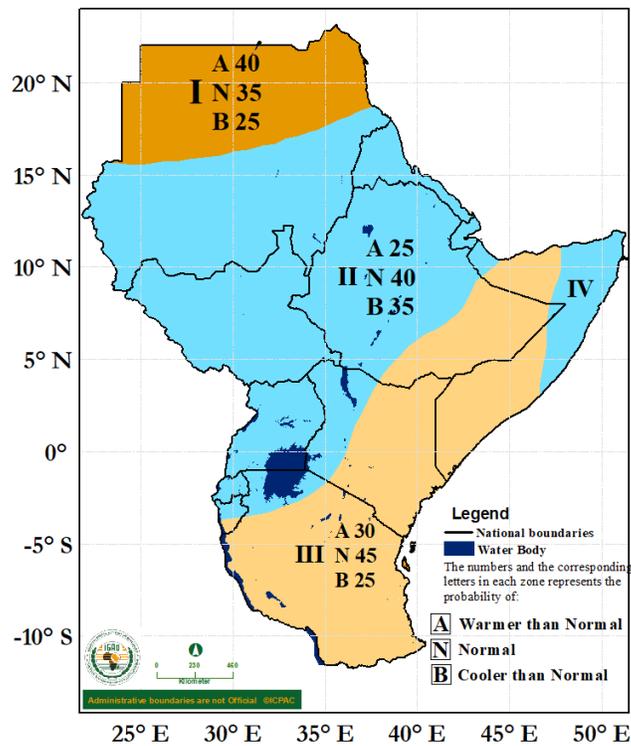


Figure 2: GHA Consensus Temperature Climate Outlook for the June to September 2018 rainfall season

Contributors

The Forty Ninth Greater Horn of Africa Climate Outlook Forum (GHACOF 49) was organized jointly by the IGAD Climate Prediction and Applications Centre (ICPAC) and National Meteorological and Hydrological Services (NMHSs) of the Greater Horn of Africa (GHA). The forum was supported by USAID, the African Development Bank, and the WISER Support to ICPAC Project funded by DFID. Contributors to the GHACOF 49 consensus regional climate outlook included representatives of the National Meteorological Services from GHA countries (Insitut Geographique du Burundi; Meteorologie Nationale de Djibouti; Eritrea Meteorological Service; National Meteorological Agency of Ethiopia; Kenya Meteorological Service; Rwanda Meteorological Agency; South Sudan Meteorological Service; Sudan Meteorological Authority; Somalia Meteorological Authority and Uganda National Meteorological Authority) and climate scientists as well as other experts from national, regional and international institutions and organizations: IGAD Climate Prediction and Applications Centre (ICPAC); Met Office, UK; and WMO Global Producing Centres (GPCs).