Statement from the Forty Second Greater Horn of Africa Climate Outlook Forum (GHACOF 42) for March to May 2016 season: 22-23 February 2016; Lemigo Hotel, Kigali, Rwanda

Summary

The March to May months constitute an important rainfall season over the equatorial parts of the Greater Horn of Africa (GHA) region. The regional consensus climate outlook for the March to May 2016 season indicates an increased likelihood of near normal to below normal rainfall over central and southern parts of Sudan, southwestern Eritrea, western and southern Djibouti, northern and eastern Ethiopia, extreme northern and southern Somalia, northern parts of South Sudan, eastern and southern Kenya, much of Tanzania and extreme southern Burundi. Much of Burundi, Rwanda, Uganda, southern and eastern parts of South Sudan, southern Ethiopia, central Somalia as well as western, northwestern and central Kenya have increased probability for near normal to above normal rainfall during March to May 2016 season. The major processes considered as key drivers of the regional climate during March-May 2016 season included atmospheric-ocean conditions over the adjacent Indian and Atlantic Oceans as well as the predicted neutral Indian Ocean Dipole mode and decaying El Niño conditions. The outlook is relevant for the March-May 2016 season as a whole and for relatively large areas. Local and month-to-month variations might occur as the season progresses. It is likely that episodic heavy rainfall events leading to flash floods might occur even in areas with an increased likelihood of near normal to below normal rainfall. Also, dry spells may occur in areas with an increased likelihood of near normal to 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 updates.

The Climate Outlook Forum

The Forty Second Greater Horn of Africa Climate Outlook Forum (GHACOF 42) was convened from 22nd to 23rd February 2016 at Lemigo Hotel, Kigali, Rwanda by the IGAD Climate Prediction and Applications Centre (ICPAC), the Rwanda Meteorology Agency (Meteo Rwanda) and partners to develop a consensus climate outlook for the March to May 2016 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 and regional climate systems and their implications on the March to May seasonal rainfall over the region. Among the principal factors taken into account were the observed and predicted atmosphere-ocean conditions in the Indian and Atlantic Oceans with implications of transporting moisture and rainfall distribution in the region as well as global scale forcing due to the decaying El Niño conditions in the tropical Pacific. Users from agriculture and food security, livestock, water resources, disaster risk management, Non- Governmental Organizations and development partners discussed the potential implications of the consensus climate outlook, and developed mitigation strategies for their respective countries and sectors.

Methodology

The forum examined the prevailing and predicted SSTs over the Pacific, Indian and Atlantic Oceans and other global, regional and local climate factors that influence the GHA rainfall during the March to May 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 42 capacity building workshop that was hosted by ICPAC from 16th to 20th February 2016. Additional inputs were obtained from various global climate Centres including the World Meteorological Organization's Global Producing Centres (WMO GPCs), and the International Research Institute for Climate and Society (IRI). The current capability of seasonal to inter-annual climate forecasting allows prediction of departures from mean conditions. The climate 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. The rainfall and temperature outlooks for March to May 2016 for various zones within the GHA region are given in Figure 1 and Figure 2 respectively.

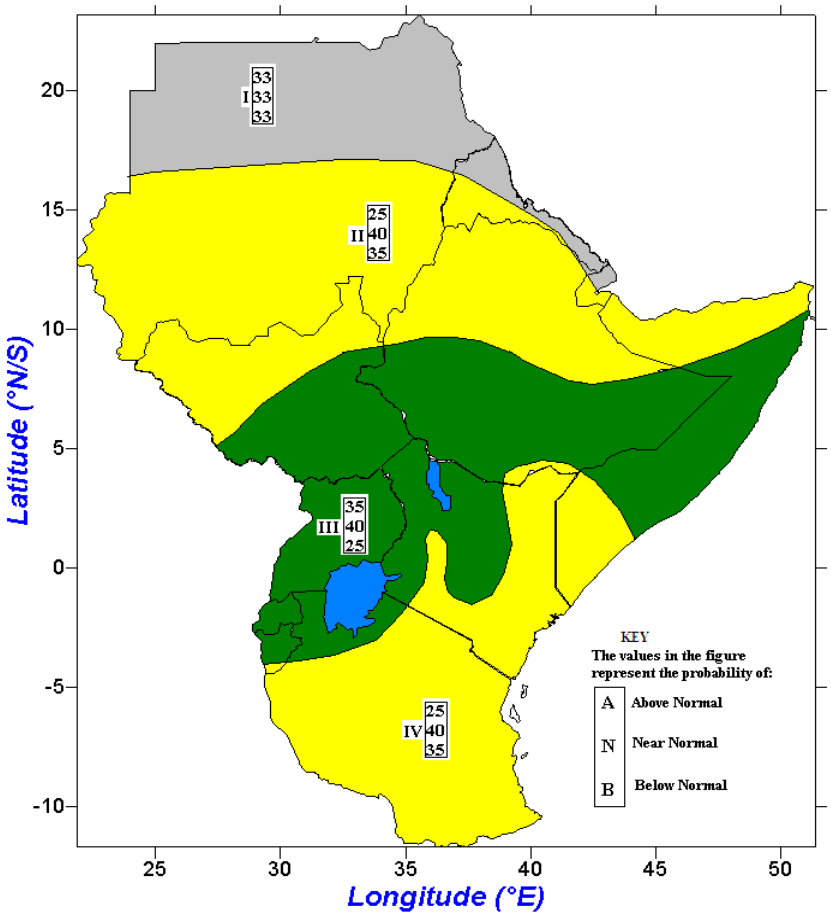

Figure 1: Greater Horn of Africa Consensus Rainfall Outlook for the March to May 2016 season

Zone I: Usually dry during March to May.
Zone II: Increased likelihood of near normal to below normal rainfall.
Zone III: Increased likelihood of near normal to above normal rainfall.
Zone IV: Increased likelihood of near normal to below normal rainfall.

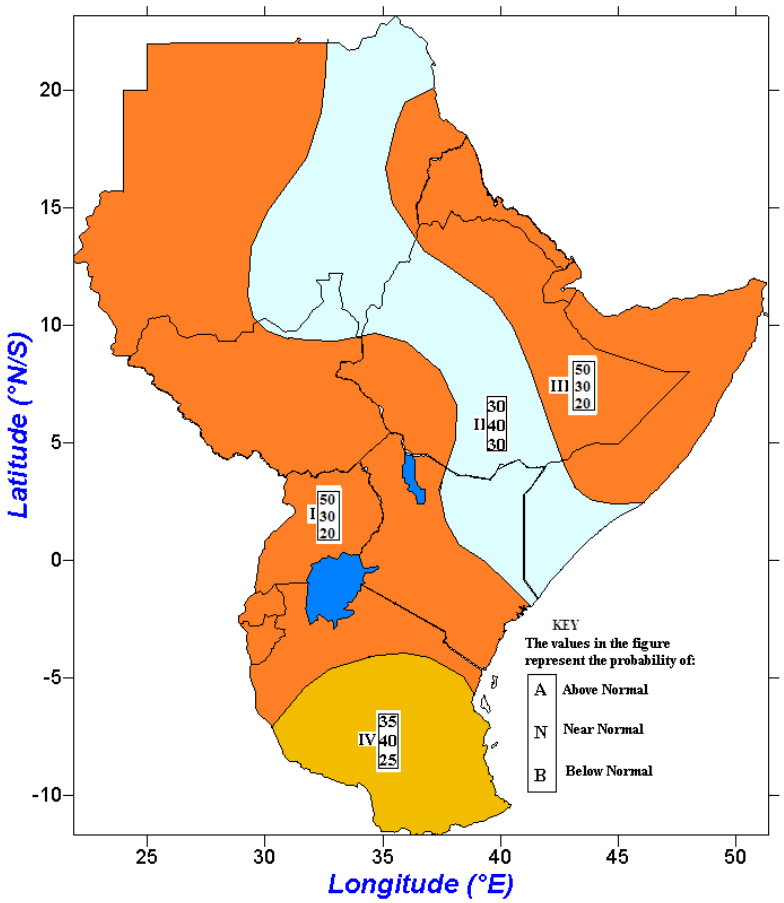

Figure 2: Greater Horn of Africa Consensus Mean Temperature Outlook for March to May 2016 season

Zone I: Increased likelihood of above normal mean temperatures.
Zone II: Increased likelihood of near normal mean temperatures.
Zone III: Increased likelihood of above normal mean temperatures.
Zone IV: Increased likelihood of near normal to above normal mean temperatures.

Note:

The numbers for each zone indicate the probabilities of rainfall and mean temperature in each of the three categories, above-, near-, and below-normal. The top number indicates the probability of rainfall and mean temperature occurring in the above-normal category; the middle number is for near-normal and the bottom number for the below-normal category. For example in zone III, Figure 1, there is 35% probability of rainfall occurring in the above-normal category; 40% probability of rainfall occurring in the near-normal category; and 25% probability of rainfall occurring in the below-normal category. In zone I, Figure 2, there is 50% probability of mean temperature occurring in the above-normal category; 30% probability of mean temperature occurring in the near-normal category; and 20% probability of mean temperature occurring in the below-normal category. The boundaries between zones should be considered as transition areas.

Contributors

GHACOF 42 was organized jointly by ICPAC and National Meteorological and Hydrological Services (NMHSs) of ICPAC member countries. The financial resources for the forum were provided by the USAID, UNDP and World Bank. Contributors to the GHACOF 42 consensus regional climate outlook included representatives of the National Meteorological Services from GHA countries (Insititut Geographique du Burundi; Agence Nationale de la Meteorologie de Djibouti; National Meteorological Agency of Ethiopia; Kenya Meteorological Department; Rwanda Meteorology Agency; South Sudan Meteorological Service; Sudan Meteorological Authority; Somalia Meteorological Authority; Tanzania Meteorological Agency and Uganda National Meteorological Authority) and climate scientists as well as other experts from national, regional and international institutions and organizations: ICPAC; Met Office, UK; HELIX Project and WMO GPCs and US Geological Surveys.