

STATEMENT FROM THE FORTIETH GREATER HORN OF AFRICA CLIMATE OUTLOOK FORUM (GHACOF 40): 25-26 MAY 2015, KEMPINSKI PALACE HOTEL, DJIBOUTI

Summary

June to August 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 August 2015 rainfall season indicates increased likelihood of near normal to below normal rainfall over much of the GHA and increased likelihood of near normal to above normal rainfall over parts of coast and the western areas of the equatorial sector. For the rest of GHA, June to August period is a dry season and these areas are expected to remain generally dry during June to August 2015. The highlands of the equatorial sector are expected to experience cool and cloudy conditions during June to August 2015.

The World Meteorological Organisation (WMO) and the major global climate centres have noted the warming of Sea Surface Temperatures (SSTs) over the equatorial Pacific Ocean with approximately 90% chance that moderate El Niño will continue through Northern Hemisphere summer 2015. Indian Ocean Dipole (IOD) that also has significant influence on regional climate is also expected to contribute to regional rainfall anomalies during the next several months. The influence of these ocean processes will be modulated by regional circulation patterns especially monsoonal winds, Somali Jetstream, together with the influence of topography and large inland water bodies. Updates on El Niño will be provided regularly by WMO and the major climate centres.

The outlook is relevant for seasonal timescale and cover 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. Dry spells also 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 Fortieth Greater Horn of Africa Climate Outlook Forum (GHACOF40) was convened from 25th to 26th May 2015 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 August 2015 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 weak to moderate El Niño conditions, sea surface temperatures (SSTs) over Atlantic and Indian Oceans, Indian Ocean Dipole (IOD) circulation and considered their impacts on the GHA during June to August 2015 rainfall season. Users from sectors such as disaster risk management, agriculture and food security and water resources as well as non-governmental organisations and development partners actively participated in the formulation of mitigation strategies of the consensus climate forecast in their 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 August 2015.

Methodology

The forum examined the prevailing and predicted sea surface temperatures (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 40 capacity building workshop that was hosted by ICPAC from 18th to 22nd May 2015. Additional inputs were obtained from various global climate Centres including the World Meteorological Organization's Global Producing Centres (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 (Figure 1). 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 outlook for June to August 2015 for various zones within the GHA region is given in Figure 1.

Rainfall Outlook for June to August 2015

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

Zones I & V: Increased likelihood for near to below normal rainfall

Zones II & VI: Increased likelihood of near normal to above normal rainfall

Zones III & IV: Usually dry during June to August

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 II, 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. It is emphasised that boundaries between zones should be considered as transition areas.

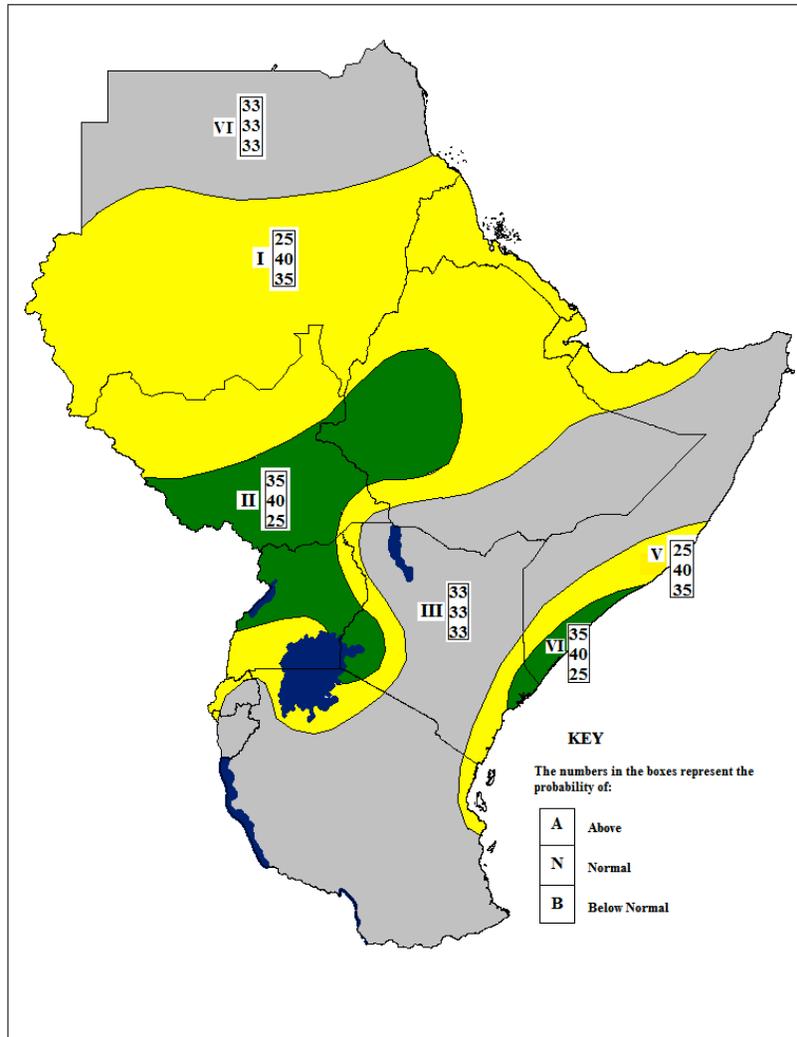


Figure 1: Greater Horn of Africa Consensus Climate Outlook for the June to August 2015 rainfall season

Contributors

The Fortieth Greater Horn of Africa Climate Outlook Forum (GHACOF 40) 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 the United Nations Development Programme (UNDP) with partial support by the United Nations Office for Disaster Risk Reduction (UNISDR) Contributors to the GHACOF40 consensus regional climate outlook included representatives of the National Meteorological Services from GHA countries (Insitut Geographique du Burundi; Meteorologie Nationale de Djibouti; National Meteorological Agency of Ethiopia; Eritrea Meteorological Service; 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); The Met Office, UK; WMO Global Producing Centres (GPCs); HELIX; Korea Meteorological Administration (KMA) and the International Research Centre for Climate and Society (IRI).