

STATEMENT FROM THE THIRTY FIRST GREATER HORN OF AFRICA CLIMATE OUTLOOK FORUM (GHACOF 31): 29-30 MAY 2012, 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 2012 rainfall season indicates increased likelihood of near normal to above normal rainfall over western and central areas of the northern sector of GHA as well as the western and coastal parts 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 2012.

World Meteorological Organisation (WMO) and the major climate centres have noted the warming of SSTs in the equatorial Pacific Ocean with potential occurrence of neutral to warm event towards the end of the year. Indian Ocean Dipole (IOD) circulations that also have significant influence on regional climate are also expected to contribute to anomalies in regional rainfall anomalies over the rest of the year. The positive (negative) IOD circulation has been associated with enhanced (reduced) advection of moisture into the eastern parts of the sub region from Indian Ocean. El Niño is normally associated with floods in the equatorial areas within October-February months. El Niño has also been associated with droughts in the northern and southern sectors of GHA. Updates on El Niño will be provided regularly by WMO, the major global climate centres, ICPAC and NMHSs among other climate institutions.

The outlook is relevant for seasonal timescale and cover relatively large areas. Local and month-to-month variations in rainfall occurrence might occur. For example interaction between local scale features and large scale circulation might lead to dry spells during the season. Regional scale forecast updates and performance evaluation will be provided by ICPAC while the respective National Meteorological and Hydrological Services will provide details at national level. The users are therefore strongly advised to contact their National Meteorological Services for national and local details.

The Climate Outlook Forum

The Thirty First Greater Horn of Africa Climate Outlook Forum (GHACOF31) was convened from 29th to 30th May 2012 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 2012 rainfall season over the GHA region. The GHA region comprises Burundi, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, South Sudan, Sudan, Tanzania and Uganda. Users from sectors such as health, disaster risk management, gender, civil society, agriculture and food security, water resources and media, as well as non- governmental organisations and development partners actively participated in the formulation of applications and impacts of the climate forecast in their specific sectors. The forum reviewed the state of the global climate system including ENSO-neutral conditions, sea surface temperatures (SSTs) over Eastern Atlantic and Indian Ocean areas, especially the Indian Ocean Dipole (IOD) circulation) as well as low and medium level atmospheric circulation. The associated impacts on the GHA during June to August 2012 rainfall season were considered.

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 2012.

Methodology

GHACOF31 examined the prevailing and expected ocean-atmospheric indicators and predictors including ENSO-neutral conditions over the tropical Pacific Ocean, sea surface temperature anomalies over the adjacent Indian and Atlantic Oceans alongside atmospheric circulation systems likely to have impacts on the regional climate during June to August 2012 rainfall season. WMO and major climate centres indicate that 2011-12 La Niña has ended, and that La Niña conditions in the tropical Pacific transitioned to neutral (neither El Niño nor La Niña) conditions in early April 2012. Model forecasts and expert opinion suggest that neutral conditions are likely to continue into the Northern Hemisphere summer. For the second half of 2012 a return of La Niña is unlikely, while neutral or El Niño conditions are currently considered to have equal chances of occurring. Modelling approaches used during the pre-forum climate prediction workshop included a suite of statistical-probabilistic schemes for linear and non-linear forecasting, pattern identification and matching in addition to analogue techniques. Other methodologies used included use of coupled and non-coupled dynamical models, generation of dynamical multi-model ensembles (MMEs) for June to August 2012 in addition to calibrated MME forecasts using bias correction techniques to arrive at the most likely rainfall evolution during the season.

Rainfall Outlook for June to August 2012

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

Zone I: Climatology (normal conditions for the season being projected)

Zone II: Increased likelihood of near normal to above normal rainfall

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; 45% probability of rainfall occurring in the near-normal category; and 20% probability of rainfall occurring in the below-normal category. It is emphasised that boundaries between zones should be considered as transition areas.

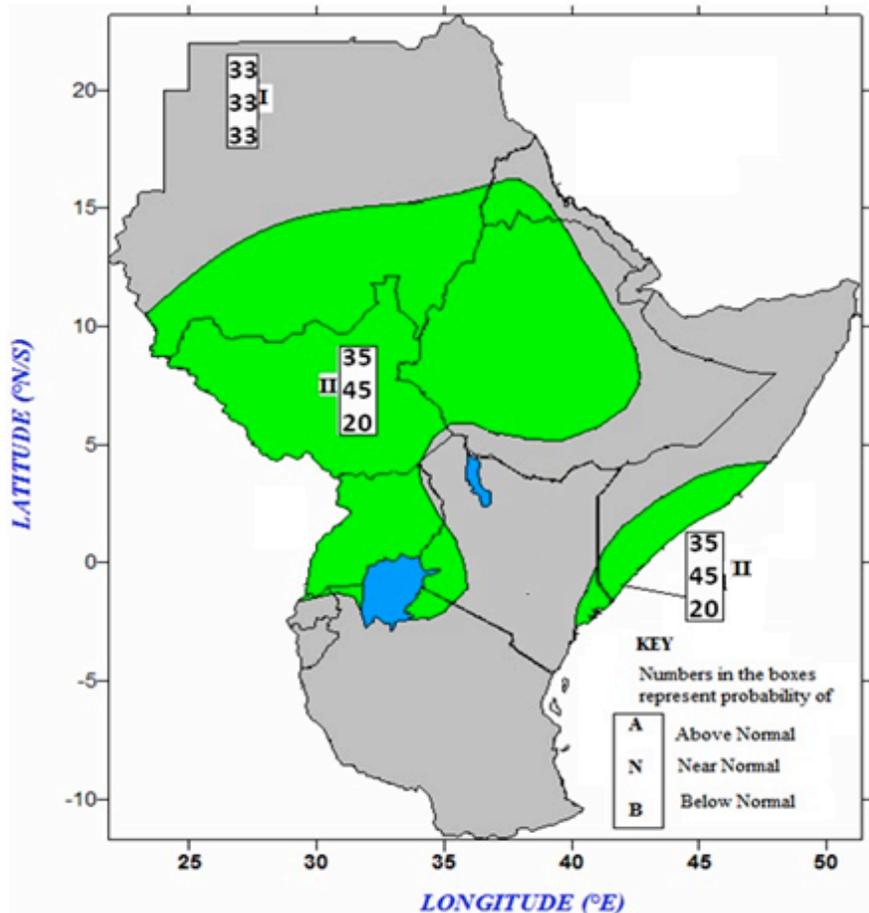


Figure 1: Greater Horn of Africa Consensus Climate Outlook for the June to August 2012 rainfall season

Contributors

The Thirty First Greater Horn of Africa Climate Outlook Forum (GHACOF 31) was organised jointly by the IGAD Climate Prediction and Applications Centre (ICPAC) and National Meteorological and Hydrological Services (NMHSs) of ICPAC member countries within the framework of *ClimDev-Africa* project funded by AfDB. It was hosted by the Djibouti Meteorological Services.

Contributors to the GHACOF31 regional consensus climate outlook included representatives of the Meteorological Services from GHA countries (Insitut Geographique du Burundi; Meteorologie Nationale de Djibouti; National Meteorological Agency of Ethiopia; Kenya Meteorological Department; South Sudan Meteorological Services; Sudan Meteorological Authority; Tanzania Meteorological Agency and Uganda Meteorological Agency) and climate scientists as well as other experts from national, regional and international institutions and organizations: IGAD Climate Prediction and Applications Centre (ICPAC); United Kingdom Met Office Hadley Centre (MOHC) and World Meteorological Organization (WMO) WMO Global Producing Centres (GPCs).