

# **STATEMENT FROM THE FORTY FIRST CLIMATE OUTLOOK FORUM FOR THE GREATER HORN OF AFRICA (GHACOF41) FOR SEPTEMBER TO DECEMBER 2015 RAINFALL SEASON: 24-25 AUGUST 2015 KUNDUCHI BEACH HOTEL, DAR ES SALAAM, TANZANIA**

## **Summary**

September to December (SOND) constitutes an important rainfall season over the equatorial sector of the Greater Horn of Africa (GHA) region. The regional consensus climate outlook for the September to December 2015 rainfall season indicates increased likelihood of above normal to near normal rainfall over most of the equatorial parts of the GHA. Increased likelihood of near to below normal is indicated over much of the northern sector. The key factors expected to influence the evolution of the regional climate during the SOND 2015 rainfall season include the Sea Surface Temperature (SST) anomalies over the tropical Oceans and their implications on rainfall bearing mechanisms including (i) the phase and strength of Indian Ocean Dipole mode (IOD) which is currently positive; (ii) likely impacts of current El Niño event over the tropical Pacific that is expected to persist during the rest of 2015 and early months of 2016; (iii) SST anomalies over the Atlantic Ocean. The influence of these ocean processes will be modulated by regional circulation processes, topography and large inland water bodies.

*The outlook is relevant for seasonal time scales and relatively large areas. Local and month-to-month variations might occur as the September to December 2015 season progresses. It is likely that episodic weather events leading to flash floods might occur in areas with increased likelihood of near normal to below normal rainfall. Also dry spells may occur in areas with increased likelihood of above normal to near normal rainfall. The Global climate centres under the coordination of WMO will continue to provide global climate including El Niño updates. ICPAC will also 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 First Greater Horn of Africa Climate Outlook Forum (GHACOF41) was convened from 24-25 August 2015 at Kunduchi Beach Hotel, Dar es Salaam, Tanzania by the IGAD Climate Prediction and Applications Centre (ICPAC) in collaboration with the World Meteorological Organization (WMO), and partners to formulate a consensus regional climate outlook for the September to December 2015 rainfall season over the GHA region. The GHA region comprises Burundi, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, South Sudan, Sudan, Tanzania and Uganda. GHACOF41 was preceded by capacity building training workshop (CBTW) for the National climate scientists to develop national and regional climate outlook products for the season which was held from 17 – 22 August 2015 at ICPAC. The capacity building workshop for climate scientist was conducted alongside workshop for regional oceanographic experts also conducted at ICPAC.

Guidance and valuable forecast inputs were drawn from a wide range of sources including the World Meteorological Organisation's Global Producing Centres (WMO-GPCs), APEC Climate Centre and Korea Meteorological Administration (KMA), The UK-Met Office and the National Oceanic and Atmospheric Administration (NOAA) Africa desk as well as the National Meteorological and Hydrological Services (NMHSs) of the Greater Horn of Africa. Inputs were also provided by the UNESCO, Western Indian Ocean Marine Sciences Association (WIOMSA) as well as expert interpretation and opinion by regional and international climate scientists.

The Forum was an interactive event that brought together climate information user experts from critical socio-economic sectors, governmental and non-governmental organisations, decision-makers, climate scientists, civil society stakeholders among others. It reviewed the implications of the key factors expected to influence the evolution of the regional climate during the SOND 2015 rainfall season include the Sea Surface Temperature (SST) anomalies over the tropical Oceans and their implications on rainfall bearing mechanisms including (i) the

phase and strength of Indian Ocean Dipole mode (IOD) which is currently positive (ii) likely impacts of the current El Niño event over equatorial eastern Pacific ocean that is predicted to persist during the rest of 2015 and early months of 2016; (iii) SST anomalies over the Atlantic Ocean The influence of these ocean processes will be modulated by regional circulation processes, topography and large inland water bodies.

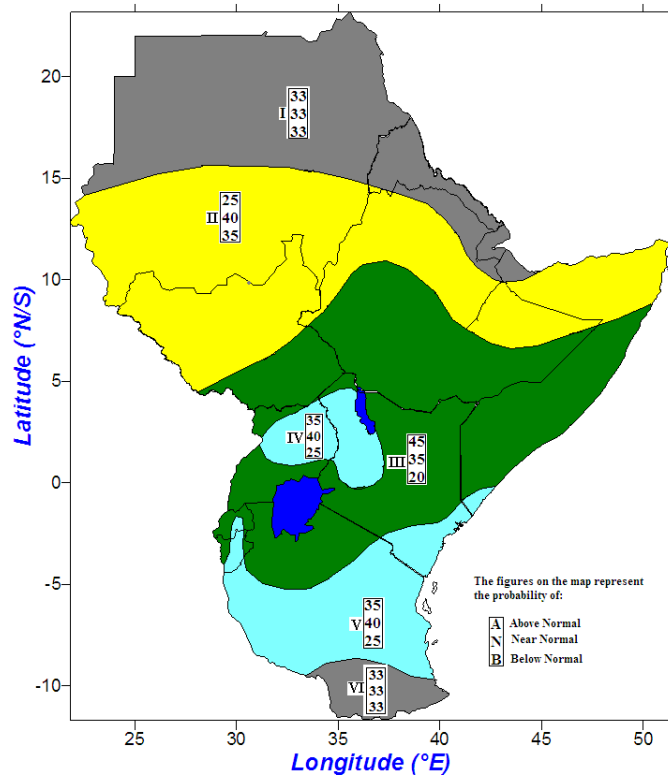
Users of climate information who participated in GHACOF 41 were drawn from various sectors including agriculture and food security, disaster risk management, water resources, health, media and as well as non-governmental organisations and development partners. The participants provided sector specific assessment of the usefulness of the previous regional consensus climate outlook and formulated sector specific mitigation strategies based on the consensus regional climate outlook for the September to December 2015 rainfall season.

**Methodology**

The forum examined the prevailing and expected ocean-atmosphere processes as well as evolving large scale and regional scale circulation mechanisms with significant implications over the GHA during September to December 2015. Key among these processes were current and evolving Sea Surface Temperature (SST) anomalies over global oceans, El Niño conditions and positive Indian Ocean Dipole (IOD) together with the modulation of these processes by regional circulation systems including regional monsoonal winds; complex topography and the large inland water bodies. Implications of these on regional rainfall were integrated during a Pre-COF 41 Capacity Building Training Workshop (CBTW) that was hosted by ICPAC from 17 to 22 August 2015 in Nairobi, Kenya. The Pre-COF 41 workshop also considered the global forecasts from the twelve World Meteorological Organization (WMO) Global Producing Centres (GPCs) to generate the regional consensus climate outlook for the September to December 2015 rainfall season.

**Rainfall Outlook for September to December 2015**

The rainfall outlooks for the GHA region is given in figure 1.



**Figure 1: Greater Horn of Africa Consensus Climate Outlook for September to December 2015 rainfall season**

<b>Zone I &amp; VI:</b>	These areas are usually dry during September to December season
<b>Zone II:</b>	Increased likelihood near normal to below normal rainfall
<b>Zone III:</b>	Increased likelihood of above normal to near normal rainfall
<b>zone IV&amp;V:</b>	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 III, there is 45% probability of rainfall occurring in the above-normal category; 35% 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.*

**Contributors**

The Forty First Greater Horn of Africa Climate Outlook Forum (GHACOF41) was organised jointly by the IGAD Climate Prediction and Applications Centre (ICPAC), World Meteorological Organization (WMO) and the National Meteorological and Hydrological Services (NMHSs) of GHA countries as well as the Intergovernmental Oceanographic Commission (IOC) of UNESCO's Sub Commission for Africa and the Adjacent Island States (IOC-Africa) and the Western Indian Ocean Marine Sciences Association (WIOMSA). It was hosted by the Tanzania Meteorological Agency (TMA).

Contributors to the GHACOF41 consensus regional climate outlook included representatives of the Meteorological Services from GHA countries (Insitut Geographique du Burundi; Meteorologie Nationale de Djibouti; Eritrea Meteorological Services; National Meteorological Agency of Ethiopia; Kenya Meteorological Service; Rwanda Meteorological Agency; South Sudan Meteorological Services; Somalia Meteorological Service; Sudan Meteorological Authority; Tanzania Meteorological Agency and Uganda National Meteorological Authority) and climate scientists from the region and also the UK Met Office. Valuable scientific support was also provided by various organizations and programmes including the World Meteorological Organization (WMO), Global Producing Centres (GPCs) facilitated by the Korea Meteorological Administration (KMA), the EU project High-End Climate Change Impacts and Extremes (HELIX), the University of Nairobi (UoN), UNESCO and FEWSNET.