# STATEMENT FROM THE THIRTY NINTH GREATER HORN OF AFRICA CLIMATE OUTLOOK FORUM (GHACOF39) FOR MARCH TO MAY 2015 RAINFALL SEASON: 23-25 FEBRUARY 2015; BOMA, HOTEL, NAIROBI, KENYA


## 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 2015 rainfall season indicates an increased likelihood of near normal to below normal rainfall over central parts of Sudan, central Eritrea, eastern Djibouti, much of Ethiopia, much of Somalia, most areas of Kenya, much of Tanzania, southwestern and northeastern Rwanda, southeastern Burundi, northeastern Uganda and southeastern parts of South Sudan. Much of Burundi, Rwanda, Uganda and South Sudan, southern parts of Sudan, western parts and northern coast of Kenya as well as extreme southern coast and northern parts of Somalia have increased probability for near normal to above normal rainfall during March to May 2015 rainfall season. The major processes considered as key drivers of the regional climate during March-May 2015 season included atmospheric-ocean conditions over the adjacent Indian and Atlantic Oceans, as well as over the Pacific Ocean and predicted neutral ENSO conditions in the tropical Pacific Ocean. The potential risk of tropical cyclones occurrence was also integrated. The outlook is relevant for the March-May 2015 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 Thirty Ninth Greater Horn of Africa Climate Outlook Forum (GHACOF 39) was convened from 23rd to 25th February 2015, at Boma Hotel, Nairobi, Kenya by the IGAD Climate Prediction and Applications Centre (ICPAC), the Kenya Meteorological Service (KMS) the World Bank and partners to formulate a consensus climate outlook for the March to May 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 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 mechanisms like the neutral ENSO conditions in the tropical Pacific. The dominant climate forcing processes included the continued cooling and warming over the western Indian Ocean as well as southeastern Atlantic Ocean and eastern Indian Ocean respectively with implications on the March-May 2015 forecast period. Users from agriculture and food security, livestock, water resources, disaster risk management, Non- Governmental Organizations and development partners formulated the potential implications of the consensus climate outlook, and developed mitigation strategies for their respective countries and sectors. The media on the other hand formulated strategies for effective dissemination of the consensus climate outlook and its potential impacts.

## Methodology

The forum examined the prevailing and predicted SSTs over the Pacific Ocean as well as the Indian and Atlantic Oceans together with 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 39 capacity building workshop that was hosted by ICPAC from 16th to 21st February 2015. Additional inputs were obtained from various climate Centres worldwide including the World Meteorological Organization's Global Producing Centres (WMO GPCs), International Research Centre for Climate and Society (IRI) and CPC/African Desk. The current capability of seasonal to inter-annual climate forecasting allows prediction 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 March to May 2015 for various zones within the GHA region is given in Figure 1.

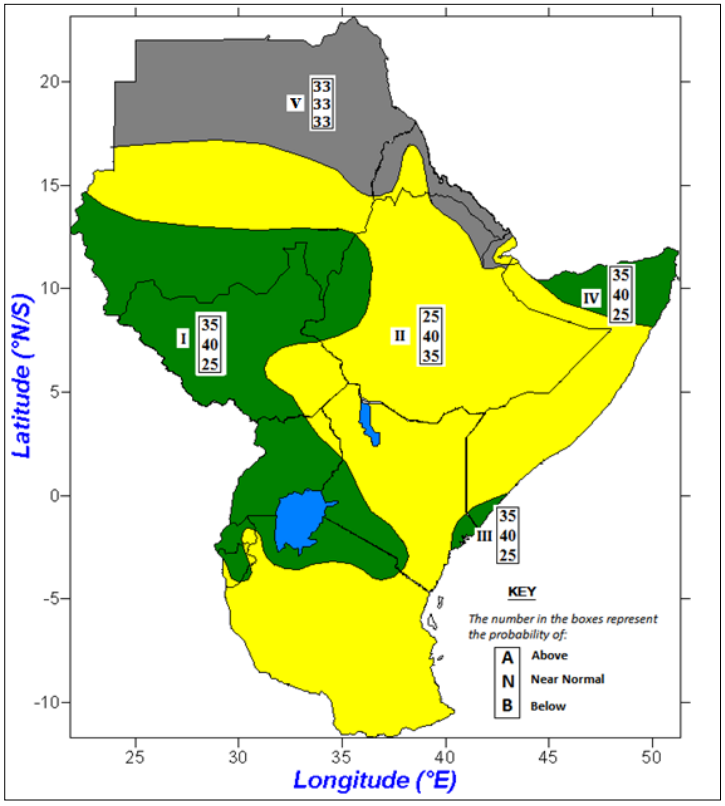


**Figure 1: Greater Horn of Africa Consensus Climate Outlook for the March to May 2015 rainfall season**

**Zone I**: Increased likelihood of near normal to above normal rainfall indicated over much of Burundi, Rwanda, Uganda and South Sudan, southern parts of Sudan, extreme western Ethiopia and southwestern Kenya.

**Zone II**: Increased likelihood of near normal to below normal rainfall over central parts of Sudan, central Eritrea, eastern Djibouti, much of Ethiopia, much of Somalia, most areas of Kenya, much of Tanzania, southwestern and northeastern Burundi, southeastern Rwanda, northeastern Uganda and southeastern parts of South Sudan.

**Zone III**: Increased likelihood of near normal to above normal rainfall Indicated over northern coast of Kenya extending to extreme southern coast of Somalia.

**Zone IV**: Increased likelihood of near normal to above normal rainfall indicated over parts of northern Somalia.

**Zone V**: Usually dry during March – May season over northern Sudan, much of Eritrea, western Djibouti and extreme northeastern Ethiopia.

**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 the below-normal category. For example in zone II, covering much of GHA there is 20% probability of rainfall occurring in the above-normal category; 45% probability of rainfall occurring in the near-normal category; and 35% probability of rainfall occurring in the below-normal category. The boundaries between zones should be considered as transition areas.*

**Contributors**

The Thirty Ninth Greater Horn of Africa Climate Outlook Forum (GHACOF 39) was organized jointly by the IGAD Climate Prediction and Applications Centre (ICPAC) and National Meteorological and Hydrological Services (NMHSs) of ICPAC member countries. The forum was supported by the World Bank Group with partial support by the World Meteorological Organization (WMO) and the Kenya Meteorological Service (KMS). Contributors to the GHACOF39 consensus regional climate outlook included representatives of the National Meteorological Services from GHA countries (Insititut 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; Tanzania Meteorological Agency 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; HELIX Climate Change Project, World Meteorological Organization (WMO) and WMO Global Producing Centres (GPCs); Korea Meteorological Administration (KMA) and the University of Nairobi, Kenya.