

Statement from the Thirteenth Climate Outlook Forum for the Greater Horn of Africa

This statement is issued from the international, regional climate scientists and the user communities in a workshop organized in Nairobi, Kenya from February 26 to 27, 2004. The workshop formulated the March- May seasonal precipitation forecast for the greater Horn of Africa, commonly known as Eastern Africa. The workshop was co-sponsored by NOAA, WMO, USAID/OFDA and the regional institutions in Eastern Africa and technically sponsored by IRI and other International centres of climate prediction, the regional National Hydro-Meteorological and Hydrological Services (NMHS) and the regional climate prediction centres such as DMCHarare, ACMAD and DMCNairobi.

Summary

There is increased likelihood of near-normal rainfall over much of the Greater Horn of Africa during the period March to May 2004. Probabilities of near normal to above normal rainfall favour southern Sudan, western, central, and extreme eastern Ethiopia, southern Djibouti, northern and extreme southern coast of Somalia; extreme western and southeastern Uganda; coastal, parts of central and southwestern Kenya, northern Rwanda, southern Burundi, southern, extreme western and parts of northern coast and northern Tanzania. On the other hand, probabilities of near to below normal rainfall favour central and southern Eritrea, northern, eastern and southern Ethiopia central and southern Somalia, much of Kenya, northeastern, central and southern Uganda, much of Tanzania, much of Rwanda and Burundi. It should be noted that episodic intense short rainfall events may occur even in areas with a likelihood of near normal to below normal rainfall.

The outlook is relevant only for seasonal time scales and relatively large areas. Local and month-to-month variations may occur. Forecast model outputs indicate that near normal (neutral) conditions are likely to persist in the equatorial Pacific during the forecast period. The current sea surface temperature (SST) anomalies over northern Atlantic and southern tropical Indian oceans are warmer than average while much of southern Atlantic Ocean is dominated by colder than average SSTs. It should be noted that development of tropical cyclones in the Indian Ocean may influence the rainfall patterns in the sub-region.

The National Weather Services and the DMCN provide update of the forecasts. The users are therefore strongly advised to keep in contact with their National Meteorological Services for interpretation of this outlook, finer details, updates and additional guidance.

The Climate Outlook Forum

From 25 to 27 February 2004, the thirteenth Climate Outlook Forum was convened in Nairobi, Kenya by the Drought Monitoring Centre, Nairobi (DMCN) to formulate consensus guidance for the March to May rainfall season in the Eastern African sub-region (sometimes referred to as the Greater Horn of Africa) comprising of Burundi, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, Sudan, Tanzania and Uganda. Users from disaster management, agriculture, health, livestock, wildlife, media, among other sectors were active participants in the forum. They participated in the development of the outlook and formulated the implications of the outlook for their respective countries and sectors. The forum reviewed the state of the global climate system and its implications for the sub-region. Among the principal factors taken into account, were the observed and predicted SSTs in the tropical Pacific Ocean, and over the tropical Atlantic and Indian Oceans.

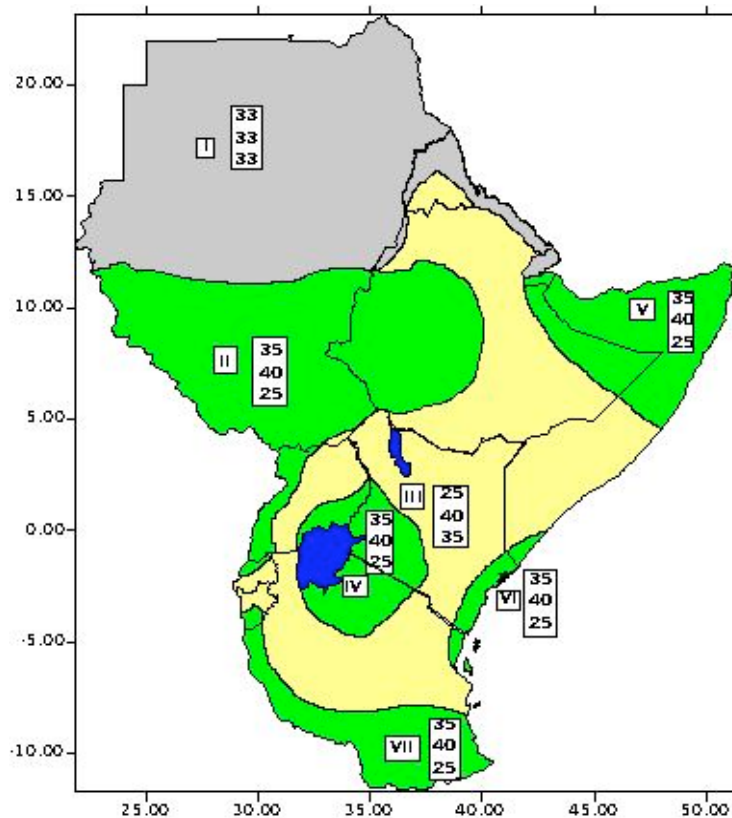
Methodology for the formulation of the forecast

The forum examined the current and expected SST anomalies over the Pacific Ocean as well as the Indian and Atlantic Oceans together with other factors that affect the climate of the sub-region. These factors were assessed using coupled ocean-atmosphere models, statistical models and expert interpretation. The current status of seasonal to inter-annual forecasting allows prediction of spatial and temporal averages and may not fully account for the physical and dynamical factors that influence regional and national climate variability.

The experts established probability distributions to indicate the likelihood of above-, near-, or below-normal rainfall for each zone (see the Map below). 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 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.

Outlook

March to May constitutes an important rainfall season over the equatorial parts of the Greater Horn of Africa sub-region. The rainfall outlook for each zone within this sub-region is given below.



Greater Horn of Africa Consensus Climate Outlook for the Period March to May 2004

Zone I: Climatology is indicated over northern Sudan; much of Eritrea; and northern Djibouti.

Zone II: Increased likelihood of near to above-normal rainfall over southern Sudan; western and central Ethiopia; extreme western Uganda and northern Rwanda.

Zone III: Increased likelihood of near to below-normal rainfall over central and southern Eritrea; northern, eastern and southern Ethiopia; central and southern Somalia; much of Kenya; northeastern, central and southern Uganda; much of Tanzania; much of Rwanda and Burundi.

Zone IV: Increased likelihood of near to above-normal rainfall over southeastern Uganda, central and southwestern Kenya and parts of northern Tanzania.

Zone V: Increased likelihood of near to above normal rainfall over southern Djibouti, northern Somalia and extreme eastern Ethiopia.

Zone VI: Increased likelihood of near to above normal rainfall over extreme southern coast of Somalia; coast of Kenya and extreme northern coast of Tanzania.

Zone VII: Increased likelihood of near to above-normal rainfall over southern and western Tanzania and southern Burundi.

Note:

The numbers for each zone indicate the probabilities (chances of occurrence) 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 the near normal and the bottom number for the below-normal category. For example, in case of southern Burundi, and southern as well as extreme western Tanzania (zone VII), 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.

Scientific and technical Contributors

Contributors to this consensus climate outlook included representatives of the Meteorological Services from ten GHA countries (Insitut Geographique du Burundi; Meteorologie Nationale de Djibouti; Eritrea Meteorological Services; National Meteorological Services Agency of Ethiopia; Kenya Meteorological Department; Rwanda Meteorological Services; Somalia Department of Agrometeorology and Food Security, Sudan Meteorological Authority; Tanzania Meteorological Agency and Uganda Department of Meteorology) and climate scientists as well as other experts from national, regional and international institutions and organisations (Drought Monitoring Centre, Nairobi; Drought Monitoring Centre, Harare; International Research Institute for Climate Prediction (IRI); World Meteorological Organisation (WMO); National Centre for Medium Range Weather Forecasting (NCMRWF) – India, USGS/FEWS-NET, United Nations Environment Programme (UNEP), Regional Centre for Mapping of Resources for Development (RCMRD), University of Nairobi, Sokoine University and Maseno University). Additional input was supplied by the National Centers for Environmental Prediction/Climate Prediction Center (NCEP/CPC), UK. Met Office, and the European Centre for Medium Range Weather Forecasts (ECMWF).