WORLD METEOROLOGICAL ORGANIZATION

REGIONAL CLIMATE CENTRE-INTERGOVERNMENTAL AUTHORITY ON DEVELOPMENT

The WMO Regional Climate Centre-Intergovernmental Authority on Development (RCC-IGAD) is hosted by the IGAD Climate Prediction and Applications Centre (ICPAC), in Nairobi, Kenya.

Linkage with Global Climate Centres

RCC-IGAD closely works with WMO Global Producing Centres for Seasonal Prediction (GPCs-SP) and other global climate information providers, such as the Met Office, United Kingdom, the International Research Institute for Climate and Society (IRI), and the United States National Oceanic and Atmospheric Administration's (NOAA) Climate Prediction Center (CPC).

Linkage with WMO Regional Climate Centres

RCC-IGAD works with the WMO African RCC and the RCC for West Africa and the Sahel (RCC-WAS), sharing both knowledge and experiences.

It is also a member of the African network of the NEPAD Water Centres of Excellence, which conducts scientific research in water-related sectors.

Linkage with WMO Regional Climate Outlook Fora

RCC-IGAD organizes the Greater Horn of Africa Climate Outlook Forum (GHACOF) three times a year for the main rainfall seasons in the region.

Mandatory functions

All WMO RCCs fulfill a set of mandatory functions related to seasonal prediction, climate monitoring, data services and training. Listed below are those performed by RCC-IGAD.

Seasonal prediction

- Deterministic and probabilistic monthly and seasonal temperature and precipitation predictions
- Ensemble mean temperature and precipitation anomalies
- Onset dates of rainfall
- Dry and wet spells
- Standardized Precipitation Index
- Probabilistic forecasts of precipitation exceeding a certain threshold

OVERVIEW

Domain of responsibility: Greater Horn of Africa

Languages: English and French

Status

1989	Establishment of the Drought Monitoring Centre, Nairobi (DMCN), in Kenya
2007	DMCN became the IGAD Climate Prediction and Applications Centre (ICPAC)
2017	WMO designation of ICPAC as WMO RCC-IGAD

Climate features

The Greater Horn of Africa experiences three rainy seasons. The northern part of the region receives rainfall during June-July-August, while the equatorial area is affected by long rains in March-April-May and short rains in October-November-December.

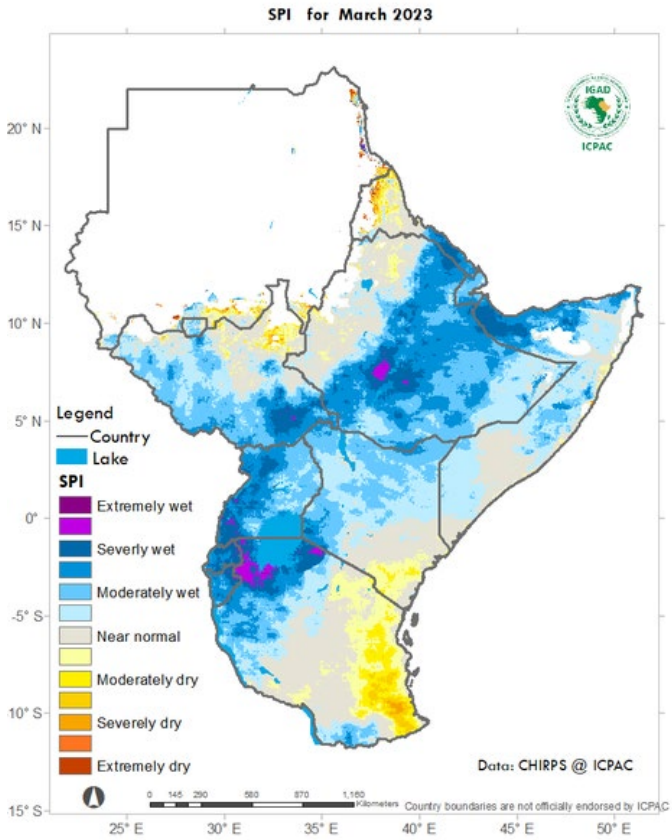
Modes of variability

The El Niño Southern Oscillation (ENSO) is associated with above-average short rains season in the equatorial region and below-average June-July-August rainfall in the northern region. The positive phase of the Indian Ocean Dipole is associated with enhanced short rains in the equatorial region, while the negative phase is associated with suppressed rainfall.

Social media:

Climate monitoring

- 10-day, monthly and seasonal rainfall totals and anomalies
- 10-day, monthly and seasonal Standardized Precipitation Index
- East Africa Hazards Watch



Standardized Precipitation Index for March 2023

Data services – Rainfall and temperature data from 153 synoptic stations in the Eastern Africa region are blended with gridded datasets – such as Climate Hazards Group InfraRed Precipitation with Station data (CHIRPS), Climatic Research Unit (CRU) and reanalysis – to produce improved datasets in various formats (i.e., NetCDF (Network Common Data Form), GeoTiff or ESRI .hdr Labelled).

Climate forecast data from statistical and dynamic models are available at 10-day, monthly and seasonal time scales in gridded format (NetCDF).

Training – Capacity building workshops provide climate prediction, modelling, co-production of climate products and climate data management training. Trainings is also regularly provided on the installation, maintenance and proper management of Automatic Weather Station (AWS) networks and on the use of AWS data in generating user-relevant climate products. RCC-IGAD also develops manuals on climate forecasting procedures and co-production approaches.

Recommended functions

WMO RCCs are recommended to perform certain functions. Listed below are those performed by RCC-IGAD.

Climate prediction and climate projection

- User-oriented products implemented in online tools such as the IRI Data Library and the East Africa Hazards Watch
- Weekly extreme rainfall forecasts
- Intra-seasonal rainfall characteristics such as onset dates, dry and wet spells
- Tropical cyclone tracks
- Heat stress products
- Forecasts of atmospheric circulation such as surface pressure, geopotential height, winds
- Downscaled climate change products and information for different scenarios

Non-operational data services – strengthens the climate data management and data rescue capacity of National Meteorological and Hydrological Services (NMHSs).

Coordination

- Supports the organization of National Climate Outlook Forums and Participatory Scenario Planning Workshops
- Supports the establishment of sector user interface platforms at regional and national levels
- Supports the establishment of National Framework for Climate Services in Kenya and Uganda

Training

- Provides climate prediction trainings to strengthen the preparation of national seasonal prediction services and contributions to the GHACOF by NMHSs.
- Organizes media and meteorological workshops
- Trains journalists to report weather and climate information

Research and development

- Studies the development and validation of objective regional forecasts
- Promotes studies of the economic value of climate information by collaborating with humanitarian agencies such as the World Food Programme, International Federation of the Red Cross and Red Crescent Societies and Food and Agriculture Organization of the United Nations.

Success story

RCC-IGAD climate information has helped Kenyan farmers with their decision-making processes.