

Continental Capacity Building Workshop on ADA and Validation of the EADW v.2.0 for Early/Anticipatory Action

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ICPAC IN BRIEF

- IGAD Climate Prediction and Applications Centre, Nairobi – Kenya
- Specialized institution of IGAD
- Established in 1989 as the Drought Monitoring Centre (DMCN)- Nairobi
- 2007, protocol establishing the Centre signed & name changed to IGAD Climate Prediction and Applications Centre
- 2017 designated Regional Climate Centre(RCC) by WMO
- Member of AUC/NEPAD Network of Water Centers of Excellence
- ICPAC has an Observer Status with UNFCCC
- Provides climate services to 11 member states



Building resilience in Eastern Africa through the provision of quality Climate Services

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ICPAC







- Suite of Early warning applications called the East Africa Watch
 - In-line with WMO ambition of "everyone covered by EWS by 2027" EW4All
- Support integrated multi-hazard early warning
 - East Africa Hazards Watch
 - East Africa Drought Watch
 - East Africa Agriculture Watch
 - East Africa Forest Watch
 - East Africa Floods Watch
 - East Africa Pests Watch



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East Africa Drought Watch

Regional Drought Monitoring & Early Warning System



- Public online system for drought monitoring and early warning
- Uses Earth Observation and Weather information
- Provides automatic 10-day warnings for:
 - Developing and actual drought events
 - Recovery from drought conditions
- Developed jointly by ICPAC and the Joint Research Centre (JRC) of the European Commission.
- Hosted at the IGAD Disaster Operations Centre
- IDOC: A state-of-the-art situation room tasked with providing regional multi-hazard monitoring and early warning to improve response and disaster risk management



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Convergence of Evidence



Rainfall, soil moisture and vegetation anomalies showing dry conditions. Source: EADW



Persistent drought conditions across 2020/21/22/23

Time-series of drought conditions over some of the worst hit regions in

Somalia



Drought condition indicator time-series. Source: East Africa Drought Watch

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Drought Conditions in Northern Uganda



Summary:

- Three counties:
 - Apac
 - Gulu
 - Masindi
- Persistent drought conditions since March 2021 sustained till now
- Failed rainfall season: The long rainy season (Mar-Apr-May) characterized by delayed, irregular and below average rainfall
- For a minimum of 2 months 100% of the counties under drought conditions (different levels)
- Drought condition updated every 10 days



















August





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New Products New Analysis

(i) IPC Food Insecurity Analysis Graph Description





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WHAT CAN YOU DO WITH THE SYSTEM?



- Automatic report generation
- Visualization of raster layers for selected weather and biophysical indicators and anomalies
- Maps, graphs downloadable (png)
- Background layers and opacity bars facilitate image interpretation
- All time series is available

(CDI) -10day CDI SPI (CHIRPS) 12 month 1 month 3 month 24 month 6 month 48 month 9 month Soil Moist. Vegetation indicators Indicators 10day 10d SM **f**APAR anomaly 10d fAPAR Anomaly

Combined Drought Index



Data

ICPAC

- Rainfall data
- Higher spatial resolution
- New products
 - Forecast
 - Monthly & seasonal

New methodology

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- Drought events
- Drought hotspots (longterm drought analysis)

Global

Regional

- Integration of socioeconomic indicators
- Analysis on user-defined boundaries

East Africa Drought Watch



- Stakeholder engagement & capacity building
- Closely working with national institutions
 - Drought management authorities, **Disaster coordination agencies**
- Validation & user requirements
- Support institution workflows • Automation of processes
- Harmonization of Early Warning messaging



Users 👻 by Country ID 👻



COUNTRY ID		USERS
Kenya	1.6K	-
United States	793	-
China	448	-
Ethiopia 🔒	432	-
United Kingdom	378	-
Somalia	316	-
Uganda	299	-

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- Declaration of Drought State of Emergency in Somalia used the East Africa Drought Watch
- Adopted as prototype for Adaptation Fund project – DRESS
- Collaborations with humanitarian agencies for info/data sharing
- Donors e.g., US government support to Ethiopia



- User engagement is key
- Workflow integration
- Need for capacity enhancement
 - Technical
 - Infrastructure
- National regulatory frameworks
- Harmonised EW messaging

Future developments

- Continuous scientific research
 - Regional drought characterization
 - Improve forecast (lead-time, skill)
- Improved system functionality and analysis (user needs)
- Early Warning to actions
 - Anticipatory action (mainstreaming & scaling) *cash transfer
 - Integrate thresholds and triggers
- Leverage emerging technologies

Traditional forecast What the weather will be

Impact-based forecast What the weather will do













Thank You



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