WFP's Role in Strengthening Forecasting Capabilities in Eastern Africa

South to South peer support between Djibouti and Ethiopia National Meteorological and Hydrological Services

As extreme weather events become more frequent and severe, WFP continues to lead efforts to strengthen resilience across the most vulnerable regions. In Eastern Africa, floods and droughts threaten millions of lives and livelihoods. To address these challenges, WFP is fostering partnerships that strengthen the capacities of national meteorological agencies, equipping them with the necessary forecasting skills and tools to drive effective Anticipatory Action (AA).

A recent initiative facilitated by WFP brought together the Djibouti National Meteorological Agency (DNMA) and the Ethiopia Meteorological Institute (EMI) for a knowledge exchange.

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The DNMA is the government institution mandated with the generation and dissemination of weather and climate information in Djibouti. This information is critical to enhancing capacities amongst stakeholders for anticipatory action, plan preparedness, and response actions to mitigate and respond to climate-related hazards. Prior to the exchange programme, Djibouti Met needed to enhance its capacity to improve seasonal and sub-seasonal forecasts, upload forecasts, and update the map room tool for drought forecast monitoring.

EMI is the mandated government institution responsible for developing, disseminating, and communicating early warning information. EMI plays a significant role in providing various meteorological services to all stakeholders, including advisories and early warnings about the adverse effects of weather and climate to relevant institutions and the general public.

ENHANCING FORECASTING CAPABILITIES FOR ANTICIPATORY ACTION

Meteorological agencies, as the mandated government institutions for generating and disseminating forecast information, play a key role in developing triggers for anticipatory actions. However, designing effective AA triggers requires tailored forecasting beyond the standard public forecasts, necessitating enhanced technical knowledge and processes.

The exchange, held in November 2024, focused on strengthening DNMA's capacity to generate and monitor drought triggers that support early warning systems and inform anticipatory action plans in Djibouti. Ethiopia's experience in this field provided a strong foundation for the learning exchange.

ETHIOPIA'S LEADERSHIP IN FORECAST-BASED TRIGGERS

EMI is advancing its drought forecasting, using tools such as the Maproom, developed with the support of the International Research Institute for Climate and Society (IRI) and with facilitation of WFP. The Maproom allows EMI to monitor climate and societal conditions at present and in the recent past and inform trigger development for anticipatory action plan activations.

EMI's experience has been pivotal in advancing drought anticipatory action in Ethiopia. EMI has successfully developed forecast triggers that were used in two separate drought anticipatory action activations in Ethiopia's Somali Region, including the most recent activation during the October-November-December (OND) 2024 season. The developed triggers enabled WFP and its partners to implement anticipatory actions before the onset of the La Niña-induced drought, such as the dissemination of early warning messages and advisories to over 470,000 people across 15 woredas, in collaboration with the Somali Disaster Risk Management Bureau; and the distribution of anticipatory cash transfers to 67,000 people.

This experience served as a foundation for the peer-to-peer learning exchange with DNMA, supporting Djibouti's progress in creating similar drought triggers.

BUILDING TECHNICAL CAPACITY THROUGH PEER LEARNING

During the exchange, EMI guided DNMA forecasters through key technical processes, including:

- Generating sub-seasonal and seasonal forecasts to predict drought conditions.

- Assessing forecast accuracy at different lead times.

- Monitoring trigger thresholds for AA readiness and activation phases.

Both EMI and DNMA are working closely with ICPAC as part of IGAD countries through sharing climate data and forecast information to inform regional climate outlook. ICPAC has been instrumental in ensuring that the exchange program incorporates regional climate data and aligns with cross-border disaster risk management strategies, supporting a more robust and standardized approach to developing drought triggers in the region.

MAIN ACHIEVEMENTS OF THE EXCHANGE:
- Strengthened collaboration between EMI and DNMA to improve forecasts for drought and other hazards in the region.

- Strong contribution to build a network of experts who are regionally available to technically support AA with the knowledge of contextualizing forecasts to the needs in the region, fostering an environment where countries can share best practices and address common challenges.

- Facilitated peer-to-peer learning on new forecasting approaches and best practices.

- Enhanced technical support and sustainability of AA through strengthened cooperation among meteorological agencies.

WFP, jointly with IRI, facilitated the learning exchange programme between DNMA and EMI as part of a broader strategy to strengthen early warning systems in the region and advance the Early Warning for All (EW4A) initiative. This effort reflects WFP's commitment to reinforcing national meteorological services and embedding anticipatory action into government systems, while aligning with ICPAC's mission to promote regional collaboration and provide technical support for climate resilience.

NEXT STEPS

DNMA experts will apply the knowledge and skills gained during the exchange programme to enhance seasonal and sub-seasonal forecast generation. The experts will collaborate with other forecasters to ensure they all achieve the same capacity level in terms of forecast generation. Meanwhile, EMI will continue to provide remote support to DNMA whenever needed as part of knowledge sharing.

DNMA and EMI will work together on further research to identify the best global models for Ethiopia and Djibouti. Additionally, EMI will assist DMNA forecasters in researching and selecting predictive services, helping them choose the most accurate options in Djibouti.

The two meteorological agencies will leverage the learning outcomes from this peer-to-peer programme to engage with development partners, aiming to enhance the capacities and services of meteorological agencies in the region, thereby bridging the existing gaps among different agencies.

WFP remains committed to strengthening the capacities of National Meteorology and Hydrological Services with the aim of improving forecast generation to enhance AA implementation and climate services sustainably.

"I am thankful to the support from WFP Djibouti for organizing this exchange programme. The DNMA forecasters have gained great knowledge and skills on development of seasonal forecast during the exchange period and the experts will put into practice the knowledge and skills acquired to ensure there is improved and regular forecast generation" Mr. Omar Gouleg Allaleh, DNMA Deputy Director General

"This exchange programme is significant step towards enhancing the partnership between Met agencies as well as sharing on knowledge and skills among climate experts and thus contributing to enhancing/improving climate services within the region. More partners should come onboard and support the exchange programme among different Met agencies. This exchange programme should become a regular programme in the Eastern Africa region." Mr. Fetene Teshome, EMI Director General