ICPAC

THE SIXTY NINTH GREATER HORN OF AFRICA CLIMATE OUTLOOK FORUM (GHACOF 69) FOR THE MARCH-MAY 2025 RAINFALL SEASON

20-21 JANUARY 2025

THEME: CLIMATE SERVICES FOR CLOSING THE EARLY WARNING GAP TOGETHER

Table of content

LIST OF ACRONYMS

ACACIA	Anticipatory Climate Adaptation for Communities in Africa
ACCRA	Africa Climate Change Resilience Alliance
CIS	Climate Information Services
CLARE	Climate Adaptation and Resilience
ClimSA	Intra-ACP Climate Services and Related Application Program
CREW	Climate Risk and Early Warning Systems
CREWS	Climate Risk and Early Warning Systems Initiative
CSOs	civil society organizations
CUWALID	Climate into Useful Water and Land Information in Drylands
ELRP	Emergency Locust Response Project
ENSO	El-Nino Southern Oscillation
EW4A	Early Warning for All
FCDO	Foreign, Commonwealth and Development Office
GBV	Gender-based violence
GHA	Greater Horn of Africa
GHACOF	Greater Horn of Africa Climate Outlook Forum
ICPAC	IGAD Climate Prediction & Applications Centre
IDP	Internally displaced persons
IGAD	Intergovernmental Authority on Development
IOD	Indian Ocean Dipole
JJAS	June July August and September
KDI	Kounkuey Design Initiative
MAM	March April May
MJO	Madden Julian Oscillation
NDMA	National Drought Management Authority
NDVI	Normalized difference Vegetation Index
NGO	Non-Governmental Organization
NHMS	National Hydro-Meteorological Service
NMS	National meteorological services
OND	October November December
RDTs	rapid diagnostic test kits
RUTF	Ready-to-Use Therapeutic Food
SCII	Strengthening Coordination and Implementation of IDDRSI
SEWAA	Strengthening Early Warning Systems for Anticipatory Action
SMS	Short Message Services
SSTs	Sea Surface Temperatures
TADs	Transboundary animal diseases
VCI	Vegetation Condition Index
WISER	Weather and Climate Information Services for Africa
WMO	World Meteorological Organization

PREFACE

The 69th Greater Horn of Africa Climate Outlook Forum (GHACOF69) was held from 20th to 21st January 2025, at the Ethiopian Skylight Hotel. It was organized by the IGAD Climate Prediction and Applications Centre (ICPAC) in collaboration with the National Meteorological and Hydrological Services (NMHS), the World Meteorological Organization (WMO), and other partners. The forum took place virtually and in-person and its objective was to review and document progress and impacts of the October to December (OND) 2024 season, release the consolidated objective regional climate outlook for the March to May (MAM) 2025 season, discuss the implications of the MAM 2025 climate forecast, and developed advisories and management strategies for various climate-sensitive socio-economic sectors.

A week-long climate scientists' workshop, known as Pre-GHACOF, took place from January 13th to 18th, 2025, at ICPAC in Nairobi, where both regional and national objective seasonal forecasts were developed, with the regional forecast serving as the main input for GHACOF69. The GHA region comprises Burundi, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, South Sudan, Sudan, Tanzania, and Uganda. Climate information users from the relevant sectors, (disaster risk management, agriculture and food security, livestock, water resources, health, conflict, and media), as well as NGOs, humanitarian organizations and development partners, actively participated in the formulation of the mitigation strategies. The forum reviewed the state of the global climate system, including the ENSO conditions, IOD, and SSTs over the Pacific and Indian Oceans, and considered their expected impacts on the GHA during the March to May 2025 rainfall season

GHACOF69 was held within the framework of the IGAD regional strategy for mainstreaming climate information in vital socio-economic sectors for disaster risk reduction and sustainable development, under the theme '*Climate Services for Closing the Early Warning Gap Together*'. The event attracted a total of 134 online participants and 308 physical participants at the Ethiopian Skylight Hotel.

EXECUTIVE SUMMARY

ICPAC organizes GHACOFs 3 times a year to provide climate outlook for the 3 main rainfall seasons (MAM, JJAS, OND) in the region. COVID-19 pandemic brought about the shift in how these workshops are held with current formats being hybrid. GHACOF69 workshop adopted different formats of interaction including presentations in plenary and group discussions. The GHACOF69 workshop held in Addis Ababa consisted of fully in-person participation during the first day and a hybrid format on the second day. The forum was supported by the ClimSA funded by the 11th EDF, ACCRA project funded by the World Bank, WISER-PASS and WISER Kenya funded by United Kingdom's FCDO, CREWS Horn of Africa, ACACIA project funded by Horizon Europe research and innovation program, SEWAA, PASSAGE funded by CLARE program, IGAD Support Platform on Forced Displacement and SCII projects funded by the Swedish government, Emergency Locust Response Project (ELRP) funded by the World Bank and ARIPHA project funded by German Federal Foreign Office.

The forum was held within the framework of the IGAD regional strategy for mainstreaming climate information into key socioeconomic sectors for resilience and sustainable development. It brought together representatives from National Meteorological and Hydrological Services (NMHSs), global climate centers, regional partners, decision-makers, and users from critical socioeconomic sectors. The government of Ethiopia was represented by the director general of Ethiopia Meteorological Institute. The forum provided a structured means for users, researchers, and climate services providers to interact at the regional level to ensure that user needs for the seasonal prediction are met.

1. Implementing Early Warning for All; Ethiopia's Experience, Challenges and Recommendations

Mr. Teshome delivered a comprehensive overview of Ethiopia's early warning system focusing on the "Early Warning for All" initiative. He began by acknowledging the increasing vulnerability of communities due to climate variability, including extreme weather events such as floods, droughts and heatwaves. He emphasized the necessity of accurate and timely early warning systems to mitigate these risks and build resilience. He highlighted the togetherness in efforts to try and address the climate change impacts and extreme weather events that threaten our countries planning and sustainable development. He pointed out that the government of Ethiopia is working on expanding and strengthening its reachable channels to the grassroot community,

empowering regional meteorological service centers and procuring and installing the state of art modernized meteorological observing and communication systems. The challenge they are facing is increased pressure in developing and implementing the appropriate methods to address weather and climate issues to assist various economic sectors to build their capacity with improved planning and better management decisions. Mr. Teshome recommended collaboration and knowledge sharing as key best practices in the delivery, provision, and valuation of weather and climate prediction which would make a huge difference. As he concluded he argued that a well-designed and formulated weather, seasonal climate prediction and climate watch system would ensure necessary actions are taken to mitigate the effects of significant climate anomalies that can cause extremes such as drought, floods, and heat waves.

2. Looking Back: October to December (OND) 2024 Seasonal Forecast.

This session was moderated by Mr. Calistus who provided a quick overview of the forum's theme '*Climate Services for Closing the Early Warning Gap Together*'. This section presents the detailed performance of the October to December season, the observed impacts and the mitigation strategies that were implemented.

2.1. State of the Climate OND 2024

For the OND 2024 season, there was a delayed onset over most parts of Somalia and northeastern Kenya. However, enhanced rainfall was observed in November across most of the region, except for central Somalia, parts of Southern Ethiopia and western South Sudan. The Madden Julian Oscillation (MJO) remained active, and during its second to fourth phases, it contributed to enhanced rainfall over the region in November. The El Nino-Southern Oscillation remained neutral throughout the season.

For the wet day anomalies and rainfall intensity, high rainfall intensity was observed over Burundi, Rwanda, Tanzania, eastern Uganda, and western Ethiopia. Most parts of the region experience an increase in the number of wet days. However, temperatures were above average with warmer-than-usual conditions recorded across most parts of Burundi, Rwanda, Tanzania, eastern Uganda, and western Ethiopia. The OND 2024 season recorded more dry days over parts of Somalia, Kenya, southern Tanzania, and western Uganda. These prolonged dry spells negatively impacted agriculture and water availability in affected regions.

2.2. Sectoral Impact Assessment

2.2.1. Livestock and Rangeland

The selector received reports from Djibouti, Ethiopia, Kenya, Somalia, South Sudan, and Uganda. Generally, there were favourable pasture conditions, improved water availability, and reduced livestock mobility due to sufficient access to water and pasture. The availability of crop residues from harvesting and forage for livestock provided additional feed in the regions that benefited from the JJAS and OND rains.

As a result, livestock productivity increased, leading to higher yields of meat, milk, hides and skin which contributed to improved food security and nutrition. Livestock prices remained stable and even improved due to better animal body conditions. In South Sudan, increased income occurred due to increased fishing activities while Uganda experienced growth in value addition of harvested crops, leading to increased availability of agro-industrial by-products.

However, challenges were also reported across the region. All member states experienced outbreaks of vector-borne diseases and other transboundary animal diseases (TADs). In deficit areas, longer trekking distances were required to access water and pasture, contributing to resource-based conflicts. In Ethiopia, increased livestock movement due to reduced pasture in areas with below-average rainfall led to land degradation. Unexpected rainfall in some parts of the region disrupted crop harvesting activities and hampered the storage of crop by-products for animal feed. A decline in pasture availability, water scarcity, and reduced animal production and productivity resulted in Somalia due to the below-average rainfall. Flooding displaced livestock, affecting approximately 184,000 people and submerging 283 schools. In South Sudan, difficulties in accessing livestock markets were reported in the upper Nile region of Malakal and Bentiu. A heavy influx of refugees from Sudan with thousands to millions of cattle and shoats, intensified competition for pasture, water, and facilities in Maban county of upper Nile region and northern Bahr-el-Ghazal states. This sometimes trigger conflicts and disrupted animal health service delivery.

To mitigate these challenges, meteorological information was disseminated via mass media, social media, email and telephone calls. In Kenya, the rehabilitation of open water structures facilitated better water recharge during the OND season. Vaccination campaigns against TADs were conducted across the region, while gender-sensitive entrepreneurship initiatives were enhanced to promote fodder conservation. Surveillance and monitoring of vectors and disease epidemics were intensified. Conflict resolution committees were strengthened in Somalia, to address resource-based disputes. Early risk communication by climate service providers enabled

proactive interventions, such as the opening of Jenga Dam by Ugandan water authorities to regulate water pressure. Peace initiatives were implemented between local communities and migrant pastoralists in Northern Bahr-el-Ghazal state to reduce conflicts. Additionally, infrastructure interventions, including the construction of drainage systems and water dykes, were carried out in flood-affected cities such as Bor and Bentiu.

2.2.2. Agriculture and Food security

The selector received reports from Burundi, Ethiopia, Rwanda, South Sudan, Sudan, Tanzania and Uganda. Some regions experienced an early onset of rainfall, which facilitated early planting, fair distribution, and good crop prospects in certain areas. Dry conditions from December to January were favourable for harvesting and post-harvest activities. Increased moisture levels in October and November contributed to favorable soil moisture for crop development across most bimodal areas. As a result, market supplies of staple foods increased during the harvest period, leading to a decline in prices.

However, various climatic shocks posed significant challenges to agricultural productivity. In Burundi, hailstorms caused extensive crop damage, while heavy rainfall in southwestern Uganda led to waterlogging and frostbite in Ethiopian farmlands. Crop losses caused severe socio-economic impacts, including increased trauma among men, which contributed to a rise in domestic violence, while women faced an increased burden in searching for food for their families. The unusual rainfall created conducive conditions for the African Armyworm infestations across farmlands in the Oromia region, while Fall Armyworm outbreaks were reported in the southern and southwestern regions. Additionally, wheat rust affected irrigated wheat, leading to crop damage and losses in the Amhara regional state; some western parts of Oromia experienced a decline in the quality of yields.

The heavy rains severely impacted crops such as rice and maize in marshlands, leading to significant losses. The winter agricultural season of the Gezira scheme in Sudan was severely affected by ongoing conflict, shortages of fertilizers, and irrigation challenges, leading to a sharp drop in cultivated areas. The wars in Sudan isolated five Darfur states, exacerbating insecurity and depriving youth, women, and persons with disability of their livelihoods. Despite initial expectations of food grains decreasing, they continued to rise due to ongoing instability in Sudan.

To mitigate these challenges, climate information services were extensively utilized, and several good agricultural practices were implemented as part of response strategies. These practices include sustainable land management techniques and climate-resilient farming practices such as

contour farming, mulching, water harvesting, soil conservation, and improving drainage systems in agricultural areas. Timely release of early warning information helped farmers make informed decisions. Additionally, rehabilitation and maintenance of irrigation infrastructure and water harvesting structures were prioritized. In Rwanda, over 65 million tree seedlings were planted during the 2024/2025 period to combat deforestation and promote environmental sustainability. The government of Rwanda also provided orange-fleshed sweet potatoes, which are rich in vitamin A and disease-resistant, to farmers in water-scarce areas as part of efforts to combat stunting, which is a national issue.

The key recommendations from stakeholders included the need to intensify programs on seed multiplication and production at the state level in South Sudan and Sudan. Infrastructure and marketing policies must be developed to encourage the private sector interventions in Sudan. Additionally, there is an urgent need to improve access to credit services in Sudan to support agricultural production and food security.

2.2.3. Water resources and Energy

The selector received reports from Burundi, Djibouti, Ethiopia, Kenya, Rwanda, Somalia, South Sudan, Sudan, Tanzania and Uganda. During the OND season, water supply remained stable for domestic, agricultural, and livestock use across Djibouti, Ethiopia, Kenya, Somalia, Sudan and Uganda. Most parts of the region experienced enhanced and stable hydropower production, contributing to energy security. Additionally, groundwater recharge improved significantly in Kenya, Djibouti and Tanzania, while river, lake and dam water levels increased in Burundi, South Sudan, Sudan and Uganda. Rwanda witnessed an increase in surface water availability, leading to ecosystem enhancement while South Sudan saw improved navigation and a thriving fishing industry due to elevated water levels.

Despite these positive trends, several challenges emerged. Water contamination and flooding were widely reported across the region, causing infrastructure damage, displacements, and landslides. In Tanzania, decreased water levels negatively impacted various sectors, while Somalia suffered from poor rainfall, drought conditions and water stress. Kenya experienced an increase in water-based conflicts particularly in arid and semi-arid regions exacerbating tensions among communities. Additionally, there was a rise in gender-based violence and increased burden on girls and women, who had to travel longer distances in search of water. Kenya and Burundi experienced a delayed onset of rainfall, leading to uneven distribution across Somalia as well. Rwanda reported no significant hydrological changes. Warmer temperatures were recorded

in Kenya and Somalia, while South Sudan had a wetter year with above-average water levels. Uganda also experienced a wetter season compared to previous years.

To address these issues, various climate services and response measures were implemented. Djibouti, South Sudan and Sudan issued daily bulletins and held multi-sectoral stakeholder meetings to enhance preparedness and coordination. In Kenya, hydropower generation was managed in conservation mode to ensure long-term sustainability. Ethiopia and Tanzania closely supervised water reservoir management and infrastructure maintenance. Djibouti undertook stagnant water clearance and aid distribution efforts to mitigate health risks associated with standing water. Community awareness and Flood risk awareness campaigns were launched in Burundi and Tanzania to educate residents on disaster preparedness. In Somalia, boreholes were dug to improve access to water in drought-affected areas. Additionally, Somalia and Uganda implemented flood mitigation and disaster preparedness initiatives to minimize the impact of extreme weather events.

2.2.4. DRM

During the OND season, the region experienced multiple disasters, including drought, floods, landslides, lightning, hailstorms, strong winds, and disease outbreaks. Displacements caused by flooding led to a surge in gender-based violence (GBV) cases, further exacerbating the vulnerabilities of affected communities. Somalia recorded the highest number of affected people, followed by Sudan, Ethiopia, and Burundi. Sudan also reported the highest mortality rates, followed by South Sudan, Djibouti and Uganda.

To mitigate these disasters, several proactive measures were taken at the start of the season. Emergency response teams were activated at both the national and local levels, resources were mobilized, and field personnels were trained. Continuous awareness campaigns were conducted to educate communities on the potential impacts of the seasonal weather outlook. Additionally, relocation efforts targeted people living in high-risk areas, while drought insurance policies for 2024 OND season were purchased. A gender-mainstreaming strategy was integrated into the DRM framework, ensuring that disaster responses were inclusive and sensitive to gender needs. Prepositioning of food aid and essential supplies, including Ready-to-Use Therapeutic Food (RUTF), was carried out to support 25,000 children suffering from severe acute malnutrition. Immunization campaigns for cholera, measles, polio, and meningitis were implemented in high-risk areas. Furthermore, relief supplies, search-and-rescue operations, and retrieval exercises were done in landslide-affected areas.

During the disaster, risk communication and health promotion activities were conducted to strengthen local resilience to mitigate disease outbreaks. Interagency logistics coordination meetings were held to assess existing logistics capabilities, identify gaps, and determine additional needs. Specific gender-responsive interventions were implemented, including the distribution of dignity kits to 1620 adolescent girls in flood-affected areas. Training of trainers on gender and disability inclusion was conducted, enhancing the capacity of relevant child protection services. Through GBV awareness campaigns, more than 5000 men, women, boys and girls were reached. Additionally, supplementary food assistance was provided to 15,000 children and over 20 frontline workers benefited from capacity building training in Malakal on GBV.

2.2.5. Health

The sector received reports from Ethiopia, Kenya, Rwanda, Somalia, South Sudan, Tanzania and Uganda. By the end of the OND season, there was a notable decline in malaria trends, reduced cases of acute respiratory tract infections, and a drop in waterborne diseases, including acute watery diarrhea and cholera particularly in South Sudan. In Ethiopia, Kenya, Rwanda and Uganda, an overall improvement in nutritional status was observed. South Sudan took a significant step by launching malaria vaccination programs in 40 areas. Additionally, fewer cases of waterborne diseases and malaria were reported in several parts of Somalia and no cases of pneumonia recorded. Improved road accessibility facilitated the transportation of medical supplies, enhancing healthcare service delivery across several regions.

However, some areas experienced a surge in health challenges. Uganda and South Sudan reported an increase in malaria cases. South Sudan also experienced rising cases of Hepatitis E and acute respiratory tract infections. Schistosomiasis and soil-transmitted helminthiasis (intestinal worms) in Rwanda were observed. Kenya, South Sudan and Tanzania recorded an increase in malnutrition cases. Meanwhile, there was an outbreak of scabies and other skin diseases in dry areas of Somalia.

To address these health concerns, several climate services and health interventions were implemented. Cholera control campaigns were strengthened in Ethiopia, Kenya and Uganda, aided by climate advisories. Prepositioning of antimalarial and rapid diagnostic test kits (RDTs) in state hubs in South Sudan and Tanzania, to improve response capacity. Health education and hygiene promotion programs were rolled out in South Sudan. Surveillance, early detection, and supportive treatment, such as oral cholera vaccinations, were carried out in South Sudan and

Tanzania. Somalia intensified routine immunization and outreach services of all antigens, including measles and diphtheria. Rwanda initiated school-based deworming programs to combat parasitic infections. Ethiopia partnered with Disaster Risk Management teams to prepare seasonal health assessments and response plans for hotspot districts. South Sudan undertook vaccinations against Hepatitis E virus. Additionally, supplementary feeding programs were established in Somalia and Tanzania, alongside food distribution for affected populations. Public education on balanced nutrition was also promoted to improve dietary practices in vulnerable communities.

2.2.6. Conflict/Climate Security;

The selector received reports from Ethiopia, Kenya, South Sudan, Somalia and Uganda. Climate extremes remain a primary driver of conflict and climate insecurity in the region

Despite earlier predictions of increased conflict incidences, reports indicated a general reduction in conflicts across most areas. However, the Abyei area experienced a significant surge in conflict incidents, with recorded cases increasing by more than 100%. This escalation was largely attributed to the seasonal migration of the Misseriya, which often leads to resource-based tensions. Additionally, heightened political hostilities were observed across the region, further compounding existing security concerns.

The region also witnessed a sharp escalation in refugee and internally displaced persons (IDP) crises, driven by both climatic and political factors. In Kenya, conflict and criminal activities related to cattle rustling and pastoralist movement saw a notable rise, particularly in the central and mid-western regions, including Meru, Tana River, and Nakuru. These incidents were primarily linked to competition over dwindling water and pasture resources, further exacerbating tensions between the communities.

Discussions

Can climate services and law enforcement collaborate? When it comes to gender-based violence, climate services can support law enforcement by identifying high risk periods for GBV such as during displacement caused by floods or drought. Early warnings and coordinated response strategies can help prevent and mitigate GBV cases.

The positive impacts observed - are they due to specific interventions? Yes, interventions such as improved water storage, pasture conservation and veterinary support contributed to increased livestock productivity. Further analysis will be done to quantify these impacts.

How does livestock trekking affect children, and how can we better capture gender-specific impacts? There is need for more data on how trekking affects children, particularly in terms of access to education, nutrition, and health. Future assessments will incorporate a gendered lens to address these concerns effectively.

In cases of child abduction, are boys or girls more affected? Boys are commonly abducted, often to be used as herders or combatants. A gender-specific approach will be applied to tailor interventions accordingly.

How is the presented data collected, and what challenges exist in country contributions? Data is sourced from national focal points, partner organizations, and field assessments. However, challenges include gaps in reporting, inconsistent data collection methodologies, and delays in submission. Strengthening national reporting systems and capacity-building for data collection will help address these gaps.

3. Opening Ceremony

Keynote address: Mr. Fetene Teshome, Director General, Ethiopian Meteorological Institute (EMI)

Mr. Teshome delivered a comprehensive overview of Ethiopia's early warning system focusing on the "Early Warning for All" initiative. He began by acknowledging the increasing vulnerability of communities due to climate variability, including extreme weather events such as floods, droughts and heatwaves. He emphasized the necessity of accurate and timely early warning systems to mitigate these risks and build resilience. He highlighted the togetherness in efforts to try and address the climate change impacts and extreme weather events that threaten our countries planning and sustainable development.

His speech addressed the successes, challenges and recommendation for advancing early warning mechanisms.

Achievements:

- The government of Ethiopia is working on expanding and strengthening its reachable channels to the grassroots community, empowering regional meteorological services

centers and procuring and installing the start of modernized meteorological observing and communication systems.

- The government is continuing to create systems that enable those who would like to share their best experiences in the field of seasonal and sub-seasonal climate forecasting and communication as well as end users using different languages.

Challenges:

- Increasing pressures will require the development and implementation of appropriate methods to address the issues of vulnerability to weather and climate to assist various economic sectors to further develop their adaptive capacity with improved planning and better management decisions

Recommendations:

- Collaborating and sharing the knowledge of best practices in delivery, provision and evaluation of weather and climate predictions can make a huge difference;
- A well-designed and formulated weather, seasonal climate predictions and climate watch system will ensure necessary actions can be taken to mitigate effects of significant climate anomalies that can cause extremes such as droughts, floods, and heat weaves;
- Effects of weather and climate related disasters can be minimized through proper use of meteorological information.

Remarks from IGAD Representative: Dr. Abdi Fidar, Officer in Charge, ICPAC

Dr. Fidar highlighted IGAD's efforts to enhance regional climate resilience to climate-related risks. His address focused on IGAD'S strategic initiatives to enhance climate services and foster cooperation among member states. Such initiatives included the following:

- The 2022 summit on climate adaptation and financing.
- Collaboration with member states to integrate climate services into national policies and development plans.
- Advancing multi-hazard early warning systems and fostering cross border cooperation.

He emphasized the importance of aligning regional efforts with global frameworks like the Paris Agreement and the Sendai framework for Disaster Risk Reduction. Dr. Fidar called for sustained investment in climate services and reintegrated IGAD'S commitment to building synergy among national and regional stakeholders.

Remarks from Mr. Oduma Wakasa, state Minister, Ethiopia

Mr. Wakasa officially opened the workshop with a speech emphasizing the critical role of the GHACOF in shaping climate services across the region. His remarks included the following:

- Reflecting on OND 2024, Mr Wakasa heighted the timely issuance of climate advisories which enabled better preparedness in some sectors. However, challenges such as limited access to forecasts in remote areas and delays in mobilizing resources were noted as key areas for improvement.
- He commended efforts to integrate climate services into sectors' policies.
- He commended Ethiopian Meteorological Institute in scaling up investments in climate information infrastructure and enhancing cross-border collaborations.
- Mr. Wakasa called for a collaborative effort to bridge the gap between early Warning systems and early action. He emphasized the need for robust institutional frameworks, increased public awareness and greater involvement of the private sector in climate resilience initiatives.

He concluded by encouraging participants to leverage the workshops as a platform for sharing best practices, fostering partnerships, and generating actionable solutions to enhance the region's capacity to address climate risks.

4. State of the Climate: March to May 2025 Seasonal Forecast

This session, led by Heidi Howard with support from Rosanna Amato, both from the UK Met Office, delved into the state of global climate systems and their anticipated impacts for the upcoming season. Key messages highlighted included the record warmth experienced globally in 2024 exceeding 2023's record-breaking temperatures, attributed to factors such as global warming, El Niño, and Warm Atlantic conditions. The Met Office outlook suggests that global temperatures in 2025 will be one of the three warmest years on record, falling in line behind 2024 and 2023. Regarding the current state of the El Niño-Southern Oscillation (ENSO), sea surface temperatures (SSTs) have cooled since late November in the central and eastern Pacific, albeit showing signs of cooling. Following an imminent weak Lanina, ENSO–neutral conditions are expected for the March to May 2025 season. Caution is advised when interpreting ENSO outlooks due to the "Spring predictability barrier," which can make forecasting ENSO from boreal winter challenging. Currently, IOD conditions are neutral and the Indian Ocean Dipole (IOD) is currently in a neutral phase, expected to persist over the March to May season. However, historical records

tell us that both ENSO and IOD have little to no impact on MAM conditions, making it hard to make statistical predictions of the upcoming season in East Africa. The Madden-Julian Oscillation (MJO) can influence wetter or drier conditions for the region, although its predictability is limited to a few weeks. Updated seasonal and monthly forecasts incorporating the MJO should be reviewed regularly. These insights provide valuable guidance for anticipating and adapting to climate variability in the upcoming season.

Consolidated Objective Seasonal Climate Outlook for the March to May 2025

Dr. Hussen started his presentation by introducing monthly and seasonal rainfall climatology and the percent of contributions from March to May in East Africa. He continues his presentation by describing how the Forecast probability distributions are established objectively to indicate the likelihood of each zone's above-, normal, or below-normal rainfall. Above-normal rainfall is defined as the upper third of historical MAM rainfall totals, below-normal as the lower third, and normal as the range between the upper and the lower third of the rainfall totals.

Climatology refers to the historical series of observed weather conditions over the 30 years (1991-2020). The forecast for the MAM 2025 season is generated using January 2025 initialized seasonal forecasts from 9 Global Producing Centers (GPCs) which were utilized and processed using three calibration techniques (canonical correlation analysis, linear regression, and logistic regression) to develop the MAM 2025 seasonal climate outlook. The final consolidated forecast is obtained by averaging the forecasts generated by the three different approaches. Forecast probability distributions for temperature are also established. The rainfall and temperature outlooks for MAM 2025 for various zones within the GHA region are given in Figure 1 and Figure 5, respectively.

Drier-than-Normal Conditions Likely over Somalia, eastern/northern Kenya, southern/northeastern Ethiopia, Djibouti, coastal Eritrea, western South Sudan, southern/western Uganda, Rwanda, Burundi, and northwestern Tanzania and Wetter-than-Normal Conditions Expected over Central/southern Tanzania, northeastern Uganda, eastern South Sudan, and western Ethiopia.

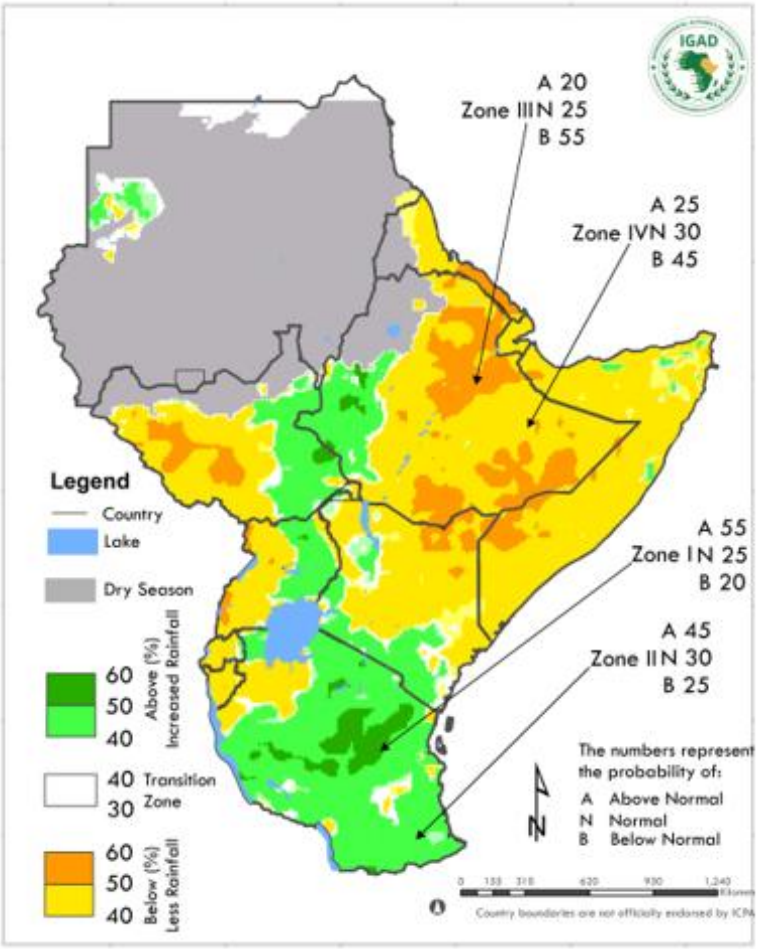

Figure 1. The rainfall outlook for various zones within the GHA region for March to May 2025

Warmer-than-average temperature conditions are expected over most parts of the region. Probabilities for warmer than average temperatures are most enhanced over Sudan, Ethiopia, Eritrea, Djibouti, northern Somalia, northern Kenya, and southern parts of south-eastern Tanzania.

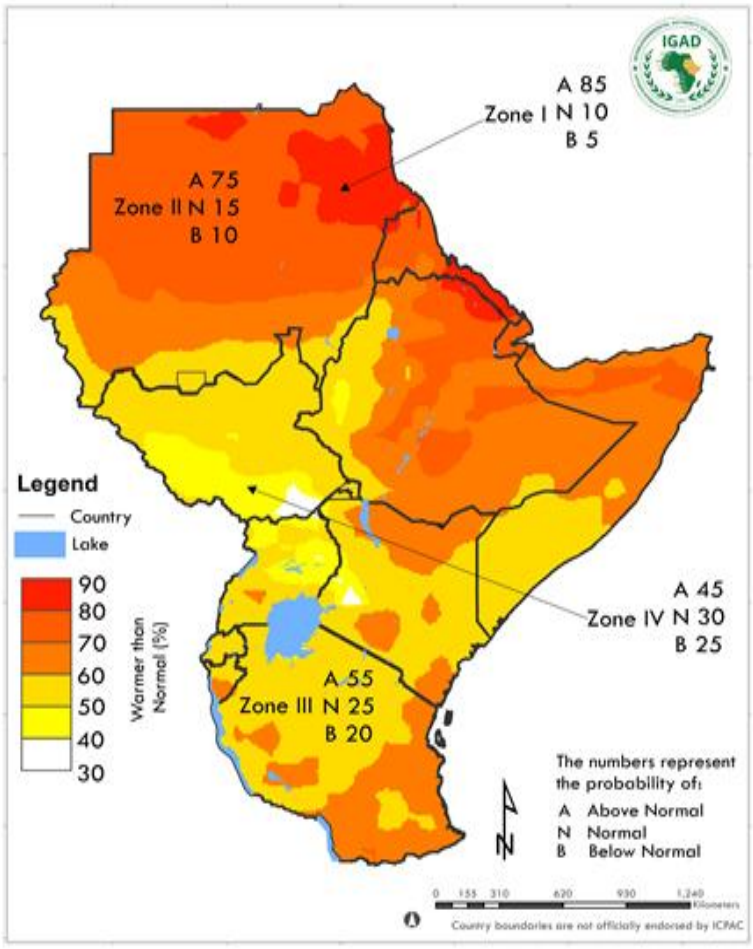

Figure 2. The Temperature outlook for various zones within the GHA region for March to May 2025

Experts also examined the prevailing and predicted SSTs over the Pacific, Indian, and Atlantic Oceans as well as other global and regional climate factors that affect the rainfall evolution during the MAM season. These factors were assessed using dynamical and statistical models. SST conditions over the equatorial Pacific Ocean were neutral over the past few months. Current SST patterns across tropical oceans and the evolution of the Nino3.4 index over recent and upcoming months indicate that 2016/2017 and 2020/2021 closely match with 2024/2025 and have been identified as analogous years. The selection of analogue years based on Nino3.4 index is carried out by calculating the correlation and the mean difference between the combined observed and forecast evolution of Nino3.4 of the target year and the corresponding Nino3.4 index for the same period in previous years (Fig. 3)

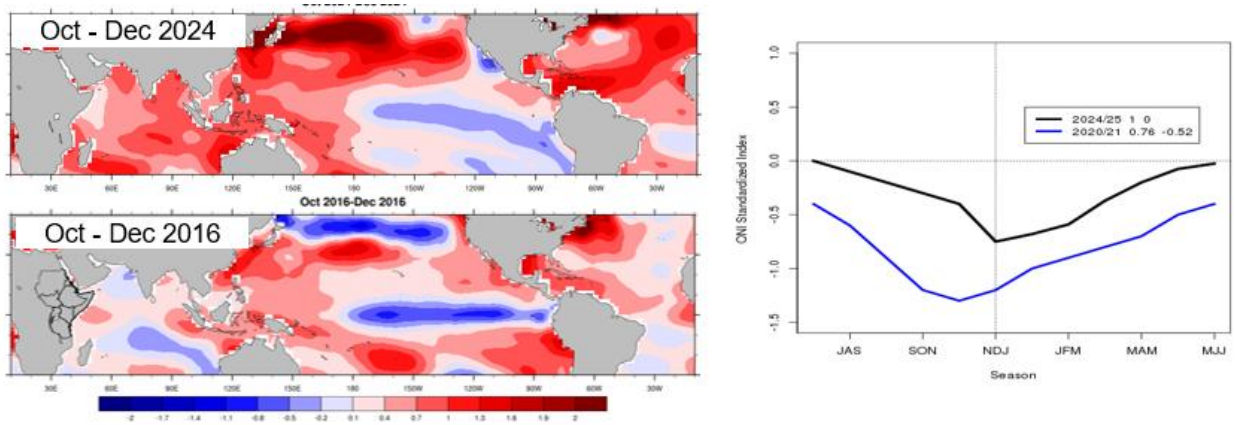

Figure 3: shows the current (Oct -Dec 2024 & Oct-Dec 2024) pattern of SST anomalies over the tropical Oceans

The predicted probability of exceeding 200 mm is higher than the historical (1991-2020) over the central parts, and lower than the historical over the northeastern parts of the region. The chance of getting 400 mm or more during MAM is higher than historical values over western Ethiopia, eastern Uganda, western Kenya, Rwanda, Burundi, and much of Tanzania.

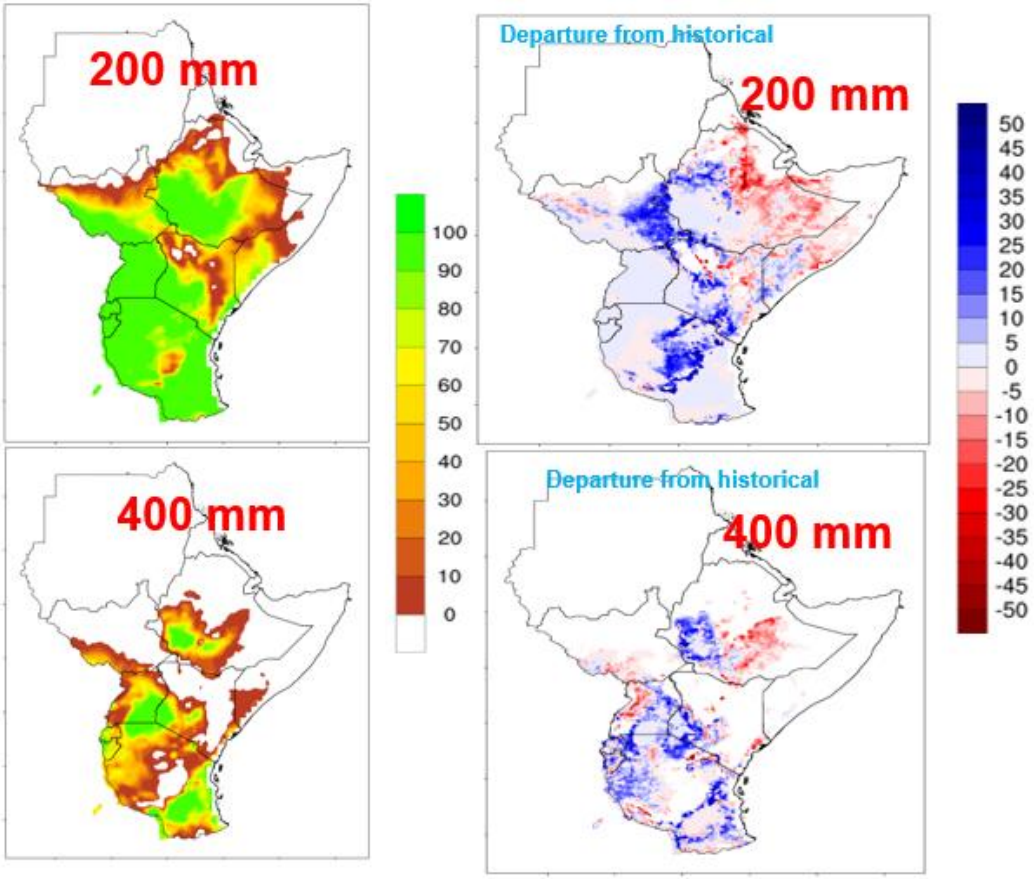

Fig 4: Probability of Exceedance for MAM 2025 rainfall

The onset of rainfall, based on the average forecast from 5 GCMs (212 members), shows a south-to-northeast progression across the region. Significant variation indicated in predicting onset dates among different ensemble members over Kenya and northeastern Ethiopia. Normal to early onset is expected over most parts of the region, while delayed onset is indicated over localized areas over parts of central Kenya, southern Ethiopia, and central Somalia.

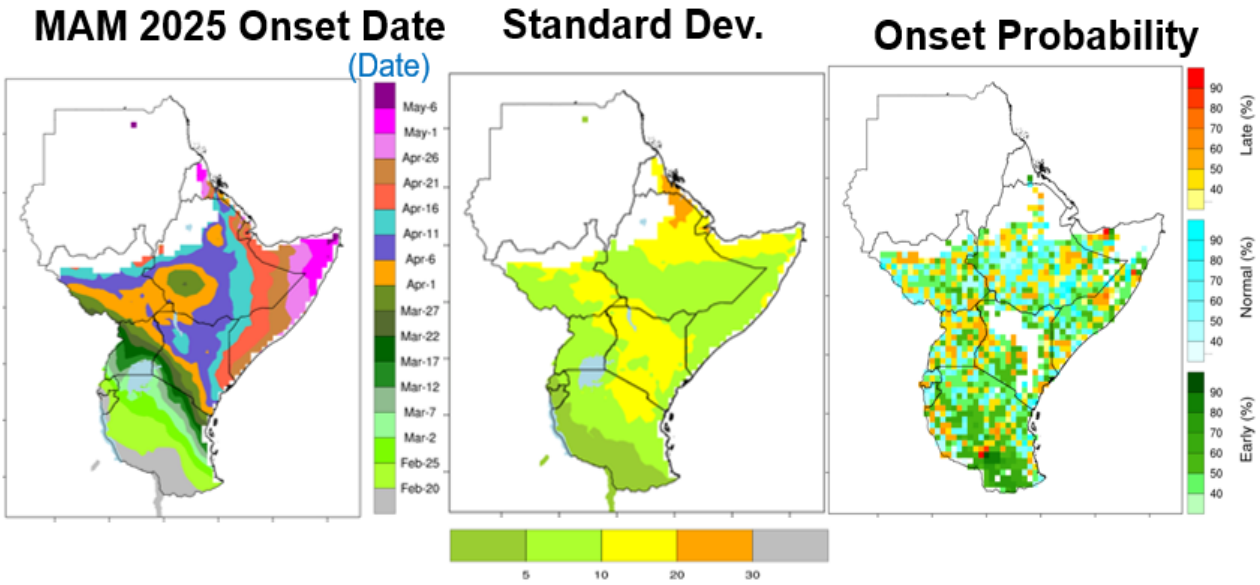

Fig 5: onset dates for the MAM 2024 season from model ensemble mean values

5. Partnerships/Projects/Initiatives for Resilience Building: Part 1

5.1. Climate services through mobile apps: Wujihacast Chatbot

The Wujihacast chatbot climate app is the work of Down2Earth in collaboration with ICPAC. Down2Earth is funded by the European Union Horizon 2020 program. The app focuses on water security, and seeks to address climatic impacts on water movement, storage and impacts specifically on vegetation across large regions like the great horn of Africa. Professor Mike stated that people's lives and livelihood rely on rainfall and in the event of failure the impacts are dire and so there is need for this information. There are very few tools that address the climate impact on vegetation across large regions.

He discussed the limitations of the current approaches for forecasting water scarcity across the region which rely on climate conditions of the atmosphere mostly rainfall and temperature. This data may not reflect the actual impact on the ground even with the high resolution it does not give information on where to find water as a solution enough for vegetation and what the crops might

need. To fill this gap, the Down2Earth project has developed a modelling system for Climate into Useful Water and Land Information in Drylands (CUWALID). It is a multi-layer model that has a time simulation module of torque with a land surface model and ground model underneath. It captures critical hydrological processes that occur across the region and are driven by seasonal forecast, historical scientific information on future climate change projections and generate information such as; crop status, pasture and browser status, surface water status, ground water status (for animals and humans) and flood hazard (based on stream flow along the channels above historical threshold).

The area of study covered Kenya, Somalia and Ethiopia drylands and the outputs are included in the GHACOF, the East Africa Hazards Watch and deliver the information through a mobile phone chatbot targeting rural communities, extension workers, radio stations, government officials and humanitarian organizations. He stated that the basis of this tool is a hydrological model for drylands called DRYP, it runs at a spatial resolution of 1km and temporal resolution of 1 hour. It is developed and calibrated for the great horn of Africa dry lands region for a region of 2 million square kilometres. It captures the ground waterflow between aquifers, groundwater response to regional lakes, emergence and drying up of open water bodies surface ponding and desiccation and representation of dynamic vegetation input /output.

Professor Mike explained the processes of the CUWAILD forecasting system and the different forecasts generated. He explained that the products are communicated through a chatbot called Wajiha Cast. Wajiha Cast is the interface with the users, and it allows for five different languages; English, Swahili, Somali, Amharic and Oromo. It allows for the use of geographical location and generation of outputs in multiple forms for multiple uses related to seasonal forecasts and the impact they have. The different forms of output include images, maps, voice notes and text delivered through the Wajiha Cast App. More information of CUWALID and WajihaCast can be found on https://down2earthproject.org/CUWALID/ and https://down2earthproject.org/WajihaCast/

5.2. VCI forecasting tool;

The Vegetation Condition Index (VCI) forecasting tool was presented by Mr. Pedram Rowhani and Chloe Hoppling. Mr. Rowhani explained the work and projects being done under PASSAGE which is a climate resilience program funded by the British NCDO among other partners such as the University of Sussex, IFRC and ICPAC. PASSAGE focuses on the cross-border region of Kenya, Ethiopia, and Somalia. The VCI forecasting tool is a part of the project under PASSAGE

which focuses on the community, clusters and region. The clusters organise sub-COFs, they create knowledge and learning hubs at community level.

The focus is on impactful forecasting of extreme events by;

- Developing effective anticipatory actions; which will help in the use of the forecast such as; when the action should be taken, who should take the action and who are the actions for.
- Communicating risk; sharing the information through risk narratives by combining forecasts together.
- Capacity building in the cross-border region; at the community and institution level to ensure coordination and cooperation to bring people together to discuss gender and information, identify vulnerabilities in different sectors of society, encourage partnerships and research.

Ms. Chloe talked about the vegetation condition forecast. She mentioned that the VCI tool uses daily VIIRS 500m Nadir BRDF Adjusted reflectance, the NDVI measure of greenness (healthy vegetation should be near 1). This is compared with the previous year and the values range from processed to aggregated county levels. Three-month VCI 3M and 10-week forecast VCI 3M is generated. The forecast is categorised into five distinct categories used at the NDMA to summarise the forecast. The NDVI is used to give the measure of the current status relative to the historical mean. The forecast is shared through uploading on the web App platform and the QR code was shared with the participants.

5.3. Impact based Forecasting for Agriculture

Dr. Masilin Godoshava introduced the project on Impact-based Forecasting which started in November 2024 and is expected to end in April 2026. She explained the difference between the probabilistic forecast and the impact-based forecast. It is aimed at utilizing the forecasting information by showing what impact is expected from the different weather hazards. Some of the expected outcomes include; -

- Enhance knowledge among stakeholders about the gaps and limitations in the current data related to impact-based forecasting. This data includes vulnerability impact data and information on different gender that are being impacted by the weather-related hazards.
- Enhance understanding of the current methods being used in impact-based forecasting. She stated the importance of this project was to find an appropriate method for our region.
- Enhance collaboration among stakeholders.
- Produce a prototype for yield forecast based on impact-based forecast for the selected region where the study is to be carried out in Kenya. This project will focus on yield forecasts.

She mentioned that the main aim of this study is to integrate the yields into the tercile forecast generated and find the possible actions to be taken if the yields are to be impacted negatively. The area of study will cover from the regional to national all the way to community level. At regional level it is important to identify the gaps, develop road maps for the region in terms of impact-based forecast alongside the traditional forecast and increase the awareness of the impact-based forecasting. At the national level the selected country is Kenya. Two counties will be used for this study where the users of the forecast will be engaged.

The participants were requested to scan the QR code provided during the meeting to provide basic information that will help in identifying the available data set in different countries, how the data is being shared and the conditions attached to the sharing of the data. This will enable the project to analyse and assess the status of our region in general preparedness to produce impact-based forecasts.

5.4. WISER Kenya

Dr. Omondi talked about the work being done by WISER Kenya in Garissa and Tana River. WISER is working with communities in Tana River and Garissa on understanding climate information and incorporating gender and policy to ensure sustainability.

He mentioned some of the outputs of WISER which include:

- Capacity building enhancement; ICPAC, Kenya meteorological department and Kenya Red Cross are being trained on how to work closely on Climate Information Services (CIS)

- Enhance collaboration among stakeholders; this is by improving coordination at regional, national and county levels by bringing different actors together on issues of climate services.
- Leverage anticipatory action to bring it from regional to national and cascade down to county level.
- Gender and social inclusion; WISER is working with communities, county government, policy makers and different genders (men, women, youth, and the people with disability).

6. March to May 2025 Seasonal Forecast Implications

6.1. Livestock and Rangelands

Expected Positive Sectoral Impacts

The eastern parts of the region are expected to experience a regeneration of pasture, with improved water availability and reduced livestock mobility. This is likely to result in better feed and food security, good nutrition, increased livestock productivity, and improved quality of animal products like meat, milk, and hides. There is also an anticipated increase in livestock reproduction rates and better animal body conditions that may stabilize or improve market prices. Additionally, the season is favorable for vaccination and water harvesting. In the western parts, pasture and water harvested from previous rains are expected to support livestock.

Expected Negative Sectoral Impacts

The eastern areas may see displacement due to floods and mudslides, resulting in livestock deaths, outbreaks of waterborne diseases, and internal parasites. There could also be an influx of livestock from neighboring regions straining resources and animal health services. Infrastructure damage, especially to roads and water holding structures, may affect market access and animal health service delivery. In the western areas, there is the potential for reduced pasture and water availability, leading to increased livestock mobility and mortality. This could exacerbate vulnerability, especially for women and children, due to the increased burden of fetching water and caring for animals.

Advisories and Mitigation Measures

It is advised to promote supplementary animal feeding and water supply, and use harvested pasture, crop residues, and agro-processing by-products as animal feed. There is a need to enhance disease surveillance and community awareness about potential TADs outbreaks and

promote fodder conservation. In the eastern parts, there should be facilitation of community awareness about expected rains to plant fodder, present animals for vaccination, and harvest and conserve water and pastures. Promoting gender-responsive migration, peace committees to mitigate conflicts, and livestock offtake before deterioration of animal condition are recommended for the western parts. Rehabilitation of critical water sources and strengthening multi-sectoral coordination for anticipatory actions are also crucial.

6.2. Agriculture and Food security;

Expected Positive Sectoral Impacts

Normal to early onset will be conducive for early planting.

Expected Negative Sectoral Impacts

Low crop production is likely to cause water stress challenges as most parts of the country are predicted to receive drier conditions. There is also the likelihood of food prices increasing.

Advisories and Mitigation Measures

Land should be prepared early, and agricultural inputs should be pre-positioned for planting at the start of the rains. Farmers should be advised to plant drought-tolerant crops that mature quickly in drier areas and improve drainage in areas experiencing wetter conditions. The use of water harvesting and storage technologies should be encouraged, as well as sustainable agriculture methods that conserve moisture. Farmers need to seek guidance from extension officers on farm management and closely monitor short-term weather forecasts. The effective use of produce from previous seasons, along with soil erosion-minimizing practices, should be promoted. Alternative livelihood strategies like bee farming should be encouraged. Authorities need to downscale climate information for localized forecasts and ensure the timely distribution of agricultural inputs. Farmers should focus on water harvesting, small-scale irrigation, and climate-smart agriculture (CSA) technologies, as well as planting drought-tolerant and short-maturing crops. Monitoring the forecast, applying good agronomic practices, and using mulch are also recommended. There is also a need to timely supply early maturing and drought-resistant varieties to farmers and to strengthen crop insurance.

6.3. Conflict/Climate Security;

Expected Negative Sectoral Impacts

Depressed rainfall, high temperatures, and delayed onset of rains may lead to resource depletion, initiating high-conflict-risk behaviors and potentially escalating inter-communal conflicts. Despite interventions like disarmament, the highlighted areas are likely to witness increased conflict.

Advisories and Mitigation Measures

A detailed, downscaled risk assessment for the highlighted areas is needed to mitigate negative impacts. Responses and interventions need to be context-specific, given varying levels of resilience. Regular monthly monitoring of weather updates is recommended.

6.4. Water resources and Energy:

Expected Positive Sectoral Impacts

The region is expected to have good water supply for domestic and livestock use, with the possibility of riverine floods and further rise in lake levels. Enhanced hydropower production and increased water availability for irrigation are also expected.

Expected Negative Sectoral Impacts

Potential reductions in hydropower production in some dams, with stable production elsewhere, are possible, and there is a risk of conflicts over water access/use. There is also the chance of low groundwater levels, reduction of water supply, and an increase in gender-based violence due to water shortages.

Advisories and Mitigation Measures

Raising awareness about flood risks and coordinating with disaster response teams for early warning is essential. A comprehensive flood preparedness plan should be developed, and drainage systems should be improved. There is a need to reinforce dykes, continuously monitor water levels, and develop a gender-responsive plan to address specific needs, as well as implement flood risk mitigation measures. It is also recommended to promote water conservation, monitor water levels, and enhance water harvesting to minimize gender-based violence. The development of a water conflict resolution plan, provision of water treatment chemicals, and water trucking are recommended. Hydropower plant maintenance should be scheduled during low flow periods.

6.5. DRM;

Expected Negative Sectoral Impacts

Conflicts in pastoral and arid regions could intensify due to drought, water shortages, and food insecurity. This situation could be worsened by outbreaks of diseases and loss of shelter due to flooding. Water source contamination also poses a threat to public health. Drought impacts include water shortages, drying of water sources, reduced soil moisture, and high temperatures with low rainfall. Landslide impacts include loss of lives and injuries, destruction of property, and inadequate services at relocation sites.

Advisories and Mitigation Measures

It is advised to open and create drainage channels, desilt dams, and stockpile food and non-food items. The dissemination of early warning information and risk communication, along with early vaccination campaigns, is crucial. Monitoring drought conditions, advocating for water harvesting, and fast-tracking the relocation of communities from high-risk areas are also advised. Creating and disseminating early warning messages and advisories, mobilizing resources, and activating DRM committees should also be implemented. Hygiene and sanitation campaigns, water purification tablets, mosquito net distribution, and early vaccinations are important. Strengthening security, mobilizing water bowsers, repairing boreholes, and pre-positioning medical supplies are also recommended. Contingency plans should be prepared, along with supporting water harvesting, and enhancing disease surveillance.

6.6. Health;

Expected Positive Sectoral Impacts

A reduction in malaria cases, decreased cholera, and a decrease in diarrhea are anticipated. Improved water availability may also lead to improved sanitation, better nutrition, and better mental health. In the eastern parts of South Sudan, improved nutrition is expected due to wetter conditions, and reduced malaria in the northern parts is expected due to drier conditions. There is also a potential reduction in acute respiratory infections (ARI) and other communicable diseases like tuberculosis and influenza.

Expected Negative Sectoral Impacts

There is a risk of reduced nutritional quantity and quality, lack of fresh water, and increased water borne diseases such as cholera and dysentery. There is also the risk of increased disease burden, including vector-borne diseases like malaria, respiratory tract infections, and zoonotic diseases. Food insecurity may also lead to malnutrition, psychosocial challenges, and increased injuries. Increased gastroenteritis and other airborne diseases, as well as skin and eye conditions, may

occur. Meningitis due to drier conditions, heat stroke due to higher temperatures, measles due to overcrowding, and increased malaria and Hepatitis E cases are all a risk.

Advisories and Mitigation Measures

It is advised to improve surveillance for early detection and treatment of malaria cases and preposition antimalarials and RDTs. Risk communication and awareness through household health and hygiene promoters is needed to prevent the spread of Hepatitis E, as well as increased access to safe water and sanitation. Meningitis vaccination campaigns are crucial, and people should be encouraged to drink plenty of water and avoid going out during the hottest part of the day to prevent heatstroke. Measles vaccination campaigns are needed, along with strengthening community engagement. Land use planning, slope stabilization, and sustainable farming practices are essential for areas prone to landslides.

For vector-borne diseases, eliminate stagnant water and use eco-friendly larvicides. Restoration of wetlands and drought-tolerant crops are needed for prolonged dry spells. Tree planting, flood-resistant infrastructure, and training for communities in disaster response are important for flooding. Also, the promotion of clean cooking stoves and solar energy may help reduce the risk of air pollution. Providing water for irrigation, treating recorded cases, water trucking, and community education are also important. Additionally, it's important to conduct health system measures, enhance surveillance, provide health education, and prepare emergency medical services. It's necessary to screen and manage malnourished patients and introduce food supplements. Lastly, there is a need to build the capacity of health workers, conduct community sensitization, and provide psychosocial support.

7. Early Warning for All Implementation

The panel discussion on Early Warning for All (EW4A) during GHACOF69 focused on assessing the progress made over the past 2.5 years, identifying challenges, and exploring strategies to accelerate implementation. Representatives from UNDRR, IFRC, and WMO provided key insights on coordination, funding, implementation roadmaps, and collaboration among stakeholders.

Progress and Achievements

Significant progress has been made since the launch of the Early Warning for All initiative. IGAD became the first region in Africa to launch an Early Action initiative in collaboration with IFRC. There was the establishment of in-house systems and dissemination channels, including a mailing list with 4000+ subscribers and a weekly bulletin released every Tuesday. At the national level, pilots have been introduced to improve and downscale information so that national focal points can learn and adapt. A key takeaway is that EW4A is bringing together partners, and feedback is crucial for enhancing the process. However, stronger coordination is still required.

Over the past 2.5 years, IFRC has provided substantial funding to support EEW4A including a 42% increase in resources since 2023. By the end of 2024, a project targeting 11 countries will be concluded. Collaboration has been strengthened with various consortium partners; some of whom are pillars leads in EW4A. Funding from the Netherlands has played a crucial role in roadmap development and implementation. A key challenge is coordination especially for the national governments and communities must work together. Funding remains a major issue, especially in countries like South Sudan, Sudan, Rwanda, Ethiopia, where multiple disasters occur simultaneously, leading to competition for limited resources.

WMO's EW4A implementation has started in 12 African countries where 7 countries have completed their roadmaps, including the costing for instance Ethiopia. 5 countries are still finalizing their roadmaps this year, Sudan has existing early warning systems (EWS), but conflict remains a major barrier to implementation. Rwanda's launch is complete, Tanzania is preparing, and Somalia's draft roadmap has undergone review. Djibouti is implementing a specialized project to enhance national capacity in developing and executing early warning systems.

Challenges and Recommendations

The main question being answered here is how would we be able to turbocharge Early Warning for All.

Strengthening coordination and fast-tracking implementation was a common response from everyone to avoid silos across different agencies. Cross-border collaboration is highly encouraged and this was well set by Uganda during the high rainfall events which affected South Sudan when their dams were released. Investing in machine learning and artificial intelligence would be good as they develop faster, more efficient early warning mechanisms. IGAD is

supporting the meteorological departments to integrate machine learning and artificial intelligence to enhance forecasting which is pillar 2 of the EW4A. Last year, the first Eastern Africa Dialogue Platform on Anticipatory Action was launched as a component for EW4A, which received high participation and strengthened collaboration.

Scaling up existing systems to reach more communities, harmonizing approaches, tools, and systems to reduce confusion from multiple methodologies and increasing resource mobilization at global, regional and national levels would be great ways to turbocharge EW4A. there needs to be more enhanced collaborations among pillar leads and government ministries. Strengthening national ownership of roadmaps and using them as tools for resource mobilization. Building national capacity for emergency response. Leveraging regional institutions for greater support and coordination. Implementing bottom-up approaches to ensure local needs are met. Political engagements at national levels to secure technical and financial backing. Evaluating challenges and lessons learned to improve future interventions.

Stakeholder Feedback and Reactions

There is a need for comparative analysis with other continents as it would enhance IGAD's strategies. For instance, Morocco's 2020-2030 disaster risk management framework was suggested as a model for IGAD's cross regional monitoring. SADC's response system was highlighted to be effective with the potential of cascading benefits for IGAD. Donor concerns pointing out that EW4A currently appears "a mil wide but an inch thick", lacking a clear strategy for targeted focus groups has been catered through a mobile application called HUSIKA that delivers customized early warning messages, particularly targeting livestock herders, and stakeholder mapping and vulnerability assessments are crucial to ensure the right people receive early warning information.

The panelists were encouraged to define a clear evaluation criterion for IGAD's performance in EW4a using a SMART objective. Stocktaking should be conducted to measure the progress and identify gaps and it should be noted that early warning efforts existed before the Early Warning for All project and they should be integrated into ongoing initiatives.

There is clear progress in the implementation of EW4A, but more work is needed in coordination, funding, and national adoption. Focus should mainly be in ensuring early warning reaches the vulnerable communities and it drives meaningful action.

8. Partnerships/Projects/Initiatives for Resilience Building: Part 2

8.1. The Regional Framework for Climate Services

The session focused on the development of IGAD's first-ever regional framework for climate services, funded by the CLIMSA program. Designed to align with the Global Framework for Climate Services, this initiative aims to enhance coordination, address data gaps, and optimize resource use across the region. Its goals include fostering collaboration among regional, national, and sub-national frameworks while integrating with existing policies and platforms, such as sectoral user interface platforms. Currently in its planning phase, the framework prioritizes stakeholder engagement, knowledge synthesis, and working committee formation. It is scheduled to launch at the next GHACOF meeting in January 2026, covering the period from 2026 to 2030. Participants raised concerns about potential duplication of efforts and emphasized the importance of including urban meteorology and city authorities. The speaker clarified that the framework complements existing initiatives and encourages urban inclusion. Participants also highlighted the need for flexibility, regional learning platforms like GHACOF, and adapting to emerging technologies. Key takeaways included the importance of strategic coordination, meaningful stakeholder engagement, and leveraging existing data to build a robust framework. Immediate next steps involve mapping stakeholders and finalizing preparatory activities for the 2026 launch.

8.2. ECREA

The ECREA project, presented by Dr. Desire Kagabo, focuses on strengthening climate resilience for 400,000 smallholder farmers in Tanzania, Rwanda, Kenya, and Uganda by improving access to weather and climate information. Funded by FCDO under the WISER program, the project emphasizes inclusivity, ensuring that 20% of beneficiaries are women and youth. Key methodologies include co-developing agro-advisories with community-based committees and disseminating information through digital tools, radio broadcasts, and workshops. The project addresses gender disparities by empowering women and youth through targeted outreach and training. Notable successes include enhanced planting schedules in Tanzania through timely rainfall forecasts and the creation of farmer networks that serve as climate ambassadors. ECREA

aims to integrate its methodologies into national frameworks for sustainability, relying on partnerships with governments, development agencies, and private sector actors.

8.3. Daraja

The session focused on the Daraja Project, a transformative initiative aimed at enhancing urban climate resilience by bridging the gap between weather forecasters and vulnerable communities, particularly in informal settlements. Led by Sunayana Sen, Director of Programs and Operations at Resurgence, the presentation highlighted the project's achievements and future plans. Daraja, which means "bridge" in Swahili, seeks to improve access to forecasts and early warnings, enhance users' understanding of climate information, and empower them to take early action at household and community levels. Operating in Uganda, Kenya, Tanzania, Ethiopia, and Sudan, Daraja employs a co-production methodology that places communities at the center, treating them as active participants rather than passive recipients. Ms. Sen emphasized Daraja's collaborative approach, which integrates national meteorological services (NMS), civil society organizations (CSOs), and community-based groups to deliver tailored and actionable climate information.

Dr. David Gikungu, Director General of the Kenya Meteorological Department, shared the success of Daraja in Nairobi, where partnerships with CSOs such as the Kounkuey Design Initiative (KDI) have connected communities in informal settlements like Kibera to reliable weather forecasts. This has improved preparedness and reduced vulnerabilities during extreme weather events. Plans are underway to expand the project to Mombasa, focusing on coastal populations.

In Ethiopia, Mr. Dargana Perath from the Ethiopia Meteorology Institute commended Daraja for addressing the needs of informal settlements, where residents often face compounded vulnerabilities. He noted that the project's approach has fostered trust and a sense of ownership among communities, enabling them to better engage with meteorological services.

Similarly, Dr. Kasim from the Sudan Meteorological Authority highlighted the challenges of delivering climate information in Sudan, particularly in conflict-affected and remote areas. Daraja has provided a practical framework for reaching displaced populations and improving communication between meteorological authorities and local communities, significantly enhancing disaster preparedness.

Daraja's key features include its co-production methodology, which brings together forecasters, CSOs, city authorities, and community groups to design localized climate information services. The project utilizes innovative communication channels such as community radio, SMS, and

social media to disseminate information. Radio listener clubs have been particularly effective in facilitating community discussions and feedback. By treating urban communities as active participants, Daraja builds trust and ensures that climate information is not only accessible but also actionable.

The session concluded with a discussion that emphasized Daraja's role in empowering marginalized groups, particularly women and youth, in informal settlements. Participants stressed the importance of integrating the project into national frameworks to ensure sustainability and scalability. They also highlighted the need for Daraja to address urban-specific challenges, such as drainage issues and population density, as it expands to other urban centers in East Africa.

8.4. COP 29 Outcomes for the region

The session on COP29 outcomes, presented by Mr. Abebe Tadege, provided a comprehensive overview of the recent COP29 summit held in Azerbaijan and its implications for the IGAD region. The presentation focused on key achievements, challenges, and opportunities from the global negotiations on climate change, offering actionable insights for IGAD member states to align their priorities with these outcomes and leverage global commitments to advance regional climate resilience.

Mr. Tadege began by highlighting COP29's significant achievements, including:

- The commitment to increase global climate financing to $300 billion annually by 2035. This financing is intended to support adaptation, mitigation, loss and damage initiatives, with the allocation of funds depending on the readiness and capacity of countries to submit robust project proposals.
- Another milestone was the operationalization of the Loss and Damage Fund, which received an initial $770 million to support countries most affected by climate-induced losses. Mr. Tadege emphasized that IGAD member states, frequently impacted by extreme weather events such as floods and droughts, have a strong case for accessing this fund, provided they enhance their institutional capacities.
- Additionally, the Babur Adaptation Work Program was introduced as a key mechanism to measure and track adaptation progress, aligning closely with IGAD's focus on building climate resilience and refining adaptation strategies.

Despite these successes, Mr. Abebe noted several challenges that emerged from COP29 such as limited progress was made on the critical issue of phasing out fossil fuels due to disagreements

among major economies, and many commitments remained incremental, lacking the transformative action required to address the root causes of the climate crisis.

The discussion following the presentation allowed participants to explore these outcomes further. In response to questions, Mr. Abebe explained that the operationalization of the Loss and Damage Fund in the IGAD region would require strong institutional capacity and alignment with the fund's eligibility criteria. He highlighted the Babur Adaptation Work Program as a critical tool for IGAD's priorities and encouraged member states to focus on renewable energy investments to accelerate the global phase-out of fossil fuels. Participants also raised concerns about the equitable distribution of climate financing, to which Mr. Abebe responded that transparency mechanisms such as third-party audits and public reporting are being considered to ensure fairness.

Key takeaways from the session included the need for IGAD member states to leverage global commitments by aligning national priorities with COP29 outcomes, building institutional capacity to access climate funds, and fostering regional collaboration to enhance resource sharing and bargaining power. The session also emphasized the importance of investing in renewable energy as a pathway to sustainable development and leadership in global climate action.

9. Key Recommendations

Throughout the discussions, key recommendations on how to improve the outlook forum were pointed out.

a. The need for wind power projections in East Africa

During the forum, key stakeholders emphasized the need for ICPAC to incorporate wind power forecasting into its climate outlook. It would provide critical data for energy production, disaster risk reduction and economic planning in East Africa. The IGAD member states are investing in wind energy as a sustainable and cost-effective power source and accurate wind forecasts will help optimize energy generation, reduce power losses, and enhance grid stability.

Changing wind patterns, strong winds and storms impact infrastructure, aviation and livelihoods. Reliable forecasts will assist in preparedness and mitigation strategies, reducing economic losses. Wind forecasting would complement ICPAC's existing climate models, providing a holistic view of climate variability and its impacts on multiple sectors.

b. Enhancing sector coordination

One of the key challenges identified during GHACOF 69 was disparities between the reports presented by the sector heads and the actual experiences of stakeholders in member states. In some cases, this was due to countries not sharing their resorts or submitting them late.

This affects the regional reports by being incomplete and there not being a full reflection on-the-ground realities leading to gaps in forecasting and preparedness. The discrepancies weaken the confidence in climate predictions, making it harder for decision-makers to act on the information provided. For there to be effective climate action, cooperation across borders is needed.

The member states need to fact check their reports before submitting them finally with ICPAC to ensure timeliness and consistency. There may be a need for ICPAC to create a real time data sharing system where all member states can upload and access climate reports, reducing delays and improving accuracy.

c. Cross regional monitoring

A key recommendation was to encourage the Early Warning for All initiative to adopt a cross-regional monitoring approach. By learning from successful and unsuccessful early warning projects in other regions such as in Morocco, East Africa can enhance its preparedness and response strategies.

By exchanging knowledge with other regions, they will foster stronger partnerships and encourage joint initiatives that can improve early warning system effectiveness. While lessons from other regions are valuable, they should be tailored to the Greater Horn of Africa's unique climate risks, infrastructure, and socio-economic conditions. A cross-regional approach ensures that best practices are adapted rather than blindly adopted.

Conducting study visits and regional workshops would facilitate East African experts to visit regions like Morocco to learn and apply relevant lessons. Setting up a system to track and compare early warning strategies across the different regions, identifying what works best in similar contexts. While strengthening partnerships between African countries and the global south region to share solutions that are more applicable to local challenges would be good.

d. Data collection on climate impact

To address the impacts of climate variability on vulnerable populations, it is imperative to collect and analyze precise numerical data on the number of cattle and individuals affected. This data should be disaggregated by gender (male, female), age (children), and include information on differently-abled individuals to ensure that interventions are equitable and responsive to the specific needs of all community members. This information assists policymakers and humanitarian agencies to design targeted strategies to address each group. For instance, accurate counts of affected livestock are crucial for implementing appropriate measures to support pastoralist communities who rely on cattle for their livelihoods.

10. Release of the Seasonal Forecast and Statement

GHACOF 69 concluded in Addis Ababa, Ethiopia, with a strong call for enhanced regional collaboration and investment in climate services to support resilience and disaster preparedness. The forum, which brought together climate scientists, policymakers, decision-makers, and sectoral experts, focused on delivering the seasonal forecast for the March to May (MAM) 2025 period and discussing its implications for key sectors such as agriculture, water resources, health, disaster risk management, and energy.

The closing ceremony was officiated by Mr. Fetene Teshome, the Director General of the Ethiopia Meteorological Institute (EMI), Mr. Mohamed Ware, the Deputy Executive Secretary of IGAD, and Dr. Abdi Fidar, the Officer in Charge at ICPAC. In their remarks, the officials highlighted the importance of collaborative efforts in leveraging climate information to inform decision-making at all levels and reduce the impacts of climate extremes in the region.

11. Key Takeaways from GHACOF 69

Seasonal Forecast Release: The climate outlook for March-May 2024 indicated an increased likelihood of below-normal rainfall across most parts of the Greater Horn of Africa, raising concerns over drought conditions in already vulnerable areas. Conversely, some regions were expected to experience above-average rainfall, highlighting the need for sector-specific preparedness plans.

Statement from the 69th Greater Horn of Africa Climate Outlook Forum (GHACOF 69)

March to May 2025 Seasonal Forecast: Below-normal rainfall is expected over most parts of the Greater Horn of Africa

21st January 2025, Addis Ababa, Ethiopia: The IGAD Climate Prediction and Applications Centre (ICPAC) officially released the March to May (MAM) 2025 seasonal climate forecast. This season is critical for the equatorial part of the Greater Horn of Africa region, contributing up to 60% of the annual rainfall in many parts. The MAM forecast indicates a higher likelihood of below-normal rainfall conditions over the eastern and western parts of the region.

Key Highlights from the Climate Outlook

- Below-average rainfall is expected in much of Somalia, eastern and northern Kenya, southern and northeastern Ethiopia, Djibouti, coastal Eritrea, western South Sudan, southern and western Uganda, Rwanda, Burundi, and northwestern Tanzania. There is a likelihood of below-normal conditions for the cross-border areas of Ethiopia-Kenya-Somalia, southern Eritrea, and parts of southwestern South Sudan.
- Wetter-than-normal conditions are expected over most parts of Tanzania, eastern Uganda, eastern South Sudan, and western Ethiopia.
- Additionally, there is a high chance (over 70%) that the seasonal rainfall will exceed 200 mm in southwestern Ethiopia, western Kenya, Uganda, Rwanda, Burundi, and Tanzania.
- · The temperature forecast indicates a higher likelihood of warmer-than-normal conditions across most parts of the Greater Horn of Africa, with the highest probabilities (more than 75%) over Sudan, Ethiopia, Eritrea, Djibouti, northern Somalia, and northern Kenya.
- An early to normal onset is expected in most parts of the region, except for localised areas in central Kenya, southern Ethiopia, and central Somalia, where a delayed start is likely.

A total of 442 participants attended the event, with 308 attending in person and 134 joining online.