THE 4TH SUB-REGIONAL CLIMATE OUTLOOK FORUM

4-6 February, 2025

IGAD CLUSTER I, II AND III

MAM 2025 SEASON FORECAST

Executive Summary

The IGAD Climate Prediction and Applications Centre (ICPAC), in collaboration with the IGAD Centre for Pastoral Areas and Livestock Development (ICPALD), through the "Strengthening Pastoral Livelihoods in the Greater Horn of Africa through Effective Anticipatory Action" (PASSAGE) project, supported by the Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA), and the Intra-ACP Climate Services and Related Applications (ClimSA) conducted the fourth sub-regional Climate Outlook Forum (Sub-COF 4) from 4-6 February 2025 for the Karamoja cluster in Lodwar, Kenya. The aim of the forum was to review the performance of the previous rainfall season, October-December (OND) 2024, co-develop downscaled tailored forecast for the March-May (MAM) 2025 season, identify and engage with the major response stakeholders at the national, sub-national, and local levels, and co-develop relevant advisories for important sectors within the Karamoja Cluster. Given the unique climate information needs, vulnerabilities, and societal structures in the region, the community-based indigenous knowledge on climate variability and forecasting was explored towards the development of context specific advisories for the region.

The MAM season is the most important for the Karamoja cluster, with rainfall extending through to August in the western regions (parts of Uganda and South Sudan), but in regions of central to southern Turkana County in Kenya, the rains cease by May. The MAM 2025 forecast indicates a high likelihood of above-normal rainfall over western and northern parts of the Karamoja cluster, including northern Surma, eastern Kapoeta, northern Kapoeta, southern Kapoeta, Budi, Karenga, Kotido, Abim, Napak, Nakapiripirit, West Pokot, as well as southeastern areas such as Turkana South and Turkana East. Conversely, drier-than-normal conditions are expected over central to northeastern Karamoja, including Turkana Central, Loima, Turkana West, Kabong, parts of Moroto, parts of Karenga, Kapoeta East, northern Turkana, Dessanach, Nyangatom, and West Pokot/Kacheliba. Temperatures are largely expected to be warmer than average across the cluster.

With participants ranging from various government agencies, humanitarian actors, academia and research, community leaders, youth, women and NGOs, the forum co-produced advisories relevant for most of the agro-pastoral livelihoods in the region. These could be summarized in the following key messages from the forum;

- Unequal spatial rainfall distribution may pose risks to crop and pasture production, potentially reducing yields and increasing food insecurity, especially in the eastern regions.
- Investing in improved water infrastructure, such as boreholes and reservoirs, is critical to reduce pastoralists' dependence on rain-fed water sources
- Enhancing collaboration with media and extension officers to improve climate information dissemination.
- Strengthen the linkages between different actors in early warning, research and community systems to ensure there is increased uptake of early warning for early action

List of Acronyms

AA – Anticipatory Action

AICCRA – Accelerating Impacts of CGIAR Climate Research for Africa

ClimSA – Intra-ACP Climate Services and Related Applications

ENSO – El Nino Southern Oscillation

GFCS – Global Framework for Climate Services

GHACOF – Greator Horn of Africa Climate Outlook Forum

ICPAC – IGAD Climate Prediction and Applications Centres

IGAD – Intergovernmental Authority on Development

ICPALD – IGAD Centre for Pastoral Areas and Livestock Development

PASSAGE – Strengthening Pastoralist Livelihoods through Effective Anticipatory Action

IDDRSI – IGAD Drought Disaster Resilience and Sustainability Initiative

IOD – Indian Ocean Dipole

JJAS – June July August September

MAM – March April May

NAO – North Atlantic Oscillation

OND – October November December

PASSAGE – Strengthening Pastoral Livelihoods in the Greater Horn of Africa through Effective Anticipatory Action

QBO – Quasi-Biennial Oscillation

RFCS – Regional Framework for Climate Services

SCIDA – Strengthening IGAD's Capacity to Increase Resilience in the Horn of Africa

SMAP – Seasonal Media Action Plan

Sub-COF – Sub-regional Climate Outlook Forum

FMD – Foot and Mouth Disease

CCPP – Contagious Caprine Pleuropneumonia

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1. Introduction

The IGAD Climate Prediction and Applications Centre (ICPAC), in collaboration with the IGAD Centre for Pastoral Areas and Livestock Development (ICPALD), National Meteorological and Hydrological Services (NMHSs) of Ethiopia (Ethiopia Meteorological Institute), Kenya (Kenya Meteorological Department), South Sudan (South Sudan Meteorological Services) and Uganda (Uganda Department of Meteorological Services), along with other humanitarian and development partners, through the PASSAGE project organized the fourth sub-regional Climate Outlook Forum (Sub-COF) for IGAD Cluster 1 from 4th-6th February 2025 in Lodwar, Kenya. The forum was supported by the Strengthening Pastoral Livelihoods in the Greater Horn of Africa through Effective Anticipatory Action (PASSAGE), the Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA), and the Intra-ACP Climate Services and Related Applications projects. The initiative aimed to strengthen operational early warning and anticipatory action systems for drought risks in pastoralist livelihood systems.

The forum focused on developing and downscaling tailored climate advisories from GHACOF to the IGAD cross-border areas for key sectors, including agriculture/food security, livestock, conflict management, and water resources. Although the forecasts were generated and presented for the larger IGAD cross-border clusters I, II and III, the advisories focused on IGAD Cluster I (Karamoja), to align with the forum participants. ICPALD focused on developing rangeland management strategies and harmonized cross-border animal health systems, with an emphasis on integrating seasonal climate variability into planning processes. Meanwhile, ICPAC brought its expertise in water-related applications, extreme temperature forecasting, and the co-production of sector-specific climate services, playing a pivotal role in advancing translation of early warning to early actions.

This activity formed an integral component of Work Package 3: *Risk Communication and Community Engagement* under the "Strengthening Pastoralist Livelihoods in the Greater Horn of Africa Through Effective Anticipatory Action (PASSAGE)" project. The Sub-COF workshop aims to downscale climate advisories from the Greater Horn of Africa Climate Outlook Forum (GHACOF) and equip pastoral communities with actionable insights for resilience building while working with the media on how to ensure that information is conveyed to the target audiences and targets.

Figure 1 Group photo of the participants of the 4th Sub-COF

Some of the objectives of the forum included;

- To interpret climate early warning information in a medium/platform that is interlinked with the local communities, and stakeholders, to foster improved understanding of the advisories supported, with support from ICPAC, ICPALD and partners
- To downscale information from regional level at GHACOF and tailor to cluster scale and co-produce impacts and advisories targeted to agro-pastoral livelihoods.
- Enhance uptake of tailored climate information for different sectors including water, livestock pieces and security, among others
- Co-design and co-develop with users using traditional knowledge to make decisions at community level.
- Assess the current livelihood conditions, and linkage to climate variability and climate information provided by meteorological services in the region.
- Synergy building between the media and relevant stakeholders including communities, sectors, meteorological services, NGOs and government structures.

2. Opening Remarks

2.1 Opening Remarks from IGAD

His Excellency Amb. David Kwaje the IGAD Head of Mission to South Sudan officially welcomed the forum on behalf of the Executive Secretary Dr. Workeneh. He acknowledged the similar cultures and climate shocks in the region. He encouraged the importance of information and knowledge being relayed to reach members of the community through the media that were present and engagement of the stakeholders for further information on enhancing the climate outlook forum.

Figure 2 His Excellency Amb. David Kwaje addressing the forum

2.1 Representative from Federal Democratic Republic of Government Ethiopia:

Mr. Jamal Sheikh the IDDRSI Country Coordinator highlighted that, "climate knows no boundaries, and we are all part of one global community, as we are equally affected by the same climate issues". Approximately 50% of livestock is found in the Karamoja Cluster and is significantly impacted by weather conditions. Climate information is of great economic importance and warrants further discussion. Jamal mentioned the need to consider an Early warning System for supporting the communities. He emphasized the need for more journalists from Ethiopia to participate in future events, since the media plays an important role in reaching the communities at the grassroots level.

2.2. Representative from Republic of South Sudan

Pascal, the Ateker Coordinator for the Cluster, representing Governor Louis Lobong,emphasized the commitment of the government of South Sudan to addressing climate change and finding sustainable solutions for the affected communities. He reiterated that decision-making and problem-solving are key mandates of the government, extending gratitude to IGAD for its support.

He highlighted the forecast projections, noting the variations in rainfall levels across the region. Some areas are expected to experience high rainfall, while others will have low levels and that the seasonal MAM forecast as being important in making use of the information in guiding movement of the communities in a peaceful manner. Given these disparities, he called upon the Ateker community to collaborate in formulating solutions and supporting communities in adapting to these climatic conditions.

2.3 Representative from Republic of Uganda

Dr. Dominic Eladu underscored the importance of networking and two-way learning during the forum. He encouraged participants to share knowledge and experiences to foster practical and impactful climate solutions in addition to learning from each other. He offered insights on the need for the need for all stakeholders to collaborate and explore solutions to the recurrent challenges due to climate variability and change.

2.4 Representative from Republic of Kenya

Dr. Antony Lapalia Hon CEC in charge of Disaster Management, County Government of Turkana, representing the Governor of Turkana and the County Government, welcomed the forum participants and acknowledged the significant impact of climate change on Turkana, making this forum timely and a crucial opportunity to address these challenges. He highlighted the effects of climate change on livestock and pasture management, noting the vulnerability of pastoral communities in Karamoja. He emphasized that climate variability has led to conflicts and displacements, stressing the need for improved early warning systems.

Dr. Lapalia addressed health concerns linked to climate change, particularly the rise in vector-borne diseases due to extreme weather, and emphasized the importance of enhancing disease surveillance and using predictive tools to prevent outbreaks. On disaster risk management, he pointed out the increasing frequency of extreme climatic events, such as floods and droughts, resulting in resource- based conflicts and displacements. He advocated for a coordinated disaster response mechanism and called for investment in alternative livelihoods and sustainable economic activities.

He concluded by stressing the need for accurate climate forecasting, inter-agency collaboration, and sector-specific insights to achieve climate resilience in the Karamoja Cluster, expressing hope that joint efforts could lead to a more adaptive and sustainable future for the region. He urged on the need of the governments to integrate climate resilience into subnational, national and regional policies.

2.5 Representative from ICPAC

Mr. Calistus Wachana opened the workshop by discussing the severe impact of climate change on regional communities, notably highlighting a community forced to adapt due to extreme weather. As they searched for water and pasture, they often crossed political boundaries without realizing it. This illustrates that climate change knows no borders, making regional collaboration essential. In response, IGAD clusters were formed to analyze climate outlooks across Uganda, Ethiopia, South Sudan, and Kenya. He added that climate affected both quality and quantity of natural resources hence the reason for the Sub-COF to the cluster climate outlook for March-

April- May (MAM) to review the past season in the region and the effects of the climate outlook and promote the use of climate information to see where it favors the livestock for feed and water. The climate information generated is crucial for informing communities about weather patterns. Calistus pointed out that when one area receives ample rainfall while another suffers drought, migration becomes inevitable, highlighting the need for host communities to prepare for incoming groups. He emphasized the importance of viewing climate change challenges from a regional perspective. The Subregional Climate Outlook Forum (Sub-COF4) aims to improve the dissemination and use of climate information in the IGAD Cluster 1 (Karamoja Cluster). This initiative will provide communities with timely climate data, helping them make informed decisions and adapt to environmental changes.

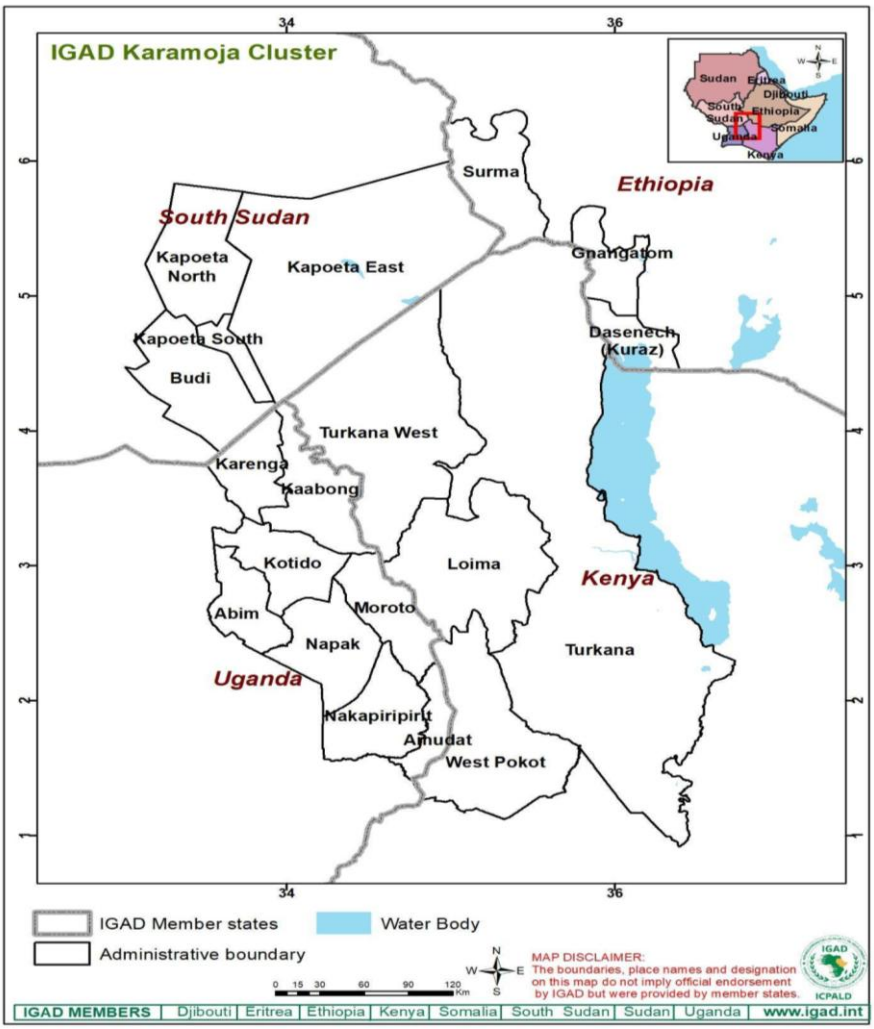

Figure 3 Map of the IGAD Cluster 1, Karamoja showing the main administrative regions

3. Setting the Scene

In setting the scene, Dr. Titike Bahaga, climate scientist from ICPAC introduced the impacts of climate change while taking note of the loss of livestock worth 2 billion dollars due to drought, the El Nino phenomenon of the OND in 2023 including losses of other resources. He highlighted the gaps in cross border policy development, unlimited access to climate information, weak coordination mechanisms in cross border areas in bringing communities together, access to climate coordination mechanisms, climate information gaps on info produced.

Figure 4 Participants during the session

3.1 Introduction to basic terminologies, community-based early warning systems & challenges related to early-warning gap

Mr. Calistus Wachana, climate and user engagement expert from ICPAC took the participants through demystifying climate information by defining the different terminologies used in forecasting, community-based early warning systems & challenges related to early-warning gaps. Some of the terminologies included;

Weather as being the state of the atmosphere at a given place and at given time; Climate as an average weather conditions information area over a long period (30 years and above);Climate information as information about past, present and future climate conditions from both local and scientific sources, and the resultant implications on development, people's livelihoods and the environment; 'Past' or 'Historical' climate information: refers to data on weather elements collected using instruments (local sources: based on memories of previous seasonal patterns and changes observed by different groups and communities); 'Present' Climate Information: is data on weather elements – such as mm of rainfall – recorded in real time; 'Future' Climate Information: is the predictions of the possible future state of the weather and climate at different time scales (climate projections-simulations of the Earth's climate for future decades based on assumed scenarios for concentrations of GHGs); Below Normal (BN)-forecasted outcome that is expected to be less than average of that season; Normal (N): forecasted outcome that is expected to be close to the long-term average of the season and Above-Normal (AN): forecasted outcome that is expected to be greater than the long-term average of the season.

He explained to the participants how the current climate change projections compared to historical climate information. Calistus presented on the different climate drivers that shape weather patterns and that seasonal forecasts rely on global weather and climate systems that are predictable-climate drivers. Some of the drivers include;

- El Nino Southern Oscillation (ENSO) with 3 phases each describing sea surface temperatures and accompanying weather across the globe
- North Atlantic Oscillation (NAO): Pressure patterns over the North Atlantic-influences the strength of Jet streams
- Indian Ocean Dipole (IOD): Sea Surface temperature anomaly in the Indian ocean
- Quasi-Biennial Oscillation (QBO)-periodic reversal wind in tropical stratosphere-affects the strength and position of jet streams
- Madden Julian Oscillation (MJO): Tropical atmospheric disturbance that propagates eastward around the globe

Some of the gaps to Early Warning System identified include; Limited Access to Technology in remote communities, weak Communication Infrastructure where warnings may not reach risk populations due to poor mobile networks or media coverage, lack of Awareness & Education in communities that may not understand the warnings or know how to respond effectively; financial Constraints that may hinder the establishment and maintenance of early warning systems; inadequate coordination between government agencies, NGOs, and local communities that may delay response actions; social & cultural barriers including traditional beliefs and misinformation that may lead to skepticism or disregard for warnings; political & policy gaps with weak policies or lack of enforcement that may reduce the effectiveness of early warning initiatives and climate change & emerging risks due to predictability of weather patterns and new hazards that pose a challenge to existing warning systems.

3.2 PASSAGE Project

Dr. Dominic Kathiya, made a presentation on PASSAGE Project progress on co-production and disseminating risk narratives. He mentioned that the project period as being between July 2023 – July 2026 with the aim being*, 'Strengthening pastoral livelihoods in the African Greater Horn through effective anticipatory action, sought to address critical knowledge gaps to enhance operational early warning systems (EWS) and anticipatory action (AA) systems for drought risk in pastoralist communities"* and the overall objective; *"To build the resilience of pastoral communities through inclusive, cross-scale risk narratives and anticipatory action plans based on predictive multi-hazard impact-based forecasts".*

The key components of the project include; Risk Modelling & Impact Based Forecasting, Anticipatory Action, Risk Communication & Community Engagement, Capacity Building, and

Monitoring Evaluation and Learning. PASSAGE has strengthened efforts with the backing of 12 collaborating partners with experience in research, humanitarian actions, resilience building, etc. (both international and National).

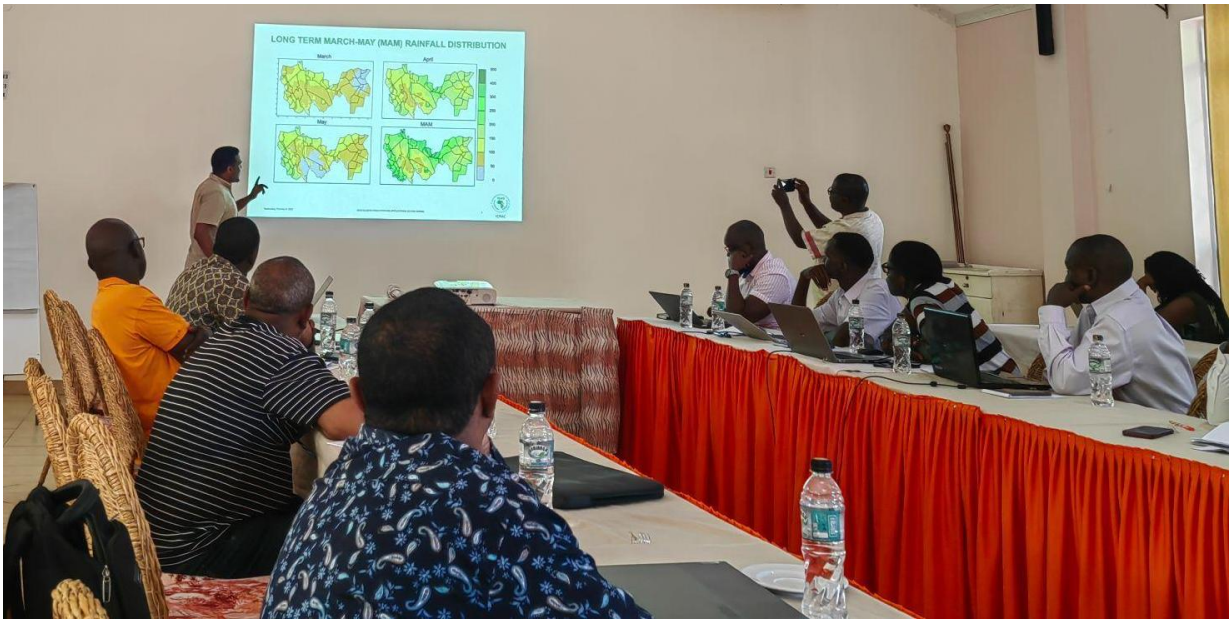

Figure 5 Snapshot of ongoing sector discussion of the MAM 2025 forecast

3.3 Key outputs and lessons from SCIDA III Project

Mr. Hussein Mohamed-Early Warning and Risk Assessment Expert presented on the Strengthening Capacity of IGAD to Increase Drought Resilience in the Horn of Africa (SCIDA III) project, highlighting the increasing drought intensity in the Karamoja cross-border area, severely impacting livelihoods in Turkana and West Pokot counties. The project leverages IGAD/ICPAC climate information systems and tools to support early warning and preparedness. Key interventions include the development of a Karamoja cross-border multi-hazard early warning bulletin and the integration of indigenous knowledge with scientific early warning mechanisms. However, gaps persist in resource mobilization for preparedness, awareness on disaster risk reduction, and the documentation of traditional early warning systems.

Hussien mentioned that key successes of SCIDA III include the customization of cross-border early warning from the East Africa Drought Watch and the increasing adoption of diversified livelihoods among pastoral communities. The project has significantly enhanced the capacity of local government officials through targeted training sessions, enabling them to develop and sustain early warning bulletins. A detailed drought risk profile has been developed, providing critical insights into hazard exposure, vulnerability, and adaptive capacity, thereby facilitating informed decision-making. Additionally, ICPAC's updated Geoportal now hosts essential cross-border biophysical data and information products, further supporting resilience efforts.

Despite these achievements, Hussein stated that there are several challenges hindering resilience building in the region. Language barriers limit access to early warning information, while insufficient credit and financial support restrict investments in resilient infrastructure and livelihoods. There is a need for more granular socio-economic and demographic data to improve risk assessments, as well as a robust feedback mechanism to enhance the reliability of early warning systems. Strengthening last-mile communication and dissemination remains a priority to ensure communities effectively utilize available climate information. Addressing these gaps through sustained collaboration and resource mobilization will be critical in scaling up SCIDA III's impact across the Horn of Africa.

3.4. IDDRSI activities in IGAD cross- border clusters

Questions

On integrating traditional and scientific Knowledge, did you find reading the intestines comparison with scientific knowledge? Was it collaborating

Response: Mr. Francis Muinda mentioned that local forecasting in Turkana elders who are given the first priority to carry out forecasters in all seasons by purchasing goats then study the intestines and are able to make a forecast. The process involves slaughtering of the goats and putting the intestines on tree branches and making rainfall prediction among other information. Then Kenya Meteorological Department also give their prediction and compare on where they agree upon which 80-90% of the comparable information tallies. This activity is also replicated by the communities in West Pokot.

Figure 6 A section of participants following the Sub-COF session

4.0 Looking Back: Performance of 2024 rainfall season in Karamoja Cluster

Moderator: Calistus W. & Rapporteur: Philip O.

This session was dedicated to backward and forward interrogation of the 2024 performance of October - December (OND) and March - May (MAM) 2025 outlook. The presentations were made as outlined in the next section.

4.1 Performance of OND 2024 rainfall season and climatology for MAM

The session led by Dr. Paulino Omay explored the rainfall distribution over the four standard annual seasons in terms of their frequencies and intensities. He demonstrated practically using two participants the meaning of 'baseline'. He used this demonstration to highlight in simple and clear terms the climate baseline (climatology). To compute rainfall anomaly, the baseline or climatology of a given locality is computed and thereafter the differences.

He showed computed monthly rainfall climatology of IGAD clusters 1, 2, and 3 together with their DJF, MAM, JJAS and OND seasons using the 1981-2000 baseline. From his analysis, March and April contribute majorly to the overall MAM seasonal rainfall while October and November the same for October – December (OND) season, Figure 7. Further, he presented seasonal Standardized Precipitation Evapotranspiration Index (SPEI) for DJF, MAM, JJAS and OND as a tool for drought monitoring and assessment since it integrates key climatic variables, offers flexibility in application, and provides a standardized measure that is sensitive to both precipitation deficits and increased evapotranspiration. This makes it particularly useful in the context of a changing climate, where both temperature and precipitation patterns are shifting.

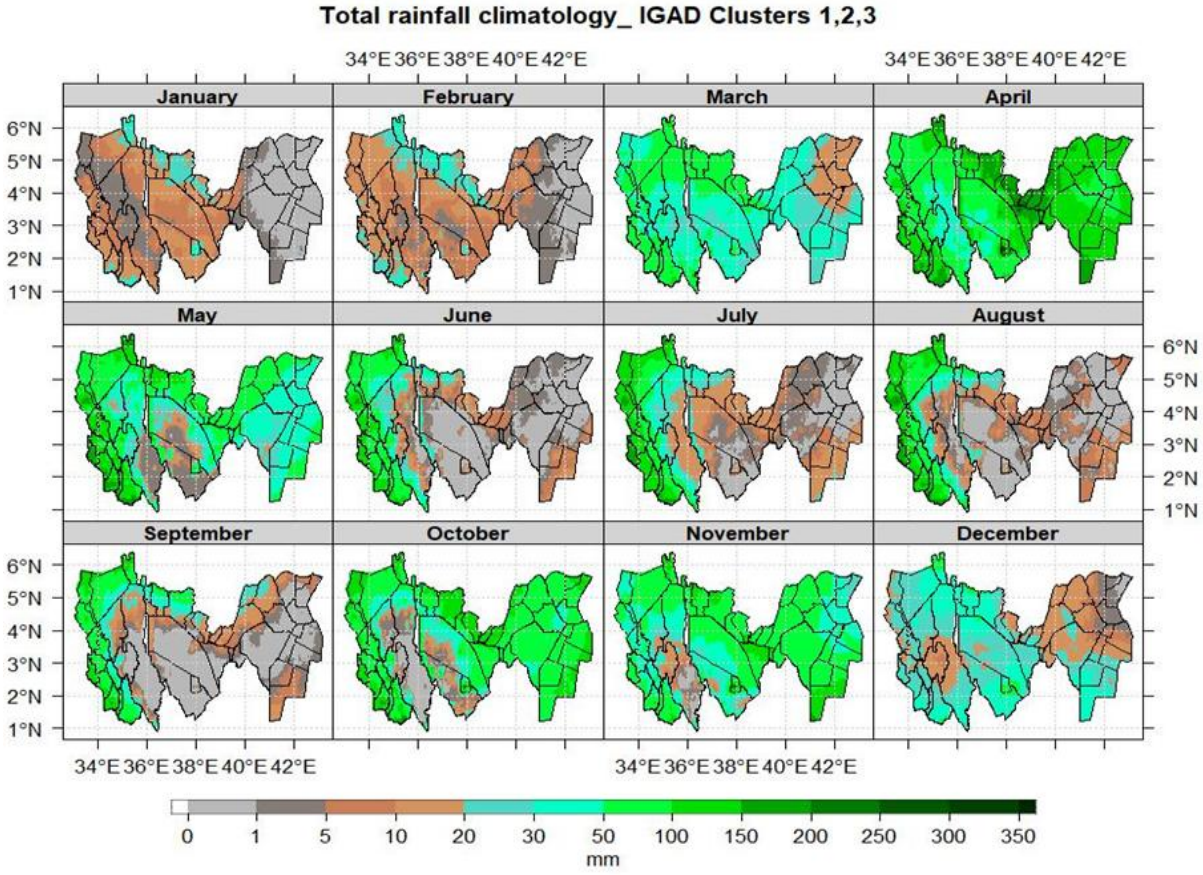

Figure 7 Monthly annual cycle of rainfall over IGAD Clusters 1, 2 and 3

Onset and cessation analysis, showed early start for MAM 2024 but delayed start in OND seasonal rains over the three clusters. The number of wet days over IGAD cluster 1 for OND were equally interrogated. The analysis of temperature with a number of extremes in 2024 depicted warmer trends in the cluster, a manifestation of climate change. Specifically, great impacts were manifested in Kapoeta of South Sudan due to heatwaves. Temperatures exceeded the 90th percentile, greater 38 Degrees Celsius for more than 20 days in southern, and northern parts of Turkana County.

4.2 March - May (MAM) 2025 seasonal climate Outlook

Dr. Hussen Seid from ICPAC presented the climate outlook for MAM 2025 rainfall seasons He started his presentation by introducing monthly and seasonal rainfall climatology and the contribution of the MAM seasonal rainfall to the annual total rainfall over the IGAD cluster 1, 2, and 3. The MAM season is crucial for the Karamoja region, contributing up to 70% of annual rainfall total in the eastern parts and 30–40% in the western parts.

By parading participants in front of the audience according to their heights, he explained how rainfall thresholds for below and above normal categories are computed. The MAM 2025 forecast indicates a high likelihood of above-normal rainfall over western and northern parts of the Karamoja cluster, including northern Surma, eastern Kapoeta, northern Kapoeta, southern Kapoeta, Budi, Karenga, Kotido, Abim, Napak, Nakapiripirit, West Pokot, as well as southeastern areas such as Turkana South and Turkana East, Figure 7. Conversely, drier-than-normal conditions are expected over central to northeastern Karamoja, including Turkana Central, Loima, Turkana West, Kabong, parts of Moroto, parts of Karenga, Kapoeta East, northern Turkana, Dessanach, Nyangatom, and West Pokot/Kacheliba Figure 8.

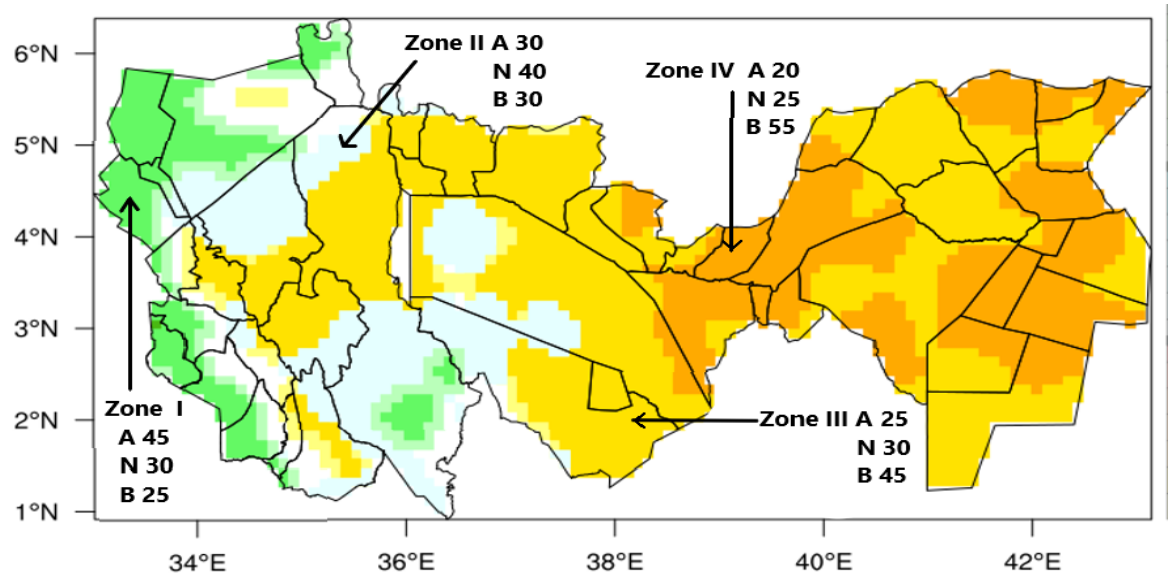

Figure 8 MAM 2025 Rainfall Outlook for IGAD Clusters I, II and III.

An early onset is expected over the western parts of the Karamoja region, while central and eastern parts are expected to have a normal onset.

Analysis of analogue years using the current Sea Surface Temperature (SST) pattern across the tropics and the predicted evolution of the Nino3.4 index indicates that 2017 and 2021 closely resemble the conditions expected in 2025. Rainfall performance during MAM in 2017 and 2021 shows drier-than-normal conditions over much of the IGAD clusters, consistent with the MAM 2025 objective downscaled forecast.

The temperature forecast, Figure 9 indicates an increased likelihood of warmer-than-normal conditions across the three IGAD clusters, with the highest probabilities over the IGAD cluster II and eastern parts of the Karamoja region.

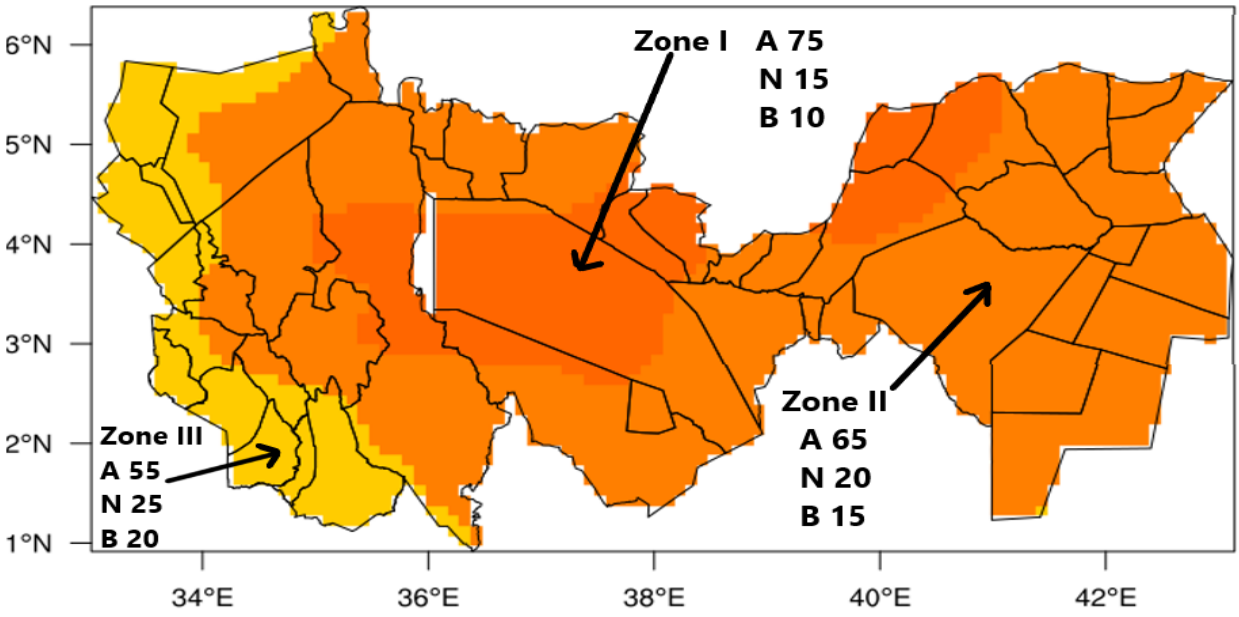

Figure 9 MAM 2025 Temperature outlook for IGAD Clusters I, II and III.

During the question-and-answer session in the plenary, the following questions were asked after the presentation. The feedback was given as summarized below.

Question 1: Normal prediction might look like the situation is not dire. How can this be presented in a way that non-technical persons can still understand and utilize the forecast?.

Answer 1: There are intermediaries or middlemen who work with scientists to communicate the forecast in a layman's language (without distortion) to end users.

Question 2: By what percentage do we consider the near normal category in forecasting?

Question 3: Which forecast is reliable, KMD or GHACOF?

Question 4: How will Dissemination will be done especially in kapoeta

Question 5: Everything given is in terms of probability, how will politicians be informed

Question 6: How can we make these scientific jargons be made relevant to inform a farmer on decision making? The information given is used with agriculture experts to come up with appropriate advisories.

Question 7: Analogues years are chosen based on predictors and not rainfall

4.3 Forage and pasture conditions and livestock body conditions

The GIS and Remote sensing Officer Julius Muyizzi provided seasonal forecast outlooks on the spatial distribution of forage conditions and on the basis for tailored advisories for the livestock sector. The stressed the importance of seasonal forage forecasts as it offers planning options for livestock and cross-border animal health management. It also provides anticipatory action to build the resilience of the mobile pastoral communities within the borderlands.

He presented the analysis of OND 2024 forage performance in comparison to the provided OND 2024 climate forecast. There was positive correlation as most areas predicted with deficit rainfall had poor forage performance and vice versa. The western parts of Karamoja Cluster predicted to receive above normal rainfall had better forage compared to the rest of the clusters. He thereafter provided the seasonal MAM 2025 outlook Figure 10 with possible livestock movement including areas to watch for alerts.

4.4. Vegetation Condition Index

The presenter from University of Sussex, James Muthoka gave a background on the project “strengthening PAStoral livelihoodS in the African Greater horn through Effective anticipatory action (PASSAGE. The aim is to address knowledge gaps that enhance operational EWS and AA systems for drought risk in pastoralist livelihood systems across GHA to enhance climate-resilient and sustainable livelihoods, especially for the most vulnerable. The project theme is moving from “what the weather will be” to “what the weather will do”.

In Forecasting Vegetation Condition, the input data, daily NASA’s Visible Infrared Imaging Radiometer Suite (VIIRS), 500 m resolution, is input into the Nadir BRDF model which is adjusted for reflectance. The Output is pre-processed into a time series of vegetation condition indices for a given administrative boundary. Hindcasting is then performed to generate forecasts for historical data, that builds up model knowledge that generates 10 weekly forecasts of 3-month average vegetation condition (VCI3M) from the latest observation. The forecast and processed data is eventually shared with users and decision makers.

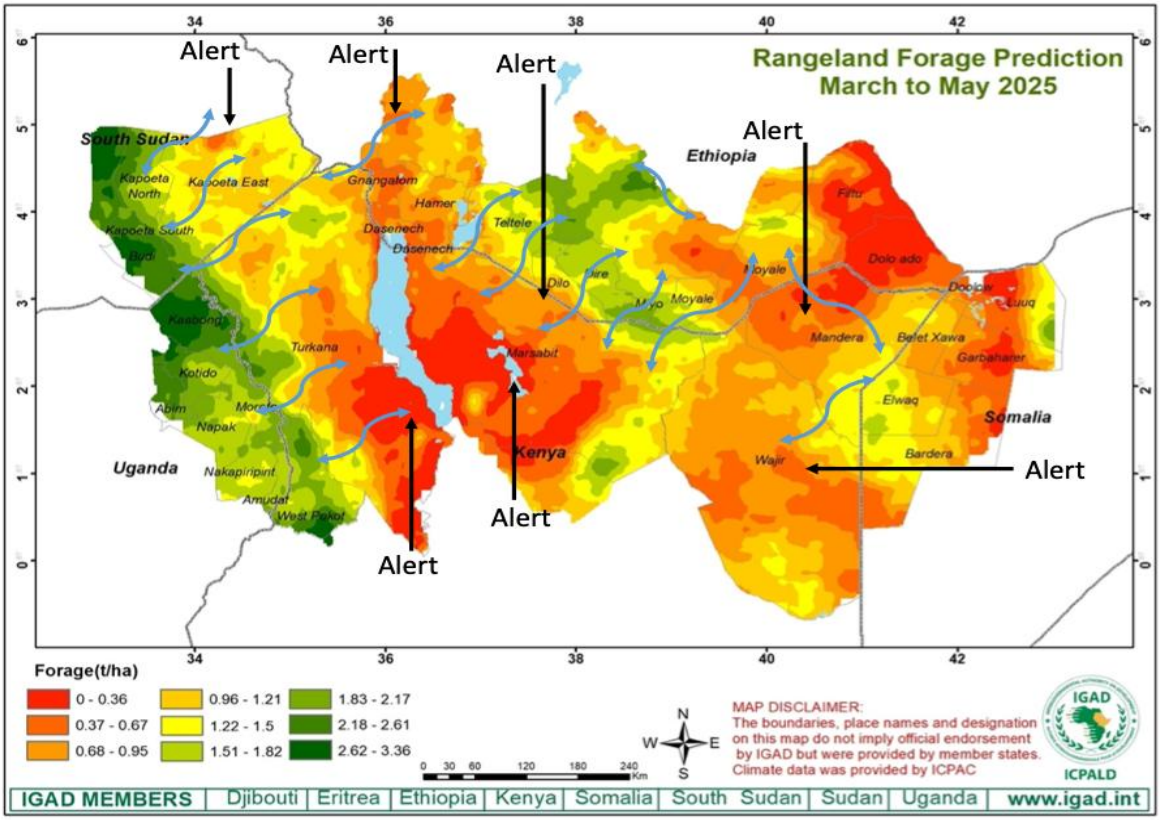

Figure 10 Rangeland forage prediction for March-May 2025 over IGAD Clusters 1,2 and 3

4.5 Cross border Water resources availability and utlook in IGAD clusters 1, 2, and 3

Khalid Hassaballah from (ICPAC) innovatively requested all participants to rise up on their feet with lifted water bottles on their hands. He asked those who would like to be given an extra bottle of water. Nearly all participants answered in affirmative. He challenged them to join in the water sector discussion after his presentation as nearly all love water. He further said that “Water is not a sector but a connector as it links all sectors”.

He presented the outcome of a recent water resources survey carried out in Karamoja. Communities in the Karamoja cluster rely heavily on land and water for farming and livestock production. Cross-border pastoralist communities engage in a wide range of shared arrangements with regards to their access to, and use of, natural resources, particularly water and pasture for their livestock. Karamoja’s average drought cycle has increased from one every eight years to one in every three years.

5. Impact analysis and development of advisories

The participants were divided into sectoral breakout groups to discuss the implications of downscaled forecasts as follows;

- Peace and Security
- Agriculture and Food Security
- Livestock and Pastoralism
- Disaster Risk Management (DRM)
- Water and Energy

During the discussions, participants analyzed sector-specific challenges and opportunities arising from the forecast including both positive and negative impacts of the forecast in the Karamoja cluster.

5.1 Agriculture Sector Discussion

The group summarized the rainfall forecast, categorizing regions expected to experience Below Normal (BN), Normal (N), and Above Normal (AN) rainfall. They also discussed the expected impacts, both positive and negative, along with key response measures to mitigate challenges and maximize benefits. Key items highlighted included the need for frequent forecast updates, where ICPAC clarified that their monthly and seasonal forecasts are updated on a monthly rolling basis. Further, downscaled information is also available from the respective NMHSs, and therefore users should endeavor to utilize the available updates since the forecast skill improves as the lead time shortens.

a. Opportunities for Crop Production in High-Rainfall Areas

It was noted that some areas, such as West Pokot, are expected to receive good rainfall, presenting an opportunity to promote crop production. However, Mr Francis Muinda clarified that the forecast referred to the long rains season, not the short rains.

b. Climate-Smart Agriculture

The promotion of drought- and disease-tolerant crops enhance resilience was suggested as being important and the role of media in disseminating climate information was emphasized, with Mr. Wachana recalling similar discussions held in Moroto.

c. Post-Harvest Management and Value Addition

The importance of post-harvest management measures to prevent losses was raised and emphasis on the need for women to engage in value addition as part of post-harvest strategies.

d. Bridging the Last-Mile Communication Gap

A persistent gap in last-mile climate information dissemination was identified and Mr Wachana suggested that climate information should be shared with agricultural extension officers to enhance dissemination and ensure farmers receive timely updates to mitigate the challenge.

e. Challenges and Risks Identified

Some of the challenges and risks identified included;

- Unequal rainfall distribution that may pose risks to crop production, potentially reducing yields and increasing food insecurity.
- Excessive rainfall that may lead to flooding, damaging crops and storage facilities.
- Delayed rains could disrupt planting and harvesting schedules.
- For livestock, increased rainfall may support pasture regeneration, but fodder and water shortages remain a risk in drought-prone areas.
- Supply chain disruptions for seeds, fertilizers, and pest control could extend intervention periods.

f. Recommended Strategies

Some of the recommended strategies included;

- Strengthening early warning systems to help farmers plan effectively.
- Promoting climate-smart agricultural practices to enhance resilience.
- Ensuring a stable supply chain for agricultural inputs to maintain productivity despite climatic uncertainties.
- Enhancing collaboration with media and extension officers to improve climate information dissemination.
- Ensuring timely access to climate information and strengthening adaptation strategies at the local level.

5.2 Livestock Sector Impacts and key response measures

The session began with an overview of the climate zones and rainfall forecasts. Areas that were expected to receive Above Normal (AN), Normal (N), and Below Normal (BN) rainfall were outlined, alongside a discussion on the impact of warmer-than-normal temperatures across the region. These factors were anticipated to influence water availability, pasture conditions, and livestock productivity in varying degrees.

Participants analyzed both the positive and negative impacts of the forecast, with particular attention to gender inclusion. It was acknowledged that climate variability could affect men,

women, and vulnerable groups differently, and response measures needed to account for these disparities. The discussion highlighted the importance of refining climate advisories to be more actor-specific and relevant to the specific needs of pastoralists and livestock keepers.

Attention was given to the specific impacts of both above-normal temperatures and below-normal rainfall on livestock and pastoralist communities. Above-normal temperatures were expected to contribute to increased livestock diseases due to floods, mudslides, and vector-borne infections. Soil erosion and land degradation were also anticipated to affect pasture quality, while the spread of invasive plant species would further threaten grazing areas. These challenges, combined with the increased caregiving burdens on women and children tending to sick or weak animals, were expected to exacerbate the mental health pressures on pastoralist communities, who rely heavily on their livestock for survival.

The below-normal rainfall raised concerns about the probability of water scarcity, which could affect livestock, irrigation and household use. Less water availability would likely lead to increased conflicts over grazing zones and water resources. The situation could also cause higher rates of livestock migration, spreading diseases like Foot-and-Mouth Disease (FMD), Contagious Caprine Pleuropneumonia (CCPP), and anthrax. Livestock production in terms of milk and beef would likely decline, which would impact both household nutrition and the broader economy. Additionally, market disruptions, particularly through distress sales of livestock, were expected to lower prices, while vulnerable groups, such as children and pregnant mothers, could face higher malnutrition rates.

a. Key response Measures

In response to these challenges, several interventions were proposed including; Strengthening early warning systems to disseminate meteorological information through radio, TV, social media, and mobile alerts was identified as a crucial strategy. Enhanced livestock disease surveillance and monitoring of disease vectors would also play a significant role in mitigating outbreaks. Sustainable livestock management practices, such as promoting crop residue utilization as alternative feed and conducting vaccination campaigns, were recommended to reduce the impact of climate-induced diseases. Furthermore, investing in improved water infrastructure, such as boreholes and reservoirs, was suggested to reduce pastoralists' dependence on rain-fed water sources.

The importance of conflict resolution and peacebuilding efforts was also emphasized, with suggestions to strengthen community peace committees and foster collaboration between local authorities, government agencies, and pastoralist leaders. Gender and social protection measures were proposed to ensure that climate adaptation strategies were inclusive. This included gender-responsive humanitarian assistance, psychosocial support programs for men affected by livestock losses, and education support to reduce school dropouts among pastoralist children.

b. Plenary Session

During the plenary discussion, moderated by Calistus Wachana, the strategies were refined further. Stakeholders highlighted the need for clearer and more specific gender-responsive measures, as well as more targeted climate advisories. Dr. Omondi raised concerns that the current advisories were too general and needed to be directed at specific actors. Another stakeholder emphasized the need to develop a contingency plan to address potential extreme weather events. The session concluded with an emphasis on the importance of expert contributions to refine and enhance the advisories.

5.3 Disaster Risk Management Sector

The DRM sector meeting began with the sector presenter introducing the members and providing an overview of the discussion. The focus of the presentation was on areas experiencing Above-Normal (AN) rainfall and the associated impacts, both negative and positive. The presenter used the East Africa Drought Watch as a tool to assess regional conditions, looking at the situation across the countries. A key part of the presentation involved showcasing an example of a monthly bulletin, particularly the Karamoja Cross-Border Multi-Hazard Warning System, which provides valuable multi-hazard risk information for the region. More on the session are in the PowerPoint presentation.

Mr. Wachana summarized the key points and engaged participants where stakeholders raised concerns about Ethiopia's exclusion from the analysis, suggesting that it should be included in future assessments. It was also suggested the need to incorporate locust forecasts into the bulletins to better predict and manage locust outbreaks in the region. It was also reported that such information could be mainstreamed once the DRM Act for both Uganda and Turkana are finalized.

Further discussions highlighted the need to identify hotspot areas prone to disaster risks, such as the Kibish and Elemi Triangle. It was noted that the Karamoja Cluster Bulletin, initially a pilot project, would be expanded to include Ethiopia and other countries in the region. Hussen confirmed that all four countries in the cluster would be included in future bulletins, with Pascal assigned to draft a specific bulletin for South Sudan.

In closing, the moderator expressed gratitude to the team and the presenter for their efforts, emphasizing the collaborative spirit of the meeting. Several action points were agreed upon, including the inclusion of Ethiopia in the Karamoja Cluster, the incorporation of locust forecasts, the finalization of the DRM Act, and the identification of high-risk areas for targeted interventions. The team also agreed on the importance of producing a tailored bulletin for South Sudan.

5.4 Water Sector

The Water Sector discussion centered on the March to May 2025 rainfall and temperature forecasts. These forecasts were analyzed to understand the potential impacts on water resources in the region. A major focus was on key river systems, with concerns about warmer-than-average temperatures across the cluster, which could exacerbate existing water-related challenges. The discussion also examined the current status (SOND 2024) and forecasted impacts, highlighting both positive and negative effects on water availability.

a. Negative Impacts

- Flash floods and river flooding were highlighted as potential threats to vulnerable communities, requiring urgent attention and preparedness.
- Sedimentation in rivers, lakes, and dams was identified as a significant issue, impacting water quality and storage capacity.
- Waterborne diseases are expected to rise due to flooding, posing a public health risk.
- Disruptions to essential services such as healthcare, education, and security were noted, which could further strain affected communities.

b. Positive Impacts

- There was a likelihood of an increase in groundwater availability, which is beneficial for drinking and domestic use in several regions.

c. Key Response Measures

- Emphasis was placed on early warning systems to enhance communication and preparedness.
- Proposed solutions included flood risk mitigation, through improved drainage systems and consistent monitoring of water levels.
- Sedimentation control was discussed, with the importance of effective management to protect vital water sources.
- Actions were proposed to improve health and water safety, including the distribution of water treatment chemicals to affected areas.

d. Plenary Session/Feedback and Discussions

The following issues were discussed/highlighted during the session;

- The importance of protecting water towers and catchment areas as these regions play a critical role in maintaining sustainable water supplies.
- The escalating challenge of soil erosion leading to sedimentation in rivers and water bodies due to human activities like deforestation and land clearing are major contributors to the overall land degradation and damage to water systems. Sustainable land and water management practices, including afforestation were recommended.
- The rugged terrain in some regions was noted as a significant challenge for effective water retention and management.

- Regions with high rock formations were flagged for their potential to impact water availability, necessitating a more detailed understanding of topographical features in water resource planning.
- Challenges like backflow and flooding, particularly in Lake Turkana and surrounding areas, were discussed. Rising water levels continue to worsen these issues, calling for urgent mitigation efforts.
- A call for regional collaboration to address these water challenges. Coordinated disaster management and sustainable water practices were stressed as essential for long-term solutions.
- Refining the presentation to better address cross-border water concerns, especially related to shared water sources and regional cooperation.

5.5 Peace and Security Sector

The session focused on the Peace and Security aspects related to climate-induced migration and resource scarcity. It began by addressing the anticipated rainfall and temperature scenarios, highlighting delays in the onset of rainfall, which are expected to disrupt the availability of resources such as water and pasture. Additionally, temperature variability could lead to higher-than-normal temperatures in certain areas, causing quicker drying of pastures and water sources. The changes are anticipated to push pastoralist communities to migrate towards regions with more favorable conditions. The discussion also highlighted the key driving elements of peace and conflict, such as competition for limited resources, large-scale migration, and climate variability. These factors are likely to increase tensions between neighboring communities as they vie for shared resources.

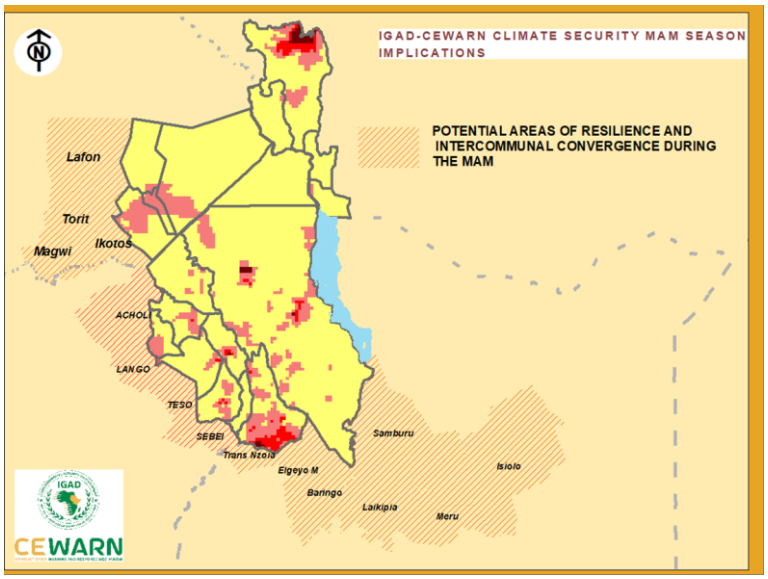

Figure 11 Resource Imbalance Anticipated for MAM 2025 with likely consequences on conflict

a. Impacts

The impacts of these climate changes were discussed in both positive and negative terms. Wetter-than-usual conditions could experience increased crop yields, providing supplementary food for affected communities. In addition, some inter-community resilience was noted as pastoralists move to areas with better resource availability. However, the negative impacts were considerable, including heightened conflict over limited resources, increased strain on host communities, and the exploitation of vulnerable groups, particularly children. The session highlighted the need for a coordinated approach to manage these challenges, including the activation of peace committees and resource-sharing initiatives.

b. **Keys Response Measure**

In response to these challenges, the session outlined several key response measures. One of the main strategies was to activate peace committees, which are typically aligned with local governments and chiefs. These committees play an important role in managing conflicts by facilitating resource-sharing agreements between communities. Additionally, there was a call for improving early warning systems to track migration patterns and resource availability. The implementation of cross-border resource-sharing frameworks was emphasized to minimize conflict in regions where resources are shared between countries.

c. **Plenary Session**

Some of the participants raised concerns about the generality of the advisories provided, suggesting that they were too broad and needed more specificity to address the regional realities of affected areas. In response, it was noted that peace committees are typically supported by local governments and partners, with a focus on community-led peacebuilding initiatives. Traditional leaders, including chiefs, women and youth, play an integral role in these efforts. The discussion also addressed the need for early migration advisories, especially in the event of below-normal rains which could trigger early migration. It was suggested that both receiving and sending communities should activate their peace committees to initiate resource-sharing mechanisms to mitigate potential conflicts.

Some of the points mentioned included; the call of action as needed because climate resilience requires collective effort, information to be used to sustain livelihoods and promote regional sustainability, services should be tailored to community needs for planning purposes, investment in adaptation and capacity building, embracing climate smart resolutions and crossborder resolutions, use of climate services to promote peace in the region and SubCOF to have sector specific insights like water, livestock etc.

The session emphasized on cross-border coordination in managing shared resources that includes; livestock disease control advisories and strategies for improving resource-sharing mechanisms to prevent conflicts, the importance of local leadership in peacebuilding, with a focus on community-level initiatives. It was also recommended to consider gender inclusive

peace committees which are instrumental in convening dialogues with local governments, IGAD and other non-governmental organizations; and assignment of roles to be specific to different stakeholders and mapping of cross border issues like having synchronized vaccination.

The session provided valuable insights into the need for proactive measures to manage migration-related conflicts and ensure peace and security in regions facing climate variability. The activation of peace committees and the establishment of resource-sharing frameworks were seen as essential to reducing conflict risks and ensuring stable conditions for vulnerable communities.

6. Partnership and Mapping of Local CIS needs in the cross-border setting and sustainability of sub-COFs

Dr Philip moderated the session and reiterated on the importance of climate services for end users. He mentioned that after the GHACOF , there are national COFs in each country and need to downscale climate information to the cross-border areas of the region and this meeting was one of the endeavors that brought different stakeholders together. He mentioned the different stakeholders at different levels.

6.1 Tools for Dryland Hydrology

The CUWALID Hydrological Forecast and WujihaCast Chatbot initiative was presented by Khalid Hassaballah, a Hydrologist at ICPAC as a key component of the DOWN2EARTH project, aimed at improving water and land information dissemination in the Horn of Africa Drylands (HAD) a project that is implemented by a consortium of leading institutions, including Cardiff University (Coordinator), University of Bristol (UoB), Vrije Universiteit Amsterdam (VU-A), Aalborg University (Aalborg-PLAN), Ghent University (UGent), University of East Anglia (UEA), University of Nairobi (UoN), Addis Ababa University (AAU), Climate Analytics (CA), BBC Media Action (BBC-MA), Action Aid (AA), Transparency Solutions (TS), IGAD Climate Prediction and Applications Center (ICPAC), and FAO-Somalia Water and Land Information System (SWALIM).

Khalid mentioned that CUWALID integrates climate modeling and forecasting techniques to provide decision-support information on seasonal hydrological conditions. The aspiration is to include CUWALID's output in regional early warning systems such as the Greater Horn of Africa Climate Outlook Forum (GHACOF), East Africa Hazards Watch, and various mobile applications catering to communities, extension workers, and humanitarian organizations.

Khalid Mentioned that The CUWALID system employs multiple forecasting models, including stoPET (stochastic PET) and climate simulations, to generate insights on hydrological parameters such as soil moisture, groundwater recharge, streamflow, and the Water

Requirement Satisfaction Index (WRSI). These outputs help forecast potential flood and drought hazards, providing critical early warning information to policymakers, disaster response agencies, and farmers. The integration of these forecasts into ICPAC's platforms enhances regional adaptation efforts by supporting adaptive agricultural practices and improving water resource management. CUWALID also enables the translation of climate forecasts into actionable decisions, leveraging various dissemination channels to reach different audiences.

He noted innovation within CUWALID as the WujihaCast Chatbot, which facilitates interactive access to climate and hydrological forecasts. Designed for use on mobile platforms, the chatbot can deliver forecast information in different formats, including maps, text, graphs , images, and voice notes, ensuring accessibility for diverse users, including those with limited literacy. This approach strengthens community engagement by providing real-time, user-friendly climate information that enables better preparedness against climate shocks. By integrating with existing early warning systems and local decision-making structures, CUWALID and WujihaCast contribute significantly to building resilience against climate variability in the Horn of Africa Drylands.

6.2 PALM-TREES

Professor J. Mutemi from the University of Nairobi delivered an insightful presentation of PALM-TREEs Project, the project is implemented by 16 consortia members. He emphasized the significance of integrating climate knowledge into societal resilience strategies. PALM-TREEs initiative, which aims to address risks associated with extreme climate events. Professor Mutemi highlighted the urgent need to consider heat stress and its adverse effects on various socio-economic activities, reinforcing the necessity of collaborative efforts across multiple projects and initiatives. He underscored the importance of co-producing research findings with communities and stakeholders, ensuring that climate knowledge informs societal norms for better resilience to extreme weather events. His discussion delved into the transition towards developing social and physical science models that accurately capture community concerns and facilitate effective adaptation strategies.

The Professor outlined key expected results from the PALM-TREEs project, demonstrating how co-produced and co-owned research can drive equitable climate adaptation. Among the notable outputs he presented were risk narratives, which offer accessible descriptions of climate-related consequences for different communities based on historical events rather than speculative future risks. He further discussed the development of process-based diagnostics, aimed at improving climate model evaluations and refining forecasting methods used by national meteorological services. Another critical aspect of his presentation was the introduction of indicators for transformational change, which will provide robust metrics to assess shifts in vulnerability and resilience, particularly in relation to gender and social identities.

He highlighted the expansion of cross-sectoral networks, fostering collaboration between institutions and practitioners to pilot climate-resilient solutions. The project also aims to contribute to open-access data repositories, ensuring that climate-related data is not only shared but also curated in adherence to ethical and safeguarding standards. Through his compelling presentation, Professor Mutemi reinforced the imperative of inclusive and evidence-based climate adaptation, advocating for collaborative research and informed decision-making to enhance community resilience in the IGAD Clusters and specifically Karamoja Cluster.

He clarified that the international water management Institute (IWMI) team based in Ethiopia led the Ethiopian component of this Project.

6.3 Sub-COFs as part of the Regional Framework for Climate Services (RFCS)

Mr. Calistus Wachana elaborated on the Regional Framework for Climate Services (RFCS) by reiterating the difference between climate information and climate services. He explained that the RFCS is funded under the Intra-ACP Climate Services (ClimSA) initiative, which is supported by the European Development Fund. He further mentioned that this framework plays a critical role in strengthening climate information services across Eastern Africa by providing both technical and financial assistance. He mentioned that the RFCS is a key component of the broader WMO Global Framework for Climate Services (GFCS), making Eastern Africa the first region to establish such a regional framework.

Calistus added that RFCS serves as an institutional mechanism designed to coordinate, facilitate, and enhance collaboration among regional and national institutions to improve the development, delivery, and use of science-based climate predictions and services. He further mentioned that the framework defines the vision, goals, and priorities for climate services in the region while also identifying key stakeholders, consultation processes, and baseline capacities. He emphasized that the RFCS establishes clear roles and responsibilities for key regional stakeholders and sets out governance mechanisms and engagement channels for its operationalization.

In his presentation, he explained the contextual framework within which RFCS operates, highlighting its integration with the Global and National Frameworks for Climate Services. He elaborated on the benefits of having a structured RFCS, noting that it provides a common vision for climate services at the regional level while ensuring strategic coordination of priority areas and transboundary issues within IGAD clusters. He further mentioned that the framework identifies key capacity needs, actions, and resources necessary to advance climate services that support early warning systems, resilience-building, and sustainable development. He emphasized the integration of RFCS with existing regional strategies and policies, ensuring alignment with ongoing collaboration mechanisms such as SUIP and RCOF.

Calistus also provided a roadmap for RFCS implementation, outlining the key stages from its current phase to early 2026, with full operationalization expected between 2026 and 2030. He further mentioned the role of key institutions, including ICPAC, IGAD, EAC, and national focal points, in ensuring the success of the framework. Concluding his presentation, he emphasized the next steps required to enhance RFCS implementation, encouraging continuous engagement and collaboration among regional stakeholders to maximize the impact of climate services in Eastern Africa.

One key concern from the audience was to understand how RFCS can effectively balance the integration of scientific climate models with indigenous knowledge given the disparities in data accuracy, perception and acceptance among local communities. Mr Wachana expounded on the importance of striking a balance between scientific climate models and Indigenous knowledge in the Karamoja Cluster. He explained that an effective Regional Framework for Climate Services (RFCS) must adopt a co-production approach, where both scientific and Indigenous knowledge systems are integrated through participatory engagements. He further mentioned that building trust within local communities requires sustained dialogue, capacity-building, and demonstration of the reliability of climate models through localized applications.

7. Role of Media in Weather and Climate communication across the IGAD Clusters

The media team worked on "Enhancing Media engagement in weather and climate communication for the Karamoja cluster" which brought together ten journalists from South Sudan, Kenya, and Uganda towards addressing the critical role of media in disseminating weather and climate information. The session emphasized on practical aspects of collaboration between meteorologists and journalists to develop actionable strategies for public awareness and resilience. The highlight of the event was the creation of the 1st Seasonal Media Action Plan (SMAP) for the March-April-May (MAM) 2025 season, a groundbreaking achievement that reflects the commitment of participants to ensuring effective weather communication across the region. The workshop strengthened the link between media and meteorology, paving the way for impactful climate communication in one of East Africa's most vulnerable regions.

Figure 12 A section of participants during the media workshop

The key areas of focus for the media team included;

a. Seasonal Media Action Plan (SMAP): A strategic framework designed to guide media engagement in disseminating weather and climate information. The SMAP focuses on innovative communication strategies such as visual storytelling, narrowcasting, and community engagement to ensure timely and actionable information reaches vulnerable populations.
b. March, April, May (MAM) 2025 Seasonal Forecast: Participants engaged deeply with the forecast, understanding its implications for agriculture, health, water resources, and disaster preparedness.
c. Participatory Media Approaches: Emphasis was placed on inclusive communication methods, such as women's listening groups and localized narrowcasting, to ensure that weather and climate information reaches marginalized communities.
d. Collaboration between Media and Meteorology: The workshop strengthened the partnership between journalists and meteorologists, fostering a shared understanding of how to translate complex weather data into accessible public information.

The media team demonstrated a strong commitment to ensuring the success of the SMAP in their respective countries, emphasizing the importance of localized approaches and cross-border collaboration

8. Feedback on Stakeholder Engagement

The forum convened a wide range of stakeholders ranging from government officials, community leaders, NGOs, development partners, academia, special groups including youth and women, and operational early warning centres. The demographics of the participants of Sub-COF4 is summarized below. This diverse setup provided a rich audience to administer a survey, in order to gather feedback aimed towards improving climate services in the IGAD region, and provide lessons for further planning of Sub-COFs.

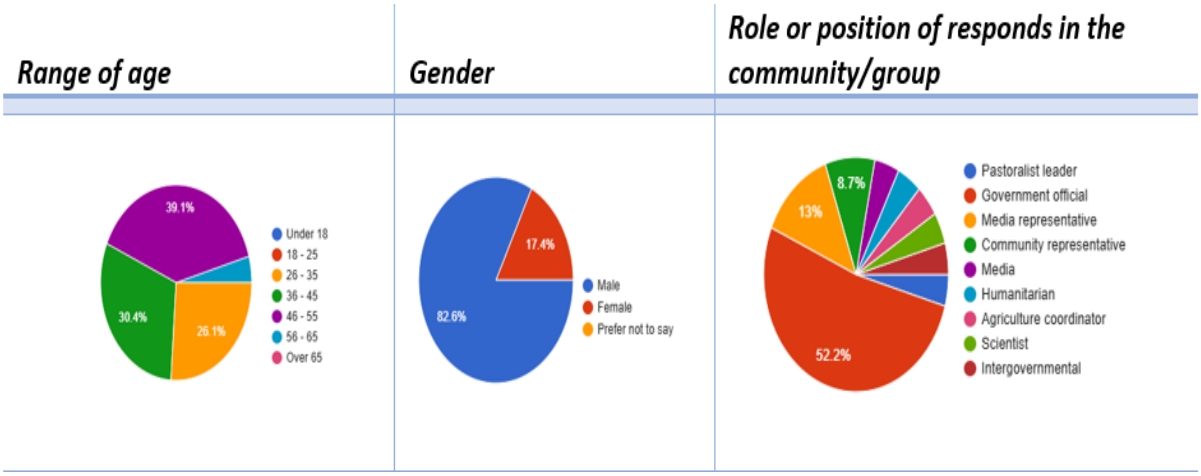

Figure 13 Summary of the demographic information of the respondents of the Sub-COF4 survey.

In terms of access to climate information, over 90% of the respondents indicated that radio is the main channel, with social media at 82.6% and community gatherings at 56.5%. This analysis points to the importance of strengthening the local media actors, including journalists to ensure that outputs of the Sub-COF are widely disseminated. There is also an opportunity to strengthen the online presence of the current forecast dissemination channels, as most respondents also have access to social media platforms.

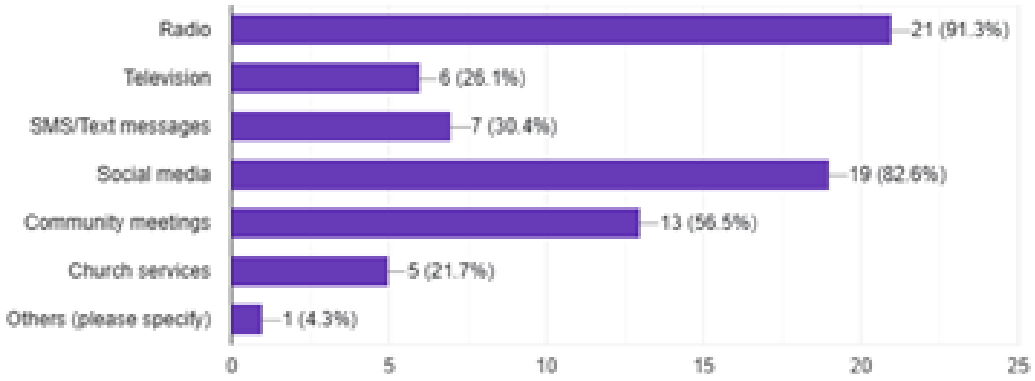

Figure 14 Summary of most preferred climate information channels

9. Appendix

9.1 Workshop Program

DAY ONE: Tuesday, 4 February 2025

TIME	ACTIVITY	FACILITATOR
08:30 – 09:00	Arrival and registration	ICPAC /ICPALD
09:00 – 09:40	**Opening Workshop/Welcome Address** Remarks: - Representative from South Sudan - Representatives from Ethiopia - Representative from Uganda - Representatives from Kenya Setting the scene and workshop perspective *Titike B.* Group Photo	Moderator: *Dominic K.* Rapporteur: *Joyce J.*
09:45 – 10:30	● Introduction to basic terminologies, community-based early warning systems & challenges related to early-warning gap *Calistus W./George O.* ● PASSAGE progress on co-production and disseminating risk narratives *Ahmed M.* ● Key Outputs and Lessons from SCIDA III Project *Hussein M.*	
10.30 – 11.00	**Tea Break**	
11:00 – 13:00	Looking Back: Performance of 2024 rainfall season: Karamoja (IGAD Cluster 1) - Performance of OND 2024 rainfall season and climatology for MAM (15 mins) *Paulino O.* - Interactive session on Climate Information (*Access & use of climate information from meteorological & community sources; frequency, scale, timeliness, packaging etc) (*20 mins) *Calistus W./Geoffrey S.*	Moderator: *Calistus W.* Rapporteur: *George O.*

	- Forage and pasture conditions and livestock body conditions (10 mins) *Julius M.* - Vegetation Condition Index (15 mins) *James M.* - Water resources (in rivers, boreholes, and reservoirs) (10 mins) *Khalid H.* - Peace and security situation (10 mins) *Andrew M.*	
12.40 – 13:00	Q&A / Discussion	
13:00 – 14:00	**Lunch Break**	
14:00 – 15:00	Looking forward: ● MAM 2025 Seasonal outlook *Hussen S.* Water Resources Outlook *Khalid H* Forage and vegetation conditions *James M* *Q&A*	Moderator: *Titike B* Rapporteur: *Paulino O*
15:00 – 16:30	Sector breakout group discussion on implications to the downscaled forecasts (: crops; Livestock and Pastoralism; peace and security; Water) – *(each sector will have own chair and rapporteur)* *(*Media & gender are cross-cutting)*	Water: *Khalid H* Agriculture: *Calistus W* Livestock: *Dominic K* Peace: *Andrew M* DRM: *George/Hussein*
	END OF DAY 1	
DAY TWO: Wednesday, 5 February 2025		
09:00 – 10:30	Sector breakout group discussion on implications to the downscaled forecasts (Agriculture crops; Livestock and Pastoralism; peace and security; Water) – *(each sector will have own chair and rapporteur)*	Water: *Khalid H* Agriculture: *Calistus W* Livestock: *Dominic K* Peace: *Andrew M* DRM *George/Hussein*
10:30 – 11:00	**Tea Break**	
11:00 – 13:00	Sector breakout group discussion on implications to the downscaled forecasts (Agriculture crops; Livestock and Pastoralism; peace and security; Water) – *(each sector will have own chair and rapporteur)*	Water: *Khalid H* Agriculture: *Calistus W* Livestock: *Dominic K* Peace: *Andrew M* DRM: *George/Hussein*
13:00 – 14:00	**Lunch Break**	
14:00 – 16:30	Plenary Discussions and Reporting on expected impacts and management strategies at Cluster levels	Moderator: *Calistus W* Rapporteur: *Hussen S.*

16:30 – 17:00	**END OF DAY 2**	
DAY THREE: Thursday, 6 February 2025		
08:30-10:30	Partnerships & Mapping local CIS needs in cross-border settings & sustainability of Sub-COFs ● PALM-TREES ● Tools for dryland hydrology (Down2Earth) ● Sub-COFs as part of the Regional Framework for Climate Services (RFCS)	Moderator; *Philip O* Rapporteur; *Hussein M*
10:30-11:00	**TEA BREAK**	
11:00-12:30	Group discussion: Brainstorming on Cross border development of AAPs ● Brainstorming on the various components of AAP ● Stakeholders to be involved at different levels and responsibilities ● Potential beneficiaries and selection process ● Establishment of agreed Trigger and Actions	
12:30-14:00	**LUNCH**	
14:00-15:00	● Delivering together: Joint Campaign Strategies for Met, Media & Users – Seasonal Media Action Plan *Media Team* ● The official release of IGAD Cluster 1 (Karamoja) outlook and advisories for MAM 2025 *ICPAC Team* ● Media interviews/Workshop closure ● Sustainability of subCOFs, and the Role of IDDRSI on way forward, remarks and workshop closure *ICPAC Team*	Moderator: *Calistus W* Rapporteur: *Media*

SEASON MEDIA ACTION PLAN (SMAP) FOR MAM 2025 (MEDIA will have separate & joint sessions)

WEDNESDAY, SEASONAL MEDIA ACTION PLAN		**Moderator**
08.00-8:30	Welcome and introduction	ICPAC & Colison Lore
08:30-9:30	March, April, May (MAM) 2025 Seasonal Forecast - Linking Media and Meteorology in IGAD Cluster I	

	Group exercise and presentation: "Harnessing Media Power Linked with Meteorology: IGAD Cluster I -Weather Alert Challenge	
09:30-10:30	Mainstreaming Weather & Climate Information in Media in IGAD Cluster I. - Basics of Mainstreaming - Role of Technology & Innovation - Community Engagement & Feedback Mechanisms Questions & Answers Session	
10.30-11.00	Tea Break	
11.00-12.30	Discussion on the impact of weather and climate on various sectors - Presentation of MAM 2025 forecast and mitigation measures -Questions & Answers	
12.30-13.00	SEASON MEDIA ACTION PLAN Participatory Media for Weather & Climate Communication & Engagement - Visual Storytelling / Oral Societies - Narrowcasting (loudspeaker) - Women Listening Groups Questions and Answers Session	
13.00-14.00	Lunch Break	
14:00-14:45	How Season Media Action Plan (SMAP) Works Group Discussions: How SMAP works	
14.45-15.45	-Review of sample SMAP in preparation for MAM 2025 SMAP	
15:45-16:30	- Design of MAM 2025 SMAP Two Groups of 5 /5 - Merger of Group Work	
16.30-16.30	Tea Break	
THURSDAY		

08.30-09.30	Presentation of SMAP for MAM 2025 Cluster I Wrap up: • Comprehensive SMAP for MAM 2025	
09.30-10.00	• Media Workshop closure	

9.2 List of participants