IGAD CLUSTER II AND III

March-MAY (MAM) 2024 SEASON FORECAST

Statement from the third Intergovernmental Authority on Development (IGAD) Cluster II and III Multi-Stakeholder Climate Outlook Forum for March-May 2024 Rainfall Season: 13—14 March 2024, Koket Hotel, Moyale, Ethiopia

Consolidated Objective Climate Outlook for the March to May 2024 Rainfall Season

The IGAD cluster II and III (Marsabit-Borana and Mandera cross-border region) March-April-May (MAM) 2024 seasonal climate outlook forum was held between 13 and 14 oMarch 2024, in Moyale, Ethiopia. The theme of the forum was "Enhancing the Uptake of Climate Early Warning Information and Anticipatory Action in Marsabit-Borana and Mandera cross-border region"

This forum is the third in a series of sub-regional climate forums following the first in Karamoja (IGAD Cluster I) conducted in Lodwar, Kenya, in February 2020 and the second in Marsabit-Borena (IGAD Cluster II) conducted in Moyale, in March 2022.

The forums use cluster-level downscaled climate information and products to engage users from the key sectors including livestock, Disaster Risk Management(DRM), agriculture, and water as well as policy makers, media and peace actors. The anticipated impacts of the expected seasonal climate on various sectors and the corresponding mitigation measures are usually assessed during such forums.

With the increasing frequency and intensity of extreme weather and climate events mainly recurring as severe droughts and floods, the impacts of climate change have become more apparent in these cross-border regions. For example, the communities experienced a back-to-back drought during the 2020-2022 period which resulted in crop failure and millions of livestock deaths. This represents a significant loss for the region, as livestock is a vital source of food, income, and transportation.

Conversely, the El Niño event and the positive Indian Ocean Dipole (IOD) in October and November 2023 brought heavy rainfall to these regions, resulting in flooding. Although the rains supported regeneration of pasture for livestock, the communities will take longer to recover from the impacts caused by the previous drought.

This forum is, therefore, a much-needed platform that encourages exchange and interactions amongst farmers, climate information users, climate experts, agriculture experts, multi-institutional, and multi-stakeholders. One of the key outputs of this forum is the co-development of the expected impacts, mitigation measures and advisories based on MAM 2024 seasonal outlook.

IGAD Cluster II and III March-MAY (MAM) 2024 Seasonal Forecast

The MAM rainfall season, on average, brings up to 300 mm of rainfall over northern and eastern Marsabit (Godoma, Bultiye, Sololo, Uran, and parts of Bubissa, Maikona, and Dukana), while more than 300 mm is recorded in Dire and Moyale on the Ethiopian side of IGAD Cluster II. On the other hand, MAM rainfall amounts in the IGAD cluster III range from 150 mm in the central area (e.g., Mandera East and Dolow) to 250 mm in the north (e.g., North Liben and Afder). This season contributes between 40% and 60% of the climatological annual total rainfall in most part of the two clusters, reaching 70% in northeast part of Mandera cluster.

The downscaled IGAD Cluster II and III MAM 2024 objective forecast (Figure 1) indicates higher chances of wetter than usual conditions over Marsabit-Borena and Mandera clusters. Higher chances of wetter than usual conditions are indicated over the northwestern part of Marsabit-Borena cluster, particularly in Debub Omo, North Borena and Horr area.

Analysis of the cumulative drought conditions as computed using the Standardized Precipitation Index (SPI, Figure 2) for 15-month duration, from March to May 2024, indicates a likelihood of a continuation of moderate to severely wet conditions throughout the forecasted period.

For MAM 2024 season temperature, the forecast indicates an increased likelihood of warmer than average surface temperatures over all parts of the IGAD Cluster II and III (Figure 3). High probabilities (75%) of warmer than average temperatures are predicted over a large area extending to western Marsabit-Borena cluster to eastern Mandera cluster with the highest probabilities (85%) indicated over northern Liben and Afder woreda, Somalia region, Ethiopia. Although with slightly lower probability (65%), warmer than usual conditions are predicted in south Debub Omo, northwestern Borena, Wajir west, and Baar Daheer area.

In summary, considering the above-normal rainfall experienced during the October to December 2023 season and the anticipated wet conditions in most parts of the Marsabit-Borena and Mandera clusters from March to May 2024, with notably higher chances of increased precipitation in Debub Omo, northwest Borena, and Horr areas, all stakeholders are urged to take proactive measures to mitigate potential flood-related risks associated with the wet climate.

The objective rainfall and temperature outlook for IGAD Cluster II and III are given below:

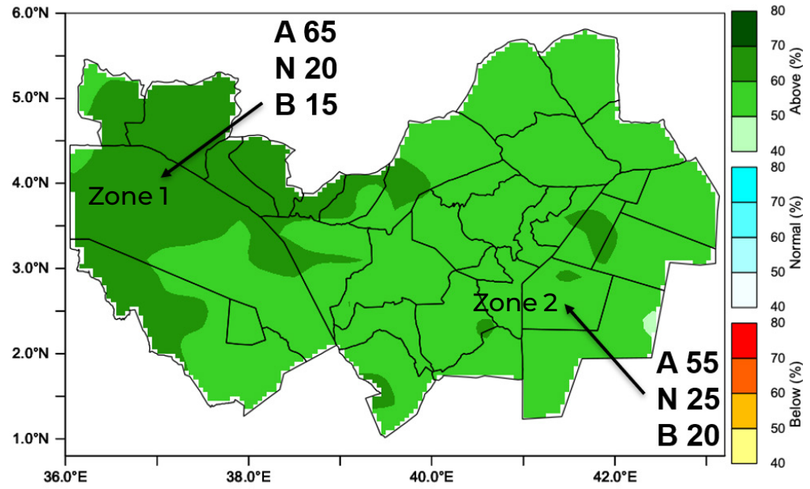

Figure 1: IGAD Cluster II and III objective rainfall outlook for the March to May 2024 rainfall season.

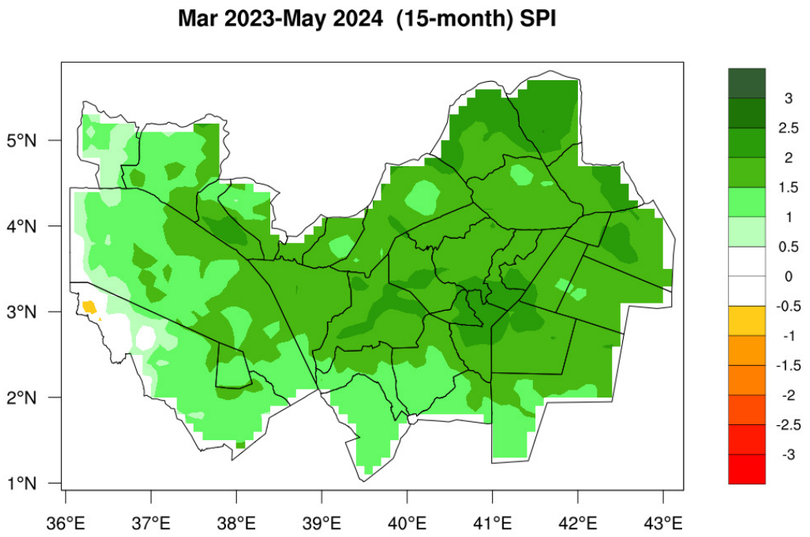

Figure 2: IGAD Cluster II and III Standardized Precipitation Index (SPI) forecast for March 2023 to May 2024.

Rainfall outlook for March to May 2024

Zone I: In this zone (dark green), the probability for the above normal (wetter) category is the highest (65%). Probabilities for the normal and below normal categories are 15% and 20%, respectively.

Zone II: In this zone (green), the above normal rainfall (wetter) category also has the highest probability. The probability for above normal category is 55% while the probabilities for the normal and below normal categories are 25% and 20%, respectively.

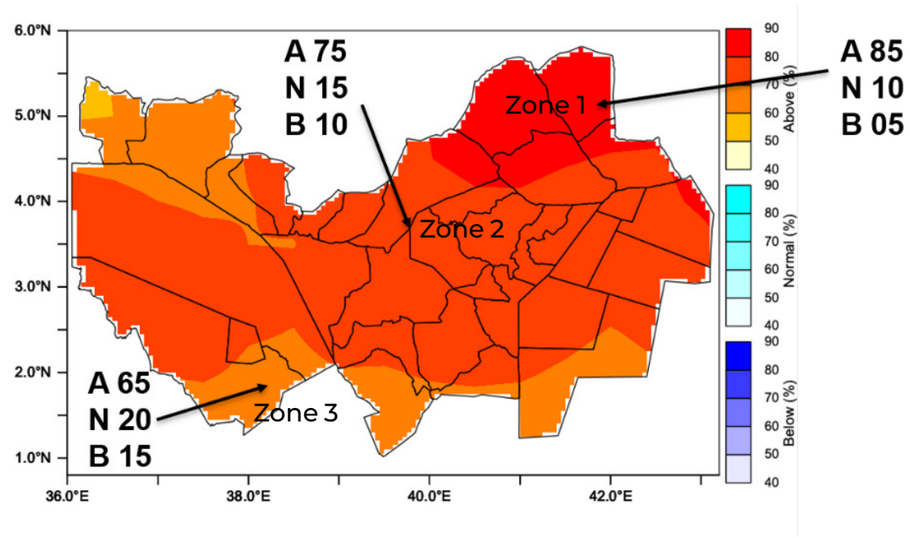

Figure 3: Probability forecast of mean surface temperatures for March to May 2024.

Temperature Outlook for March to May 2024

Zone I: In this Zone (darker red), the above normal mean temperature (i.e., warmer) category is most likely at 85%. The probabilities for the near normal and below normal categories are 10% and 5% respectively.

Zones II: In this Zone (dark orange) also, the above normal mean temperature category has the highest probability (at 75%). The probabilities of the normal and below normal categories are 15% and 10%, respectively.

Zones III: In this Zone (orange), also the above normal mean temperature category has the highest probability (at 65%). The probabilities of the normal and below normal categories are 20% and 15%, respectively.

Note: The numbers for each zone indicate the probabilities of rainfall and mean temperature in each of the three categories, above-, near-, and below-normal. For example, in Zone I, Figure 1, there is a 65% probability of rainfall occurring in the above-normal category; a 15% probability of rainfall occurring in the near-normal category; and a 20% probability of rainfall occurring in the below-normal category. In Zone I, (Figure 3), the dark orange shading indicates a 85% probability of mean temperature occurring in the above-normal (i.e., warmer) category; 10% probability of mean temperature occurring in the near-normal category; and a 5% probability of mean temperature occurring in the below-normal (i.e., cooler) category.

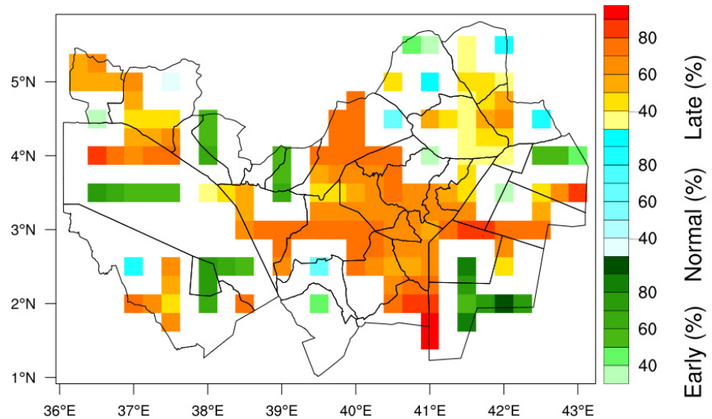

Figure 4: Forecast probabilities for three (tercile) categories of onset timing (early/normal/late).

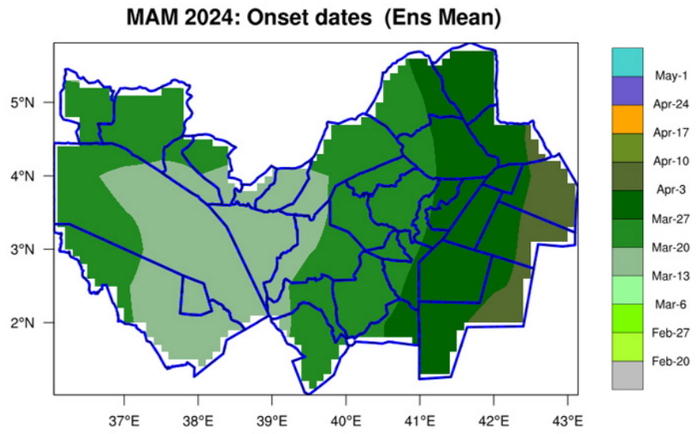

Figure 5:). The most likely rainfall onset dates for the MAM 2024 season from model ensemble mean values.

Sector implication and advisories for the expected March to May 2024 rainfall season in IGAD cluster II and III

Agriculture

Impacts

The expectation of a good havest depends on implementing effective agronomical practices which not only improve food security and lower cereal prices but also leads to increased water levels through dams and ponds for irrigation support. However, challenges such as crop pests and diseases like fall armyworm, risk of post harvest loses, aflatoxin contamination due to high moisture, water logging in areas like Marsabit, leaching of nutrients, crop damage from high rainfall in flood prone areas, soil erosion in sloppy regions of marsabit, aggravation of water and vector-borne diseases such as cholera and malaria, increased risk of flower abortion, wilting and stunting of crops due to evaporation, evapotranspiration, and drying of vegetables, as well as poor seeding practices, must be addressed to ensure a successful agricutural outcome.

Advisories

- Ensure the availability and accessibility of certified seeds to farmers.
- Provide early warning information, particularly targeting communities residing in riverine areas.
- Strengthen extension services to provide support and guidance to farmers. This is also important in ensuring enhanced dissemination of crucial agricultural information.
- Ensure adequate stocking of pesticides both at agrovets and farmers' levels.
- Promote crop diversification strategies to mitigate risks associated with monoculture.
- Encourage the planting of drought-tolerant and early-maturing crop varieties, especially in arid and semi-arid (ASAL) regions like Marsabit.
- Implement Integrated Pest Management (IPM) techniques to ensure sustainable pest control.
- Develop and implement strategies for managing post-harvest losses effectively.
- Implement soil conservation infrastructure such as terraces on farms.
- Facilitate the exchange of knowledge and best practices through exchange trips and visits to demonstration farms (showcasing innovative techniques and practices), thereby fostering cross-border learning and collaboration. In addition, coordinate joint advisories to address shared agricultural challenges and opportunities across borders.
- Promote the construction of own-farm ponds and the use of dam liners, along with planting trees around ponds to minimize evaporation.
- Introduce kitchen garden technologies including cone gardens, multi-storey gardens, and shed nets to enhance productivity on small-scale farms.
- Advocate for conservation agriculture practices such as the use of rippers in plowing to minimize soil disturbance and promote sustainable land management.

Water

Impacts

Positive impacts

Enhanced water availability for multi-purposes. Enhanced groundwater recharge.

Negative impacts

Risk of flooding in hotspot areas (Sololo, Yambala, Fachana, Lang Balal, Loglogo). Possible loss of lives and properties, risk of soil and gully erosion, water pollution and displacement. There is also a likelihood of destruction of water infrastructure and potential outbreak of water-borne diseases.

Advisories

- Provide early warning information.
- Sensitize commuities living within flood prone areas sensitized to relocate to higher ground.
- Clear water ponds to enhance water storage.
- Coordinate with DRM agencies.
- Encourage water harvesting measures.
- Provide water treatment chemicals.
- Unclog drainage and water ways.
- Implement water harvesting structures to enhance water storage.
- Check dams and gabions to control gully erosion and enhance groundwater recharge.

Livestock

Advisories

- Procure and preposition vaccines and drugs for livestock disease control.
- Facilitate vaccination of livestock against transboundary animal diseases e.g. Rift valley fever.
- Promote good husbandry practices such as deworming and control of ectoparasite by spraying.
- Carry out livestock disease surveillance.
- Activate/strengthen community grazing schedules i.e. wet and dry grazing by enforcing community by-laws.
- Encourage cultivation of commercial pasture and fodder by sourcing grass and legume seeds for agropastoral farmers.
- Sensitize community on controlling wild fire to mitigate fire destruction of pasture and forage.
- Promote water harvesting and maintenance of water dams through desilting by communities.

IGAD Cluster II and III March-MAY (MAM) 2024 Seasonal Forecast

Disaster Risk Management

Impacts

Positive Impacts

Further improvement/regeneration of the already very good pasture condition. Exceeding high water recharge levels. Sustained birth rates of lives. Increased milk production and consumption to above normal ranges.

Negative Impacts

Likelihood of the water pans/dams/ponds and embankments collapsing. Likelihood of disease outbreak e.g. cholera, malaria and diarrhea. Increased breeding and emergency of zoon-tile diseases. Possible displacement of communities.

Advisories

- Stockpile insecticides and surveillance for crop pests, including Fall armyworm (FAW) infestation.
- Promote and implement strategies for reducing post-harvest losses. Relatedly, avail and utilize crop dryers to prevent aflatoxin contamination.
- Implement water harvesting technologies such as chuck dams, diversions, or storage facilities.
- Strengthen awareness efforts regarding risks of Rift Valley Fever outbreaks.
- Increase vigilance in disease surveillance, treatment, and ring vaccination, with markets in affected areas being closed as necessary. In addition, regulate livestock movement as necessary.
- Activate and operate livestock markets through campaigns.
- Maintain water pans, dams, and boreholes through desilting and repair.
- Stockpile and distribute water treatment chemicals to address poor WASH hygiene and practices.
- Promote good hygiene and sanitation practices, including the distribution of mosquito nets and education on food handling, along with spraying stagnant water and providing drugs and vaccines to prevent diarrhea, cholera, and malaria outbreaks.
- Rehabilitate roads for improved access during disasters.

Peace and Security

Advisories

- Enhance peace community dialogues on the gold mines.
- Strengthen early warning for early response (information).
- Deploy police presence at Dabel permanently.
- Solve potential boundary conflict-sololo/turbi; Forolle –Elle Dimtu/Forolle Dirre; Dukana-Dillo/Moyale-Moyale ;Moyale- Wajir ;Saku-North Horr due to uneven rain distribution.
- Accelerate mining coorporatives and link with investors.
- Create alternative livelihhods to target mining workers due to job losses, especially by CBOs.
- Enhance collaboration-provide logistical support to the crossborder peace committee, local governments, and peace policy.
- Enhance livelihood support i.e. financial assistance – a model of seed capital) to vulnerable communities.

Front and back page photos | Tumal Orto

Contributors: Financial support was provided by the Strengthening PAStoralist livelihoodS in the African Greater Horn through Effective anticipatory action (PASSAGE), funded by UK aid from the UK government and by IDRC through CLARE research programme; the European Union-funded Intra-ACP Climate Services and Related Applications (ClimSA); and Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA) projects. ICPAC, in collaboration with ICPALD, NDMA, along with the Ethiopia Meteorological Institute (EMI), and Kenya Meteorological Department (KMD) developed the seasonal Climate advisories for the IGAD Cluster II and III region.

CLARE
CLIMATE ADAPTATION &RESILIENCE

UK International Development
Partnership | Progress | Prosperity

IDRC · CRDI
Canada

ClimSA
INTRA-ACP CLIMATE SERVICES AND RELATED APPLICATIONS PROGRAMME
An initiative of the Organisation of African, Caribbean and Pacific States funded by the European Union

CGIAR

AICCRA
Accelerating the Impact of CGIAR Climate Research for Africa