

ICPAC

Summary for Decision Makers

SEASONAL FORECAST

March to May 2024

Rainfall and Temperature

March to May (MAM) constitutes an important rainfall season, particularly in the equatorial parts of the Greater Horn of Africa (GHA), where MAM rainfall contributes up to 60% of the total annual rainfall. Analysis of global climate model predictions from 9 Global Producing Centres (GPCs) customized for the GHA indicates that wetter than normal conditions are favoured over most parts the GHA region.

Forecast probabilities for wetter than normal conditions are in the range 55-65% over an area including Kenya, Somalia, southern Ethiopia, South Sudan, Burundi, Rwanda, Uganda and north-western Tanzania, with highest probabilities in central to western Kenya and in cross-border areas spanning Ethiopia, Kenya, and Uganda (Figure 1a). On the other hand, forecast probabilities favour drier than normal conditions over parts of eastern Tanzania, western Ethiopia, western Eritrea and localised areas in north-western South Sudan Figure 1a.

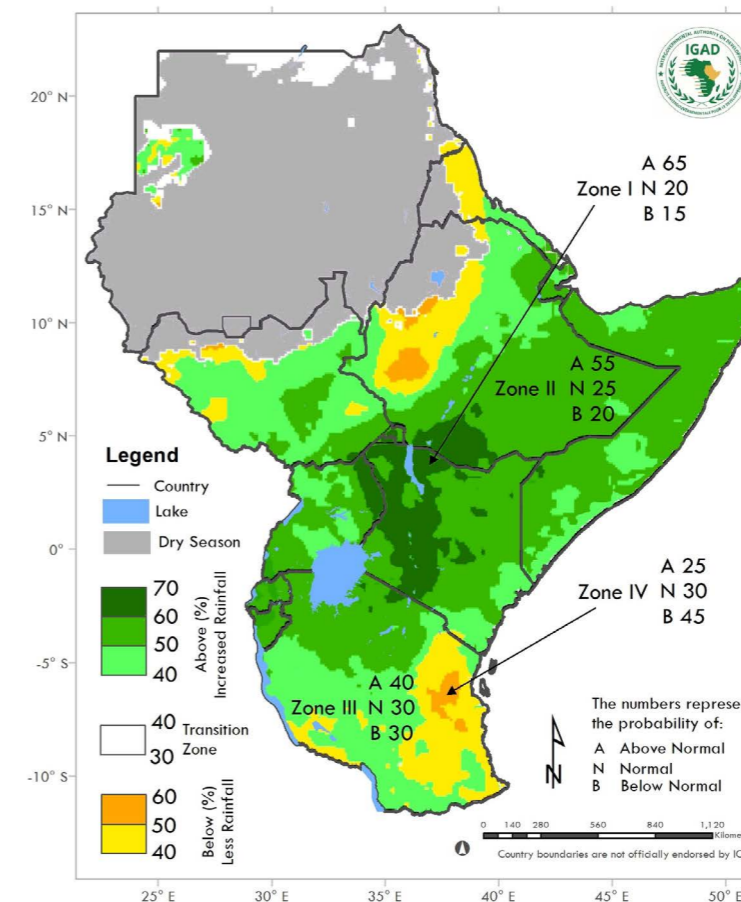
The heightened rainfall recorded across much of the GHA during OND 2023 and the elevated forecast probabilities for above normal rainfall during MAM 2024, suggest a raised risk of flooding in flood-prone areas.

The predicted start of the MAM 2024 season, based on 5 Global Climate Model forecasts that provided daily outputs, is shown in Figure 2a . There are high chances of early to normal onset over most parts of the GHA region except a few localized areas. Raised chances of an early onset is indicated in parts of northern and north-eastern Tanzania, eastern Rwanda, southern and western Uganda, western Kenya, southwestern Somalia and parts of south-central Ethiopia. On the other hand, higher chance for delayed onset is indicated over localized areas over central Kenya as well as parts of southern and north-western Ethiopia (Figure 2a).

The consolidated objective temperature forecast from 9 GPCs indicates an increased likelihood of warmer than normal surface temperatures over the entire region (Figure 1b). Probabilities for warmer than normal temperatures are most enhanced over Sudan, northern South Sudan, Ethiopia, Eritrea, Djibouti, Somalia and southern parts of Tanzania.

How should I use seasonal forecasts? Seasonal forecasts are tailored for planning purposes as they are associated with uncertainties. Therefore, this seasonal forecast should be used in conjunction with weekly and monthly forecasts as well as climate monitoring products issued by ICPAC and National Meteorological and Hydrological Services (NMHSs) of the region.

Rainfall Forecast March - May 2024

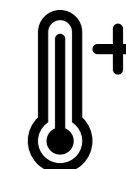
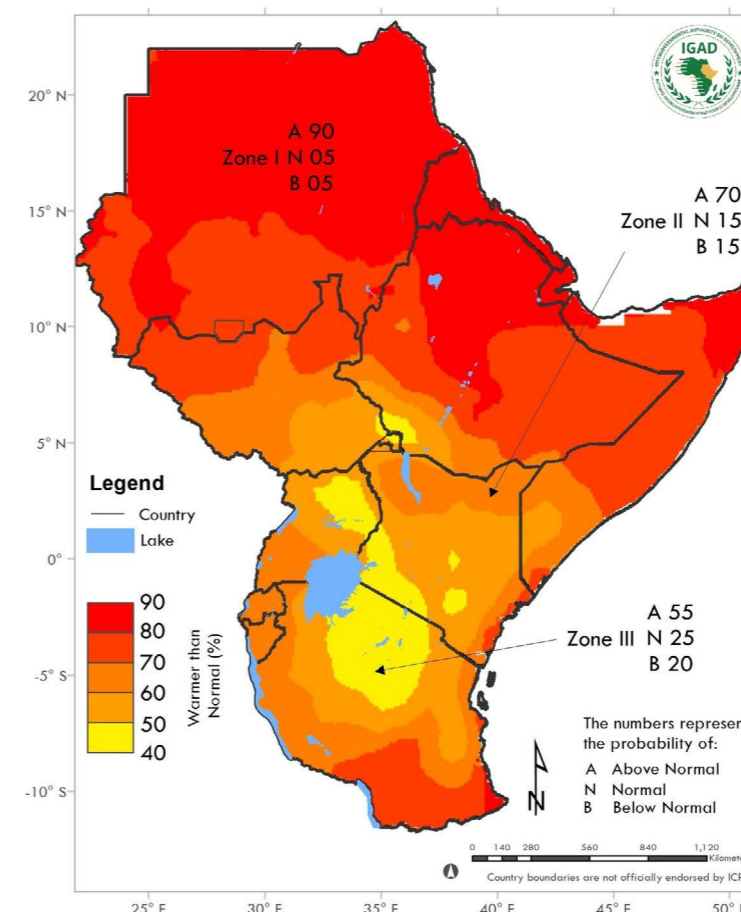


Rainfall



Figure 1 (a): March - May 2024 rainfall probabilistic forecast

Temperature Forecast for March - May 2024

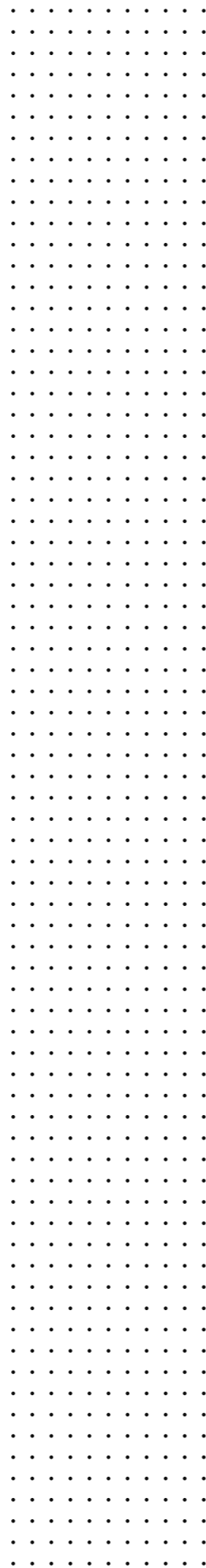


Temperature

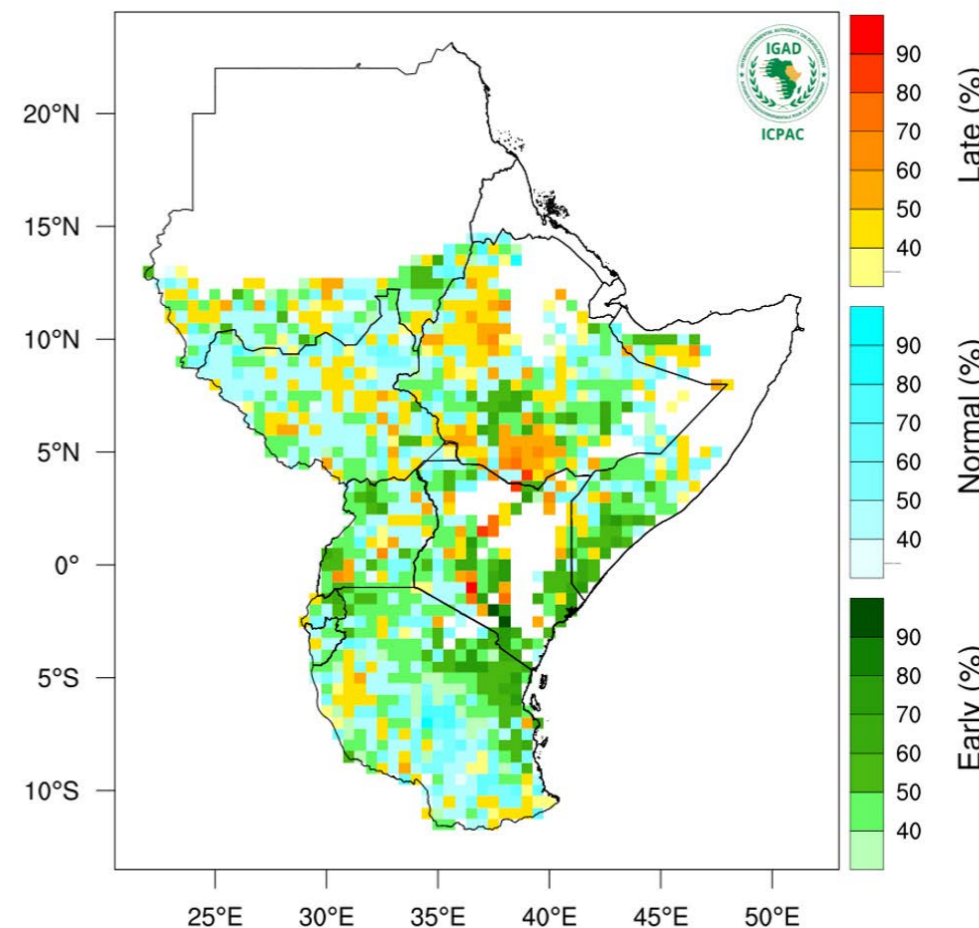


Figure 1 (b): March - May 2024 temperature forecast

Wetter than normal Conditions Predicted for most parts of the Greater Horn of Africa.



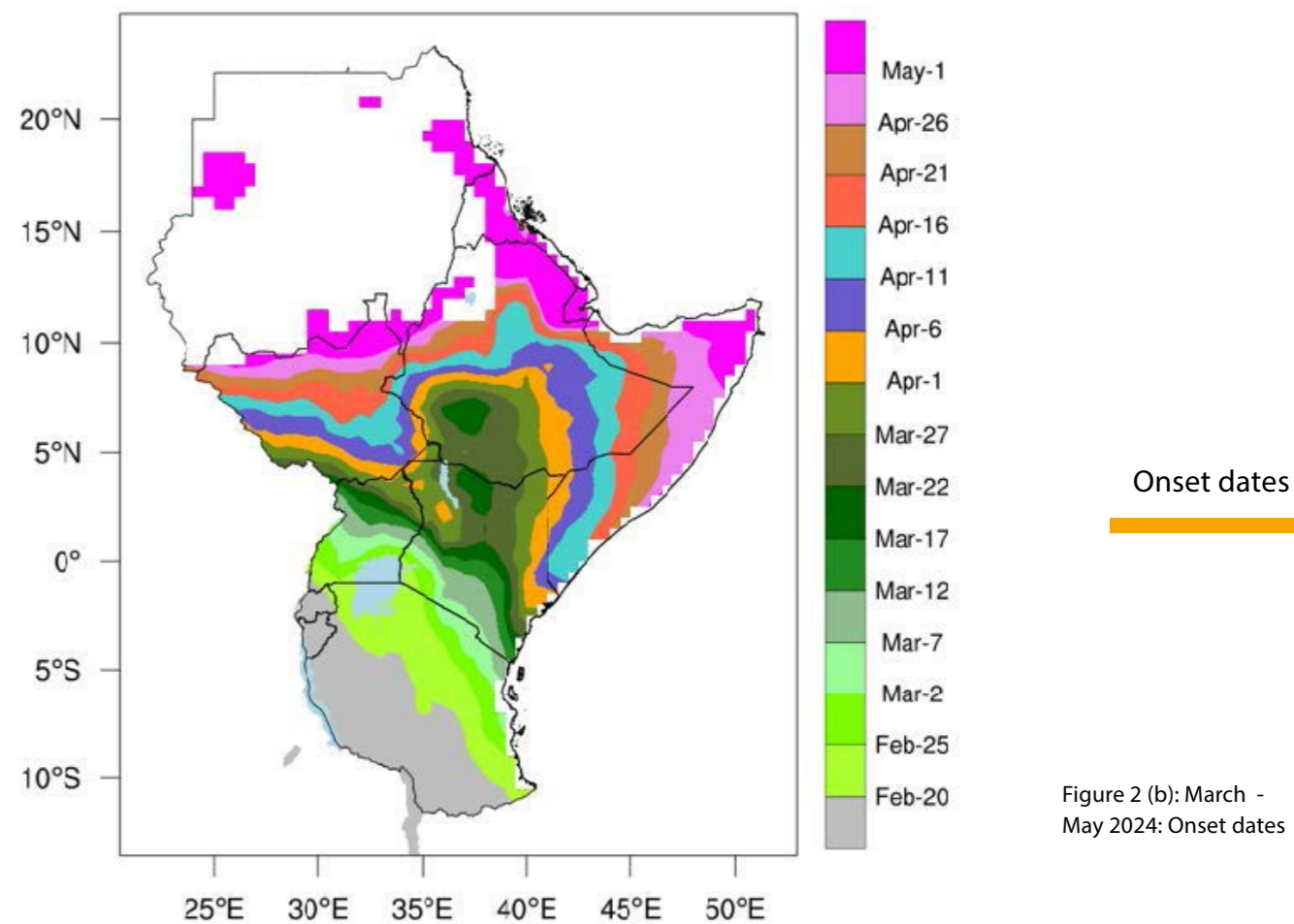
March - May 2024: Onset probability



Anomaly in onset of seasonal rains

Figure 2 (a): March - May 2024 Onset probability

March - May 2024: Onset dates



Onset dates

Figure 2 (b): March - May 2024: Onset dates

Probability of Exceeding 400 mm in MAM 2024

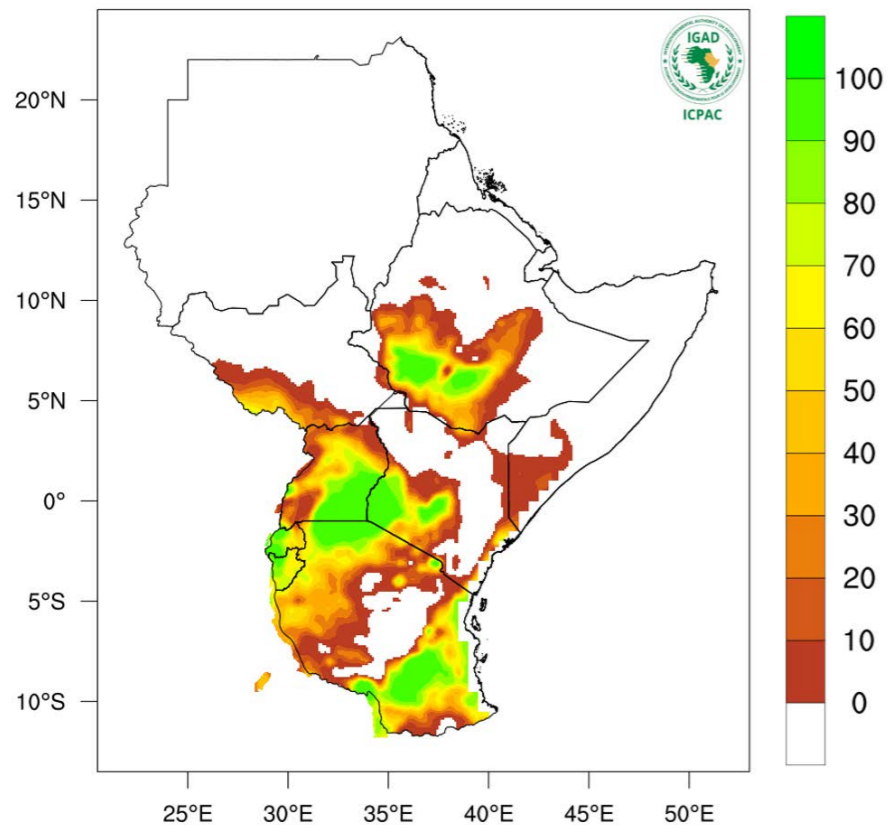


Figure 3: March - May 2024 probability of rainfall exceeding 400 mm

Probability of rainfall exceeding 400 mm

MAM 2024: Number of days of wetspells

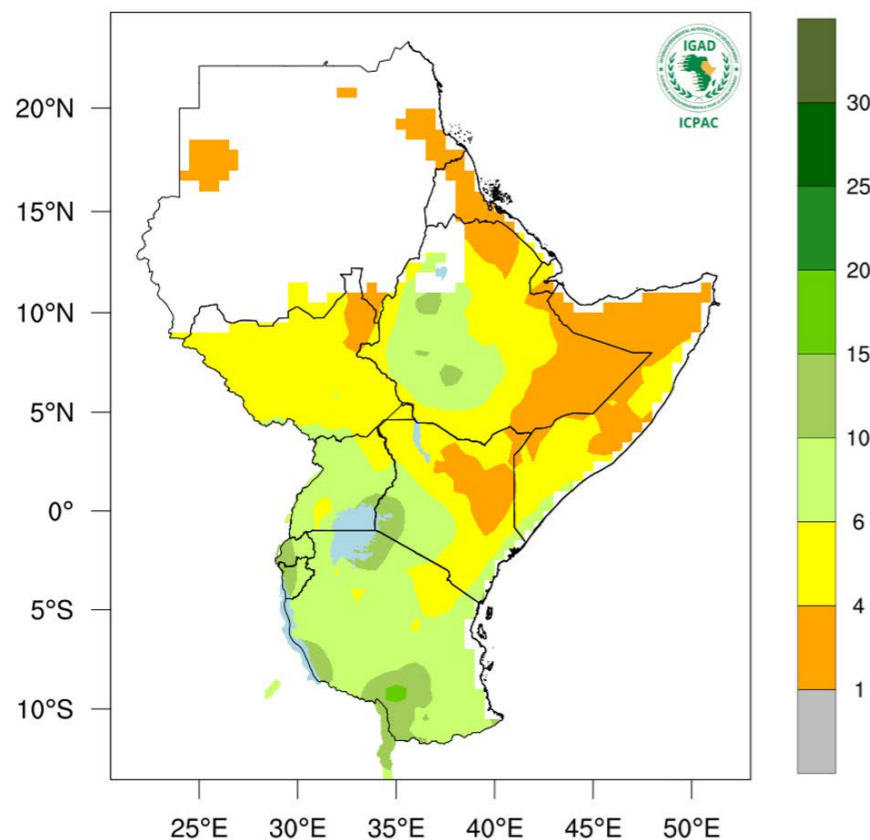


Figure 4: March - May 2024 maximum number of consecutive wet days

Maximum number of days of wetspells

March forecast

Rainfall probabilistic forecast for March 2024

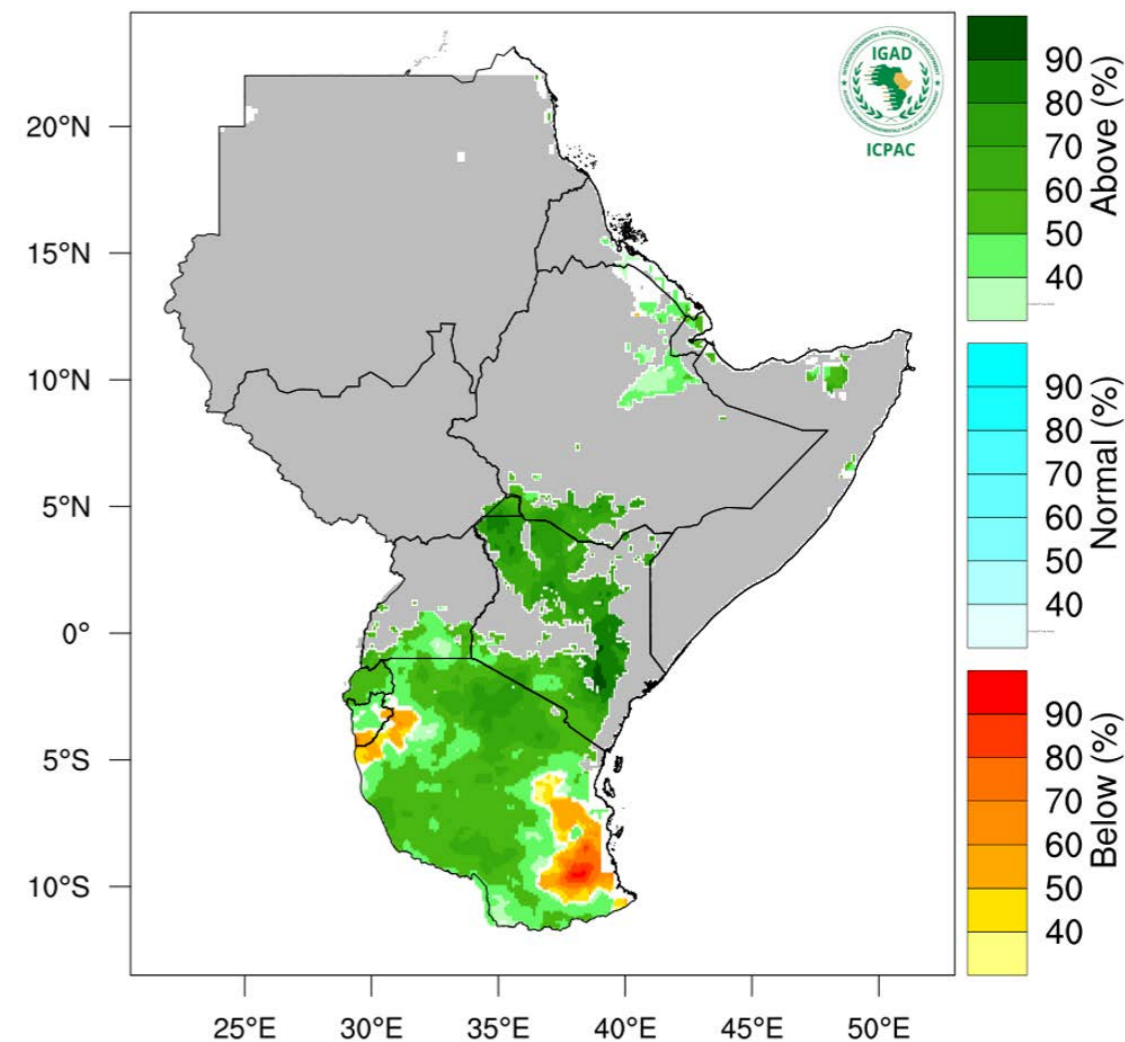


Figure 5 : March rainfall forecast

- Wetter than usual conditions expected over the southern part of the Greater Horn of Africa.
- Drier than usual conditions expected over south-eastern and north-western Tanzania.

DJIBOUTI



Agriculture and Food Security

Focus is mainly on vegetable and some fruits like watermelon, papaya, lemon among others. Expected wetter conditions is conducive for fruit and vegetable production, recharge of water points and good for regeneration of pasture. Good breeding of pests and diseases e.g. desert locusts.

Advisory

- Prepare land in time in anticipation for the forecasted wet conditions.
- Distribute early warning information to all stakeholders in time.
- Promote water harvesting through water pans by farmers.



Water and Energy

MAM is not the rainy season for Djibouti.

Advisory

- Carefully use of the available water resources.



Livestock

Reduced pastures in areas with below average rains leading to increased movement of livestock in search of pasture and water leading to land degradation. Higher competition and potential conflict due to migration related to inadequate pasture in areas of little or no rain. Higher chances of desert locust invasion (if other conditions are favorable).

Advisory

- Enhance disease surveillance especially for Transboundary Animal Diseases (TADs).
- Promote strategic restocking.
- Create community awareness about expected rains to plant fodder, present animals for vaccination, water harvesting etc.
- Raise awareness among IGAD Member States about the presence of desert locusts in Djibouti.



Health

Increased occurrences of diseases such as malaria, diarrhoea, dengue fever, and other waterborne illnesses are on the rise. Additionally, there is a likelihood of rural-to-urban migration as people seek employment opportunities in urban areas.

Advisory

- Maintain disease surveillance at all times.
- Create other sources of employment opportunities.

ETHIOPIA



Disaster Risk Management

Flooding is expected in areas like Somalia region. This would result in disrupted harvest, outbreak of diseases and also creation of favorable condition for desert locust.

Advisory

- Disseminate early warning information on time.
- Create gender responsive awareness on value addition of harvests, marketing and promoting a saving culture.
- Position medical supplies in hospitals.
- Unclog drainages.



Agriculture and Food Security

Early onset and late cessation with normal and above normal rainfall distribution during the season in all parts of Belg (Short season) growing areas is conducive for crop production. Outlook favors cultivation of perennial and long maturing crops (maize, sorghum) and fodders. Good crop stands and yield increment is expected (normal and above normal rainfall). Outlook presents conducive environment for fertilizer utilization. Might negatively impact harvesting of irrigated crops especially irrigated wheat due to early onset. It favours breeding of desert locust and quelea birds. The expected dry spells likely to increase risk of crop stress in drought prone areas.

Advisory

- Urge government to enhance climate advisory services for utilization in agronomic practices.
- Appeal to the government to facilitate early distribution of agricultural input due to early onset.
- Distribute early warning, monitoring and control of desert locust and other pests.
- Integrate climate information into insurance, credit provision, crop monitoring and yield forecasting.



Water and Energy

Enhanced water availability for different users for the Southern and Eastern basins. Stable hydropower generation for the hydropower systems located in the east and south basins. Risk of flooding in the basins where MAM is a rainy season.

Advisory

- Provide early warning information.
- Coordinate with disaster risk agencies.
- Encourage water harvesting measures.



Livestock

Outbreak of water born disease and internal parasites, TADs. Reduced pastures in areas with below average rains leading to increased movement of livestock in search of pasture and water leading to land degradation. Higher competition and potential conflict due to migration related to inadequate pasture in areas of little or no rain. Livestock deaths due to flash floods in regions that will receive heavy rains. Higher chances of desert locust invasion (if other conditions are favorable). Heavy rains will affect timely access to markets.

Advisory

- Promote conservation of excess pasture and water.
- Enhance disease surveillance especially for TADS.
- Create community awareness about expected rains to plant fodder, present animals for vaccination, water harvesting etc.
- Raise the level of awareness among IGAD Member States regarding the desert locust infestation in Ethiopia.
- Activate the pre and post migration peace committees to mitigate conflicts between pastoralists, farmers, wildlife.
- Improve access to early warning messages and build capacity of communities to understand and interpret the messages.



Health

Seasonal increase in malaria is expected due to increased temperatures and rainfall, which creates ideal conditions for mosquito breeding. Likewise, cholera outbreaks are probable in regions experiencing prolonged rainfall and excessive precipitation, leading to potential flooding incidents. Additionally, heightened temperatures in specific hotspot areas pose a risk of heat stress, particularly impacting the vulnerable populations such as the elderly and children.

Advisory

- Create awareness and social mobilization.
- Conduct vector control and community mobilization.
- Enhance surveillance at all levels.
- Strengthen case management.

KENYA



Disaster Risk Management

Predicted enhanced rainfall is anticipated to cause flooding, land/mudslide, displacement and outbreak of diseases like malaria and cholera.

Advisory:

- Disseminate early warning information to communities in risk areas.
- Map out hot spot areas and relocation sites.
- Enhance disease surveillance and vaccinations.
- Preposition gender responsive emergency shelters.
- Preposition food and non-food items.



Agriculture and Food Security

Adequate moisture for crop production in most areas. Adequate water in reservoirs for irrigation. Likelihood of increased acreage under crop production. Likelihood of average to above-average crop production. Boost in availability of short season crops e.g., vegetables for consumption. Likelihood of flash floods inundating farmlands. Upsurge of pests and diseases within the season. Possibility of soil erosion and landslides in slopy areas affecting planted crops. Silting of water reservoirs and destruction of irrigation infrastructure. Inaccessibility to farms and produce markets due to infrastructural damage.

Advisory

- Advise farmers to prepare farms early and procure relevant inputs.
- Appeal government to expand/accelerate provision of subsidized fertiliser and seeds.
- Mobilise multiagency/counties approaches to respond to negative impacts e.g., floods, landslides, infrastructure breakdown, outbreak of pests, and diseases.
- Mobilise water harvesting initiatives for irrigation.
- Rehabilitate irrigation infrastructure and water reservoirs for enhanced water storage.



Water and Energy

Enhanced water availability for different users. Stable hydropower generation. Risk of flooding as well as displacement because of increase in lakes levels.

Advisory

- Continuously monitor water levels and provide early warning information in time.
- Provide water treatment chemicals.
- Balance the operation of the cascade dams to avoid flooding of downstream areas.



Livestock

Perceived impacts on livestock are; outbreak of waterborne diseases and internal parasites, TADs. Outbreak of Rift Valley fever (RVF) and other vector-borne diseases. Reduced pastures in areas with below average rains leading to increased movement of livestock in search of pasture and water leading to land degradation. Higher competition and potential conflict due to migration related to inadequate pasture in areas of little or no rain. Heavy rains will affect timely access to markets.



Health

Changes in weather patterns across central, western, and the rift valley regions may trigger floods, causing the displacement of communities. Such events can heighten the vulnerability of individuals, particularly children and the elderly, to vector-borne diseases and respiratory ailments. In areas surrounding Lake Victoria, the heightened frequency of vector-borne illnesses like malaria and Rift Valley Fever poses significant risks, particularly to children under the age of 5 and expectant women. Additionally, there is a rise in waterborne diseases such as dysentery, diarrhea, and cholera.

Advisory

- Promote conservation of excess pasture and water.
- Enhance disease surveillance especially for TADS.
- Create community awareness about expected rains to plant fodder, present animals for vaccination, water harvesting etc.
- Increase awareness about the presence of desert locust in Ethiopia and Djibouti.
- Activate the pre and post migration peace committees to mitigate conflicts between pastoralists, farmers, and wildlife.
- Improve access to early warning messages and build capacity of communities to understand and interpret the messages.
- Conduct humanitarian support with temporary shelter and the provision of medication and disease management.
- Supply testing and treatment commodities, including community sensitization and education.
- Treat and provide water treatment chemicals to households.
- Roll out cholera vaccination in targeted counties.
- Share advisories with stakeholders at all levels in good time.
- Use advisories to forecast and plan for areas with wetter than normal conditions.

SOMALIA



Disaster Risk Management

The expected heavy rains are likely to cause floods, disaster displacements, pest and diseases and disease outbreaks. Some parts of Somalia anticipated to experience localized dry spells.

Advisory:

- Disseminate early warning information in good time.
- Activate anticipatory action for floods.
- Activate contingency planning.
- Conduct site mapping and planning for potential relocation of affected people including targeted gender inclusive responses.



Agriculture and Food Security

The probability of expansion in plantation areas is high due to favourable expected conditions. Good prospects for crop production. Likelihood of soil erosion incidences particularly riverine areas. Possibility of the second generation of desert locust, especially in North West. Damage of road infrastructure which might have negative impact on food distribution.

Advisory

- Construct gabions and embankment for river breakage.
- Urge government to provide certified seed distribution for small holder farmers.
- Appeal to government and development partners to enhance humanitarian assistance.



Water and Energy

Enhanced water availability. Enhanced groundwater recharge. Risk of flooding.

Advisory

- Provide early warning information in good time.
- Coordinate with Disaster Risk Management (DRM agencies).
- Encourage water harvesting measures.



Livestock

Outbreak of waterborne diseases and internal parasites, TADs. Reduced pastures in areas with below average rains leading to increased movement of livestock in search of pasture and water leading to land degradation. Higher competition and potential conflict due to migration related to inadequate pasture in areas of little or no rain. Heavy rains will affect timely access to markets.

Advisory

- Promote conservation of excess pasture and water.
- Enhance disease surveillance especially for TADS.
- Create community awareness about expected rains to plant fodder, present animals for vaccination, and water harvesting etc.
- Increase awareness about the presence of desert locust in Djibouti and Ethiopia.
- Activate the pre and post migration peace committees to mitigate conflicts between pastoralists, farmers, and wildlife.
- Improve access to early warning messages and build capacity of communities to understand and interpret the messages.



Health

Surge of Malaria cases in regions affected by flooding, particularly in the riverine villages of Gedo, Lower Juba, Hiran, Middle Shabelle, and Lower Shabelle in Somalia. Additionally, there is a likelihood of outbreaks of Acute Watery Diarrhea (AWD)/Cholera in these regions, attributed to contaminated water sources. Potential dengue fever outbreak. Increase in malnutrition cases among children and women residing in nomadic communities distanced from the initial flood-affected areas.

Advisory

- Implement nutrition interventions in the target population and vulnerable groups, including providing cash vouchers and establishing new nutrition stabilization centers for severely malnourished children in towns such as Mogadishu, Bay, and Gedo regions.
- Implement preventive measures for AWD/Cholera and case management activities, including enhancing surveillance and building human resource capacity.
- Distribute mosquito nets in flood-affected areas, along with anti-malaria drugs, and conduct aerial spraying of mosquito breeding places.
- Conduct distribution of hygiene and sanitation kits, water purification tablets, and where possible, provide water trucking.



Agriculture and Food Security

Normal to early onset would help farmers to plant early. Good prospects for crop production. Average to above average rainfall will enhance availability of wild food and fruits in the green belt and Equatorial region of the country. Likelihood of some infrastructure destruction like roads which might lead to disruption of supply of food related goods and services. Likelihood of pests and diseases like fall army worms.

Advisory

- Urge government to undertake timely distribution of improved seeds and other agricultural inputs.
- Appeal government to provide extension services to the farmers throughout the season.
- Communicate and disseminate early warning information in good time through radios, Short Message Service (SMS), National Climate Outlook Forums (NCOFs), among others.
- Conduct crop monitoring and surveillance for pests and diseases across the country.



Water and Energy

Adequate water availability for various users. Risk of flooding and displacement of population.

Advisory

- Continuously monitor water levels within the country.
- Provide early warning information in time.
- Implement anticipatory actions.
- Monitor hydrometeorological situations in upstream transboundary basins.



Livestock

Outbreak of waterborne disease and internal parasites, TADs. Reduced pastures in areas with below average rains leading to increased movement of livestock in search of pasture and water leading to land degradation. Higher competition and potential conflict due to migration related to inadequate pasture in areas of little or no rain. Livestock deaths due to possible flash floods from the Democratic Republic of Congo. Heavy rains will affect timely access to markets.

Advisory

- Promote conservation of excess pasture and water.
- Enhance disease surveillance especially for TADS.
- Create community awareness about expected rains to plant fodder, present animals for vaccination, water harvesting etc.
- Increase awareness about the presence of desert locust in Ethiopia and Djibouti.
- Activate the pre and post migration peace committees to mitigate conflicts between pastoralists, farmers, and wildlife.
- Improve access to early warning messages and build capacity of communities to understand and interpret the messages.



Health

Anticipated increases in malaria cases expected across South Sudan as a result of unusual wet conditions, which are ideal environments for malaria vectors. Heightened rainfall may lead to a surge in yellow fever cases, as it facilitates breeding sites for the causing vector. Drier conditions in the northern areas of the country are expected to contribute to a rise in meningitis cases. Under-nutrition and malnutrition anticipated due to food shortages in the northern states of the nation.

Advisory

- Preposition antimalarials and Rapid Diagnostic Tests (RDTs) to state hubs and plan for Long-lasting Insecticidal Nets (LLINs) mass campaign.
- Plan for Indoor residual spraying (IRS) and larviciding in Point of care (POC) and refugee camps.
- Plan for vaccination and environmental management of all breeding sites.
- Plan for mass vaccination against meningitis.

SOUTH SUDAN



Disaster Risk Management

The season will be good for South Sudan and it is anticipated that there will be good crop yield, good pasture regeneration for livestock, stabilization of food prices and easy access to market.

Advisory

- Sensitize communities to maximize on crops and livestock production.
- Create awareness on water harvesting techniques.
- Create awareness on saving culture with target on men
- Raise awareness on value added income.

SUDAN



Disaster Risk Management

This is not the main season for Sudan. However, the predicted high temperature is likely to cause heat stress/stroke and dehydration. Other impacts include desert locust invasion and increased respiratory diseases due to dust storm.

Advisory:

- Sensitize communities on heat exposure targeting most vulnerable people like children, women, and the elderly
- Create awareness on reducing outdoor activities to minimize exposure to dust storms.
- Conduct sensitization on WASH related activities to improve hygiene.



Agriculture and Food Security

Forecasted dry and warm conditions are conducive for harvesting winter crops (wheat, garlic, spices). Conducive time for enhancing and preparing of storehouses. Ground water level will be deeper for the horticulture sector and this could hinder production and a likelihood of a reduction of irrigated lands.

Advisory:

- Focus on training programs during the March to May period, commonly regarded as a “dead” season in the country, to equip individuals with essential skills for the upcoming main season of June to September (JJAS). Training initiatives should emphasize critical areas such as land preparation, water harvesting techniques, and the restoration of wells.
- Appeal for concerted efforts to end conflict in the country to enable farmers resume to their normal farming and pastoral activities.
- Increase humanitarian support.



Water and Energy

MAM is not the rainy season for Sudan.

Advisory:

- Promote careful and efficient use of the available water resources.

UGANDA



Disaster Risk Management

Anticipated increase in water levels will improve water availability. However, the expected heavy rains are likely to cause floods, landslides, displacements and destruction of properties, hailstorm and windstorm, and disease outbreaks.

Advisory:

- Disseminate early warning information and sensitization factoring in needs and limitations of different gender groups.
- Map out alternate routes in flood prone areas and relocation sites.
- Establish gender-responsive emergency shelters and stockpiling of dignity kits.
- De-silt drainage channels.
- Preposition food and non-food items and stocking hospitals with medical supplies.
- Sensitize and create awareness on gender responses.



Agriculture and Food Security

High likelihood of improved crop yields (perennial and annual crops like maize, beans, sorghum, and millet due to the wetter than normal conditions and conducive soil moisture. Likelihood of flooding incidences which might lead to rotting of crops like cassava. Increased occurrences of pests and diseases like caterpillars, worms, banana wilt, fruit fries, coffee wilt, cassava brown streak virus disease (CBSV) etc. Incidences of soil leaching might occur leading to loss of soil fertility. Increased weeds leading to increased cost of labour and other inputs.

Advisory:

- Encourage farmers to utilize early warning information through multiple channels available to them, including the USSD code *201#, television, radio broadcasts, and other accessible platforms.
- Urge farmers to plant long maturing varieties and undertake timely and good agronomic practices e.g., weeding, terraces, mulching and utilize weather updates for tactical decisions.
- Urge farmers to undertake proper soil and water conservation practices e.g., rain water harvesting, trenches, bands etc.
- Advise farmers to avoid planting in low lying and flood prone areas.
- Urge farmers to plant cover crops to conserve soil nutrients.



Water and Energy

Enhanced water availability for various uses. Risk of flooding, soil erosion, water pollution, landslides and displacement of population. Risk of floating vegetation causing blockages of waterways, hydropower and water supply facilities.

Advisory:

- Provide early warning and flood alerts.
- Implement soil and water conservation measures.
- Promote the implementation of strategic lake water management practices to alleviate flooding in both upstream and downstream regions.



Livestock

Perceived impacts on livestock are; outbreak of waterborne disease and internal parasites, TADS. Outbreak of RVF and other vector born diseases. Reduced pastures in areas with below average rains leading to increased movement of livestock in search of pasture and water leading to land degradation. Higher competition and potential conflict due to migration related to inadequate pasture in areas of little or no rain. Heavy rains will affect access to markets.

Advisory:

- Promote conservation of excess pasture and water.
- Enhance disease surveillance especially for TADS including RVF.
- Create community awareness about expected rains to plant fodder, present animals for vaccination, water harvesting etc.
- Increase awareness about the presence of desert locust in Ethiopia and Djibouti.
- Activate the pre and post migration peace committees to mitigate conflicts between pastoralists, farmers, wildlife.
- Improve access to early warning messages and build capacity of communities to understand and interpret the messages.



Health

Cholera outbreaks in Mbale may stem from displacement from landslide-prone Bududa. Landslides result in fatalities, displacement, trauma, and heightened domestic violence. There's an increased risk of other waterborne diseases like typhoid.

Advisory:

- Increase antimalarials stock for areas prone to malaria.
- Raise public awareness on possible increase in malaria and waterborne diseases like cholera and typhoid.
- Appeal the Ministry of Disaster Preparedness to be on alert in case of landslides and massive floods.
- Expedite the plan for indoor residual spraying in eastern Uganda, planned for March 2024. This will help reduce malaria transmission.

BURUNDI



Agriculture and Food Security

Predicted normal to early onset is conducive for early planting. High likelihood of wetter than normal conditions will contribute to high soil moisture favourable to agricultural activities. Likelihood of good crop production is predicted. Longest dry spell length is predicted which can affect crop production at early stages due to water stress for longer period. Predicted late cessation and extended length of growing can lead to incidences of post-harvest challenges. Pests and diseases proliferation. Incidences of soil erosion.

Advisory

- Undertake early national climate information downscaling for the country.
- Recommend establishment/rehabilitation of soil erosion control structures e.g. contour lines, disches etc.
- Urge government to promote post harvest technologies (storage facilities).
- Advise farmers to promote the use of IPDM (Integrated Pests and diseases Management) technologies to manage pest and diseases within the season.
- Urge farmers to promote rain water harvesting technologies (collect and store surface rainwater for future use during drier conditions (JJA period is climatology dry for Burundi).



Water and Energy

Enhanced water availability for various users. Increase of Lake Tanganyika water levels. Risk of flooding and destruction of infrastructure.

Advisory

- Monitor water levels regularly.
- Provide early warning information.

RWANDA



Agriculture and Food Security

Above normal rainfall predicted over Rwanda is likely to lead to good crop prospects for the March to May season. Expected early onset is conducive for early planting but may negatively affect land preparation for some farmers. Likelihood of soil erosion affecting cropping areas. Prevalence of crop/animal pests and diseases due to enhanced rains and warmer than average temperatures.

Advisory

- Advise farmers to speed up land preparation and planting.
- Encourage farmers to join subsidized programs: Nkunganire System (SNS) for inputs and the National Agricultural Insurance Scheme (NAIS) to minimize impacts of wetter conditions that may occur in MAM 2024.
- Encourage farmers to conduct crop monitoring regularly to spot pest and diseases.
- Disseminate seasonal information early (Season B 2024) forecast through March to May 2024.
- Promote water storage options within farms e.g., rainwater harvesting, soil water storage, ponds, reservoirs, and groundwater banks to store excess water for potable water use and irrigation in times of deficits.



Water and Energy

Enhanced water availability for various users. Risk of flooding, landslide and destruction of infrastructure.

Advisory

- Monitor water levels regularly.
- Provide early warning information in good time.

TANZANIA



Water and Energy

Reduced inflow to reservoir in the Pangani basin. Possible reduction in hydropower generation. Minimal risk of destruction of infrastructure.

Advisory

- Encourage implementation of water harvesting measures.
- Optimize reservoir operation.
- Implement water conservation measures.






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