



ICPAC

Summary for Decision Makers

SEASONAL FORECAST

June to September 2021



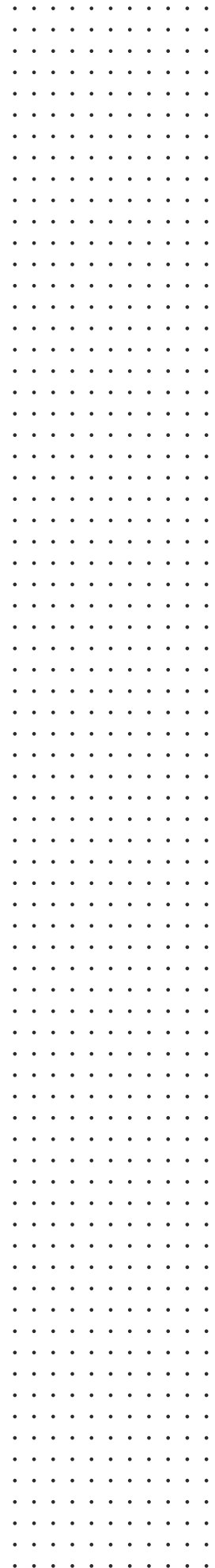
Rainfall and Temperatures

The upcoming rainfall season, June to September, is an important season for Djibouti, Ethiopia, Eritrea, South Sudan, Sudan, and Uganda. For some of these countries it is the main farming season for their staple crops.

A wetter than usual season is expected in Djibouti, Eritrea, much of the northern two-thirds of Ethiopia, South Sudan, Sudan, and Uganda. The Karamoja Cluster, which covers parts of Ethiopia, Kenya, South Sudan, and Uganda is expected to experience a wetter than usual season. The forecast indicates a 15% higher than usual chance of receiving more than 400 mm accumulated rainfall during June to September over central Sudan and 5% increased chance of exceeding 400 mm over western Ethiopia and western South Sudan. Albeit the expected wetter than usual season over western Ethiopia and southern parts of Sudan, there is a chance of having more than usual dry spells.

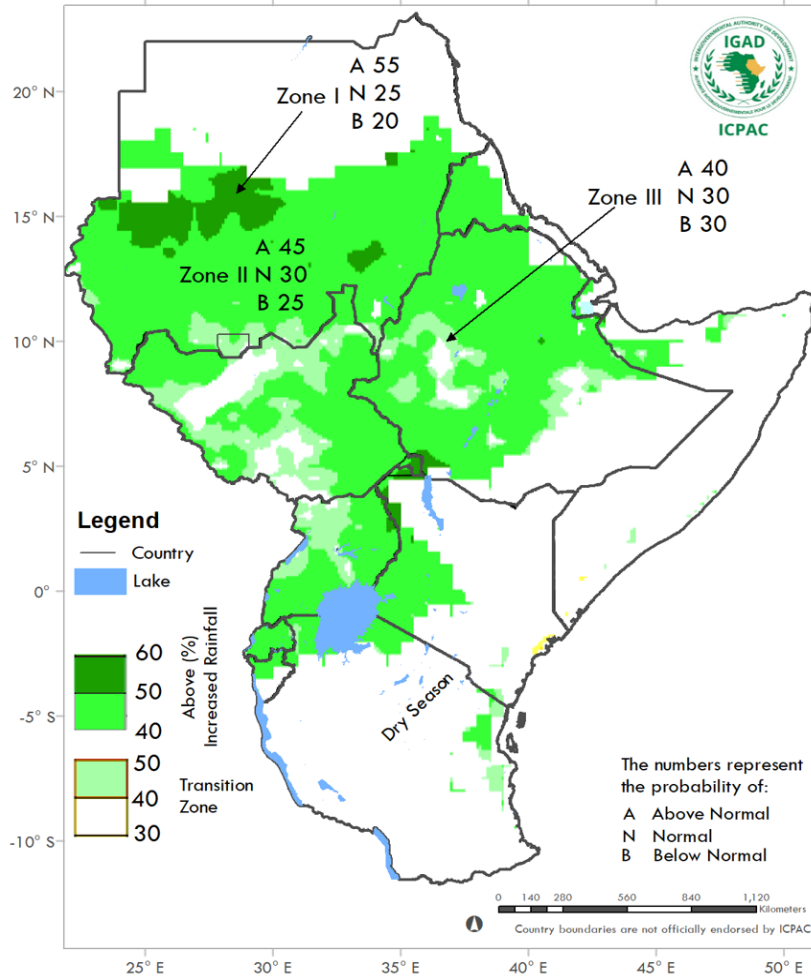
An earlier than usual start of the season is expected over western Ethiopia, eastern South Sudan and southern parts of Sudan. A delayed start to the season is expected in the eastern areas of the region including margins of northern Sudan, northern and eastern Eritrea, north-eastern and eastern Ethiopia, and northern Somalia.

How should I use seasonal forecasts? *Seasonal forecasts need to be used with caution for planning purposes because of the uncertainty inherent in seasonal forecasting. It is crucial to update and adjust plans with weekly and monthly forecasts as well as climate monitoring products issued by ICPAC and NMHSs.*



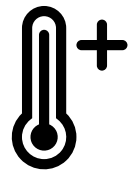
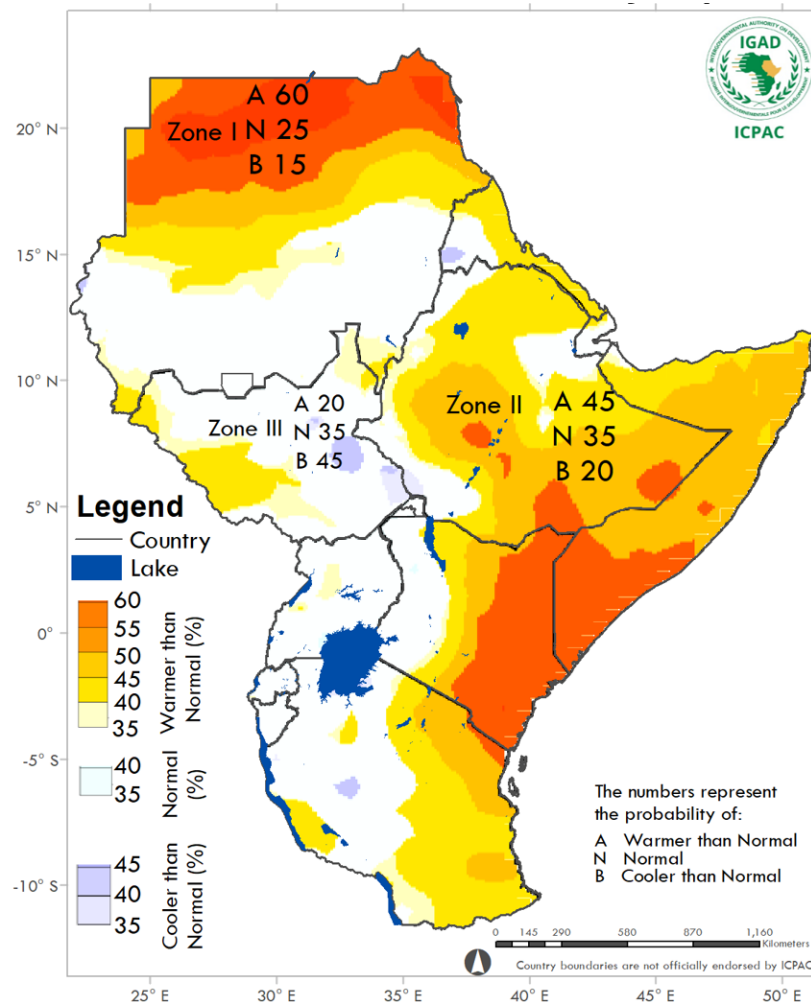
Rainfall Probabilistic Forecast June - September 2021

Seasonal forecast for June to September 2021



Rainfall

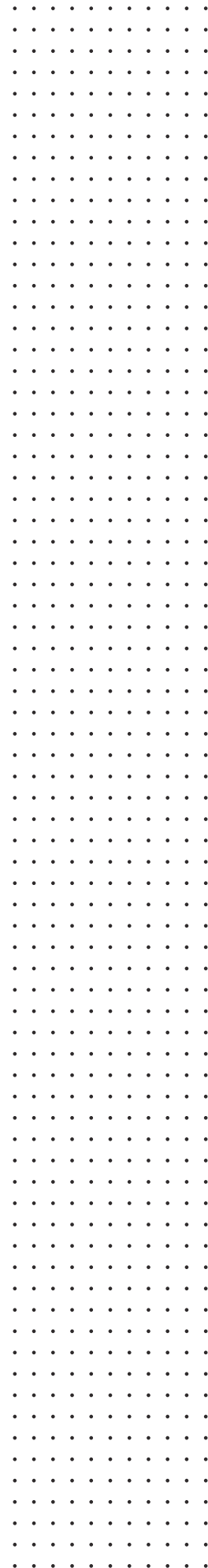
Temperature Probabilistic Forecast for July - September 2021



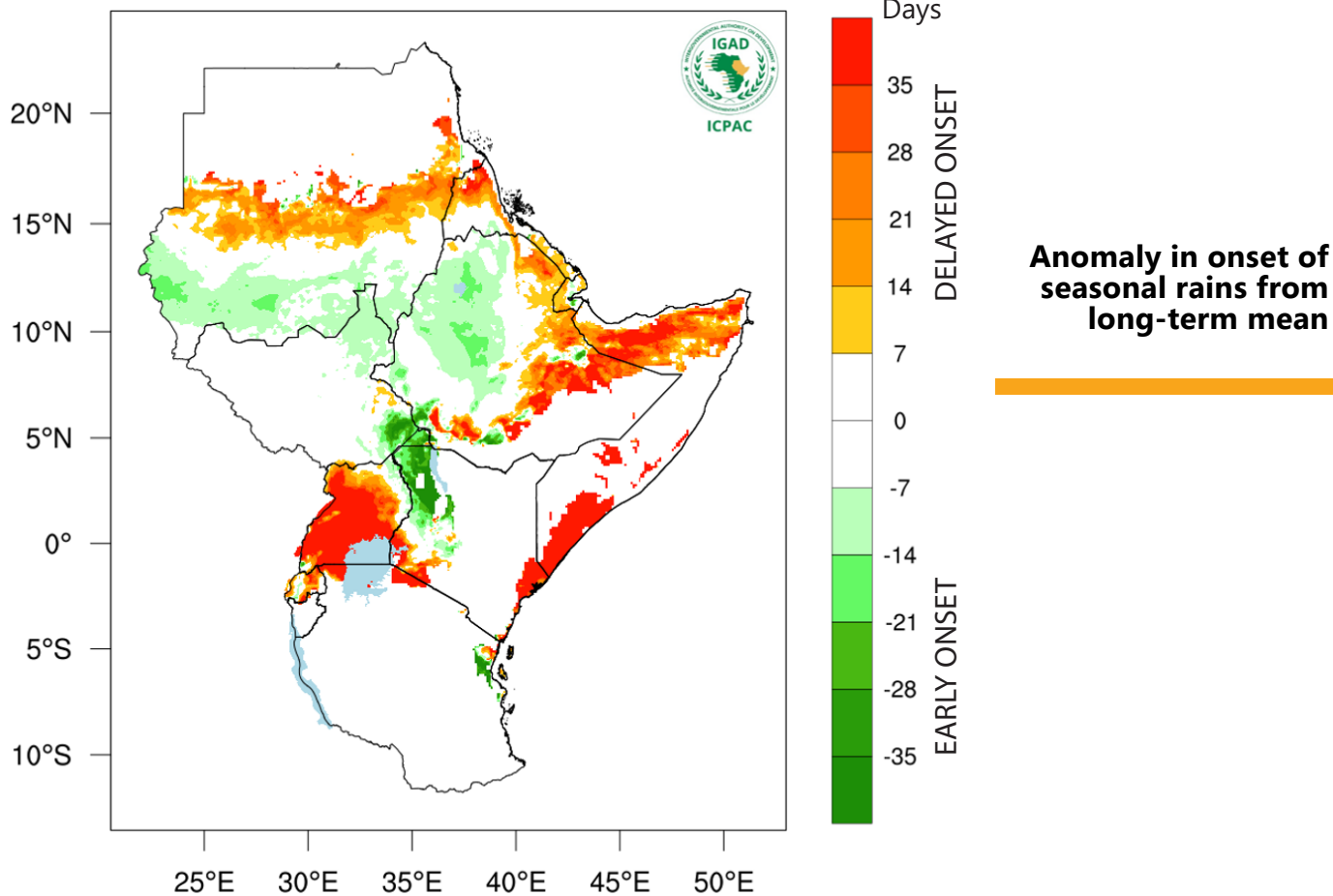
Temperature

FIGURE 1 and 2:
Seasonal forecast for June to September 2021

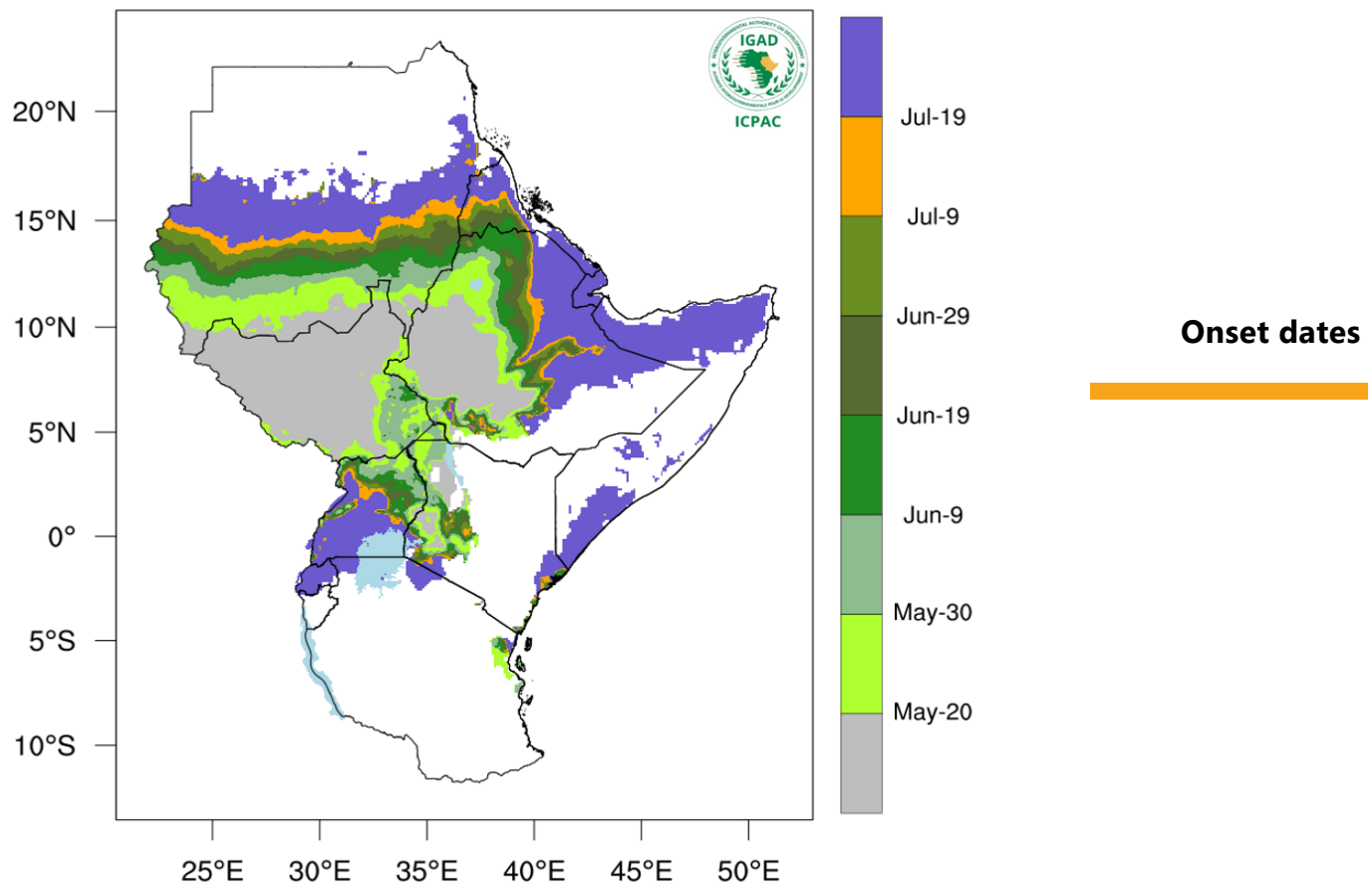
A late onset is expected over northern Sudan, Eritrea, north-eastern and eastern Ethiopia, and northern Somalia.



JJAS 2021: Onset anomaly

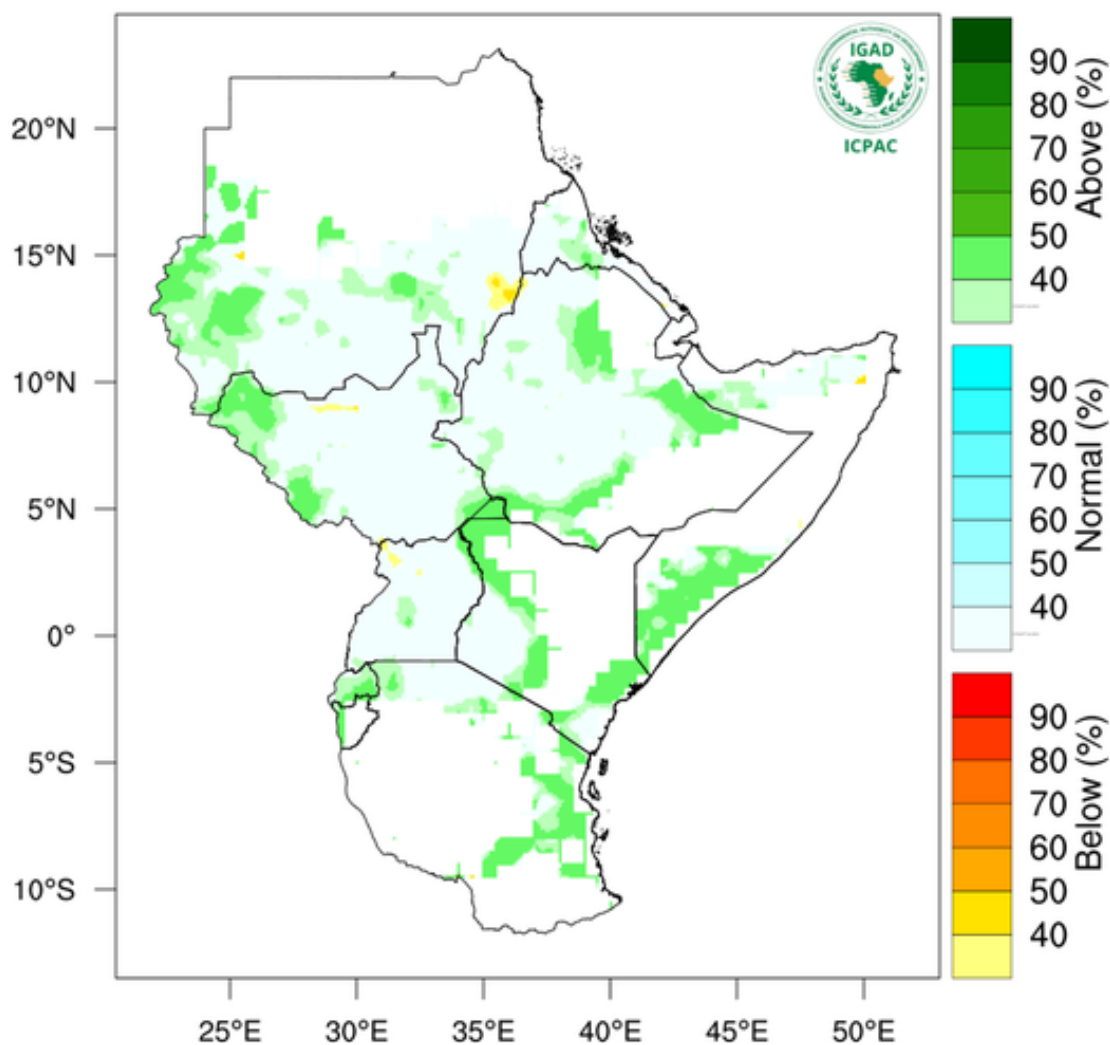


JJAS 2021: Onset dates



June forecast

June Monthly Probabilistic Rainfall forecast

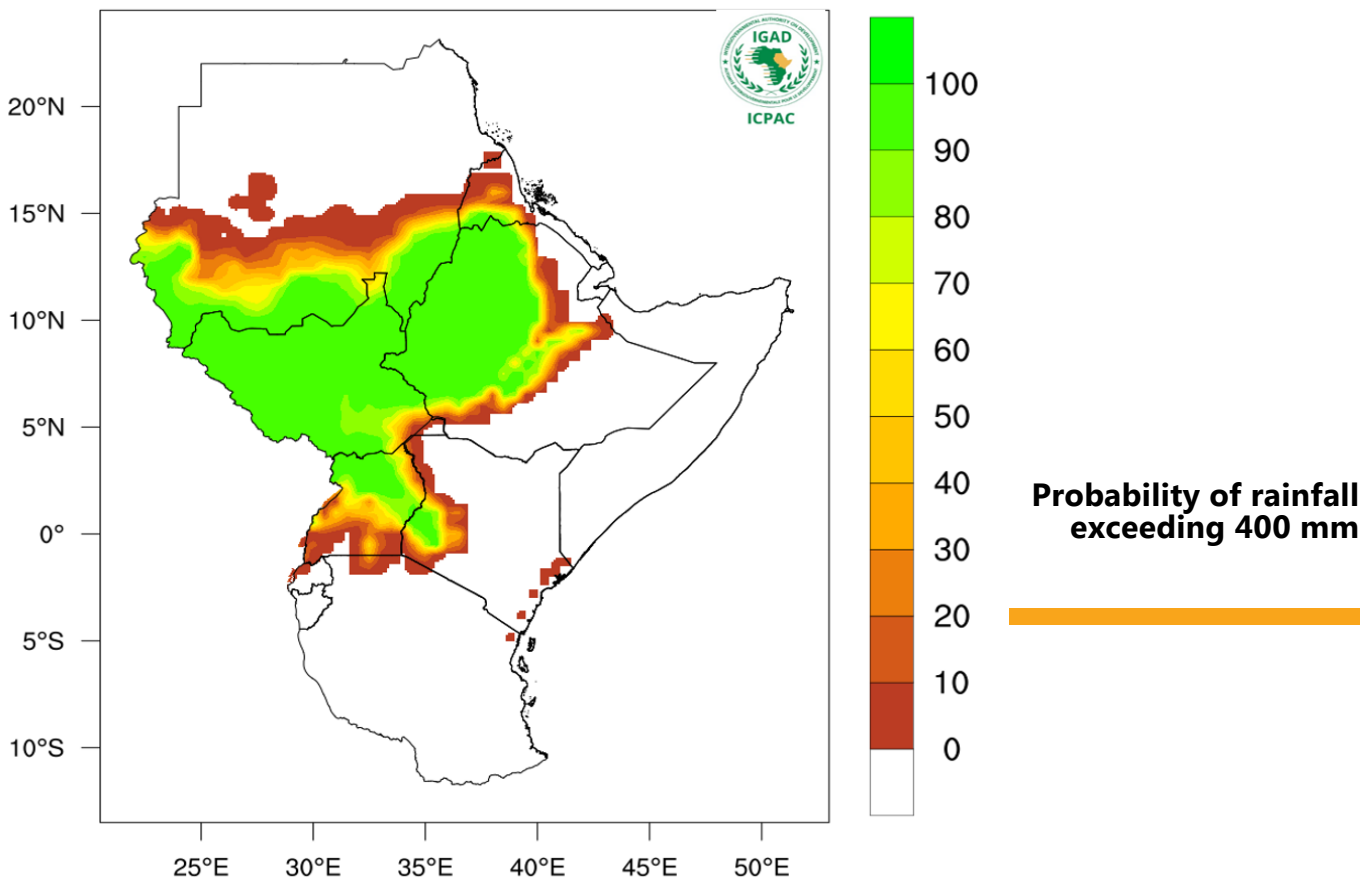


Wetter than usual conditions are expected over areas of coastal, central and north-western Kenya, southern Somalia, eastern and south-western Ethiopia, western South Sudan, and western Sudan.

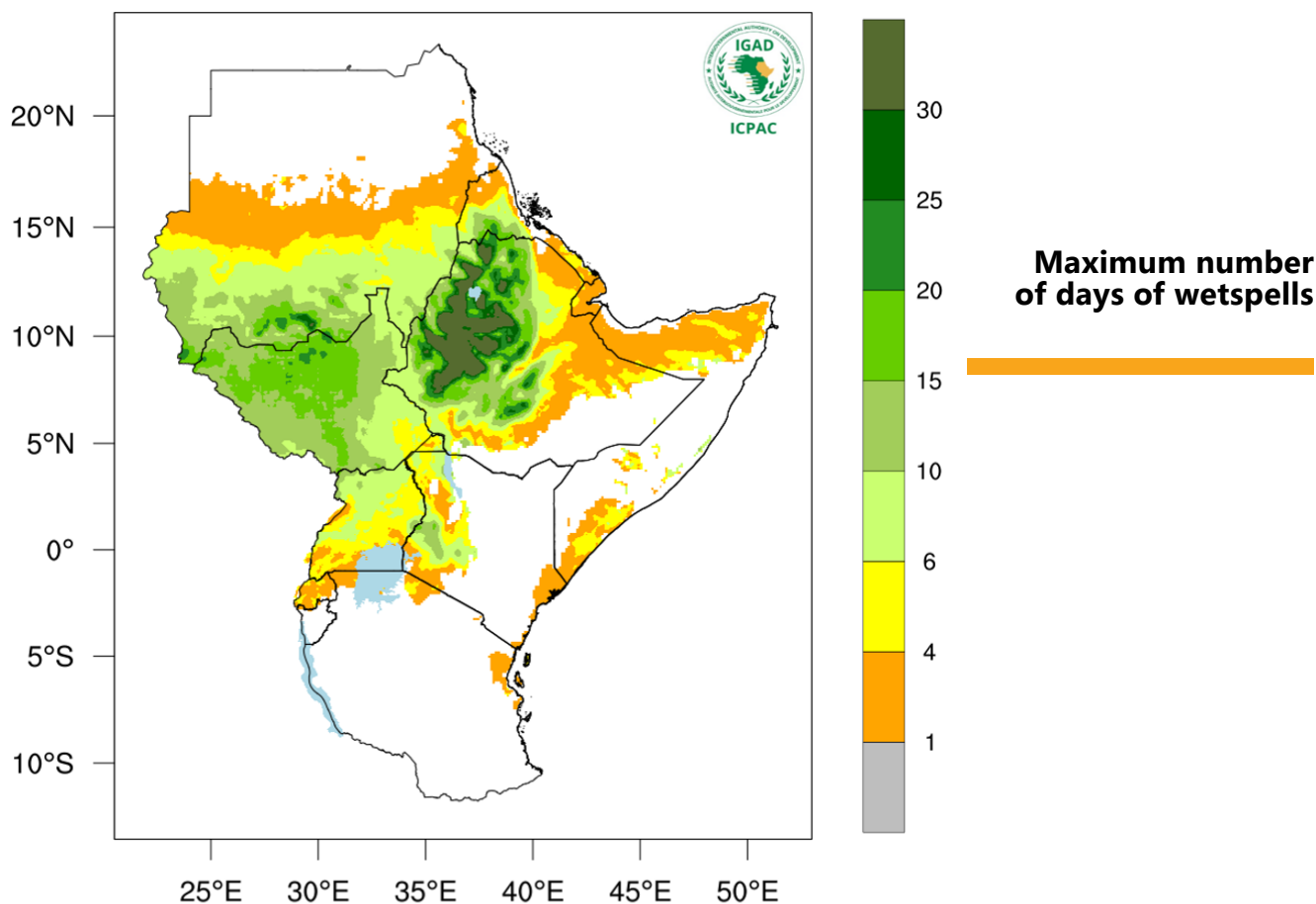
Usual conditions expected over central and western Ethiopia, much of South Sudan, Uganda, southern and eastern parts of Sudan, northern Somalia, and Lake Victoria basin of Kenya.

The rest of the region is expected to remain dry.

JJAS 2021: Probability of Rainfall Exceeding 400 mm



JJAS 2021: Number of days of wetspells



DJIBOUTI



Disaster Risk Management

Possibility of occurrence of flash floods in Djibouti city.

Advisory

- Establish flood preparedness and contingency plans



Water and Energy

Enhanced water storage due to the forecasted above-average precipitation. Possibility of secured water for the use of pastoralists. Enhanced groundwater recharge.

Advisory

- Desilt water pans and other storage facilities to accommodate maximum inflows



Livestock

Expected improved availability of pastures and water for livestock and improved milk production.

Advisory

- Watch out for flash floods that could lead to livestock losses especially in river beds
- Increase surveillance for Rift Valley Fever and cases of Pneumonia
- Careful restocking is advised



Health

Risk of outbreaks of vector-borne diseases such as Malaria, Dengue fever and risk of Cholera and Heatstrokes.

Advisory

- Distribution of mosquitoes net
- Wash hands often with soap and clean water, safe and well-covered food
- Drink plenty of fluids and wear lightweight clothing



Environment and Forestry

Normal to above-normal rainfall is expected in Djibouti. Good conditions for tree planting programme.

Advisory

- Reforestation and restoration activities of Day and Mount Mabla forests

ETHIOPIA



Disaster Risk Management

Floods and landslides are expected, which might result in displacement, loss of life, and livelihoods mainly in flood-prone areas and lowland areas. Risk of water-borne disease outbreaks.

Advisory:

- Strengthen preparedness and disseminate risk information
- The flood task force is activated already and will remain on standby for the season
- Prepare/review contingency plans with relevant sectors



Agriculture and Food Security

Good crop prospects due to conducive conditions for planting and sowing. Likelihood of a reduction in pests. The early onset is likely to affect the land preparation time. Likelihood of floods and waterlogging incidents in flood prone areas (Afar, eastern Amhara, SNNP). A desert locust outbreak is likely due to the good vegetation caused by rainfall. Moist conditions are suitable for weed infestation. The intermittent moist condition might be favorable for pest and disease outbreaks over moisture stress areas.

Advisory

- Early distribution of seeds and fertilizers and early land preparation
- Remain alert due to the risk of heavy rainfall and build conservation structures
- Issue Early Warning Advisory for Desert Locust
- Farmers advised to make small water channels on their land and conduct soil and water conservation measures
- Plant water-tolerant crops in places with higher than usual rainfall



Water and Energy

Enhanced inflows to water storage facilities for water supply irrigation and hydropower. Risk of riverine and flash flooding.

Advisory

- Create awareness to communities that are at risks associated with floods
- Update basin management plan based on the forecast
- Provide early warning information on potential risks



Livestock

Good production of fodder in zones with good rainfall. Poor pastures are expected in the Borana areas and the Somali region. High livestock movements are expected in these areas and with this comes disease sharing among herds and conflicts over the limited resources. Likely persistence of the desert locust in the country.

Advisory

- Flood control in flood-prone areas
- Fodder harvesting and preservation is advised
- Close monitoring of seasonal performance in Borana and Somali region
- Conserve water and pastures/fodder in the areas receiving good rains during this season
- Conduct an awareness-raising campaign, as soon as possible to avoid negative impacts
- Monitor Desert locust



Health

Risk of Malaria and Chikungunya transmission / outbreaks in regions that will receive higher than usual rainfall. Possibility of Cholera outbreaks. High incidence in eastern parts of Ethiopia.

Advisory

- Residual spraying and insecticide-treated bed nets
- Risk communication campaigns to use mass media to support vector control
- Cholera surveillance in areas expected to be hotter than usual



Conflict Early Warning

The season is the major cropping season for the Tigray region. The good agriculture prospect might lead to conflict over land and agricultural input. The ongoing conflict in the region may also hamper adequate utilization of the season. Active conflict expected around the northern basin of Lake Turkana owing to the anticipated migration of Turkana herders.

Advisory

- Disseminate climate information, community awareness, resource mobilization
- Expand irrigation facilities
- Provide humanitarian assistance, particularly in Oromia, Tigray, Amhara, Somali, and Southern Nations, Nationalities, and People's Region, where there are ongoing socio-political conflicts that are hindering



Environment and Forestry

Expected enhanced rainfall good for tree planting programme. Likely increased forage and biomass for both wildlife and livestock. High rainfall likely to cause land degradation/soil erosion especially in the highlands.

Advisory

- Right timing of tree planting programmes
- Land management and soil conservation initiatives

KENYA



Disaster Risk Management

Flooding in western parts of the country, mainly in the flood-prone areas. The dry conditions in the east might contribute to resource-based conflict mainly in the arid and semi-arid areas. A cholera outbreak is expected over the western part of the country.

Advisory:

- Conduct early awareness-raising campaigns and community sensitization
- Activate drought contingency plan for ASAL and flood contingency plans for the western parts of the country
- Preposition food and non-food items for communities that might be affected during this season
- Multi-Agency teams to plan and coordinate preparedness plans and response. The ministry of health to assist
- Relocation of communities at high risk of flooding in advance



Agriculture and Food Security

Enhanced rains to contribute positively to crop production (harvest in September). The heavy rainfall and cold conditions will not be very favorable for the harvesting of Beans in western Kenya.

Advisory

- Put in place proper post-harvest handling for beans



Water and Energy

Water scarcity may be experienced in some basins that received less than usual precipitation during the March-May rainfall season. There is a possibility of floods and landslides associated with the high rainfall amounts which can cause displacement and loss of life, particularly in the Lake basin. Further rise in Lake water levels due to enhanced rainfall is likely to cause further inundation, displacement of people and increased threat to infrastructure around the lakes

Advisory

- There is a need to conserve water for the areas that will experience a dry season
- Provide water trucking services to those in need of water and far from water sources
- Provide early warning information on potential risks



Livestock

Pastures and fodder production will go down, animal body conditions expected to decline. There are high chances of more animal migrations in the region. With this comes conflict and disease sharing among herds. Poor animal body conditions mean lower immunity and hence higher susceptibility to infections.

Advisory

- Monitor closely seasonal performance
- Conduct routine control Trans-boundary Animal diseases (TADs)
- Conduct an awareness-raising campaign, as soon as possible to avoid those negative impacts



Health

Increased probabilities of vector-borne diseases especially malaria in Western and north-western Kenya. In Coastal Kenya elevated incidence of Dengue fever and malaria in some parts may be experienced. No change is expected in terms of disease patterns in the rest of the country.

Advisory

- Risk communications to areas at risk of an outbreak of malaria and dengue
- Social behavior change communications on public and household prevention strategies and promotion of prompt care-seeking
- Provide and pre position treatment commodities. Eg. Medicines, diagnostics, and supportive care supplies
- Provision of emergency funding to at-risk health care systems for any outbreaks management operations
- Intensify surveillance of all climate -sensitive/induced diseases



Conflict Early Warning

Anticipated congregation of herders along the mountainous border escarpments with Uganda. Anticipated migration of herders towards the north of Lake Turkana and the border areas with Ethiopia. Heightened conflict between cross-border communities along the border escarpments and around Lake Turkana catchment areas with Ethiopia.

Advisory

- Disseminate the outlook and likely impacts with the implicated frontier county authorities of the
- Activate cross-border peace committees early enough to start engaging with communities on peaceful coexistence



Environment and Forestry

Enhanced rainfall especially in the western parts of Kenya to benefit forests and planted trees growth and warmer than usual temperatures in the eastern parts of Kenya likely to: Reduce the forage and water for wildlife and likely to cause human-wildlife conflicts around protected areas; Speed up the drying of vegetation and increase the wildfires.

Advisory

- Continue the initiated tree planting programme
- Monitor human-wildlife conflict hotspots areas
- Conduct fire management practices especially in the fire hotspots areas Eg. Tsavo, Aberdares, and Mt Kenya

SOMALIA



Disaster Risk Management

Coastal Somalia to have water availability for domestic and livestock use. Although this is not the main rainy season, storms might affect the coastal areas like the previous JJAS season and livelihoods might be disrupted. Likelihood of flash floods over coastal Somalia. Temperature is likely to be cooler over the south due to cool wind and storms Northern parts of the country expected to experience high temperatures.

Advisory:

- Conduct a National Climate outlook forum (NCOF) for Somalia with relevant sectors to design measures that will be taken during the season
- Sub-national COF for selected districts that will be impacted negatively by the JJAS season
- Put in place cyclones Preparedness plans
- Communities in the northern parts to monitor the temperature rise and take the necessary measures



Agriculture and Food Security

Water stress over most parts of the country. Decreased crop production due to water stress. Limited damage of land area by Desert Locusts. Drought conditions over regions expected to be dry. Possibility of floods / flash floods in the North.

Advisory

- Cultivate short-cycle crops (Early maturing varieties)
- Monitor closely river levels and drought conditions by concerned authorities
- Households advised to move closer to water sources and practice water harvesting
- Undertake rehabilitation of flood-affected infrastructures like canals and embankments
- Continued Humanitarian support for regions that are food insecure



Water and Energy

Water scarcity may be experienced in some districts that received below-average precipitation during the March-May rainfall season.

Advisory

- Conserve water for those areas that will experience a dry season from June to September
- Provide water trucking services to those in need of water and far from water sources



Livestock

Animal movements to occur in some areas due to inadequate water and pasture

Advisory

- Take advantage of the expected good market prices due to the Hajj to sell their livestock
- Conduct close monitoring of season's performance



Health

Increased Malnutrition rate due to seasonal crop failure resulting in food insecurity among women and children in the farming communities, IDPs, and urban poor. Increased AWD/Cholera outbreak due to shortage of Water and deteriorated hygienic conditions among IDPs and vulnerable communities. Increased population displacement due to drought and food insecurity.

Advisory

- For Malnutrition: Enhance Nutrition Promotion interventions to reduce malnutrition, establishment stabilization centres, supplementary feeding, Nutrition screening, provision of Cash assistance to malnourished families
- For AWD/Cholera: Implement all preventive measures including hygiene promotion, water source purification, and case management interventions of AWD/Cholera in the affected areas
- Increase food aid

SOUTH SUDAN



Disaster Risk Management

Floods are expected over Jonglei and Upper Nile states. This could lead to disease outbreaks and displacement of people. Risk of conflict among farmers and pastoralist over central and eastern equatorial where farming takes place due to completion for resources. There might be issues of access in flood-affected areas and this needs prepositioning food and non-food items to optimal locations in advance.

Advisory:

- Engage national DRR platform and early warning working group members to advise on the response strategies
- Conduct national COF with the support of the national meteorological office to have a good contingency plan and specific advisories
- Publish early warning bulletin and policy briefs and disseminate to stakeholders
- Prepare contingency plans for response and engage partners



Agriculture and Food Security

Limited disease outbreaks Eg. fall armyworms. Increase of production acreage due to favorable conditions Limited storage facilities for the first harvest might lead to post-harvest losses. Likelihood of transportation problems due to damaged roads. Difficulties in hiring labor.

Advisory

- Early distribution of seeds for the second season
- Practice proper post-harvest management for the March-May crops
- Conduct continuous monitoring of the season including use of forecast updates



Water and Energy

Enhanced inflows into the country from upstream countries due to enhanced rainfall particularly in Ethiopia and Uganda. Risk of riverine and flash flooding and prolonged water logging condition. Delayed/difficulties in dykes repair work due to wet ground/water logging condition.

Advisory

- Create awareness to communities that are at risk associated with floods due to enhanced rainfall forecast
- Provide early warning information on potential risks



Health

Risk of ARI (Acute respiratory infection), AWD (Acute Watery diarrhea), ABD (Acute bloody diarrhea), Malaria, Measles, RVF (Rift Valley Fever), and HEV (Hepatitis E Virus).

Advisory

- Prepositioned IPC materials and outbreak investigation kits
- Conduct follow up serological testing, already planned at UVRI
- Continue community awareness, already in progress, to mitigate the risk of RVF spreading from animals to human by observing RVF preventive measures
- Encourage integration of all Community resources networks (ICMN, Hygiene promoters, nutrition workers, EPI team, Animal health workers, Polio team, and BHI workers) to support risk communication and AHR surveillance in Humans and Animals

SUDAN



Disaster Risk Management

Riverine floods along the Blue Nile and the White Nile are expected. This could damage public utilities and houses, disrupting the lives and livelihoods of communities. Urban floods for Darfur, Kasala, and Khartoum, among others. High temperature over the northern part, will have less impact as there are less to no population in such places.

Advisory:

- Conduct emergency preparedness planning and coordinate response
- Ensure source for funding in advance for preparedness and response
- Conduct community sensitization and engagement
- Share forecast with the flood task force, including Sudan Met office, national NGOs, and other stakeholders



Agriculture and Food Security

The wetter than usual season gives good prospects for agriculture. Likelihood of floods and waterlogging incidences.

Advisory

- Establish a plan for the summer season in terms of land to be cultivated and crop composition
- Extension staff to advise on timing for sowing and crop selection including determining the quantity and type of seeds to be provided to smallholders. For areas that will experience poor rains, early maturing varieties should be distributed and high yield variety to the areas of above-average rains
- Undertake rehabilitation of drainage systems especially in flood-prone areas
- Undertake early transportation of agricultural inputs to the areas where roads were cut by rains
- Encourage planting of watermelon seeds as a cash crop in flood-prone areas
- Farmers should cultivate rain resistant crops and replace crops not resistant to excessive rains like sesame



Water and Energy

Enhanced inflows into the country from upstream countries due to enhanced rainfall particularly in Ethiopia and South Sudan. Risk of riverine and flash flooding and prolonged water logging condition. Enhanced water storage due to the forecasted above-average precipitation.

Advisory

- Create awareness among communities at risk on the risks associated with floods
- Update basin management plan based on the forecast
- Provide early warning information on potential risks



Livestock

Improved pasture regeneration and water harvesting. Seasonal Animal movement expected from South Sudan to the southern part of Sudan (South and East Darfur, South Kordofan, White Nile, Blue Nile, and Sinnar) up to central states (North Kordofan, Gadarif, and Kassala states) to avoid flies and mosquitoes leading to disease sharing among herds.

Advisory

- Conduct flood control measures in flood-prone areas
- Conserve water and pastures/fodder in the areas receiving good rains during this season
- Control vector-borne diseases, conduct deworming, vaccinations
- Conduct routine control Trans-boundary Animal diseases (TADs)



Health

Risk of Malaria outbreaks due to increase in mosquitoes breeding. Risk of diarrheal diseases like Acute Watery Diarrhea, Typhoid, and Dysentery due to poor sanitation which leads to breeding.

Advisory

- Ensure allocation of resources to controlling outbreaks, including mosquito control measures
- Provide safe drinking water
- Ensure availability of vaccines



Conflict Early Warning

The season is expected to be wetter than usual over most parts of the country providing a good prospect for agriculture and pasture generation. This is the season of agriculture production and seasonal movement of pastoralists, which increases the risk of conflict between farmers and pastoralists. Increased risk of conflict over land, especially in western parts of the country due to the delicate security situation.

Advisory

- Maximize the benefit from the season by increasing water harvesting effort to save water for the dry season
- Mobilize communities and the relevant authorities to identify migration routes for pastoralists and ensure pasture land is protected from agricultural use, to reduce conflict risk
- Mobilize security forces and traditional peacebuilding mechanisms community to protect farmers in remote areas of the western part of the country



Environment and Forestry

Above-average rainfall is expected in most parts of Sudan likely to: Increase the growth rate of trees and seed production; Increase fodder grass likely to attract considerable nomads groups, leading to damage regeneration and young trees. Potential of production of Gum Arabic affected.

Advisory

- Tree planting and encourage tending operations
- Forest conservation activities by protecting the younger regeneration and trees

UGANDA



Disaster Risk Management

Risk of flooding over the western parts of the country to continue in the coming season. Currently, there is a challenge of getting land to relocate communities affected by floods. Mt. Ruwenzori area is expected to experience landslides. The country is expected to have enhanced agricultural production.

Advisory:

- The Office of the Prime Minister to intensify early warning to reach communities in affected areas
- Sensitization and dissemination of early warning information
- Early action to be taken to relocate people by the government to save lives
- Review contingency plan and ensure it is in place



Water and Energy

Further rise in Lake water levels due to higher than usual rainfall is likely to cause further inundation, displacement of people, and increased threat to infrastructure around the lakes. Delayed/difficulties in repair work due to wet ground/water logging condition.

Advisory

- Conduct continuous monitoring of the rivers and Lakes to avert disasters
- Provide early warning information on potential risks



Livestock

Good pastures and water harvesting to prevail as well as good animal body conditions. Honey production expected to increase due to adequate flowers and water. Diseases associated with wet conditions are expected in areas expected to have higher than usual rainfall. Parasitic diseases, Tse Tse ,and ticks are expected to prevail.

Advisory

- Conserve water and pastures/fodder in the areas receiving good rains during this season
- Control of vector-borne diseases, deworming, vaccinations
- Conduct routine control Trans-boundary Animal diseases (TADs)
- Continue control measures of African Swine Fever, CBPP, PPR Foot and Mouth Disease
- Conduct flood control measures in flood-prone areas
- Intensify Zones 1 & 2 Poultry disease control, especially Gumboro and Coccidiosis



Health

Likelihood of malaria incidence in most parts of the country particularly in Karamoja, eastern Uganda, central and south-western Uganda. Likelihood of Cholera outbreaks in Cholera prone districts particularly in the districts of Kasese and Ntoroko in south-western Uganda, and Busia, Bulambuli, Namayingo in eastern Uganda.

Advisory

- Continuous monitoring and surveillance of the disease with a focus in Karamoja, eastern, central, and south-western regions
- Conduct Health education and social behavior change communication to contribute preventing outbreaks
- Prioritize the regions above in the routine distribution of nets
- Buffer stocks of antimalarials and mRDTs in those regions
- Conduct continued Surveillance for Cholera in the cholera prone districts especially Kasese, Ntoroko, Bulambuli Namayingo, Busia, and Karamoja

BURUNDI



Agriculture and Food Security

A reduction of rivers and lake levels during March-May rainfall season has caused damage to livelihoods and crops. A reduction in post-harvest related losses for the last March-May season crops.

Advisory

- Cultivate drought tolerant and short cycle crops like tubers (sweet potatoes, cassava, or crops like vegetables in swampy areas and strengthen small scale irrigation schemes
- Promote kitchen garden technologies



Water and Energy

Good availability of water supply for municipal, irrigation, and stable hydropower supply. The current high lake level will be sustained over the June-September period.

Advisory

- Implement water conservation measures to take the country through the dry season
- Conduct continuous monitoring of the rivers and Lakes to avert disasters



Health

Risk of outbreaks of Malaria , Acute watery Diarrhoea and Cholera.

Advisory

- Sensitization of the community to seek treatment on time and Bed nets utilization
- Case management and ITNs distribution to the target population



Environment and Forestry

Environment and forests to continue to benefit from high rainfall.

Advisory

- Continuation of tree planting campaigns

RWANDA



Agriculture and Food Security

Post-harvest losses likely for season B crops. Floods and waterlogging incidents that might negatively affect Season C crops .

Advisory

- Ensure effective post-harvest strategies, avail post-harvest equipment, rehabilitate some warehouses for Season B crops
- Distribute seeds and fertilizers on time, in readiness for season C season



Water and Energy

Good availability of water supply for municipal, irrigation, and stable hydropower supply. The current high lake level will be sustained over the June-September period.

Advisory

- Implement water conservation measures to take the country through the dry season
- Continuous monitoring of the rivers to avert disasters



Health

Rwanda is expecting the increase of malaria cases between May and June in endemic districts of the Eastern and Southern Provinces and hot spots of malaria are expected in Western Province around Lake Kivu. Cases of Schistosomiasis are expected in all districts of Rwanda and more cases of soil-transmitted Helminthiasis are expected in many districts of the western province, few districts of the southern province bordering the western province, and few districts of the Northern province.

Advisory

- Continue, IRS combined with the distribution of standard nets, which is already being conducted in all endemic districts (12) of the eastern and southern provinces and the extreme south-west region of Rwanda known as a high endemic area
- Districts with moderate endemicity without IRS have received the new generation LLINs (G2 LLINs) and PBO LLINs while Standard Nets were distributed in Districts with low endemicity



Environment and Forestry

Enhanced rainfall will increase water availability and higher moisture available for vegetation and trees growth. High rainfall likely to cause land degradation/soil erosion especially in the highlands.

Advisory

- Promote Tree planting and setting up of tree nurseries
- Promote land management/soil conservation and landscape restoration on affected lands

TANZANIA



Agriculture and Food Security

Normally dry during June to September, no major agricultural activities. Only irrigated land have crops.



Water and Energy

The current high lake level will be sustained over the June-September period. Water scarcity may be experienced in some basins that received below-average precipitation during the March to May season.

Advisory

- Water conservation needs to be implemented to take the country through the dry season
- Continuous monitoring of the rivers and Lakes to avert disasters

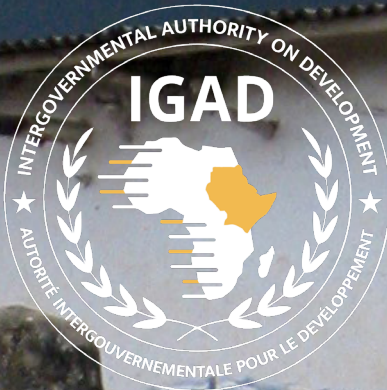


Health

Risk of outbreaks of Malaria, Schistosomiasis around the lake region. Increase in typhoid and other diarrheal diseases
Risk of sporadic Cholera, Dengue outbreaks.

Advisory

- Intensify malaria and schistosomiasis control interventions in the lake region
- Ensure availability of clean water and treatment tabs to communities
- Intensify mosquito control interventions, including larviciding, environmental management
- Rehabilitate rain-water drainage to avoid flooding






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