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UGANDA NATIONAL METEOROLOGICAL AUTHORITY

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THE SEASONAL RAINFALL OUTLOOK FOR JUNE TO AUGUST 2018 OVER UGANDA

1.0 OVERVIEW

The June, July and August forecast period is generally a continuation of a rainfall season for much of northern Uganda but part of a dry season over most parts of south western, central, Lake Victoria basin and some parts of eastern region. It generally marks the end of the first rainfall season for the southern sector of the Country and is usually a crop harvest season.

During the 49th Climate Outlook Forum for the Greater Horn of Africa held in Djibouti, from 13th – 14th May 2018, the National, Regional and International Climate Scientists reviewed the state of the global climate system and its implications on the seasonal rainfall over the East African region. It was observed that the major physical conditions likely to influence the weather conditions over Uganda and the rest of the east African region for the forecast period of June to August 2018 are as follows:

- i) The neutral phase of the Indian Ocean Dipole (IOD) in the Indian Ocean;
- ii) The El Niño–Southern Oscillation (ENSO) which is currently neutral—neither in an El Niño nor La Niña phase.
- iii) The influence of regional circulation patterns, topographical features and large inland water bodies.

Based on the above considerations as well as details of the climatology of Uganda and scientific tools for climate analysis, Uganda National Meteorological Authority (UNMA) under Ministry of Water and Environment has downscaled the regional forecast and has prepared the following detailed forecast:-

Overall, there is an increased likelihood of **near normal tending to above normal rainfall** over the northern and some parts of eastern region, while the rest of the country is expected to experience **Normal to below normal rainfall punctuated with occasional light** rainfall conditions as shown by the map below:

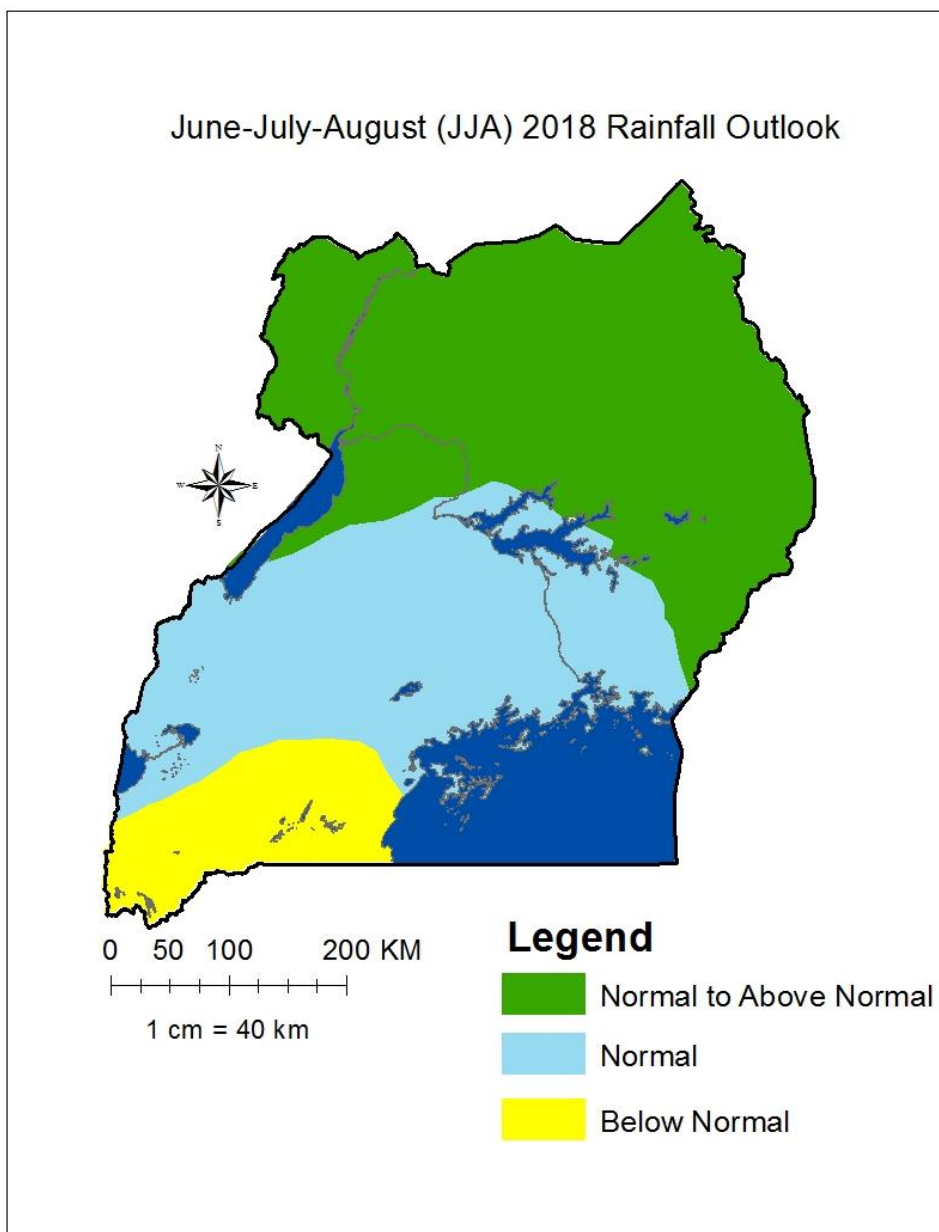


Figure1: JJA 2018 climate Outlook.

2.0 THE BREAKDOWN OF THE FORECAST FOR EACH REGION

2.1.0 WESTERN REGION

2.1.1 Central Western (*Bundibugyo, Ntoroko, Kabarole, Kyenjojo, Kyegegwa, Kamwenge, Masindi, Buliisa, Hoima, Kakumiro, and Kibaale*) districts

This region is experiencing seasonal rainfall characterized by dry spells, though undergoing a gradual reduction. This condition is expected to persist up to around mid June when the dry conditions are expected to begin and continue till mid-July followed by wet conditions up to the end of forecast season. Overall, **near normal (near average)** to **below normal (below average)** rainfall is expected to prevail over most parts of the region.

2.1.2 South Western (*Kisoro, Kabale, Rukungiri, Kanungu, Ntungamo, Mbarara, Kiruhura, Isingiro, Ibanda, Bushenyi, Buhweju, Mitooma, Sheema, Rubirizi and Kasese*) districts

The region has been receiving seasonal rains since February which are expected to end by early/mid-June. Thereafter, dry conditions are expected to set in and continue up to end of July when isolated outbreak of light showers is expected to prevail up to the end of the season. Overall, **below normal (below average)** rainfall is expected over most parts of the region.

2.2.0 LAKE VICTORIA BASIN AND CENTRAL REGION

2.2.1 Northern and Southern parts of Central (*Nakasongola, Luwero, Kyankwanzi, Nakaseke Kiboga, Mubende, Kasanda, Sembabule, Lwengo, Lyantonde, and Rakai*) districts.

The rains being experienced over this region are expected to reduce by early/mid-June, there after dry conditions are expected to set in and continue up to mid-July when isolated showers and thunderstorms, thereafter, occasional outbreaks of showers are expected to get established and continue up to the end of the season. Overall, there are high chances of **near normal (near average) to below normal (below average)** rainfall over most parts of the region.

2.2.2 Eastern parts of Central (Mukono, Buikwe, Kayunga, Buvuma) districts.

This region is experiencing seasonal rains which are expected to continue up to early / mid June when dry conditions punctuated with light rain are expected to set in and continue up to end of July, then occasional rains are expected up to the end of the forecast period. Overall, **near normal (near average)** rainfall with a tendency to **below normal (below average)** rainfall over most parts of the region.

2.2.3. Central and Western Lake Victoria Basin (*Kalangala, Kampala, Wakiso, Masaka, Mpigi, Butambala, Kalungu, Bukomansimbi, Gomba, and Mityana*) districts

The region has been experiencing seasonal showers and thunderstorms, which are expected to continue up to end of early/Mid June. Thereafter, relatively dry conditions are expected to set in and persist up to the end of July, and thereafter, outbreaks of isolated showers and thunderstorms are expected to get established until the end of the season. Overall, **normal (average)** rainfall with tendency towards above normal is expected over this region.

2.2.4 Eastern Lake Victoria Basin: (*Jinja, Bugiri, Busia, Mayuge, Namayingo and Tororo*) districts.

The region is experiencing showers and thunderstorms that are likely to continue up to early/mid of June when the dry conditions are expected to set in and likely to extend up to mid-July giving way to occasional rains until the end of the rainfall season. Overall, **normal (average)** rainfall with a tendency to above average is expected over this area.

EASTERN REGION

2.3.1 South Eastern: *(Kamuli, Iganga, Luuka, Namutumba, Buyende, Kaliro, and Butaleja) districts*

The rains which are being experienced over this region are expected to continue up to early/mid- June when the dry conditions are expected to begin and prevail up to July, thereafter, occasional outbreaks of showers and thunderstorms are expected to prevail up to the end of the rainfall season. Overall, there are high chances of this area receiving **normal (average) with a tendency to above normal (above average)** rainfall conditions over this region.

Eastern Central: *(Pallisa, Budaka, Kibuku, Mbale, Sironko, Manafwa, Bududa, Bulambuli, Kapchorwa, Kween, Bukwo, Bukedea, Kumi, Kaberamaido, Serere and Soroti) districts.*

The seasonal rains being experienced over this region are expected to continue up to end of June, thereafter occasional rains punctuated by dry spells are expected until the end of the season. Overall, there are high chances of this region experiencing **normal (average) to above normal (above average)** rainfall.

2.3.3 North Eastern: *(Amuria, Katakwi, Moroto, Kotido, Nakapiripirit, Abim, Napak, Amudat, and Kaabong) districts*

The region is experiencing seasonal rains punctuated with some dry spells which are expected to continue up to end of June, when a reduction in the rainfall is expected to prevail until the end of the season. Overall, **above normal (above average)** conditions are expected over most parts of the region during the forecast period.

NORTHERN REGION

2.4.1 North Western *(Moyo, Yumbe, Adjumani, Arua, Maracha, Zombo, Nebbi, Koboko) districts*

The region is experiencing seasonal rains punctuated with dry spells which condition is expected to continue up to the end of the season. Overall, **above normal (above average)** rainfall is expected prevail over this region during the forecast period.

2.4.2 Eastern Northern Parts: *(Lira, Kitgum, Agago, Lamwo, Otuke, Pader, Alebtong, Kole, and Dokolo) districts*

The region has been experiencing wet conditions since early March which are expected to continue till end of June, when the rains are expected to reduce giving way to dry conditions associated with light showers that are expected to extend up to the end of the season. Overall, there are high chances for this region receiving above **normal (above average)** rainfall.

2.4.3 Central Northern Parts : *(Gulu, Apac, Pader, Nwoya, Amuru, Oyam and Kiryandongo) districts*

The period June to August (JJA) is normally a continuation of rain season for this region. The region has been experiencing wet conditions which are expected to continue up to July when a reduction in the rains is expected. Thereafter, steady rains are expected to set in and continue up to the end of the season. Overall, there are high chances for this region receiving above **normal** (above **average**) rainfall.

3.0 ADVISORIES

3.1 Sector advisories

Sectors	Areas expected to receive Normal to Below Normal rainfall	Areas expected to receive Normal to Above Normal rainfall.
Agriculture and Food Security	<p>Impacts:</p> <ul style="list-style-type: none"> • Water stress for some crops such as maize, bananas, and tea; • Shortage of pasture and water for livestock; • Increased incidences of livestock and crop pests and diseases. 	<p>Impacts:</p> <ul style="list-style-type: none"> • Post-harvest losses • Poor tuber formation in crops e.g. sweet potatoes • Increased availability of water for production; • Access to food will be negatively impacted as roads are destroyed/ rendered impassable • Soil erosion from surface runoff; • flash flooding in low lying areas • Silting of dams, valley tanks, fishponds and other water harvesting structures due to erosion. • likelihood of animal and crop diseases e.g. foot and mouth disease
	Advisories:	Advisories:

	<ul style="list-style-type: none"> • Sparingly use the available water for livestock, irrigation and domestic purpose; • Farmers should mulch their gardens to conserve soil moisture available • Pasture preservation (hay, silage for livestock); • Encourage farmers to store enough food for household use especially cereals; • Planting of leafy vegetables and drip irrigation should be encouraged; • Use of proper post-harvest handling practices to avoid yield losses e.g. use of super bags, metallic silos, maize cribs, Cocoons, tarpaulins, drying racks; • Early land preparation (towards end of JJA season) to allow for timely planting for SON; • Supplementary irrigation to sustain crop growth. • use early warning weather updates 	<ul style="list-style-type: none"> • Pay attention to forecast updates • Soil and water conservation practices e.g., grass bunds, mulching to enhance soil moisture retention and erosion control • Control of fungal and bacterial-rain spread disease e.g. potato diseases • Rehabilitation of agricultural infrastructure destroyed by flooding. • Dig water trenches and drainage channels to minimize flash floods and water logging; • Encourage proper agronomic practices such as timely weeding and harvesting; • Encourage proper food storage; • Encourage improved high yielding varieties e.g. cereals, soya, sorghum; • Avoid planting in areas prone to water logging; • Backyard/homestead gardening of vegetables such as nakati, dodo, egg-plants, is encouraged. • Establishment of water harvesting structures at household and communal level;
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Water Resources Management sector	Impacts:	Impacts:
	<ul style="list-style-type: none"> • Decline/Drying of streams and other water sources such as boreholes, wells; • Reduced availability of surface and groundwater resources; • Drop in the water table. 	<ul style="list-style-type: none"> • Bursting of riverbanks may occur • Destruction on Infrastructure (e.g. roads, bridges) resources; • Water contamination and Increased Sediment loading expected; • Increased availability/recharge of surface and groundwater.
	Advisories:	Advisories:

	<ul style="list-style-type: none"> • Farmers to practice Rain water harvesting and use water sparingly • Effective utilization of available water resources; • supplementary Irrigation in case of long dry spells 	<ul style="list-style-type: none"> • Open drainage channels to avoid flash floods and water logging; • Local leaders should mobilize communities to clear the possible water drainage areas; • Encourage tree planting along riverbanks and Clearance of water pathways to avoid silting.
Health Sector	Impacts:	Impacts:
	<ul style="list-style-type: none"> • Upper respiratory infections like flu and colds are expected; • Increase in skin allergies is also expected. 	<ul style="list-style-type: none"> • Malaria, typhoid and cholera upsurges expected to increase. • Increase in livestock diseases and vectors are expected.
	Advisories:	Advisories:
	<ul style="list-style-type: none"> • Community health education is encouraged; • Stocking of drugs against respiratory diseases is encouraged; • Vaccination against meningitis is encouraged; • Good personal hygiene and sanitation practices are encouraged; 	<ul style="list-style-type: none"> • Carrying out community health education is encouraged; • Distribution of mosquito nets to the communities is encouraged; • The Ministry of Health and the district local government should Intensify disease surveillance; • Stocking of drugs for water borne diseases; • Good personal hygiene and sanitation practices should be encouraged.
Disaster Preparedness	Impacts:	Impacts:
	<ul style="list-style-type: none"> • Dry conditions in the south western region of the country may lead to serious water shortage in the community; • Conflict due to water and food shortage may occur among the communities. 	<ul style="list-style-type: none"> • Lightning and thunderstorms expected to occur in different areas; • Landslides may occur in the mountainous areas of Rwenzori and Elgon. • Flooding in some parts of Northern and Eastern Uganda may occur.
	Advisories:	Advisories:

	<ul style="list-style-type: none"> • Food security awareness creation in communities; • Proper post-harvest handling; • Contingent plans should be put in place to handle any emergencies. 	<ul style="list-style-type: none"> • Construct/clear drainage and diversion channels, pathways along the roads in order to avoid flooding; • Tracking the progress and performance of the seasonal climate forecast is encouraged; • Disaster committees in the districts should be on the lookout to report any occurrences of any disaster.
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4. ACCURACY

This forecast is up to 75% accurate. It is supported by useful forecast guidance inputs drawn from a wide range of sources including the World Meteorological Organization’s Global Producing Centres (WMO GPCs). These inputs were combined into a regional consensus forecast using deterministic and probabilistic modelling alongside expert analysis and interpretation to obtain the national rainfall forecast for this JJA season.

The UNMA will continue to monitor the evolution of relevant weather systems particularly the El Niño/La Niña event, IOD and will accordingly issue appropriate updates and advisories to the users.



Dr. Festus Luboyera
EXECUTIVE DIRECTOR

EXPLANATORY NOTES TO TERMINOLOGY

Above Normal: This is when the total rainfall is above 125% of the long - term - mean (LTM). Impact on socio-economic activities is mostly boosted especially in the modest degrees of above average.

Normal: This is when the total rainfall is in the range of 75% to 125% of the LMT. This range of rainfall is expected to adequately support the normal socio-economic activities for the various areas.

Below Normal: This is when the total rainfall is below 75% of the LTM. Under this range there are high chances for socio-economic activities

being stressed, the level of stress increasing with increasing rainfall deficiency.