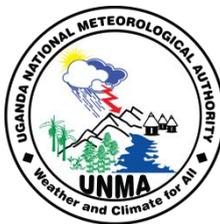


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UGANDA NATIONAL METEOROLOGICAL AUTHORITY

4th September 2017

SEPTEMBER TO DECEMBER 2017 SEASONAL RAINFALL OUTLOOK OVER UGANDA

1.0 OVERVIEW

September to December period constitutes the second major rainfall season in Uganda. During the 47th Greater Horn of Africa Climate Outlook Forum (GHACOF47) for the Greater Horn of Africa that was held at Zanzibar Beach Resort in Zanzibar, Republic of Tanzania from 21st – 22nd August 2017, the national, regional and international climate scientists reviewed the current state of the global climate systems and their implications on the seasonal rainfall over the Greater Horn of Africa.

It was observed that the major physical conditions that are likely to influence the evolution of weather conditions over Uganda and the rest of the region for the forecast period of September to December 2017 will include:-

- *The predicted neutral phase of Indian Ocean Dipole and neutral ENSO conditions in the central and eastern Pacific Ocean (No El Niño and no La Niña);*
- *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) has downscaled the regional forecast and come up with the following detailed forecast:

Overall, there is an increased likelihood of **above normal (above average)** rainfall over much of Uganda, while near **normal (average)** rainfall over **south western Uganda and near normal to below normal** rainfall conditions over Karamoja regions.

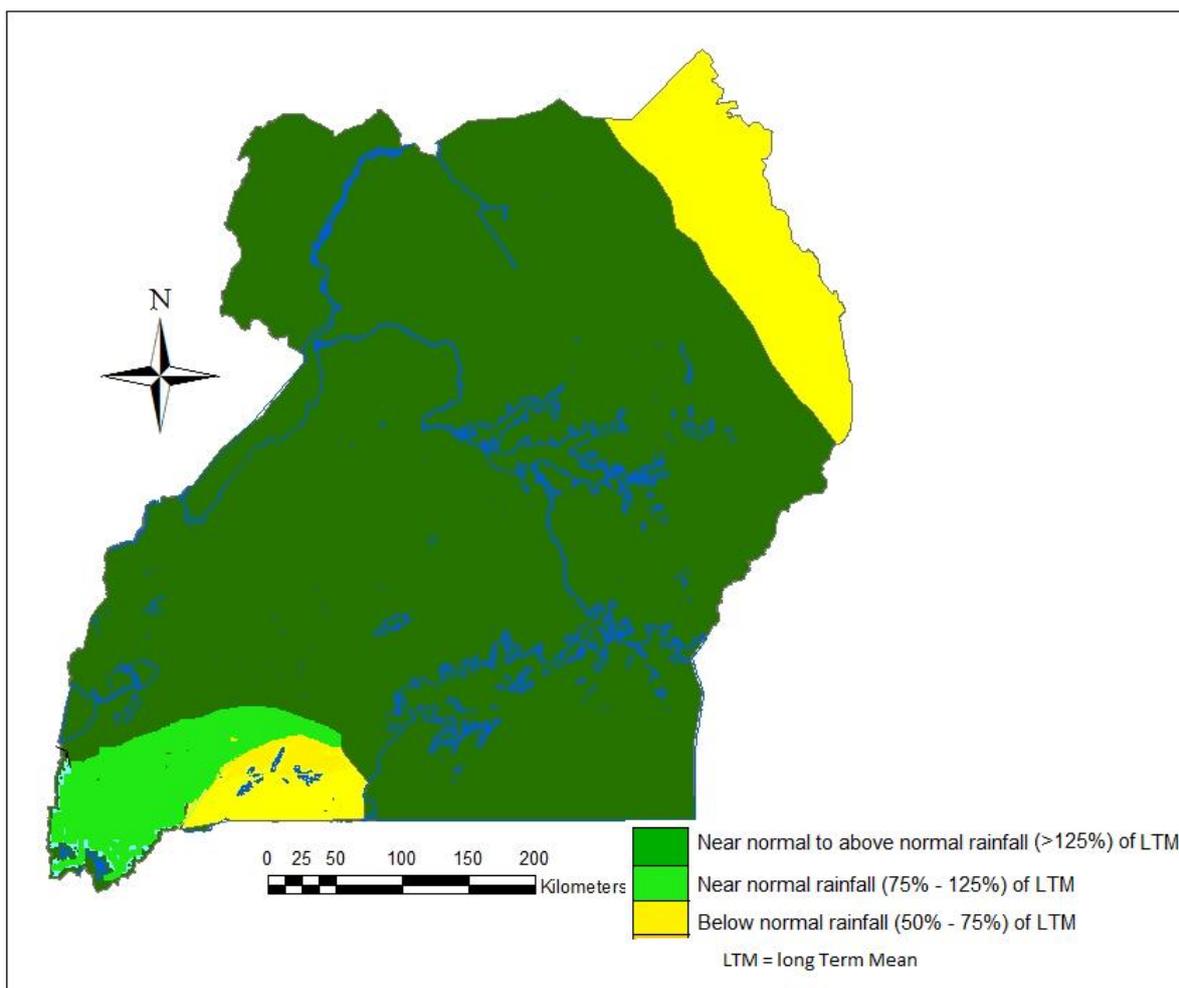


Fig1: Seasonal rainfall Outlook for September to December (SOND) 2017

2.0 DETAILED FORECAST FOR EACH REGION

2.1.0 WESTERN REGION

2.1.1.1 South Western (*Kisoro, Kabale, Rubanda, Rukiga, Rukungiri, Kanungu, Ntungamo, Ibanda, Bushenyi, Buhweju, Mitooma, Sheema, Rubirizi and Kasese*) districts

The onset of steady rains is expected around mid-September. The peak of rains is expected around late October to mid-November. The cessation of seasonal rains is expected around mid December. Overall, **near normal (average) with the tendency to above normal** rainfall conditions are expected to prevail over this region.

2.1.1.2 South Western (*Eastern parts of Ntungamo, Mbarara, Kiruhura, and Isingiro districts*)

Following the dry conditions which were experienced during June and July, the region has started receiving outbreaks of light showers and thunderstorms over several places. However, the onset of steady rains is expected around mid-September. The peak of rains is expected around late October to mid-November. The cessation of seasonal rains is expected around early December. Overall, **near normal with the tendency to below normal** rainfall conditions are expected to prevail over this region.

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

This region is currently experiencing isolated showers and thunderstorms which are expected to persist up to around early September when steady rains are expected. However, most areas of Masindi and Hoima have been experiencing substantial amounts of rain since July. The rains are expected to reach peak levels around mid October to early November. It should be noted that the areas around Mt. Rwenzori are expected to receive above normal (enhanced) rainfall during this period. The cessation of the seasonal rainfall is expected around mid December. There are high chances of near **Normal (average) with a tendency to above normal (above average)** rains over most parts of this region.

2.2.0 LAKE VICTORIA BASIN AND CENTRAL REGION

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

The current isolated outbreaks of showers and thunderstorms being experienced over this region are expected to continue up early / mid-September when steady rainfall is expected to set in. The peak levels are expected around mid October with a steady decline expected to set in from late November and continue up to early December when the cessation of seasonal rainfall is expected. Overall, near **normal to above normal** rainfall conditions are expected to prevail over this region.

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

The area is experiencing occasional outbreaks of showers and thunderstorms which are signifying the onset of seasonal rainfall. The seasonal rainfall is expected to reach the peak around mid October and the cessation is expected around early December. There are high chances of **Normal with a tendency to above normal** rains over most parts of this area.

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

The onset of seasonal rains over this region is already established. The rains are expected to reach the peak levels around mid October and the cessation around early December. Overall, near **normal to above normal** rainfall is expected over this area.

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

Currently the region is experiencing some showers and thunderstorms that are expected to persist up to early September, when seasonal rains are expected to get established and reach peak levels around mid/late October. The end of the seasonal rainfall is expected around early/mid December. Overall near **normal rainfall with tendency to above normal rainfall** is expected over this region.

2.3.0 EASTERN REGION

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

The rains which are being experienced in this region are expected to continue up to early September when steady seasonal rainfall is expected to get established. The peak of rains is expected around mid/late October, thereafter, a reduction in the rainfall is expected to set in and continue up to the end of the season around mid December. Overall, near **normal rainfall with a tendency to above normal** rainfall is expected.

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

The seasonal rainfall over this region is already established. Currently the region is experiencing heavy down powers which have resulted into landslides in some areas. However, the peak of the rainfall is expected to be around early/mid October, the cessation of the rainfall is expected to be around early December. It should be noted that some areas around the mountain Elgon are expected to receive enhanced rains which might cause negative severe impacts over the area. Overall, there are high chances of **normal to above normal** rains to prevail over the region.

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

This region is currently experiencing occasional heavy showers and thunderstorms, which are expected to continue up to around late September. The peak levels are expected around early/mid October. The cessation of the rainfall season is expected around late November. There are high chances for **near normal** with a tendency to **below normal** rains over this region.

2.4.0 NORTHERN REGION

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

The region is currently experiencing seasonal rains characterized by heavy showers and thunderstorms which are expected to continue up to around late September/early October. The end of the seasonal rainfall is expected around late November to early December. Overall, **near normal to above normal** rainfall is expected over this region.

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

The region has been experiencing its seasonal rainfall since June. The rains are expected to continue and reach the peak levels around early/mid October. Thereafter, the cessation of the rainfall is expected around late November to early December. There are high chances for this region to receive **normal to above normal** rainfall.

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

The rainfall being experienced over this region is expected to continue up to around late November, and thereafter, a reduction in the rainfall punctuated with dry conditions are expected to prevail up to end of the forecast period. Overall, **near normal to above normal** rainfall is expected during this season.

3.0 ADVISORIES

Due to the good expected rainfall performance, there is an increased potential for optimal crop performance over several parts of the country. The following advisories are highly recommended.

Categorical areas	Areas expected to receive near normal to above normal rainfall.	Areas expected to receive near normal to below normal rainfall
Sectors	Impacts	Impacts
Agriculture and food security	<ul style="list-style-type: none"> Plant both long and short maturing crops like millet, rice, sorghum, maize, cassava, sweet potatoes, legumes, root tubers and vegetables; Avoid planting crops in flood and landslide prone zones: cases of flooding and landslides may be experienced in areas such as Mt.Elgon areas of 	<ul style="list-style-type: none"> Timely planting of improved varieties (i.e. quick maturing and drought tolerant) such as Beans (NABE 15-23 series), maize (Longe 5, 7H, 10H-11H). Enhance rain water harvesting (in-situ, roof, surface-run-off) for usage when the rains start is encouraged;

	<p>Buduada, and Bulambuli plus Bundibudyo, Kasese areas around Mt. Rwenzori.</p> <ul style="list-style-type: none"> • Carryout soil and water conservation practices such as digging trenches, mulching, minimum tillage (ripping, raised beds, planting basins) 	<ul style="list-style-type: none"> • Encourage good soil and water conservation practices e.g. terraces, stone bunds, trenches, grass bunds, mulching to control soil erosion and boost soil moisture retention; and Drip irrigation where possible is encouraged;
Health sector	<ul style="list-style-type: none"> • Malaria upsurges is expected to increase; • Increase in livestock diseases and vectors are also expected. 	<ul style="list-style-type: none"> • Upper respiratory infections like flu and colds are expected towards the end of the season;
Disaster preparedness	<p>Impacts</p> <ul style="list-style-type: none"> • Lightning and thunderstorms are expected to occur in different areas; • Landslides may occur in the mountainous areas of mountain Rwenzori and Elgon and floods in low lying areas and some parts of Teso such as Kapelebyong • District authorities are advised to update their contingency plans for better coordination in case of any weather and climate disaster that might occur during this season; • Construct proper drainage systems around homesteads and urban areas; 	<p>Advisory</p> <ul style="list-style-type: none"> • Food security sensitization to communities need to be carried out; • Proper post harvest handling should be encouraged • Contingent planning to handle any eventualities should be put in place.
Water and energy sector	<p>Impacts</p> <ul style="list-style-type: none"> • Increased availability of surface and groundwater resources • Water contamination and Increased sediment are expected to increase; • Bursting of some riverbanks may occur • More generation of hydroelectricity is expected as a result of the 	<p>Impacts</p> <ul style="list-style-type: none"> • Reduced availability of surface and groundwater resources • Decline water in streams and other water sources • Drop in the water table. <p>Advisory</p> <ul style="list-style-type: none"> • Committees should

	<p>expected good rains.</p> <p>Advisory</p> <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. 	<p>ensure effective utilization of available water resources</p> <ul style="list-style-type: none"> • Farmers who practiced water harvesting and use it sparingly • Rainfall harvesting is encouraged
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4.0 ACCURACY

This forecast is up to 80% accurate. It is supported by useful forecast guidance inputs drawn from a wide range of sources including the World Meteorological Organizations' Global Producing Centers (WMO GPCs). These inputs were combined into a regional consensus forecast using deterministic and probabilistic modeling alongside expert analysis and interpretation to obtain the regional rainfall forecast for this season.

The UNMA will continue to monitor the evolution of relevant weather systems particularly and issue appropriate updates and advisories to the users accordingly.



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.