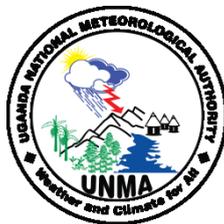


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## UGANDA NATIONAL METEOROLOGICAL AUTHORITY

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# PRESS RELEASE

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## SEPTEMBER TO DECEMBER 2016 SEASONAL RAINFALL OUTLOOK OVER UGANDA

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### Overview

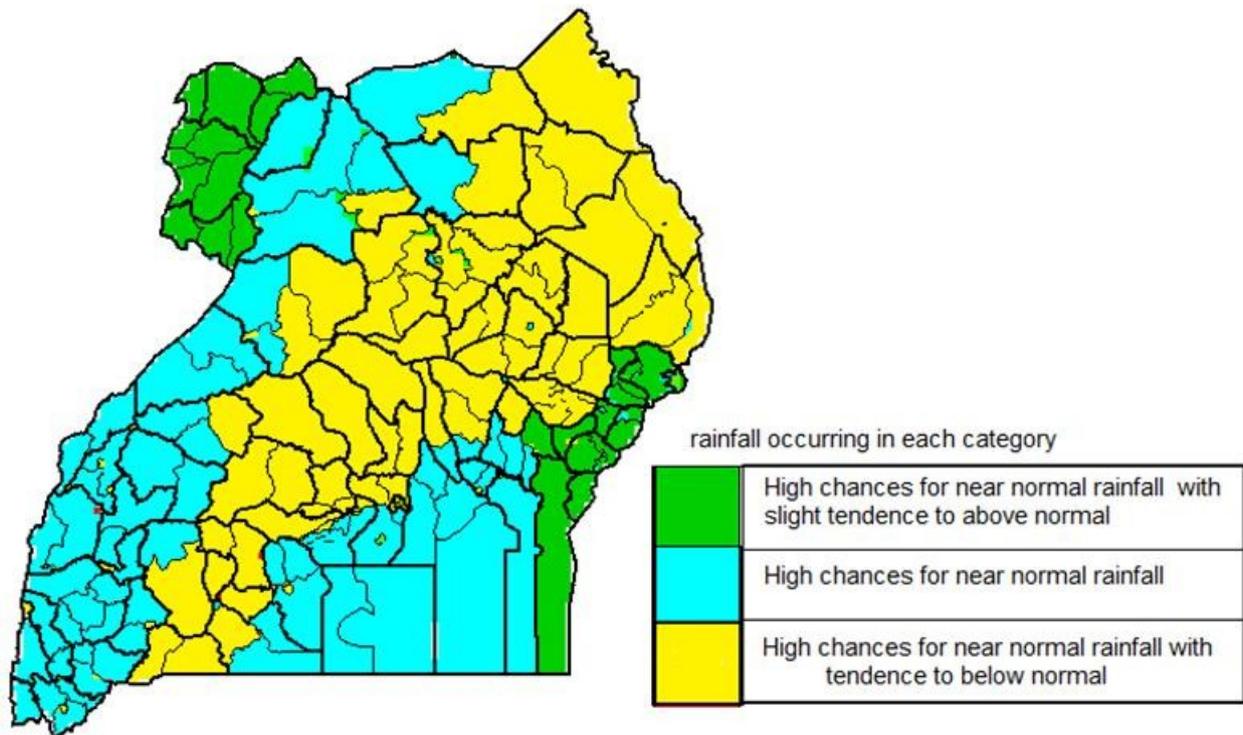
September to December period constitutes the second major rainfall season in Uganda. During the 44<sup>th</sup> Climate Outlook Forum (COF44) for the Greater Horn of Africa that was held at Speke Resort Hotel Munyonyo from 29<sup>th</sup> to 30<sup>th</sup> August 2016, the national, regional and international climate scientists reviewed the current state of the global climate systems and their implications on the seasonal rainfall over the east African region. 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 2016 will be mostly ***La Niña conditions over equatorial eastern pacific Ocean that are predicted to persist during the rest of the 2016 and early months of 2017.*** Other conditions include:-

- i) The Indian Ocean Dipole (IOD) that has significant influence on regional climate is also predicted to be in the **negative phase** during the forecast period;
- ii) The influence of regional circulation patterns, topographical features and large inland water bodies.

*It should be noted that when La Niña occurs, most parts of Uganda receive suppressed rainfall.* Based on the current La Niña conditions as well as details of the climatology and scientific tools for climate analysis, Uganda National Meteorological Authority (UNMA) in the Ministry of Water and Environment, has come up with the detailed forecast as follows:-

### General forecast

Overall, there is an increased likelihood of ***near normal to below normal rainfall*** over several regions of the country. However, areas of south western, Lake Victoria basin, and south-eastern Uganda are expected to receive near normal rains, while, north-western Uganda and Mt. Elgon areas are expected to have high chances of experiencing near normal to above normal rainfall.



**Figure 1: September to December (SOND) 2016 forecast map**

## **WESTERN UGANDA**

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

The region is currently experiencing dry conditions with light intermittent rains in some few areas. This situation is expected to continue up to late September / early October when the onset of seasonal rains is expected to get established. The steady rains are expected to intensify with peak being experienced around late October. The cessation of rains is expected around late November / early December. Overall, near normal rains are expected over this region.

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

Northern parts of this region have been receiving substantial amount of rainfall during August. Currently, the region is experiencing intermittent light rains. The onset of seasonal rains is expected around late September. The peak of seasonal rains is expected to be realized around mid October. The cessation of rains is expected early December. Overall the region is expected to receive near normal rains.

**North Western** (*Moyo, Arua, Maracha, Nebbi, Okoro, Adjumani, western Amuru, western Nwoya, Yumbe, Koboko and Zombo*) districts

The region is currently experiencing its main rainy season which started in June. Steady rains are expected to get established by mid-September with the main peak occurring around late October to early November. Thereafter, a sharp decline is expected with cessation of seasonal rains likely to occur around late November. Overall, near normal rains with slight tendency to above normal are expected to prevail over this region.

## **CENTRAL UGANDA**

**Western parts of Central** (*Rakai, Lyantonde, Lwengo, Kalungu, Bukomansimbi, Sembabule, Mubende, Kiboga, Kyankwanzi, Nakaseke and Nakasongola*) districts

Currently this region is experiencing dry conditions. Onset of seasonal rains is expected around late September with the peak occurring around late October. Cessation of the rains is expected around early December. In general, there is a high chance of this region receiving near normal to below normal rains over this forecast period.

**Eastern parts of Central** (*Mukono, Luwero, Buikwe and Kayunga*) districts

The region is currently receiving intermittent light rains and thunderstorms punctuated with dry spells which are expected to continue up to mid-September when normal seasonal rains are likely to set in. Thereafter, the rains are expected to intensify with a peak occurring around late October/early November. A steady decline of rains punctuated by dry spells is expected late November and cessation of seasonal rains expected around early December. Overall, there are high chances for near normal rains over most parts of this region.

## **LAKE VICTORIA BASIN**

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

This region is currently experiencing light isolated intermittent rains and thunderstorms. The onset of seasonal rainfall is expected around late September. Peak rains are expected around late October/early November. Cessation is expected around early December. Overall, there is a high chance of near normal rains in this region.

**Eastern Lake Victoria Basin** (*Jinja, Mayuge, Bugiri and Busia*) districts.

Currently the region is experiencing intermittent light and thunderstorms punctuated with dry spells over several areas. The onset of seasonal rains is expected to set in around mid/late September and steady rains are expected to reach the peak levels during the month of October and November. The season is expected to end around early December. Overall, near normal rains are expected to prevail over most part of this region.

## **EASTERN UGANDA**

**South Eastern** (*Kamuli, Iganga, North Bugiri, Luuka, Namutumba, Buyende, Kaliro and Tororo*) districts

This region has been experiencing some isolated light outbreaks of showers and thunderstorms since July. Steady seasonal rains are expected to set in by mid / late - September reaching the peak levels around late-October to late November. The rain is expected to cease around early December. In general, near normal rains are expected to prevail over this region

**Eastern Central** (*Pallisa, Budaka, Mbale, Sironko, Manafwa, Bududa, Kapchorwa, Kumi, Kaberamaido, Soroti, Serere, Amolatar, Butaleja, Bulambuli, Kween, Bukwo, Bukedea and Ngora*) districts

The onset of seasonal rains is expected to set in by mid-September reaching the peak around late-October to late November. Thereafter, the rains are expected to decline steadily with cessation expected around early December. Overall near normal to above normal rains are expected over this region.

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

The region has been experiencing its seasonal rainfall since July which was punctuated by short dry spells over several parts. The intermittent rains are expected to continue up to around late September. Overall, there are high chances for below normal rains over this region.

## **NORTHERN UGANDA**

### **Central Northern and Eastern parts of Northern Region**

(Gulu, Apac, Lira, Alebtong, Kitgum, Otuke, Pader, Amuru, Agago, Amolatar, Lamwo, Nwoya, Oyam, Kole, Dokolo and Kiryandongo) districts

The region is experiencing its major rainy season with isolated showers and thunderstorm in several parts. However, some parts have been experiencing dry spells. The current moderate seasonal rains are expected to continue up to early October when the peak of the seasonal rains is expected to set in. The rains are expected thereafter to decline with cessation around late November to early December. Overall, near normal rains are expected over this region.

## **IMPLICATIONS OF THE FORECAST**

- i) The seasonal climate forecast for September to December 2016 indicates that there is an increased likelihood of **near normal to below normal rainfall** over several regions of the country. This implies that most regions of the country are expected to receive the total rainfall that is below 75% of the long term mean (LTM) of the base period of 1981-2010. Under this range there are high chances for socio-economic activities being stressed, the level of stress increasing with increasing rainfall deficiency. The areas that are likely to be more affected are those that lie along the **Cattle Corridor of Uganda**. Expected impacts include; water stress, shortage of pastures, Internal and cross-border conflicts, human and animal disease outbreaks, food insecurity leading to Poor Nutrition, possibility of diseases related to dry conditions such as meningitis and animal diseases such as foot and mouth disease, reduced water levels, Low discharges, drying up of aquifers and wetlands and reduced water availability.
- ii) For the areas that have high chances of receiving near normal rains, means that the total rainfall expected will range between 75% to 125% of the long term mean (LTM) of the base period of 1981-2010. This range of rainfall is expected to adequately support the normal socio-economic activities for the various areas in those areas.
- iii) The regions expected to receive near normal above normal rainfall, it implies that the total rainfall in those areas is expected to be above 125% of the long term mean (LTM) of the base period of 1981-2010. This means that the Impacts on socio-economic activities are mostly boosted especially in the modest degrees of above average for several areas. This is expected to be reflected in north-western and some parts of eastern regions.

## **GENERAL ADVISORIES TO DIFFERENT SECTORS**

### **REGIONS EXPECTING TO EXPERIENCE NEAR NORMAL TO BELOW NORMAL RAINFALL CONDITIONS**

#### **✓ The Agricultural and food security Sector**

- Plant early maturing crops such as beans, upland rice and drought resistant varieties like non-cooking bananas, cassava (NASSE 14-drought tolerant), sweet potatoes etc that can withstand the little rainfall situations;
- Farmers are encouraged to carry out proper post-harvesting and storage practices so as to limit the post-harvest losses during transportation from gardens to stores;
- Communities are advised to use available food and water sparingly to ensure water availability for small scale crop growing;
- The pastoral households should maintain manageable herds and carry out Pests and Disease control measures for their livestock e.g. tick borne disease;
- Proper management of fruit trees like mangoes, oranges is encouraged;
- Water harvesting practices are advised.
- Diversify livelihood options for easy adaptation due to high chances of low levels of agricultural output expected;

#### **✓ Health sector**

- Sensitization and awareness campaigns on sanitation and hygienic issues to prevent disease outbreaks like meningitis and other airborne diseases should be carried out;
- Vaccination and immunization of animals should be carried out in the pastoral communities especially Karamoja region due to expected cross boarder movements.

#### **✓ Water and Energy sector**

- Efficient power utilisation and adoption of alternative power sources such as solar, wind, geothermal, gas etc is encouraged;
- Water harvesting, storage and proper usage should be enhanced to resolve the issues of the expected water scarcity;
- Communities should ensure proper catchment management and avoid encroachment on wetlands;
- Desilting of valley dams is encouraged to ensure the maximum collection of the rain water;

### **REGIONS EXPECTING TO EXPERIENCE NEAR NORMAL CONDITIONS / TO ABOVE NORMAL RAINFALL CONDITIONS**

#### **The Agricultural and food security Sector**

- The farming communities are encouraged to carry out timely planting of all forms of crops both perennial and annual such as commercial trees, fruit trees, cotton, coffee;
- Soil Water Conservation practices like mulching, trenches are encouraged to ensure maximum water moisture content storage in the soil for proper plant growth and development;
- Disease control measures should be put in place by agricultural communities, for instance, weeding, pruning and increased frequency of spraying during the rainy season at least once a week for both livestock and fruit trees like citrus;

- There is need for timely procurement of farm inputs like seeds, manure, to avoid unnecessary late planting ready by start of the rains;
- Pastoral communities are encouraged to maintain manageable numbers of livestock and to grow surplus pastures and fodder, hay making and silage for future use.

### **Disaster risk management**

- Establishment of food reserves at household levels / Village grain banks to prepare for the expected food insecurity;
- Enacting and enforcement of By-laws and ordinances in the respective local governments as far as disaster management is concerned is encouraged;
- Enhance and empower operations of District Disaster Committees as far as resources for disaster management is concerned;
- Early warning information dissemination channels should be developed to ensure quick action by authorities in case of any emergencies;
- Uganda Wildlife Authority (UWA) and Ministry of Tourism and Trade should sensitize communities around the parks and wildlife reserves on the negative impacts of encroachment on game reserves especially during this La Nina period;
- The government should introduce and establish weather insurance Index for extreme weather events to guarantee compensation of disasters affected communities.

### **Health sector**

- Regular surveillance of diseases, stock of relevant drugs and supplies is encouraged as a contingency measure against any expected disease outbreaks;
- Clearing bushes, opening of drainages, purchase of mosquito nets, fumigating in and around homesteads is encouraged as a precautionary control measure against Malaria;
- Immunization of animals against trypanosomiasis which is a common animal disease during rainy periods should be carried out;

### **Water and Energy sector**

- The concerned authorities should prepare for routine de-silting of channels and reservoirs
- Buffer zones of vegetated/forested areas around water sources should be set up to guard against water pollution, and communities should avoid consumption of contaminated water;
- Communities staying in low laying areas (flood prone) should take precautionary measures to avoid damages and loss of properties;
- De-silting of river beds, dams, valley tanks, and fishponds should be advised for example River. Nyamwamba to minimize water clogging during heavy down pours.

### **In conclusion**

The predicted seasonal patterns require action in sufficient time and in an appropriate manner so as to take advantage of the information. These forecast advisories should be used for planning across all economic sectors so as to improve economic welfare and livelihoods for all our communities in their localities.

UNMA has taken a further step of publishing this seasonal forecast in two major national daily newspapers and translating it into thirty five (35) different local languages for audio and text messages. These translated messages will be disseminated to communities in different parts of the country mainly using local FM radios and meetings/workshops.

The Uganda National Meteorological Authority will continue to monitor the evolution of relevant weather systems particularly the state of the SSTs and issue appropriate updates and advisories to the users regularly

The accuracy of the seasonal climate forecast for this season 2016 is about 80%. It is supported by useful forecast guidance inputs drawn from a wide range of sources including the World Meteorological Organizations' 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 regional rainfall forecast for this season.

**For God and My Country**

Festus Luboyera

**EXECUTIVE DIRECTOR**