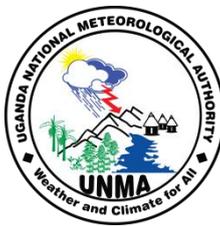


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## UGANDA NATIONAL METEOROLOGICAL AUTHORITY

### **PRESS RELEASE**

**20<sup>th</sup> February 2018**

#### **SEASONAL CLIMATE OUTLOOK FOR MARCH TO MAY 2018 OVER UGANDA**

##### **1. OVERVIEW**

March to May (MAM) constitutes the first major rainfall season in Uganda. During the 48<sup>th</sup> Climate Outlook Forum for the Greater Horn of Africa held in Mombasa, Kenya from 12<sup>th</sup> to 13<sup>th</sup> February 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 of Uganda and the rest of the region for the forecast period of March to May 2018 are as follows:

- i) The predicted evolution of Sea Surface Temperatures (SSTs) including neutral phase of Indian Ocean Dipole and the anticipated evolution from La Nina to neutral ENSO conditions in the central and eastern Pacific Ocean (No El Niño & no La Niña);*
- ii) 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) in the Ministry of Water and Environment, has come up with the following detailed forecast:-

##### **2. GENERAL FORECAST**

Overall, there is an increased probability for **near normal rainfall over much of Uganda**, except the western sector of the country which is expected to receive **normal to above normal rainfall**. It should be noted that the onset of seasonal rains is expected to be characterised by severe thunderstorms and hailstorms over several parts of the country. The breakdown of the forecast for each region is given as follows:

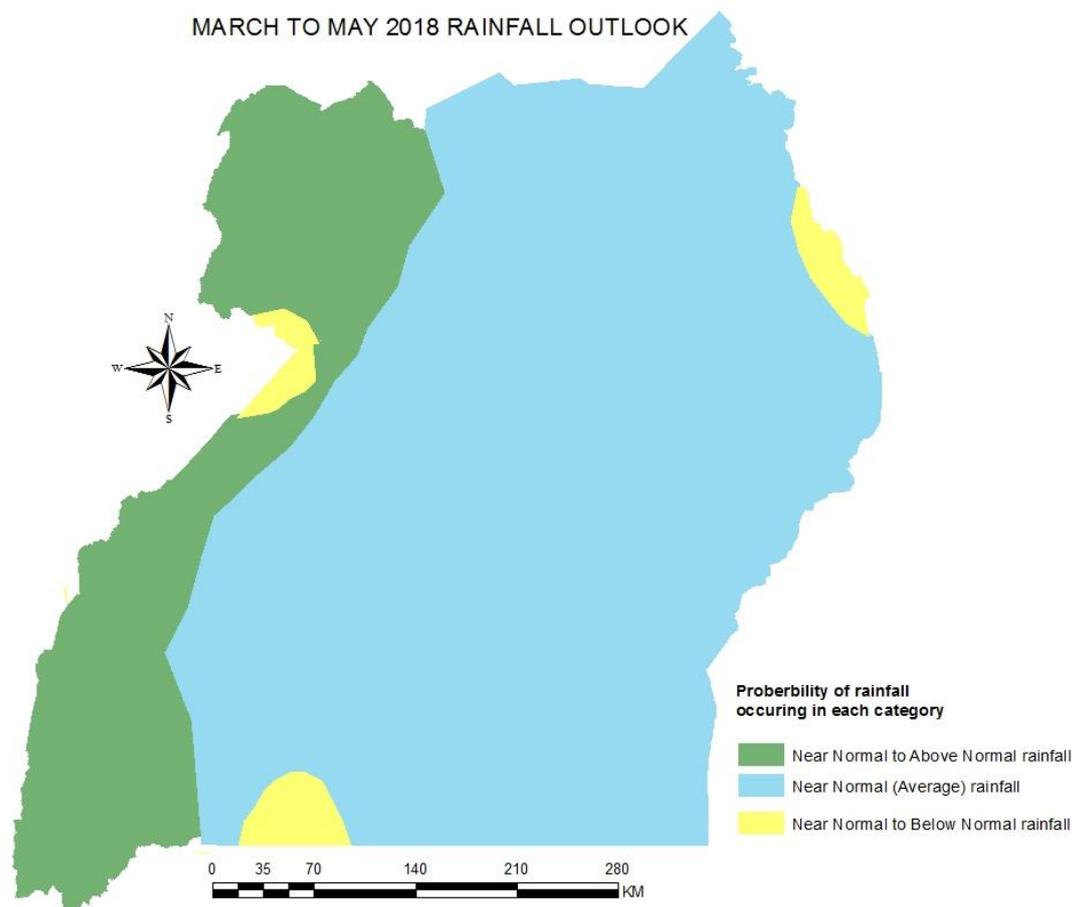


Figure 1: Spatial map for March to May 2018 Rainfall Outlook over Uganda

## 2.1 EASTERN UGANDA

### 2.1.1 Eastern Lake Victoria and South Eastern: (Jinja, Mayuge, Kamuli, Iganga, Bugiri, Namayingo, Luuka, Namutumba, Buyende, Kaliro, Busia and Tororo) districts

- This region has been experiencing dry conditions since December 2017. The onset of seasonal rains is expected around late February to early March and the peak is expected around mid to late April through early May. The cessation is expected around late May. **Overall, this region has a high chance of receiving near normal rainfall.**

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

- The onset of seasonal rains over this region is expected around early to mid-March. The peak rains are expected around late April and the cessation around mid-June. **Overall the region is expected to receive near normal rains.**

### 2.1.3 North Eastern Region: (Katakwi, Moroto, Kotido, Nakapiripirit, Abim, Napak, Amudat, Amuria, and Kaabong) districts

- This region has been experiencing dry conditions since December 2017. However, irregular light rains are expected to set in around mid to late March, which will eventually lead to the onset of steady rains by early April. The peak rains are expected around early to mid-May, and then moderate relaxation around mid-June. **Overall, there are high chances for near normal rainfall over this region.**

## 2.2 NORTHERN UGANDA

### 2.2.1 Eastern parts of northern region: (*Lira, Alebtong, Kitgum, Agago, Otuke, Pader, Kole, and Dokolo*) districts

- This region has been experiencing dry conditions since December 2017. The onset of normal seasonal rainfall is likely to set in around early to mid-March. Moderate relaxation of rains is expected around mid-June. ***Overall, near normal rainfall is expected during this season.***

### 2.2.2 Central Northern Parts: (*Gulu, Omoro, Apac, Lamwo, Nwoya, Amuru, Oyam and Kiryandongo*) districts

- The region is currently experiencing dry spells which are expected to continue up to mid/late March when the onset of the seasonal rains is expected to get established. The moderate relaxation of rains is expected around mid-June. ***Overall, there are high chances for near normal rains over this region.***

### 2.2.3 North Western: (*Moyo, Arua, Maracha, Nebbi, Pakwach, Adjumani, Yumbe, Koboko, Terego and Zombo*) districts

- The region has been experiencing dry conditions since December 2017. The onset of seasonal rainfall is expected around late February to early March. The peak of the rainfall is expected around late April 2017 and moderate relaxation is expected around mid-June. ***Overall, there are high chances for near normal with a tendency to above normal over this region.***

## 2.3 WESTERN UGANDA

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

- The region has been experiencing dry conditions since December 2017 apart from areas around Kigezi region which have been experiencing isolated showers. The onset of steady rains is expected to be established by late February to early March. The peak of the rains is expected around mid-April and the cessation around late May to early June. ***Overall, the region is expected to receive near normal with a tendency to above normal rainfall during this season.***

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

- The region has been experiencing relatively dry conditions since January. The onset of seasonal rains is expected to be established around late February to early March. The peak is likely to occur around mid to late April. The cessation of the seasonal rains is expected around early to mid-June. ***Overall, there are high chances for near normal rains with slight tendency to above normal over this region.***

## 2.4 LAKE VICTORIA BASIN AND CENTRAL AREAS

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

- The region has been experiencing relatively dry conditions punctuated with isolated

rainfall since December 2017. The onset of seasonal rains in this region is expected around late February to early March and thereafter, rains are likely to intensify with the peak occurring around mid to late April. The cessation is expected around early to mid-June 2018. ***Overall, there are high chances of near normal rainfall over this region.***

**2.4.2 Western Parts of Central:** (*Nakasongola, Luwero, Kyankwanzi, Nakaseke, Kiboga, Mubende, Sembabule, Lyantonde, Kyotera and Rakai*) districts

- The region is currently experiencing dry spells which are expected to continue up to late February to early March when the onset of the seasonal rains is likely to get established. The peak of rains is likely to occur around mid-April. The cessation is expected around early/mid-June. ***Overall, there are high chances of near normal rainfall over this region.***

**2.4.3 Eastern parts of Central:** (*Mukono, Buikwe, Kayunga, Buvuma*) districts

- The region is currently experiencing dry spells which are expected to continue up to late February when irregular rains will set in. The onset of seasonal rains is expected around late February to early March. The peak of rains is expected around mid to late April. The cessation is expected around early to mid-June. ***Overall, near normal rainfall is expected over this region.***

### **3.0 THE IMPLICATIONS OF THE CURRENT FORECAST**

- i) ***Generally, most areas around the country are expected to receive near normal with a slight tendency to above normal in some areas.*** The implication is that these areas will receive rainfall within average range and in some areas above the average of their respective long term means. Rainfall is expected to adequately support the normal socio-economic activities for the various sectors;
- ii) ***There are high chances that Eastern Karamoja region, parts of Isingiro and Rakai, and parts of Pakwach and Nebbi are expected to experience below normal rainfall during this season.*** This implies that the total rainfall expected over these regions is below 75% of the Long Term Mean (LTM). Under this range there are high chances for socio-economic activities being stressed, the level of stress will increase with increasing rainfall deficiency
- iii) It should also be noted that localized episodic flash flood events may also be observed in areas that are expected to receive near normal to below rainfall as a result of isolated heavy down pours and similarly, poor rainfall distribution may occur in localized areas expected to receive above normal rainfall
- iv) It should be noted that the onset of seasonal rains is expected to be characterised by severe thunderstorms and hailstorms over several parts of the country.

### **4.0 SPECIFIC ADVISORIES TO DIFFERENT SECTORS:**

#### **4.1 Agriculture, Livestock and Food Security Sector**

The farmers are advised to do the following:

##### **4.1.1 Regions expecting near normal to above normal rainfall and with 2.5+ months growing season (Refer to Figure 1):-**

Farmers in these regions where rainfall onset is expected to get established around early to mid-March should:-

- Start securing inputs and Early land preparations, which will allow timely planting;
- Plant long maturing crops like millet, rice, sorghum, maize, cassava, sweet potatoes at the start of rains and short quick maturing crops such as legumes, root tubers and vegetables, later as the rains progress.
- Carryout soil and water conservation practices such as digging trenches, mulching, minimum tillage (ripping, raised beds, planting basins);
- Enhance surveillance of crop gardens for pests and diseases;
- Good agronomic practices (proper spacing, fertilizer use, weeding);
- Livestock farmers are advised to plant livestock fodders at the onset of the rains;
- Deworming and moving stock to higher grounds to prevent foot rot and pneumonia diseases;
- Water harvesting for home consumption, and ground water harvesting into gardens, dams and valley tanks for livestock and sustaining crop production is encouraged;

***4.1.2 Regions expecting near normal to below normal rainfall and with length of 1-2.5 months growing season such as Eastern parts of Karamoja, Isingiro & Pakwach areas (Refer to Figure 1) are advised to do the following:-***

- Utilize irregular light rains for early land preparation and securing inputs such as seeds, fertilizers and chemicals.
- Timely planting of improved varieties (i.e. quick maturing and drought tolerant) e.g. Beans (NABE 15-23 series), maize (Longe 5, 7H, 10H-11H).
- Rain water harvesting (in-situ, roof, surface-run-off) as soon as the rains start is encouraged;
- Soil and water conservation practices such as terraces, stone bunds, trenches, grass bunds, mulching to control soil erosion and to enhance soil moisture retention;
- Pasture preservation/making hay is encouraged;
- Good agronomic practices for crops such as proper spacing and use of fertilizers
- Diversification including intercropping and mixed cropping (examples may include Maize/beans, maize-cowpea, maize-soybean.
- Low-cost irrigation systems such as small-scale drip irrigation (examples may include usage of plastic bottles filled with water;
- Maintenance and rehabilitation of existing water schemes for livestock
- Water rationing
- Livestock disease monitoring and vaccination.

In general, farmers are advised to make use of the seasonal rains by optimizing crop yields through appropriate land-use management. Farmers are also encouraged to plant enough food for both domestic use and for selling to emerging markets in the neighbouring countries.

## **4.2 Disaster Management Sector**

It should be noted that local and month-to-month variations might occur as the season progresses. For example, episodic flash floods might be experienced in some areas leading to loss of lives and destruction of property. Other disasters may arise from possible landslides mostly in mountainous areas of western, south-western and eastern Uganda as well as strong and gusty winds and lightning among others. Therefore, the following and other appropriate measures should be taken to avoid loss of life, destruction of infrastructure and property:

- Village, Sub county and District Disaster Management committees should immediately report any emerging incident associated with weather and climate hazards to the concerned authorities at the National Emergency Coordination and Operation Centre

(NECOC), Office of the Prime Minister on toll free line **0800177777**;

- De-silting the dams in the Karamoja sub region to ensure capturing and storing the water flows from the expected limited rains;
- District authorities should update their contingency plans for better coordination in case of any weather and climate disaster;
- Activating the national contingency plan to contain flood risk.

### **4.3 Water, Energy and Hydro-Power generation**

#### **4.3.1 *Regions expecting near normal to above normal***

- Plans for optimization of power generation and distribution should be enhanced due to the expected increased discharge of seasonal rain water into the water bodies;
- Protection buffer zones be set up around water sources to avoid water pollution due to vegetated/forested areas and nearby communities should avoid consumption of contaminated water;

#### **4.3.2 *Regions expecting near normal to below normal rainfall***

- Water source protection and management should be strengthened due to possible water security;
- Water should be used sparingly and where possible recycling can be adopted;
- Water infrastructure such as dams and valley tanks should be protected and conserved;
- Soil and water conservation should be encouraged using practices such as mulching;
- Other energy sources including solar, biogas and wind energy should be exploited. For example Biogas fuel in energy saving stoves.

### **4.4 Infrastructure, Works and Transport Sector**

The anticipated near normal rainfall patterns are likely to be occasionally accompanied by intense rainfall events that may lead to flash flooding in some localized places especially in Kampala city and other urban areas. The following measures should be taken:-

- Urban authorities should clear and reduce blockages of drainage systems to avoid water logging on the streets;
- Mitigating measures must be taken to withstand strong/violent winds be experienced that can cause structural damages to buildings (blow off rooftops and collapse of poorly constructed buildings);
- Encouraging de-silting of drainages and other water channels to curtail flooding is encouraged.

### **4.5 Health**

There is need to increase disease surveillance due to expected upsurges of epidemics of diseases that are prevalent during rainy seasons such as malaria, cholera, bilharzia and typhoid. Increases in lower respiratory diseases such as asthma due to humid conditions and allergies from some flowering plants are also expected. Health authorities are therefore advised to be alert and vigilant to equip health units with the necessary drugs to deal with such emergency situations. Therefore the following measures should be undertaken:

- Intensifying health education and awareness campaigns - emphasizing the use of mosquito nets, slashing bushes, disposing open containers, filling up open pits, and

draining stagnant water around homesteads in order to reduce breeding places for mosquitoes;

- Frequent health inspection in all communities;
- Increased prevention for air borne diseases and non-communicable illnesses should be improved;
- Improve domestic hygiene and Sanitation around homes and schools to reduce contamination of water e.g. the use of latrines.

**In conclusion,**

The predicted rains require early action by different stakeholders so as to take advantage of the seasonal rainfall outlook. This forecast should be used for planning in all rain-fed economic activities so as to improve economic welfare and livelihoods for all communities in Uganda.



Festus Luboyera (Dr.)

**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.

**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 Organisation'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 regional rainfall forecast for the March to May 2018 season.

**General:** 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.

**NB:** The current status of seasonal forecasting allows for prediction of spatial and temporal averages over larger areas and may not fully account for all physical and dynamical factors that influence short-term climate variability. Users of this outlook are, therefore urged to make good use of daily, ten day and monthly updates issued by the Uganda National Meteorological Authority.