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REVIEW OF THE WEATHER IN OCTOBER 2017 AND THE OUTLOOK FOR NOVEMBER 2017

1. SUMMARY

Several parts of the country experienced fairly wet conditions during October 2017. More than half of the meteorological stations recorded monthly rainfall totals exceeding 50mm. The October-November-December (OND) 2017 "Short-Rains" seasonal rainfall onset was as predicted over the better part of the country and more so over the western, North western and Central parts of the country. Most of these regions recorded substantial amounts of rainfall that was enhanced at most stations.

November is normally the peak month for the "Short-Rains" season. The outlook for November 2017 indicates that most parts of the country are likely to experience near average to above average rainfall during the month. Some areas in Northeastern and Southeastern Kenya are, however, likely to experience slightly depressed rainfall during the month.

2. WEATHER REVIEW FOR OCTOBER 2017

The month of October marks the onset of "Short Rains" season over most parts of the country. In October 2017, the onset of the "Short Rains" season was as predicted over most parts of the country. Several places in Western Kenya received rainfall during the first week of October that continued from the previous month of September while areas in the Northwestern and Central Kenya experienced the onset during the second week of the month.

In terms of rainfall amounts, more than half of the meteorological stations in the country recorded monthly rainfall totals of more than 50mm. The only stations that recorded below 50mm include Garissa, Wajir and Marsabit in Northeastern Kenya, Lodwar in Northwestern Kenya, Machakos, Makindu and Voi in Southeastern Kenya and Lamu in the Coastal strip.

The highest monthly rainfall total of 270.4mm (266% of the Long-Term Mean (LTM)) was recorded at Eldoret Airport station. Kisii, Eldoret (Kapsoya), Embu, Dagoretti, Kitale, Kericho, Meru, Laikipia Airbase, Nakuru and Moi Airbase stations recorded 238.9mm (132%), 221.3mm (349%), 219.7mm (125%), 170.9mm (285%), 170.0mm (136%), 154.5mm (88%), 135.7mm (62%), 133.3mm (171%), 130.5mm (169%) and 128.7mm (233%) respectively. Kakamega, Thika, Kisumu, Mandera and Wilson Airport stations recorded between 100 and 120mm while the rest of the stations recorded less than 100mm as depicted in **Figure 1**.

3. EXPERIENCED IMPACTS

The timely onset of the OND 2017 seasonal rainfall impacted positively on the Agricultural and Livestock sectors in various parts of the country. Farmers in most agricultural areas planted in good time following the timely onset.

However, some of the Counties in Southeastern, Northeastern and the Coastal regions that remained generally dry are still facing drought situation caused by lack of or low rainfall for a long period of time. Pasture for livestock continued to deteriorate as a result of the sunny and dry conditions in some pastoral

areas of northeastern, southeastern and the coastal region. These areas include the Pastoral areas of Tana River (Tana North), Garissa (Ijara, Fafi, Daadab), Marsabit (Moyale), and also the Marginal agriculture areas of Kilifi (Ganze, Kaloleni), Kwale (Kinango), Lamu (Lamu West), Kitui (Kitui South) and Makueni (Kibwezi East) among others.

4. FORECAST FOR NOVEMBER 2017

November is normally the peak month for the “Short-Rains” season. The outlook for November 2017 is mainly based on empirical statistical models developed from expected evolution of global Sea Surface Temperatures (SSTs) anomalies, SST gradients and Southern Oscillation Index (SOI). The SST anomaly patterns taken into account include the warmer to near average SSTs in the central to western Equatorial Indian Ocean (adjacent to the East African coast) coupled with near average to cooler than average SSTs in the eastern Equatorial Indian Ocean (adjacent to Australia) that constitutes a slightly positive Indian Ocean Dipole (IOD). This situation is favorable for good rainfall in the country. The neutral El Niño Southern Oscillation (ENSO) condition in the Eastern and Central Equatorial Pacific Ocean was also taken into consideration.

The forecast indicates that the Highlands West of the Rift Valley, Lake Basin, Central Rift Valley, Highlands East of the Rift Valley including Nairobi area are likely to experience enhanced rainfall during the month of November. The extreme northern areas (Mandera and much of Marsabit), Northwestern Kenya (much of Turkana and Pokot), parts of the North Rift (Baringo and northern parts of Elgeyo Marakwet), the South Rift (Narok and Kajiado) and the Coastal strip are likely to experience near normal rainfall during the month of November. Much of the Northeastern and Southeastern parts of Kenya are likely to experience generally depressed rainfall as seen in **figure 2**.

The specific outlook for individual areas is as follows:

The Highlands West of the Rift Valley (Kitale, Kericho, Nandi, Eldoret, Kakamega), Lake Basin (Kisumu, Kisii, Busia), Central Rift Valley (Nakuru, Naivasha), Highlands East of the Rift Valley (Nyeri, Muranga, Kiambu, Embu, Meru), Nairobi area (Dagoretti, Wilson, Eastleigh) are likely to receive near-normal to above-normal (generally enhanced) rainfall.

The Coastal strip (Mombasa, Mtwapa, Malindi, Kilifi, Lamu), Northwestern Kenya (Lodwar, Lokichoggio, Lokitaung etc), the South Rift (Narok and Kajiado) and the extreme northern parts of the country (Mandera, Moyale, Marsabit) are likely to receive near-normal (average) rainfall.

Several parts of Southeastern Kenya (Machakos, Makindu, Voi, Taita-Taveta) and Northeastern region (Isiolo, Garbatulla, Wajir, Garissa) are likely to receive near-normal to below-normal (slightly depressed) rainfall.

NB: Despite the forecasted depressed rainfall in Southeastern and Northeastern areas, a few storms may still occur during the month causing flash floods in isolated areas.

5. POTENTIAL IMPACTS

The expected good rainfall performance during November 2017 will lead to various impacts as follows:

- The good rainfall is expected to improve agricultural activities in several parts of the country and more so over the western and central regions. In the Southeastern region where the rainfall is expected to be depressed and the onset of the rains is likely to be delayed, agricultural activities are likely to be interfered with bearing in mind that October-November-December is considered as the major rainfall season in this region.
- Sustained rainfall in high agricultural potential areas of Uasin Gishu and Trans Nzoia is likely to affect harvesting and drying of food crops
- Foliage and pasture conditions over most pastoral areas of Northeastern, Northwestern and Southeastern Kenya are likely to slightly improve as the rains set in.
- Problems related to water scarcity are likely to increase in some parts within the marginal areas. This is likely to result into Human-Wildlife conflicts over limited water resources in the areas.
- Diseases associated with water scarcity and poor sanitation such as typhoid and cholera are likely to emerge in some parts of the country.

- Water levels in the hydroelectric power generating dams are expected to improve and enhance the capacity for hydroelectric power generation in the hydropower dams.
- The continued drought situation especially in the ASALs region is likely to cause food insecurity in the affected areas.

N.B: This forecast should be used in conjunction with the daily 24-hour and the weekly forecasts issued by this Department.

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