REVIEW OF THE WEATHER IN SEPTEMBER 2009 AND THE OUTLOOK FOR OCTOBER 2009

1. SUMMARY

Most parts of the country are normally sunny and dry during the month of September. This scenario was observed over the better part of the country in September 2009. However, some parts of western Kenya experienced highly enhanced rainfall that led to serious flooding and loss of lives and property in Nyanza Province. The Coastal strip and central Highlands including Nairobi area recorded light rainfall amounts.

The outlook for October 2009 indicates that most parts of the country are likely to experience enhanced rainfall during the month. This will be mainly associated with the evolving El Niño conditions in the Equatorial eastern and central Pacific Ocean coupled with warmer than average Sea Surface Temperatures (SSTs) over the Equatorial western Indian Ocean adjacent to the East African Coast.

2. WEATHER REVIEW FOR SEPTEMBER 2009

2.1 RAINFALL REVIEW FOR SEPTEMBER 2009

Most parts of western Kenya, and especially the Lake Victoria Basin, experienced highly enhanced rainfall during the month of September 2009. The rainfall was especially heavier at Kisumu where several people lost their lives as a result of flash floods. On 20th September, the Kisumu Meteorological Station recorded 131.1mm of rainfall. The same station recorded 34.3 and 67.4mm on 21st and 23rd September, respectively. Kericho Meteorological Station recorded 43.2mm on 3rd September while Kakamega station recorded 32.6mm on 19th September. Elsewhere, the Coastal strip and some parts of central Highlands including Nairobi recorded light rainfall amounts with monthly totals barely exceeding 10mm.

In terms of monthly rainfall totals, the short-lived intense rainfall amounts recorded in Kisumu significantly contributed to relatively high September 2009 rainfall totals. Consequently, Kisumu Meteorological Station recorded the highest total of 279.2mm (309% of the Long-Term Mean - LTM). Kericho, Kakamega, Kisii, Kitale, Eldoret Airport, Nakuru, Eldoret and Nyahururu stations recorded 197.5 (114%), 192.5 (116%), 134.0 (83%), 89.8 (96%), 86.0 (102%), 46.5 (60%), 44.9 (74%) and 22.0 (34%) respectively. The rest of the stations in the country recorded less than 20mm as seen in **Figure 1.**

2.2 REVIEW OF THE SYNOPTIC CLIMATOLOGY AND PATTERNS IN SEPTEMBER 2009

During September 2009, warmer than average SSTs continued to occur over western Equatorial Indian Ocean along the coast of East African. Warm SSTs were also sustained over the eastern and central equatorial Pacific Ocean (Niño areas), indicating the presence of El Niño conditions.

The Meridional (North-south) arm of the Inter-Tropical Convergence Zone (ITCZ) was well over the western parts of the country resulting to heavy rainfall. The Zonal (east-west) arm of the ITCZ, which follows the North-South migration of the overhead sun, remained further north in Ethiopia and Sudan. The Eastern Africa high-pressure Ridge was relatively weak while high pressures started establishing over the Arabian region especially, towards the end of the month of September, 2009.

3. EXPERIENCED IMPACTS

4. The prolonged dry conditions over most parts of the country continued to affect most communities, families and households who lacked food and water. This was more so in the marginal areas where people had to cover long distances in search of water for consumption;
5. Animals continued to die in the pastoral areas due to lack of pastures and water; and
6. Despite the prolonged dry conditions over most parts of the country, the heavy rainfall that occurred in Nyanza Province caused serious flooding that led to loss of human life and destruction of infrastructure.

7. OUTLOOK FOR OCTOBER 2009

This climate outlook is based on models developed from expected evolution of global SSTs and SST gradients. The evolving El Niño conditions in the Equatorial eastern and central Pacific Ocean as well as the warmer than average SSTs over the Equatorial western Indian Ocean adjacent to the East African Coast were considered. The forecast indicates that most parts of the country are likely to experience near-normal rainfall tending to above normal (enhanced) during the month (See 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), most parts of northeastern Kenya (Moyale, Mandera, Wajir, Garissa) and the Coastal strip (Mombasa, Mtwapa, Malindi, Msabaha, Lamu) are likely to receive near normal rainfall tending to above normal (enhanced).

The Central Rift Valley (Nakuru, Narok, Nyahururu, Naivasha), Highlands East of the Rift Valley (Nyeri, Muranga, Kiambu, Embu, Meru), Nairobi area (Dagoretti, Wilson, Eastleigh), Northwestern Kenya (Lodwar, Lokichoggio, Lokitaung), Southeastern lowlands (Machakos, Makindu, Voi, Taveta) and parts of northeastern Kenya (Marsabit) are likely to receive near normal rainfall tending to slightly above normal (slightly enhanced).

5. EXPECTED ONSET DATES

- The western parts of the country including the Lake Victoria Basin **(Kakamega, Kitale, Eldoret, Kisii, Kericho, Kisumu etc) are expected to continue experiencing rainfall during the first week of October spreading from the month of September;**
- The Central Rift Valley areas **(Nakuru, Narok, Nyahururu etc) are likely to experience the onset during the second week of October;**
- Onset over the northwestern region **(Lodwar, Lokitaung, Lokkichogio etc) is expected during the second to third week of October;**
- The Central Highlands (**Meru, Embu, Nyeri, Murang'a, Nanyuki etc);** Nairobi area **(Dagoretti, Kabete, Eastleigh etc) and** Northeastern areas **(Marsabit, Mandera, Moyale, Wajir, Garissa) are expected to experience their onsets in the first to second week of October;**
- Most parts of the Southeastern lowlands **(Voi, Makindu, Taveta, Tana River etc) are likely to realize the onset during the second to third week of October; and**
- **Onset over the** coastal areas **is expected in the first to second week of October** (see Figure 3).

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

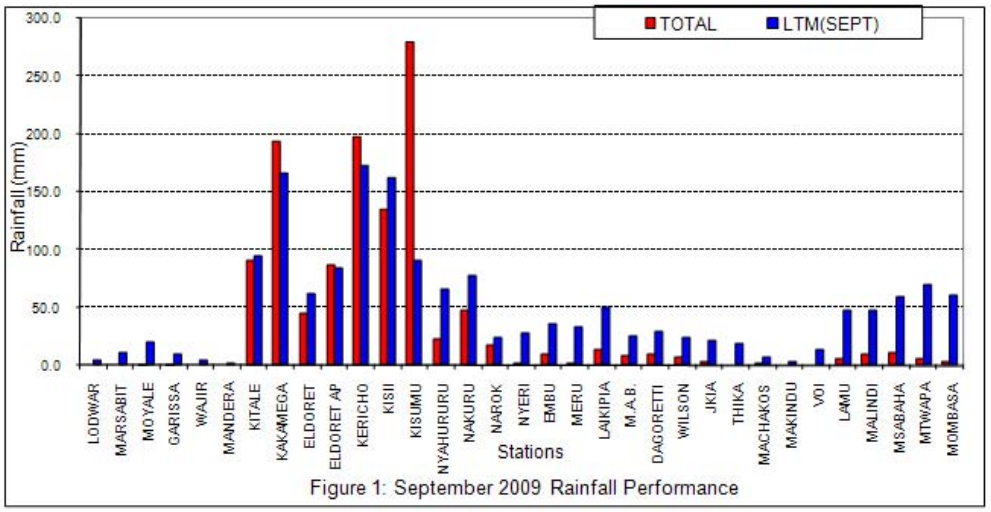
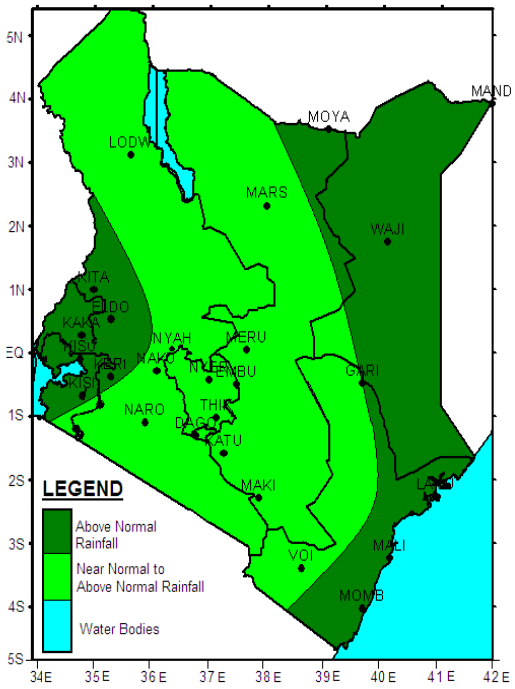


Figure 1: September 2009 Rainfall Performance

FIG 2: Rainfall Outlook for October 2009



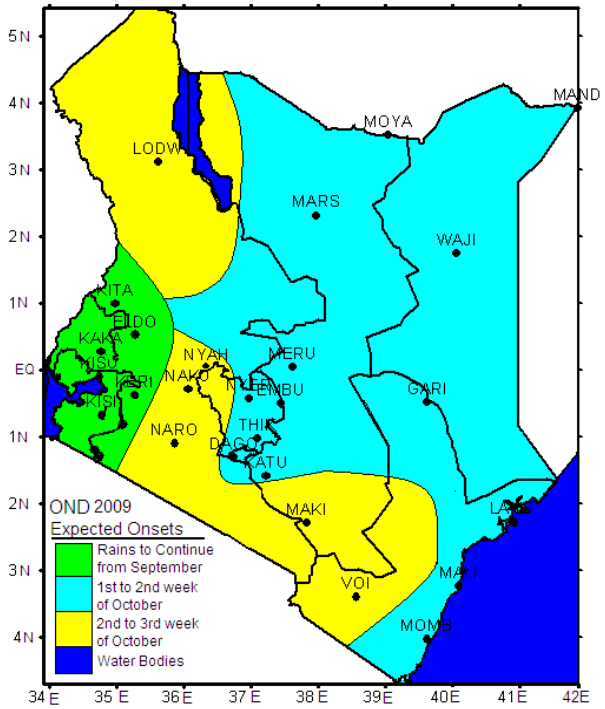


Figure 3: Expected Onset Dates for October-December 2009 "Short-Rains" Seasonal Rainfall

Kenya Meteorological Department (KMD)

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