



REPUBLIC OF KENYA

MINISTRY OF ENVIRONMENT, WATER AND NATURAL RESOURCES
STATE DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
KENYA METEOROLOGICAL SERVICE

Dagoretti Corner, Ngong Road, P. O. Box 30259, Nairobi, Kenya,
Telephone: 254-20-3867880-5, Fax: 254-20-3876955/387373,
E-mail:director@meteo.go.ke

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PRESS RELEASE

THE OUTLOOK FOR THE MARCH-APRIL-MAY 2014 "LONG-RAINS" SEASON AND REVIEW OF WEATHER DURING THE OCTOBER-DECEMBER 2013 "SHORT RAINS" SEASON, JANUARY-FEBRUARY 2014 PERIOD

1. HIGHLIGHTS

1.1 Outlook for March-April-May 2014 "Long Rains" season

- Near normal with a tendency to depressed rainfall is expected over most of the eastern sector of the country during March-May 2014 "Long-Rains" Season. On the other hand, rainfall over the western, northwestern and central counties is likely to be enhanced.
- Most of the rainfall over the better part of the country is likely to be recorded during the peak month of April.
- The seasonal rainfall onset is expected during the third week of March over most parts of western Kenya. The better part of the eastern sector, especially Northeastern Kenya is likely to remain dry throughout the month of March.

1.2 Performance of the October-November-December 2013 "Short Rains" season

- Generally depressed and poorly distributed rainfall was recorded over most parts of Northeastern, Northwestern and parts of Central Kenya and Central Rift Valley during October-November-December 2013 "Short-Rains" season. Several areas in Western and Southeastern Kenya recorded enhanced rainfall especially in the month of December 2013.
- The generally poor rainfall performance in the country was mainly as a result of the prevailing cool Sea Surface Temperatures (SSTs) in the western Equatorial Indian Ocean adjacent to the East African Coast, especially during the months of October and November 2013.

2. FORECAST FOR MARCH-APRIL-MAY (MAM) 2014 "LONG-RAINS" SEASON

March to May is a major rainfall season in most parts of Kenya as well as much of East Africa. *Figure 1* depicts the mean (average) March-April-May seasonal rainfall. It is discernible from the figure that the highest rainfall amounts of over 300mm are recorded over Western, Central, Coastal strip and parts of northern Kenya (Marsabit, Moyale).

This forecast for March to May 2014 is based on the prevailing and expected Sea Surface Temperature Anomalies (SSTAs) over the Pacific, Indian and Atlantic Oceans as well as other Synoptic, Mesoscale and local factors that affect the climate of Kenya. These factors were assessed using various tools including ocean-atmosphere models, statistical models, satellite derived information and expert interpretation. The prevailing slightly cooler than average Sea Surface Temperatures (SSTs) in the Northwestern Equatorial Indian Ocean (adjacent to the Horn of Africa) coupled with warmer than average SSTs in the eastern Equatorial Indian Ocean (adjacent to Australia) were highly considered. Negative Indian Ocean Dipole (IOD) was still prevailing, a situation that is not favorable for good seasonal rainfall especially over the eastern sector of the country.

The predicted Onsets, Cessation and distribution of rainfall were derived from statistical analysis of past years, which exhibited similar characteristics to the current year.

The forecast indicates that most of the western half of Kenya is likely to experience near normal rainfall with a tendency towards above normal (i.e. enhanced rainfall). However, the eastern half of the country is likely to

experience near normal rainfall with a tendency to below normal (i.e. depressed rainfall). The specific outlook for March to May 2014 “Long-Rains” Season (depicted in **Figure 2**) indicates that:

- i. **Western Counties** (Busia, Vihiga, Kakamega, and Bungoma); **Nyanza Counties** (Kisumu, Siaya, Migori, Kisii, Homa Bay, and Nyamira.); **Counties in the central and Southern Rift Valley** (Trans Nzoia, Uasin Gishu, Kericho, Nandi, Nakuru, Bomet, Narok, Baringo, Laikipia, Kajiado, etc); **Most Counties in Northern Rift Valley** (Turkana, West Pokot); **Central Counties** (Nyandarua, Nyeri, Kiambu, Murang’a, Kirinyaga, etc.); **Nairobi County** and **Some Counties in Eastern Region** (Embu, Meru, etc); are likely to receive near normal rainfall with a tendency towards above normal (i.e. enhanced rainfall).
- ii. **Several Counties in Eastern Region** (Machakos, Makueni, Isiolo, Marsabit, Kitui, etc); **Counties in Coast Region** (Mombasa, Kwale, Kilifi, Tana River, Lamu, and Taita/Taveta); **Most Counties in Northeastern** (Mandera, Garissa, Wajir); are likely to receive near normal rainfall with a tendency towards below normal (i.e. depressed rainfall).

3. EXPECTED SEASONAL RAINFALL DISTRIBUTION

The distribution, both in time and space, of March to May 2014 “Long-Rains” is likely to be generally good, over most parts of western and Central Kenya. Poor rainfall distribution is, however, expected over the eastern sector of the country and more so in the Arid and Semi-Arid Lands (ASALs).

- In Northwestern Kenya, the rainfall performance is likely to be highly depressed in March but enhanced in April and May.
- Generally depressed rainfall is expected over the western highlands, Lake Basin, central Rift Valley and the central highlands including Nairobi in March. It is, however, expected to be enhanced in April and May.
- The northeastern counties are likely to experience generally depressed rainfall throughout the season.
- The southeastern counties are expected to receive depressed in March and May but enhanced in April.
- The rainfall performance along the Coastal Strip is expected to be generally depressed in March and April but slightly enhanced in May.

4. EXPECTED ONSET AND CESSATION DATES

	Region	Onset Dates	Cessation Dates
1	Counties in the Lake Basin and in Highlands West of the Rift Valley	2 nd to 3 rd week of March 2014	Rainfall will continue into June 2014
2	Southern parts of the Rift Valley	3 rd to 4 th week of March 2014	3 rd to 4 th week of May 2014
3	Central Rift Valley	3 rd to 4 th week of March 2014	Continues into June but will reduce during the 4 th week of May
4	Central highlands including Nairobi area	3 rd to 4 th week of March 2014	3 rd to 4 th week of May 2014
5	South eastern Counties	3 rd to 4 th week of March 2014	1 st to 2 nd week of May 2014. Generally dry for most of the month of May.
6	Coastal Strip	4 th week of March to 1 st week of April 2014	Continues into June 2014
7	North-eastern and North-western districts	1 st to 2 nd week April 2014. Generally dry during the month of March	1 st to 2 nd week May 2014. Most areas to remain generally dry in May 2014.

The expected Onset and Cessation dates are also shown in **Figures 3a and 3b** respectively.

5. POTENTIAL IMPACTS

5.1 Agriculture and Food Security Sector

In the agricultural counties of Western, Nyanza, Rift Valley and central highlands where rainfall is expected to be near-normal with a tendency towards above-normal, the farming communities should take advantage and maximize crop production through appropriate land-use management. Farmers are advised to liaise with the Ministry of Agriculture, Livestock and Fisheries.

In other agricultural counties like the Southeastern Kenya where the rainfall is expected to be generally depressed, farmers are also advised to liaise with the Ministry of Agriculture to get advice for the best use of rains by planting appropriate crops that are drought resistant.

5.2 Disaster Management Sector

Lightning strikes are expected in western Kenya especially within Gusii and Kakamega counties while flooding in places like Budalang'i and Kano plains is probable. Isolated cases of landslides/mudslides are also likely in prone areas of Western, central and Rift Valley. The National Disaster Operations Centre is, therefore, advised to take the necessary measures that would ensure mitigation of any negative impacts that may arise from the forecast conditions.

5.3 Energy Sector

The Tana River, Turkwel and Sondu Miriu catchment areas are expected to experience enhanced rainfall during the coming season (March-May). It is, therefore, expected that the level of water in the Seven-Folks and other hydroelectric power generation dams will improve gradually during the season.

5.4 Transport and Public Safety

Flash floods are likely to occur especially in Western and some parts of Central Kenya. This may lead to transport problems in areas where the roads become impassable when it rains. Slippery roads may also pose dangers to motorists and pedestrians. All should, therefore, take utmost care during the rainy period.

Light aircrafts are advised to take utmost care in the western routes and avoid flying through deep cumulus clouds, especially in the afternoon hours. Such clouds are associated with severe turbulence (updrafts and downdrafts and cross winds occasioned by strong convections) and lightning.

5.5 Water Resources Management Sector

Water resources for drinking, sanitation and industrial use in the western and central municipalities of the country are expected to improve due to the expected good rainfall in the regions. Elsewhere, the resources are likely to continue being limited due to the expected depressed rainfall especially in Northeastern Kenya. The currently available water should therefore be well managed especially in the marginal areas in order to cater for the animal and human population needs.

5.6 Local Authorities

Municipalities located in western and central regions, where rainfall is likely to be enhanced, are advised to open up drainage systems early enough so as to avoid water accumulation due to surface runoff that lead to flash flooding.

5.7 Health Sector

Water borne diseases associated with poor sanitation as well as flooding may emerge in areas expected to receive enhanced rainfall. Health authorities are, therefore, expected to be on the look out and equip hospitals with necessary drugs to be able to deal with such situations as they arise. There is also need to be on the lookout for Highland Malaria in regions that are expected to receive enhanced rainfall.

5.8 Industry

In areas expecting enhanced rainfall, some sections of the road network may be muddy and slippery. Vehicles may stall in the muddy sections. This scenario is likely to result in late delivery or non-delivery of raw materials and industrial products to the industries and distribution outlets to commodity markets respectively.

5.9 Environment

In areas expected to receive enhanced rainfall, the Ministry of Environment, Water and Natural Resources should encourage residents to put in place soil conservation measures to minimize environmental degradation. People should also be encouraged to plant more indigenous trees in order to increase forest cover.

6. WEATHER REVIEW

6.1 OCTOBER-NOVEMBER-DECEMBER (OND) 2013 "SHORT RAINS" SEASON

The October-December 2013 seasonal rainfall analysis indicates that the performance was generally poor over several parts of the country. This was more so in Northeastern, Northwestern and some parts of Central Kenya where most meteorological stations recorded less than 75% of their seasonal Long-Term Means (LTMs). However, a few stations in western Kenya and Southeastern lowlands recorded enhanced rainfall (above 125%). Nyahururu, for example, recorded more than 200 percent of its seasonal LTM while Eldoret and Eldoret Airport stations recorded between 150 and 200 percent.

The highest seasonal amount of 612.5mm (89%) was recorded at Meru station while Kakamega, Kisii, Kericho, Nyahururu, Voi, Marsabit, Makindu, Embu, Eldoret Airport and Kitale stations recorded 480.6mm (122%), 474.1mm (88%), 436.1mm (108%), 377.4mm (203%), 360.2mm (129%), 342.8mm (116%), 337.0mm (104%), 334.4mm (63%), 329.0mm (152%) and 301.2mm (127%) respectively. The rest of the stations recorded less than 300mm. The lowest seasonal rainfall percentages of below 50% were recorded at Narok (44%), Garissa (45%) and Wajir (49%) (see figures 4a and 4b).

6.2 OBSERVED CONDITIONS DURING JANUARY-FEBRUARY 2014

Generally sunny and dry weather conditions prevailed over most parts of the country during the two months (January-February 2014). This was more so in January when most stations in Northwestern, Northeastern, Southeastern and the Coastal regions recorded no rainfall at all. The rainfall recorded in January over the central highlands including Nairobi occurred in a single day (18th January). Wilson Airport station recorded the highest daily rainfall amount of 59.4mm, recorded on 18th January.

Kisii station in the western Highlands recorded the highest monthly rainfall total of 77.7mm. Wilson Airport, Kakamega, Narok, Kericho and Kisumu stations recorded 59.4mm (one day rainfall), 47.9mm, 43.3mm, 41.2mm and 40.2mm respectively, while the rest of the stations recorded less than 40mm as seen in figure 4.

A wet spell in mid February 2014 resulted in high rainfall amounts were recorded over various parts in the southern half of the country. This was more so in western Kenya, south Rift, Nairobi area and some parts of Southeastern Kenya. Wilson Airport station in Nairobi recorded the highest monthly rainfall amount of 116.1mm while Narok, Voi, Thika, Dagoretti Corner, Machakos and Jomo Kenyatta International Airport stations recorded 103.7mm, 100.5mm, 96.3mm, 91.2mm, 80.0mm and 73.5mm respectively. The rest of the stations recorded less than 70mm.

During the January-February period, most meteorological stations in the country recorded near-average daytime (maximum) and night-time (minimum) temperatures.

7. EXPERIENCED IMPACTS

The poor rainfall performance during the season resulted into:

- Poor crop performance over most of the central highlands and southeastern Kenya.
- Deteriorating foliage and pasture for the pastoralists in the pastoral areas of Northwestern and Northeastern Kenya.
- Reduced water levels in the Seven-Folks hydroelectric power generation dams.
- Reduced food security in various parts of the country.
- A reduction in water resource for domestic use, drinking and sanitation in most parts of the country and in particular the counties in Northern, Northeastern and Southeastern parts of the country.

A few people lost their lives in Kajiado County as a result of short-lived flash floods despite the poor rainfall performance in the County.

NB: This outlook should be used with 24 hour forecasts and regular updates issued by this Department.

MR. JAMES G. KONGOTI
 DIRECTOR OF METEOROLOGICAL SERVICES & PERMANENT REPRESENTATIVE OF KENYA
 WITH WMO

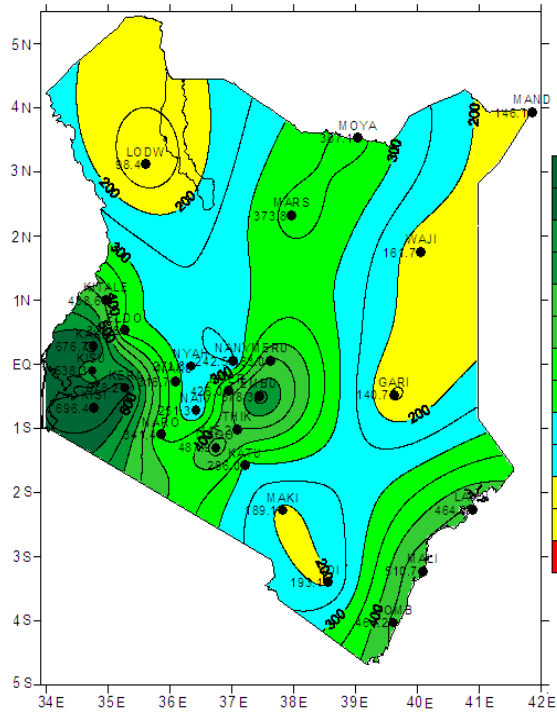


FIG. 1: MEAN MARCH-MAY SEASONAL RAINFALL

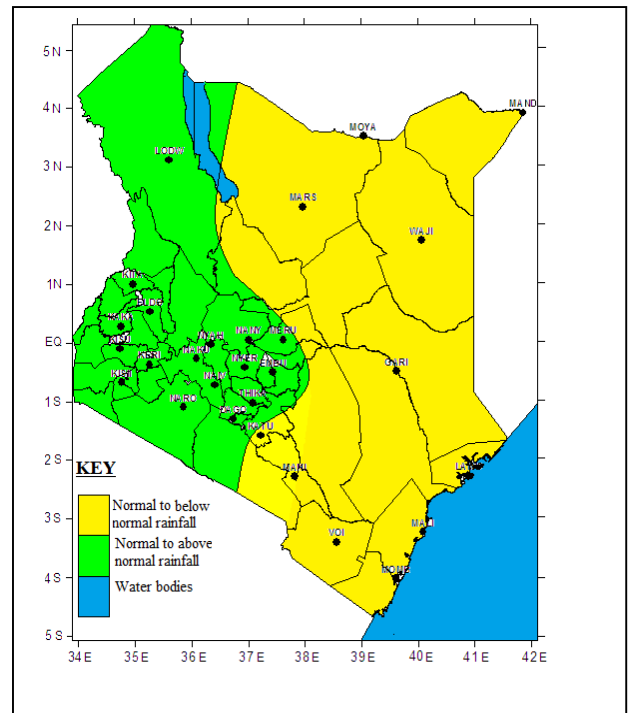


FIG. 2: MARCH-MAY (MAM) 2014 SEASONAL RAINFALL

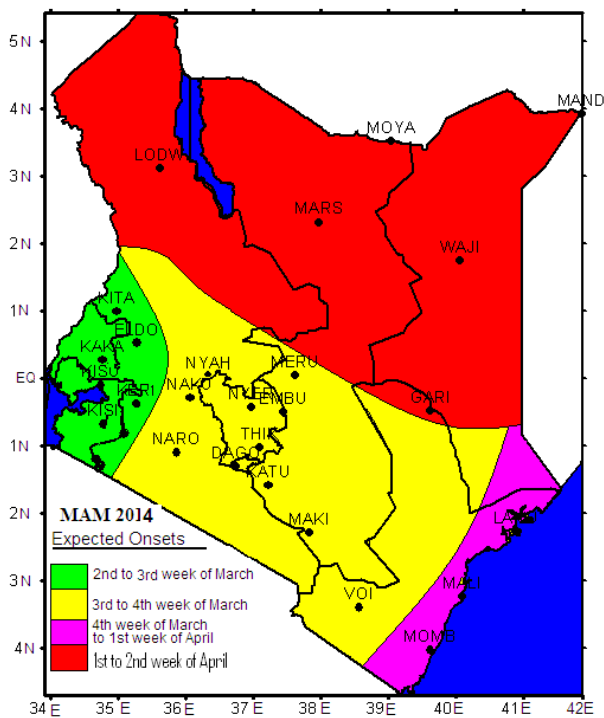


FIG. 3A: EXPECTED MARCH-MAY 2014 SEASONAL RAINFALL ONSET

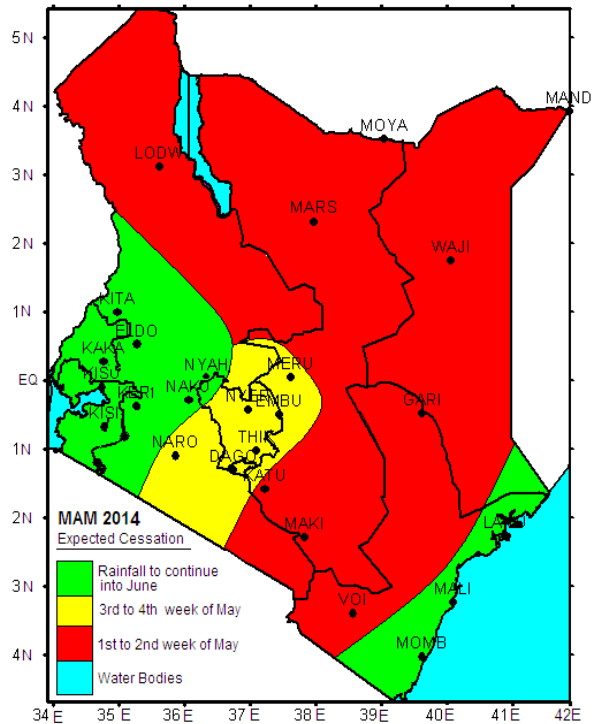


FIG. 3B: EXPECTED MARCH-MAY 2014 SEASONAL RAINFALL CESSATION

