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MARCH-APRIL-MAY (MAM-2026) SEASON OUTLOOK FOR MOMBASA COUNTY

1. HIGHLIGHTS

- ✓ The MAM-2026 rainy season is expected to be Below normal in the County of Mombasa and its neighborhoods.
- ✓ The onset dates are expected to fall within the 1st to 2nd week of April 2026. A delayed onset is expected
- ✓ Rain is likely to continue into June 2026
- ✓ The rainfall distribution over Mombasa County will be marked by prolonged dry spells and occasional isolated storms. Occasional Floods are expected
- ✓ Temperatures are expected to be warmer than average across the county and in the coastal waters.

The reasons for the expected below normal rainfall during the MAM 2026 season:

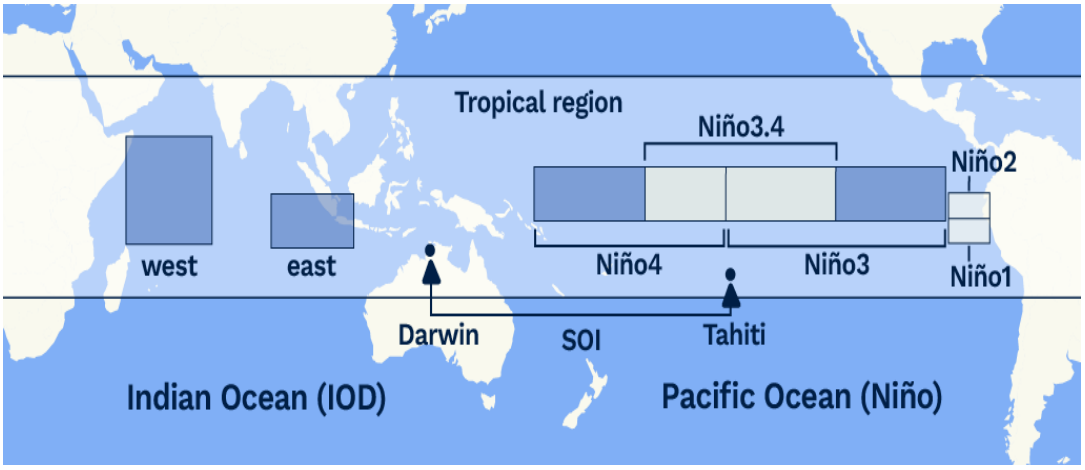
1) This will be driven by weak La Niña conditions, characterized by cooler-than average Sea Surface Temperatures (SSTs) over the Central and Eastern Equatorial Pacific Ocean.
2) The existence and persistence of negative and neutral phases Indian Ocean Dipole.

OCEAN AND ATMOSPHERE INDICES

Climate is influenced by sea surface temperature and atmospheric patterns in the Pacific, Indian and Southern Ocean regions. Specific regions are continuously monitored as they can indicate the presence or potential development of ENSO (El Nino, La Nina), Indian Ocean dipole (IOD) phases. Pacific and Indian Ocean indices are updated regularly.

NIÑO INDICES REGIONS

To monitor the Pacific Ocean for signs of El Niño or La Niña, climatologists use several SST indices. These indices measure the difference between the current sea surface temperature and its long-term (1991–2020) average in several regions located along the equatorial Pacific. The difference is referred to as an anomaly. These regions are labeled Niño1, Niño2, Niño3, Niño3.4 and Niño4 and are used by meteorological agencies around the world.



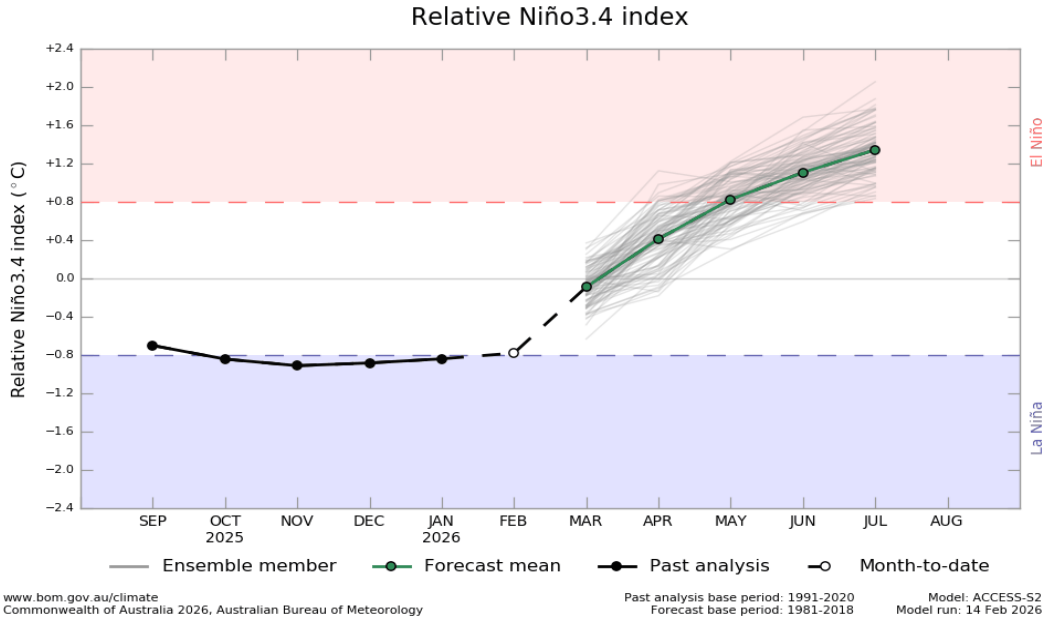
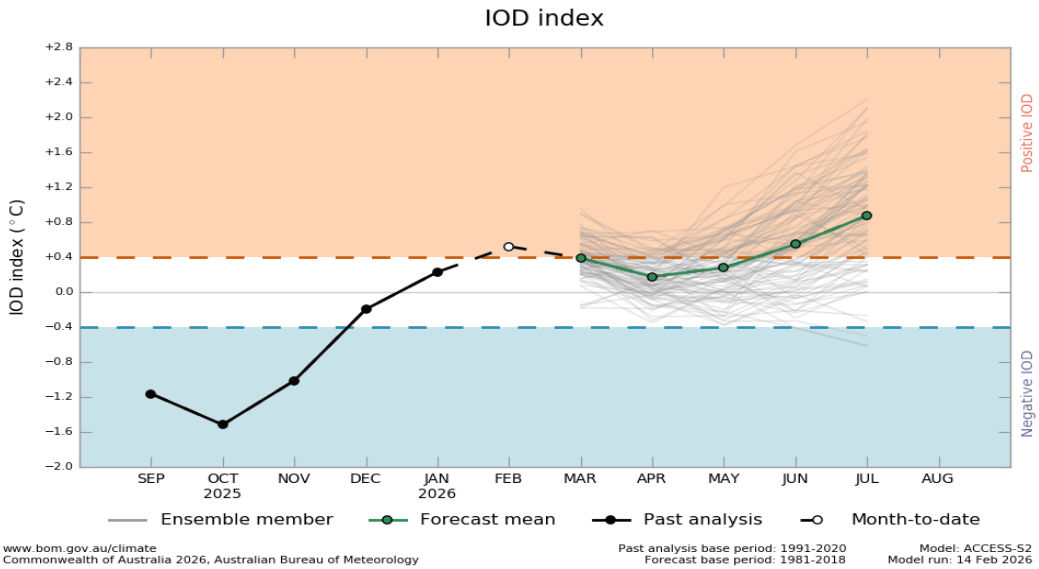
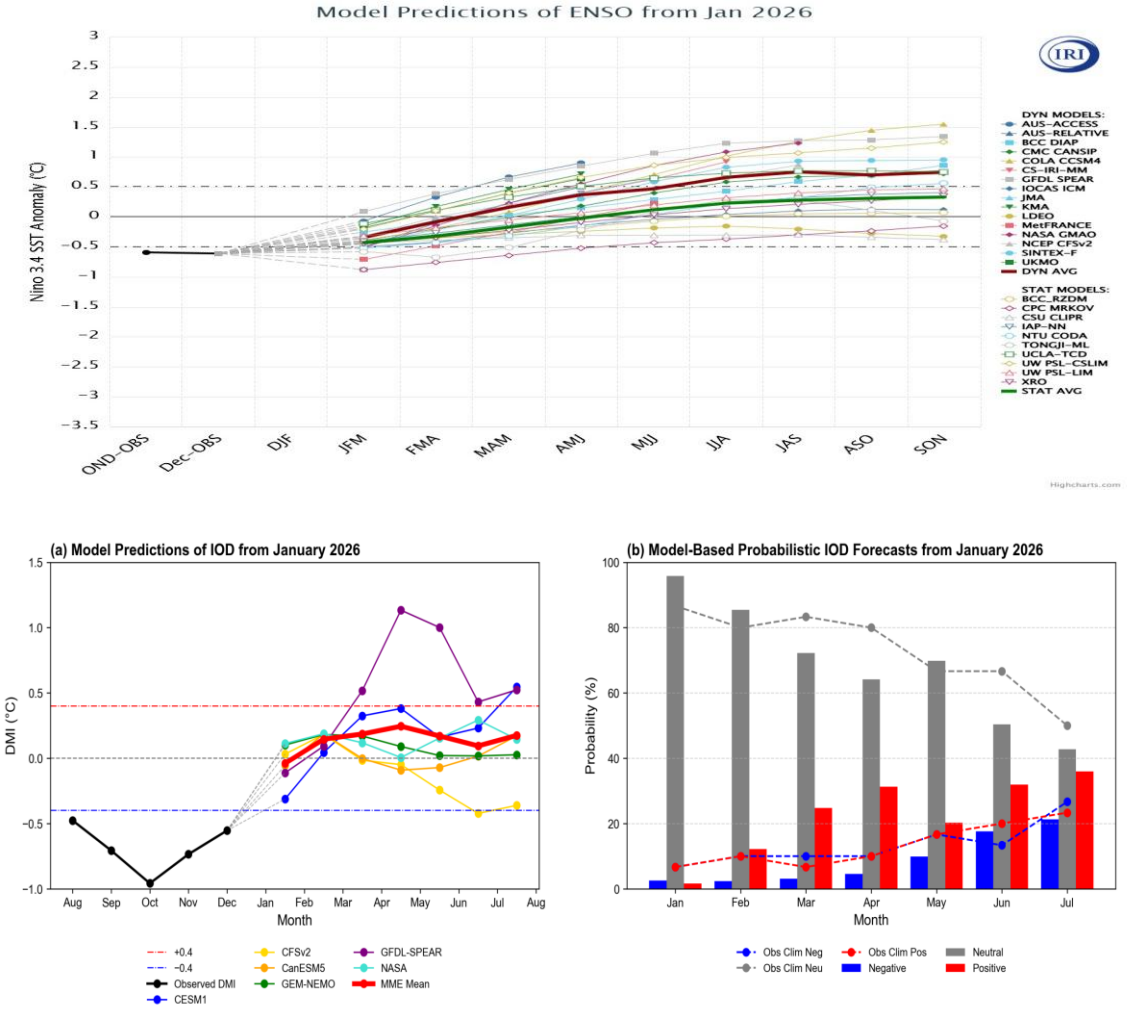


Figure 1: Relative Nino 3.4 index



Figures 2: Indian Ocean Dipole index

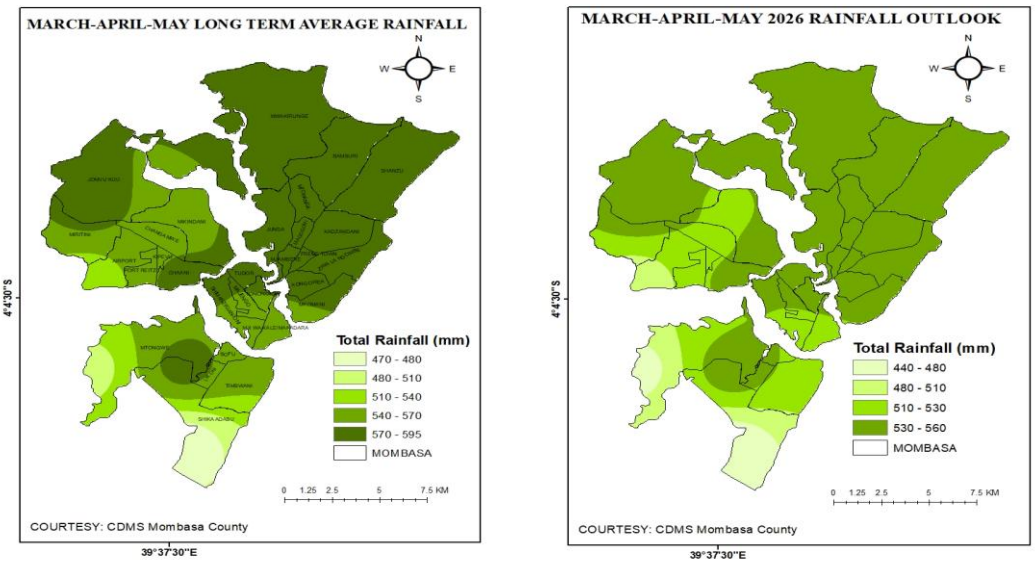
ENSO AND IOD PROJECTIONS



Figures 3: Model predictions and projections of ENSO and IOD

March to May (MAM) constitutes an important rainfall season, particularly in the equatorial parts of East Africa where the season contributes up to approximately 60% of the total annual rainfall. MAM season is therefore critical for socio-economic sectors in the region, including livestock production, water resources and other livelihoods.

SPATIAL MAP OF PROBABLE TOTAL MAM 2026 SEASONAL RAINFALL COMPARED WITH LONG TERM OND MEAN



(a) (b)

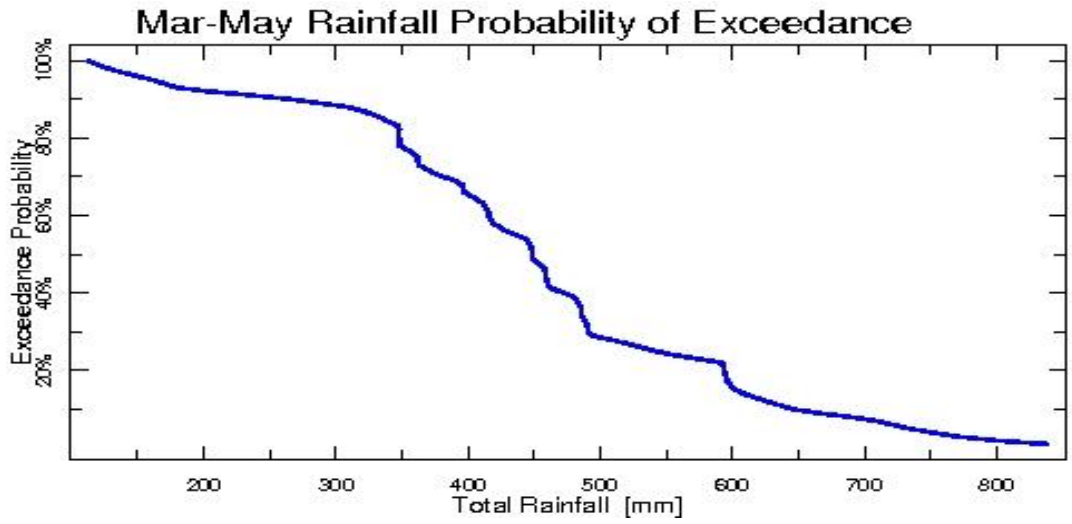
Figures 4: (a) OND Long Term Average rainfall and (b) MAM-2026 rainfall outlook for Mombasa County

MAM SEASON LTM AND 2026 OUTLOOK TOTALS BY SUB-COUNTY

Sub-County	MAM Long-Term Average Rainfall	MAM-2026 Forecast Total Rainfall
Nyali	570 - 595 mm	530 - 560 mm
Mvita	540 - 570 mm	510 - 530 mm
Likoni	480 - 510 mm	440 - 480 mm
Kisauni	570 - 595 mm	530 - 560 mm
Jomvu	540 - 570 mm	480 - 510 mm
Changamwe	510 - 540 mm	480 - 510 mm

Table 1: MAM LTM and 2026 season total rainfall

FORECAST BROBILITY AND EXCEEDANCE PROBABILITY



Figures 5: Mombasa MAM probability of exceedance

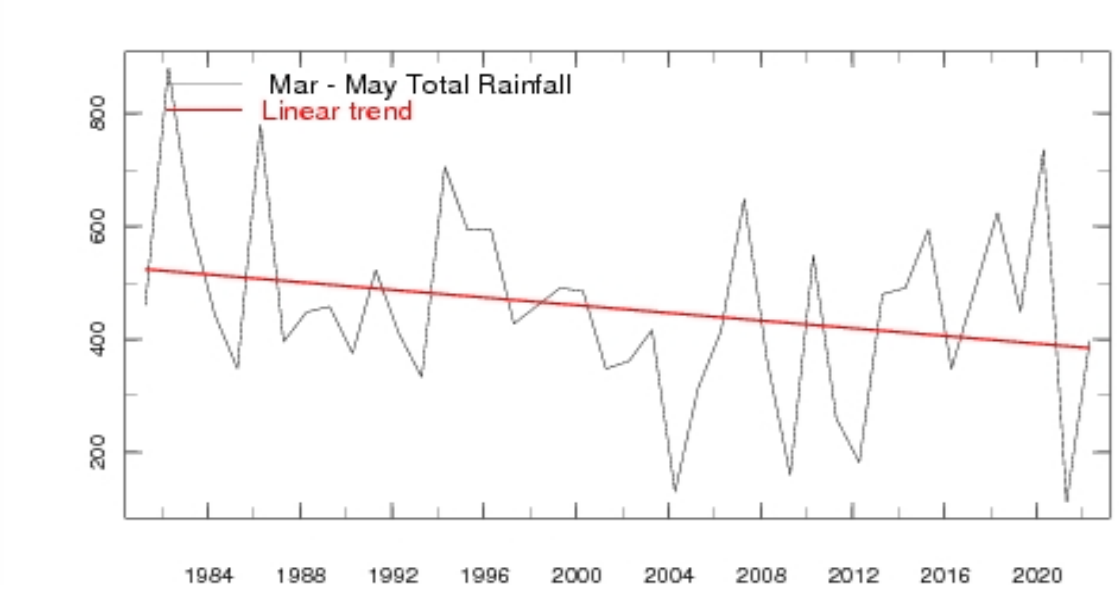
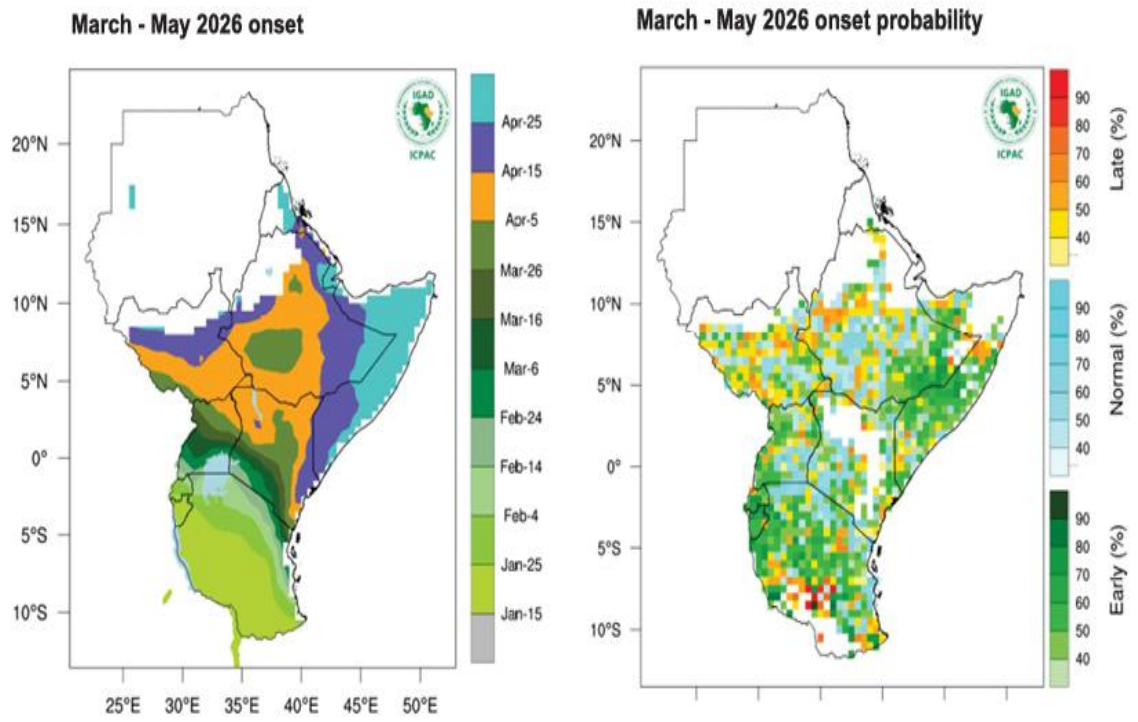


Figure 6: Mombasa MAM Long term trend

ON SET, CESSATIONS AND DISTRIBUTION OF THE 2026 MAM SEASON

ON SET DATES	CESSATION DATES	DISTRIBUTION
First to second week of April 2026) Normal to late on-set expected	Continue into June	The rainfall will be poorly distributed throughout the MAM 2026 season. With occasional storms

Table 2: MAM 2026 onset, cessation and distributions



Figures 7: onset dates and probability

SUMMARY FOR DECISION MAKERS IN VARIOUS SECTORS IN MOMBASA COUNTY

1. DISASTER RISK MANAGEMENT

The anticipated drought may cause crop failure, conflicts and wildfires. The water sources could dry up due to below average forecasted rainfall and could expose communities to safety risks. This situation may also lead to livestock disease outbreaks and loss, human disease outbreaks (waterborne and vector-borne), increased resource-based conflicts and cross-border movements. The expected occasional storms could impact negatively on weak infrastructure, drainage systems, roads, and bridges. The county government and other organizations should ensure adequate supplies of food items and intensify surveillance across the County.

2. AGRICULTURE AND FOOD SECURITY

There is a likelihood of inadequate soil moisture and water to support crop growth and development due to low rainfall and poor distributions. Also, the prevalence of pests and disease outbreaks is likely. This situation may lead to an increase in the number of food-insecure households hence malnutrition of populations across the county. Additionally, there is a likelihood of increased conflict, involving human - wildlife interactions and community disputes. Farmers are advised to adjust planting dates and where possible irrigation methods are to be applied to sustain crop production

3. WATER AND ENERGY

There is likelihood of potential reduction in water supply for human consumption, livestock, irrigation, and hydropower production, coupled with the risk of water contamination during the occasional storms and conflicts over water use and access. Monitoring water levels and quality is necessary in addition to water harvesting and storage especially during the occasional storms.

4. HEALTH

There is a likelihood of increased incidence of vector-borne diseases due to scarcity of clean water. Malnutrition due to the expected inadequate food supply to feed the community and to support school feeding programs. Expected higher temperatures could also impact on human and animal skin health conditions. Awareness creation is advised for early diagnosis and prompt treatment to prevent the negative impacts on human and animal health and biodiversity.

5. FISHERIES

The anticipated warmer than average temperatures (sea surface temperatures) are likely to impact on fishing activities within the western Indian Ocean that boarder the County coastal waters. This can cause fish habitat shift to cooler deep waters because of down welling, can also affect spawning and health of fish; affect the coral reefs and coastal habitat eventually impacting on the economic activity. Sustainable fishing practices and measures need to be employed during the season in addition to enforcing the fishing regulations.

6. TRANSPORT SECTOR

The anticipated occasional storms are likely to impact road constructions (delays and rescheduling of activities) and affect road transport. The delivery of food items to the markets could also be impacted whenever such storms occur and this could also translate to losses in business and low supply

NB: The relevant sectors are advised to develop appropriate advisories to enable the community to cope/adapt and where possible mitigation measures should be applied to the anticipated situations likely to be caused by the expected below average rainfall during the 2026 MAM season

2. RECOMMENDATIONS

a. The MAM seasonal forecast should be considered together with the various time scale forecasts (24-hour, Monthly, Weekly forecasts, special forecasts) and regular advisories/updates issued by the Kenya Meteorological department and Mombasa County Meteorological Office

b. Various sectors and agencies are advised to co-develop appropriate advisories and put in place measures that would assist in adaptation and mitigation during the season.

c. Humanitarian support by the relevant government, non-governmental and well-wisher to be mobilized in readiness for the expected dry season

Joseph Amollo
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