Republic of Kenya

KENYA METEOROLOGICAL DEPARTMENT

Republic of Kenya

MINISTRY OF HEALTH

MALARIA EPIDEMIC EARLY WARNING PREDICTION SYSTEM FOR WESTERN KENYA HIGHLANDS FOR JANUARY 2026

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Preamble

This report presents the malaria epidemic early prediction model outputs for the Western Highlands of Kenya, covering Kakamega, Kisii, and Nandi, for the period January 2026 to February 2026. The analysis is based on observed climate data (temperature and rainfall) and model simulations that estimate the percentage risk of malaria transmission. Overall, the results indicate **a 45% Risk of Malaria epidemic in Kakamega and No Risk of malaria epidemic** across Nandi and Kisii areas during the forecast period.

1. Model Outputs

1.1 Malaria epidemic early prediction system for Kakamega

The observed climate data for December 2025 indicates a decrease in maximum temperature from 29.4°C in November 2025 to 29.3°C in December 2025.This observation in December 2025 *was positive (1.8 above the mean of the month).* Rainfall increased from 82.5mm in November 2025 to 173.7 mm in December 2025. The additive model percentage risk is **45%.**

Box 1:
For Kakamega, the epidemic threshold level is 30%.

Consequently, there is a risk of Malaria Epidemic in Kakamega in the months of January 2026 and February 2026 (See Figure 1)

Figure 1:

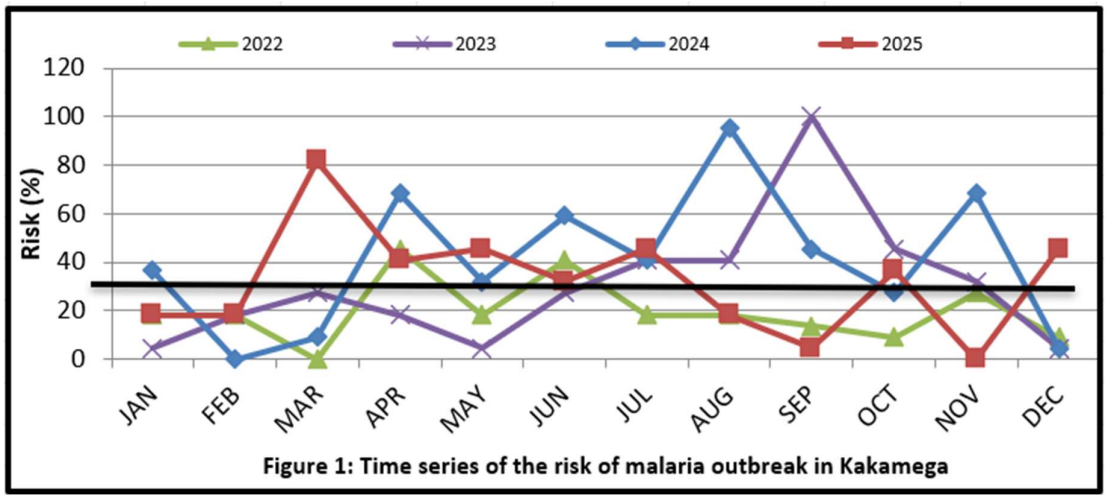

Figure 1: Time series of the risk of malaria outbreak in Kakamega

1.2 Malaria epidemic early prediction system for Kisii

The observed climate data for Kisii for December 2025 indicates a decrease in maximum temperature from 26.8°C in November 2025 to 26.0°C in December 2025. This observation in December 2025 was *positive (0.6 above the long term mean of the month).* Rainfall increased from 109.2mm in November 2025 to 117.3mm in December 2025.

Box 2:
For Kisii, the epidemic threshold level is 20%.

The model output risk is **NIL. Therefore, there is no risk of malaria epidemic in Kisii in the months of January 2026 and February 2026.** (See Figure 2).

Figure 2:

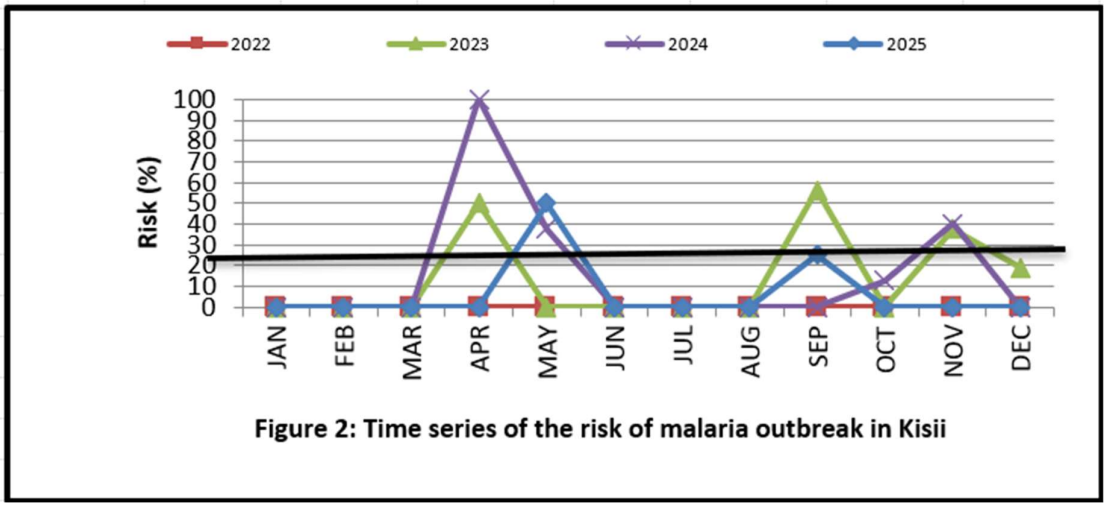

Figure 2: Time series of the risk of malaria outbreak in Kisii

1.3 Malaria epidemic early prediction system for Nandi

The maximum temperature in Nandi indicates a decrease from 24.6°C in November 2025 to 24.5°C in November 2025. This observation in December 2025 for Nandi was *positive (0.8°C above the mean of the month).* Rainfall increased from 105.3mm in November, 2025 to 106.5mm in December, 2025.

Box 3:
For Nandi, epidemic threshold level is 20%.

The additive model percentage risk is **NIL.**

Hence, there is no risk for malaria outbreak for the months of January 2026 and February 2026. (See Figure 3)

Figure 3:

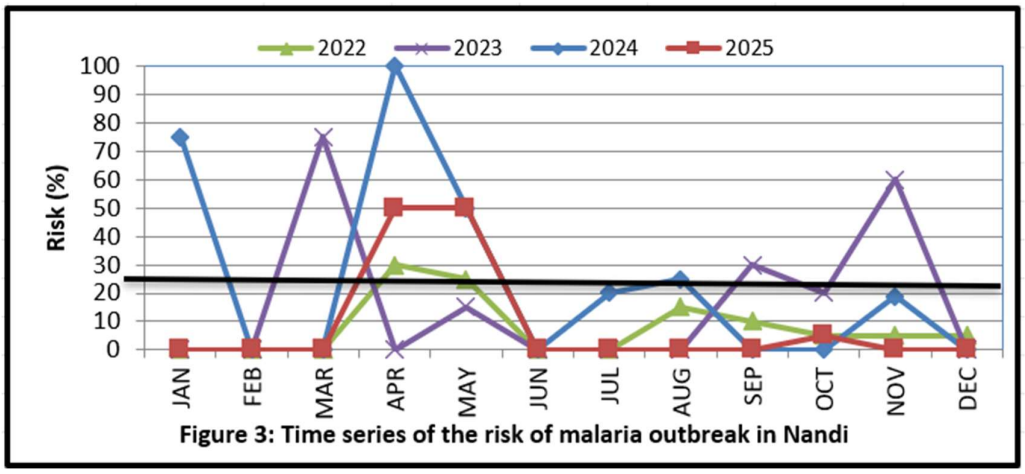

Figure 3: Time series of the risk of malaria outbreak in Nandi

3. Disclaimer

The information presented in this bulletin is based on predictive models and observed climate data, which are subject to change. While every effort has been made to ensure the accuracy and reliability of the data, the following should be noted.

Public Health Advisory: This bulletin is intended for informational purposes only. It should not be used as the sole basis for public health decisions. Local health authorities should be consulted for actionable guidance and preventive measures against malaria.

Continuous Monitoring: Malaria transmission dynamics are influenced by numerous factors, including temperature, rainfall, and human behaviour. Continuous monitoring and updates to the predictive models are essential for accurate assessments.

Updates: This bulletin reflects data and predictions as of (December 2025) Future updates will be issued when new data becomes available.

***For*: Ag DIRECTOR, KENYA METEOROLOGICAL DEPARTMENT**