Republic of Kenya   **Republic of Kenya**

KENYA METEOROLOGICAL DEPARTMENT   **MINISTRY OF HEALTH**

MALARIA EPIDEMIC EARLY WARNING PREDICTION SYSTEM FOR WESTERN   KENYA HIGHLANDS FOR SEPTEMBER 2025

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1.   Summary

The model outputs for the malaria epidemic early prediction system for the Western highlands of Kenya indicate Low risk of Malaria in all the three areas in the months of September and October 2025.

2.   Model Outputs

2.1   Malaria epidemic early prediction system for Kakamega

Table 1 below shows the malaria epidemic early prediction system for Kakamega for September 2025.

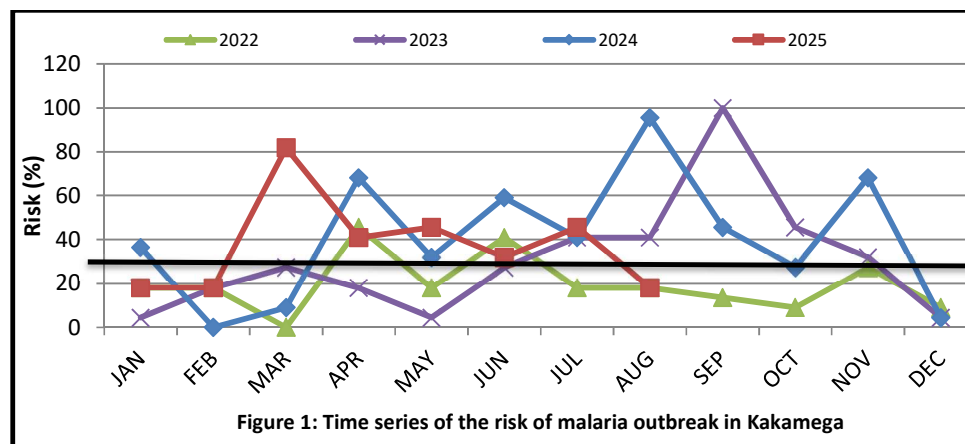**Table 1: MALARIA EPIDEMIC EARLY PREDICTION SYSTEM: KAKAMEGA**

Yr.	Month	Tmax (°C)	Mean Tmax (°C)	Tmax Deviation /anomaly	R/fall (mm)	R/fall Code	Tmax Deviation /anomaly Code	Additive % Risk
2025	1	29.9	28.3	1.6	85.3	0	4	18.2
2025	2	32.7	29.2	3.5	3.9	0	16	18.2
2025	3	30.7	29.1	1.6	190.1	2	4	81.8
2025	4	28.7	27.3	1.4	251.1	5	4	40.9
2025	5	27.8	20.4	1.4	502.1	6	4	45.5
2025	6	27.6	25.8	1.8	214.5	3	4	31.8
2025	7	27.6	25.6	2.0	293.2	6	4	45.5
2025	8	26.8	26.1	0.7	145.6	0	1	18.2

The observed climate data for August 2025 indicates a decrease in maximum temperature from 27.6°C in July 2025 to 26.8°C in August, 2025.This observation in August, 2025 *was positive (0.7 above the mean of the month).* Rainfall decreased from 293.2mm in July 2025 to 145.6 mm in August 2025. The additive model percentage risk is **18.2%.**

Consequently, there is Low risk of Malaria Epidemic in Kakamega in the months of September and October 2025 (See Figure 1)

Figure 1:

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

2.2   Malaria epidemic early prediction system for Kisii

Table 2 below shows the malaria epidemic early prediction system for Kisii for September, 2025.
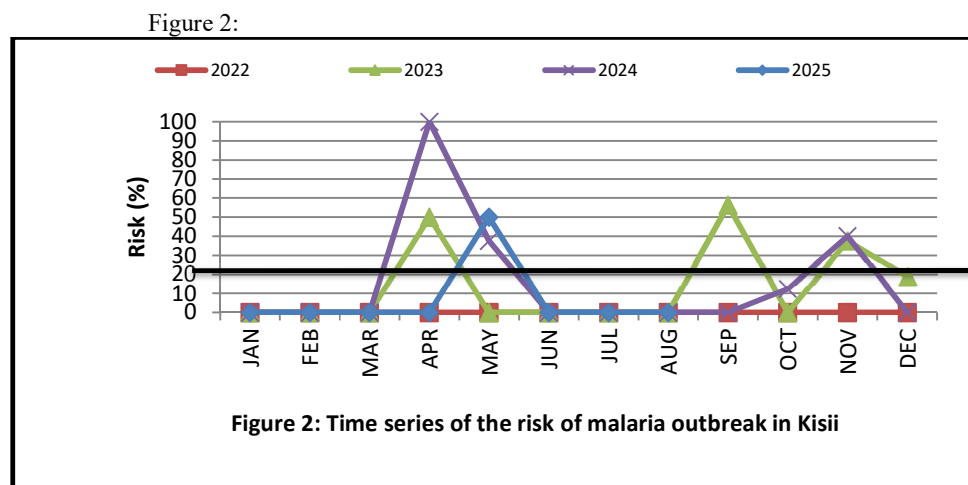
Table 2: MALARIA EPIDEMIC EARLY PREDICTION SYSTEM: KISII

Yr	Month	Tmax (^{0}C)	Mean Tmax (^{0}C)	Tmin (^{0}C)	Mean Tmin (^{0}C)	Tmax Dev./ anom	Tmin Dev. /anom	Total Temp Dev./ anom	Temp Dev./ anom Code	R/fall (mm)	R/fall Code	Model Output
2025	1	29.9	26.1	16.9	15.7	3.8	1.2	5.0	5	206.4	1	0
2025	2	29.2	27.0	11.3	16.1	2.2	-4.8	-2.6	0	47.6	0	0
2025	3	27.3	27.0	16.7	15.9	0.3	0.8	1.1	2	168.7	0	0
2025	4	25.5	25.5	16.3	15.8	0.0	0.5	0.5	0	287.1	2	0
2025	5	25.5	25.1	16.2	15.6	0.4	0.6	1.0	2	366.7	4	50
2025	6	25.2	24.6	15.6	15	0.6	06	1.3	2	126.9	0	0
2025	7	25.0	24.5	15.3	14.0	0.5	0.8	1.3	2	169.0	0	0
2025	8	24.9	24.9	15.2	14.7	0.0	0.5	0.5	0	125.6	0	0

The observed climate data for Kisii for August, 2025 indicates very slight decrease in maximum temperature from 25.0°C in July, 2025 to 24.9°C in August, 2025. This observation in August, 2025 is the same as the mean of the month. Rainfall decreased from 169.0mm in July, 2025 to 125.6mm in August, 2025.

The model output risk is **NIL. Therefore, there is no risk of malaria epidemic in Kisii in the months of September and October 2025.** (See Figure 2).

Figure 2:

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

2.3   Malaria epidemic early prediction system for Nandi

Table 3 below shows the malaria epidemic early prediction system for Nandi for September, 2025.

Table 3: NANDI MALARIA EPIDEMIC EARLY PREDICTION SYSTEM

Yr	Month	Tmax (^{0}C)	Mean Tmax (^{0}C)	Tmax Dev.	Tmin	Mean Tmin	Tmin Dev. /anom	Total Temp Dev. /Anom.	R/fall (mm)	Temp Dev. Filters	R/fall Filters	Multiplicative Model
2025	1	25.1	23.3	1.8	11.8	10.9	0.9	2.7	101	3	0	**0**
2025	2	27.6	23.2	4.4	16.8	11.7	5.1	9.5	32.7	5	0	**0**
2025	3	25.9	23.0	2.9	12.7	11.5	1.2	4.1	189.5	1	0	**0.0**
2025	4	24.8	22.8	2.0	12.4	11.2	1.2	3.2	267.6	4	2	**50.0**
2025	5	23.4	22.7	0.7	12.3	10.7	1.6	2.3	283.7	3	2	**50.0**
2025	6	23.3	22.7	0.6	17.2	10.9	6.3	6.9	196.3	5	0	**0.0**
2025	7	22.9	22.8	0.1	12.0	10.6	1.4	1.5	183.1	2	0	**0.0**
2025	8	23.0	23.1	-0.1	11.6	10.8	0.8	0.8	163.1	1	0	**0.0**

The maximum temperature in Nandi indicates a very slight increase from 22.9°C in July, 2025 to 23.0°C in August, 2025. This observation in July, 2025 for Nandi was *negative (0.1°C below the mean of the month).*
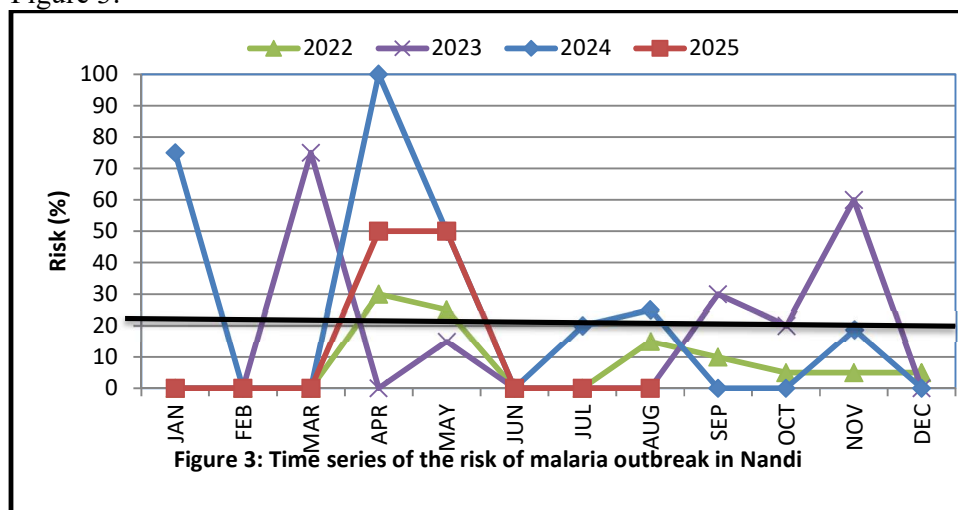
Rainfall decreased from 183.1mm in July, 2025 to 163.1mm in August, 2025.

The additive model percentage risk is **NIL**

Hence, there is no risk for malaria outbreak for the months of September and October 2025.
(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 August 2025. Future updates will be issued when new data becomes available.

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