REPUBLIC OF LIBERIA

MINISTRY OF TRANSPORT

DIVISION OF METEOROLOGY

LIBERIA METEOROLOGICAL SERVICE (LMS)

Contact us: +231886565078/+231776679045

Email: meteoliberia.transport@yahoo.com/website: https://meteoliberia.com

CLIMATE AND HEALTH BULLETIN

Summary

The highlights of the Bulletin for December 2025 are as follows:

- The expected December 2025 rainfall across Liberia ranged between 25.3 mm and 119.4 mm. The south-east coastal counties are expected to record rainfall amounts between 60.0 mm and 110.0mm.

- The predicted 2025 relative humidity across Liberia ranges from 69% to 83%. The highest range of values (80–83%) is expected in the southern counties.

- The mean temperatures for various locations across the counties for December 2025 are anticipated to be between 24.0°C and 27.0°C.

- The maximum (daytime) temperatures across the counties in December 2025 are predicted to range between 28.6°C and 32.1 °C.

- The minimum (nighttime) Temperatures across the country in December 2025 are anticipated to range between 17.4°C and 25.9°C.

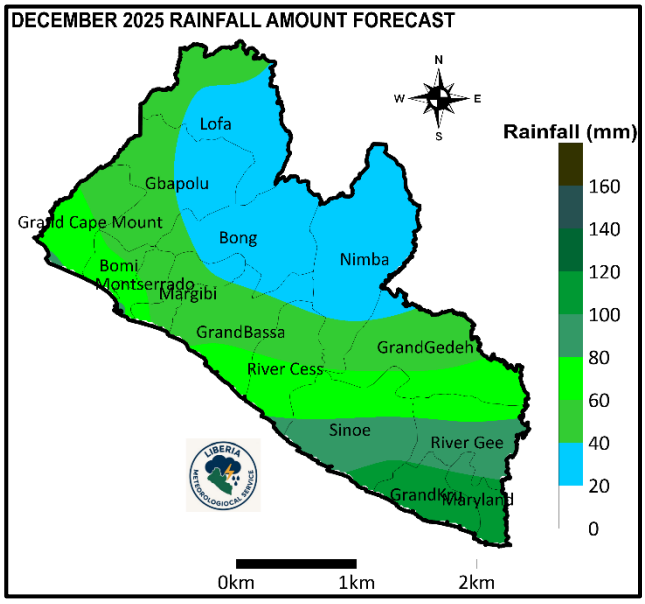
- The expected climatic conditions in December 2025 suggest high prospects of malaria incidences in southern counties. While low vigilance is prescribed in other parts of counties.

- High vigilance is expected over the southern counties, extending to parts of the inland and the central counties. Moderate vigilance is prescribed over Grand Cape Mount, Bong, Nimba and GrandGedeh counties

- Normal to caution heat index vigilance is prescribed over most parts of the counties

1.0 GENERAL OUTLOOK FOR 1ST TO 30TH DECEMBER 2025

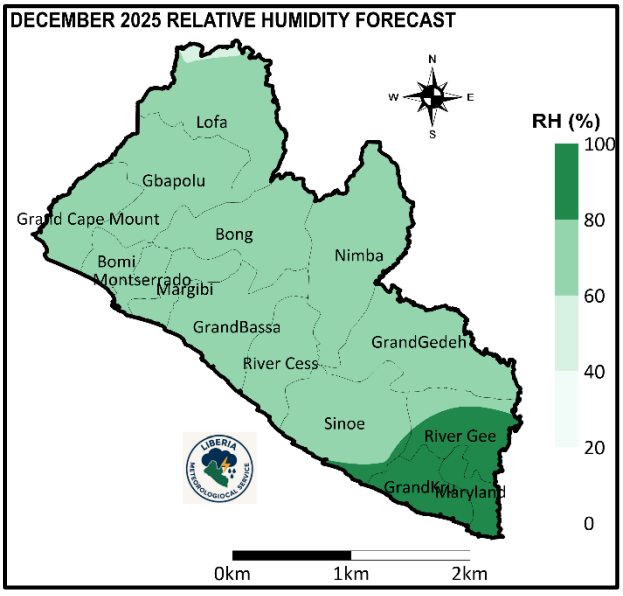
1.1 Rainfall Amount in December 2025



In December 2025, the forecasted cumulative rainfall amount across the counties is anticipated to be between 25.3 mm and 119.4 mm. The south-east coastal counties are expected to record rainfall amounts between 60.0 mm and 110.0mm. Rainfall amounts of below 60.0 mm are predicted over the northern counties (Figure 2).

Figure 2: December 2025 rainfall amount forecast.

1.2 Relative Humidity (RH)



Relative humidity across Liberia for December 2025 is predicted to range from 69% to 83%, as shown in Figure 3. The highest range of values (80–83%) is expected in the southern counties. The extreme north is expected to record the lowest relative humidity, 69% while the rest of the country is expected to record a range of 70% to 80%.

Figure 3: December 2025 Relative humidity forecast.

1.3 Mean Temperature

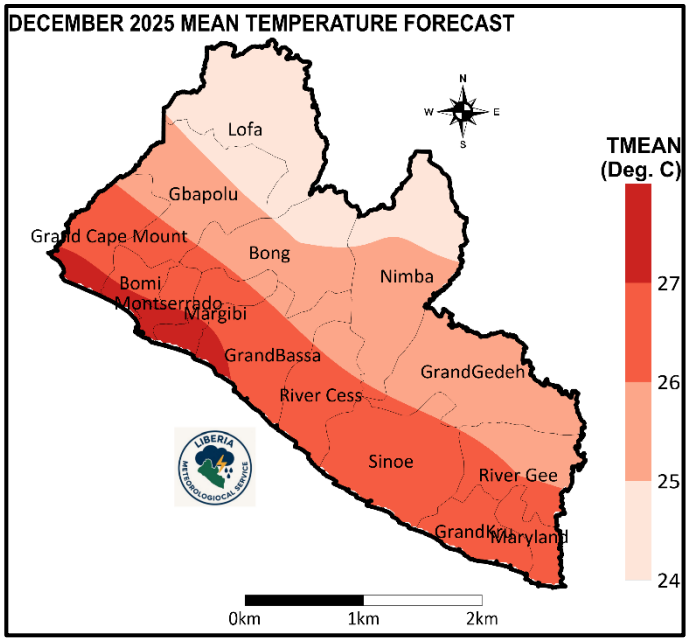


Figure 4: December 2025, Mean temperature forecast.

The predicted mean air temperatures for various locations across the country for December 2025 are between 24.0°C and 27.0°C. The lower range (24.0°C to 25.0°C) is expected over Lofa, parts of Gbapolu, Bong and Nimba counties, while the highest range (26.5°C to 27.0°C) is anticipated over the inland and the coastal counties (Figure 4).

1.4 Maximum (Daytime) Temperature

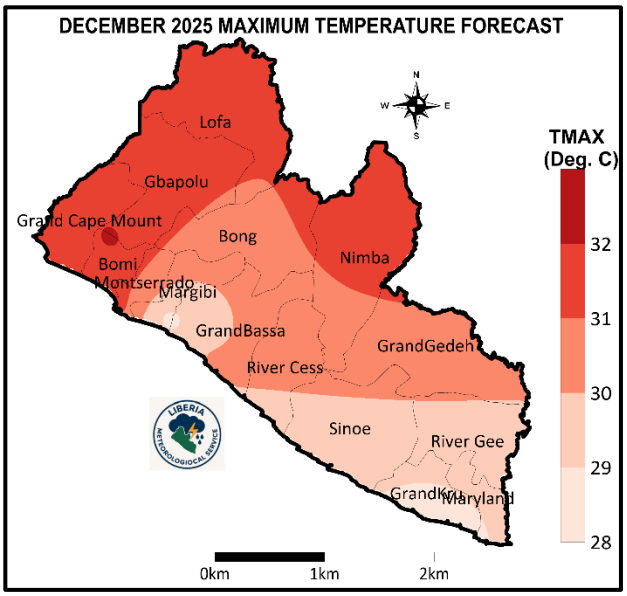
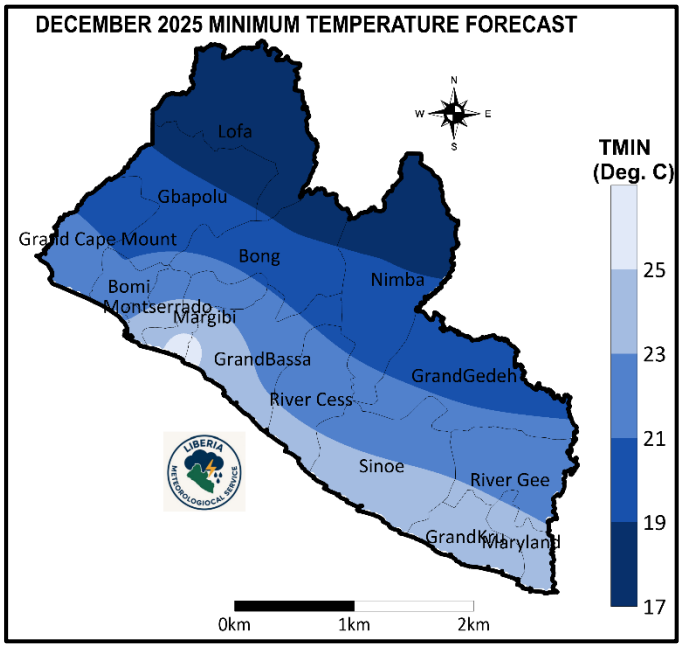


Figure 5: Maximum temperature forecast for December 2025.

The maximum temperature in December 2025 is anticipated to be 28.6°C to 32.1°C across the counties, as shown in Figure 5. The lowest and highest maximum daytime temperatures of 28.6°C and 32.1°C are predicted over Margibi and Grand Cape Mount counties.

1.6 Minimum (Nighttime) Temperature



Nighttime temperatures across the country in December 2025 are anticipated to range between 17.4°C and 25.9°C, as presented in Figure 6. The lowest nighttime temperature range of 17.4°C to 19.0°C is anticipated in Lofa, parts of Gbapolu, Bong and Nimba counties, while the highest nighttime temperature of 25.9°C is expected over parts of Margibi County.

Figure 6: December 2025, minimum temperature forecast.

2.0 DISEASE VIGILANCE

2.1 Malaria

2.1.1 Malaria Vigilance for December 2025

The expected climatic conditions in December 2025 suggest high prospects of malaria incidences in the southern counties. Low vigilance is prescribed in other parts of counties during the forecast period. (Figure 7).

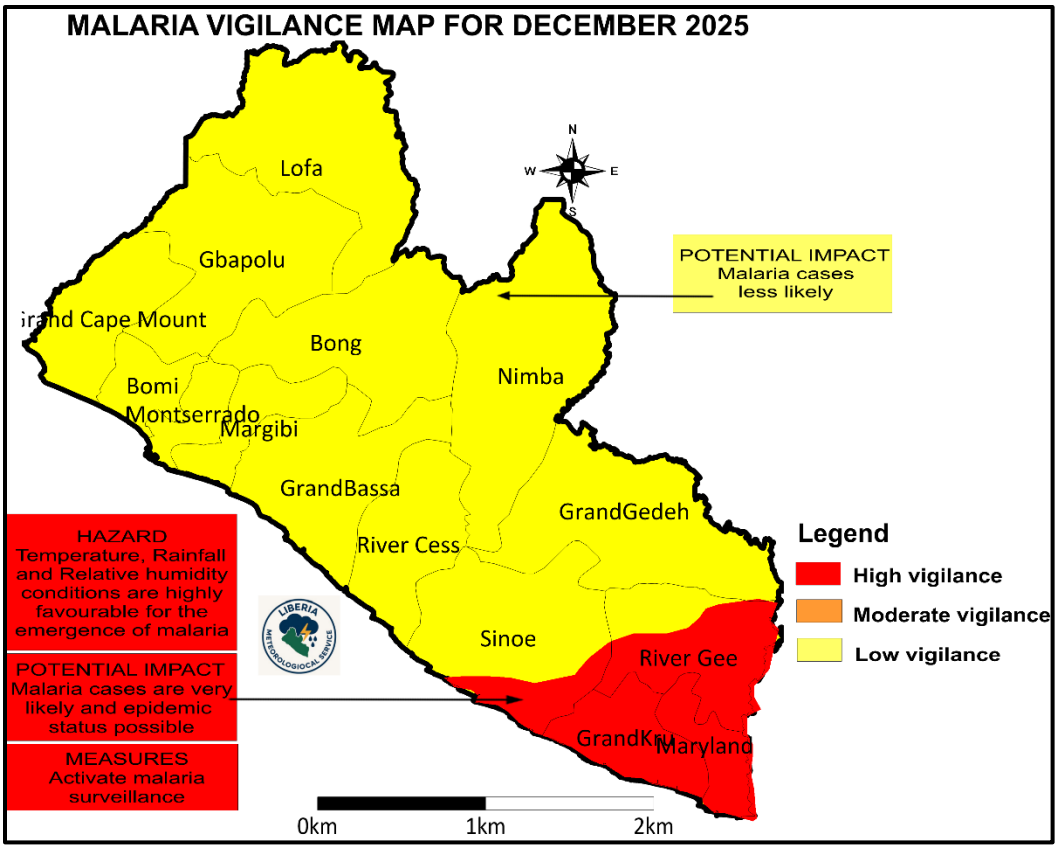


Figure 7: Malaria Vigilance for December 2025

Table 1: Malaria threshold, epidemic characteristics and Advisory

	Climate Conditions	Hazard	Potential Impacts	Advisory/Measures
	• Temperature between 25°C and 32^{0}C. • Relative humidity greater than 80%. • Rainfall greater than 80 mm.	High probability of occurrence of malaria cases.	(i) Malaria could be fatal if not treated promptly and properly. (ii) Procurement of drugs for the treatment of malaria is expensive and therefore has adverse impacts on the	As much as possible, avoid mosquito bites by using insecticide-treated mosquito nets, fumigating the environment frequently, and clearing drainages and stagnant water around homes.

	• Temperature between 20°C and 25°C. • Relative humidity between 70% and 80% • Rainfall greater than or equal to 80 mm	Moderate probability of occurrence of malaria cases.	financial resources of individuals and government. (iii) Malaria is usually accompanied by headache, fever, and body aches. These health conditions impact negatively on the patient's daily life. (iv) Malaria patients usually feel sick with high fever and shivering chills. As a result, malaria patients cannot undertake normal economic and social activities.	Early diagnosis and treatment should be emphasized.
	• Temperature between 18^0C and 20°C • Relative humidity between 60% and 70% • Rainfall 80 mm	Low probability of occurrence of malaria cases.		To reduce the risk of contracting malaria, pregnant women are encouraged to take essential precautions such as using mosquito nets coated with pesticides when sleeping and taking anti-malaria prophylaxis.
	• Temperature is less than 18^0C or greater than 32^0C; • Relative humidity is less than 60%; • Rainfall is less than 80 mm.	The occurrence of Malaria cases is unlikely.		

3.0 Medication Instability

3.1 Medication Instability Vigilance for December 2025

The temperature and humidity anticipated in December 2025 are likely to cause drug and medication instability across Liberia. Based on the predicted weather elements (relative humidity and temperature), high vigilance is expected over the southern counties, extending to parts of the inland and the central counties. Moderate vigilance is prescribed over Grand Cape Mount, Bong, Nimba and GrandGedeh counties, while low vigilance is anticipated over Lofa and parts of Gbapolu and Nimba during the forecast period (See Figure 8).

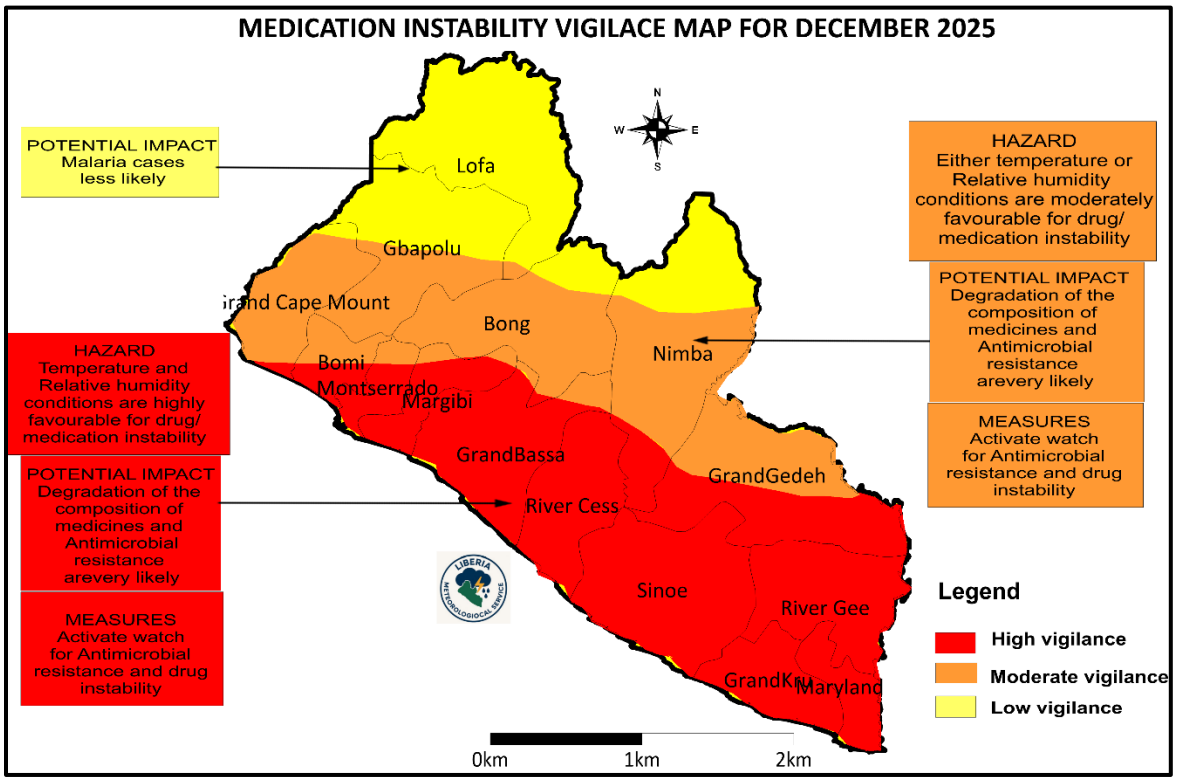


Figure 8: Medication Instability Vigilance for December 2025

Table 2: Medication Instability threshold, potential impacts and Advisory

	Climate Conditions	Hazard	Potential Impacts	Advisory/Measures
	• Maximum temperature is greater than 30°C and, • Relative humidity is greater than 75%.	These conditions are considered unsafe and unfavorable or inconducive for the storage of medicines.	(i) Drugs may lose their potency. Consequently, patients treated with such medications are not likely to recover or respond to treatment as desired. (ii) Microorganisms that cause some diseases may develop antimicrobial resistance (AMR). (iii) Recovery of patients will be retarded when they are treated with antibiotics that have been exposed to weather conditions that affect their stability.	In areas with high medication instability vigilance thresholds, there is a need for greater caution when moving and storing medications. Medicines should always be stored and transported using facilities with controlled temperature and humidity.
	• Maximum temperature is greater than 30°C and	The predicted temperatures and relative humidity are likely to cause depreciation in	Microorganisms that cause diseases are likely to develop antimicrobial resistance (AMR) when patients are treated with	Temperature and humidity monitoring systems for transporting and storing medicines are advised.

	• Relative humidity is less than 75%. OR • Maximum temperature < 30°C and Relative humidity > 75%.	the quality of medicines.	antibiotics that have lost their potency due to exposure to weather conditions that affect their stability.	
	• Maximum temperature is between 25°C and 30°C; • Relative humidity is between 70% and 75%.	Unconducive weather conditions tend to shorten the shelf life of medicines and could affect their overall potency.		Medical professionals should also advise patients on the proper storage of their medications to avoid degradation and loss of potency.

4.0 Heat Index

5.1 Heat Index Vigilance for December 2025
During the forecasted period, normal-to-caution is prescribed over most parts of the counties (see Figure 16).

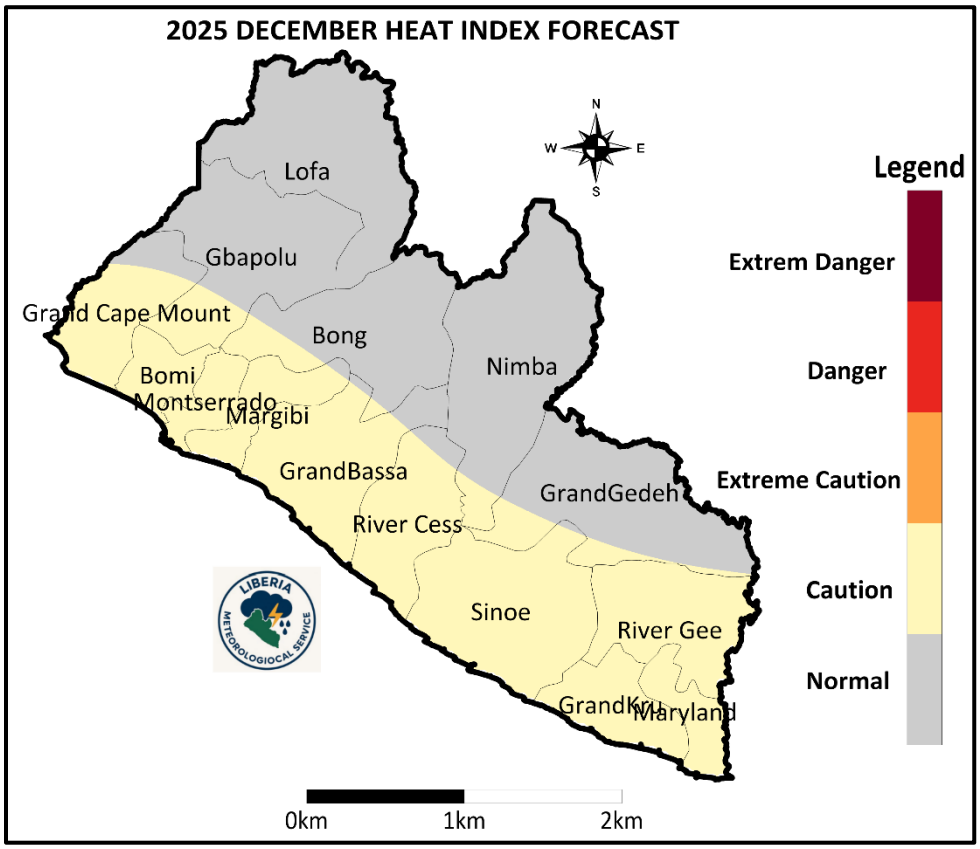


Figure 9: Heat stress Vigilance for December 2025

Table 3: Heat Index threshold, potential impacts and Advisory

	Climate Conditions	Hazard	Potential Impacts	Advisory/Measures
	Heat Index between 40°C and 52°C	The danger and extreme danger of heat stress are probable.	People in the affected areas are likely to be more susceptible to heat stroke, exhaustion, loss of concentration, and possible damage to the brain, liver, and heart, which may lead to fainting.	Use shades when engaging in outdoor activities to avoid direct exposure to heat from the sun.
	Heat Index between 33°C and 39°C	Moderate probability of heat stress.	Persistent and increased respiration rates can lead to exhaustion and fainting.	Work and other outdoor activities should be carried out when the intensity of solar radiation is not severe.
	Heat Index between 27°C and 32°C	A low probability of heat stress is likely.	Thirst, loss of appetite, and fatigue. It may lead to other abnormal health conditions such as heat rash.	Reduce physically demanding labour when the weather is hot.