MINISTRY OF TRANSPORT

LIBERIA METEOROLOGICAL SERVICE

AGROMETEOROLOGICAL DECADAL BULLETIN

VOLUME N° 04 FIRST DEKA OF FEBRUARY 2025

Summaries

- Rainfall Analysis
- Temperature Analysis
- Evapotranspiration
- Vegetative Condition
- Farmer Advisory

AGROMETEOROLOGICAL CONDITION

Rainfall Analysis

The first ten days of February 2025 were marked by a decline in rainfall activity across the country, this attributed to the absence of the monsoon wind over the continent. During this period, rainfall amounts ranged from **0.00mm** to **33.00mm** nationwide. Soil moisture levels remained low. Farmers shifted their focus to vegetable production and also began preparations for the incoming season. Harper, Sione, and Grandcess recorded the highest rainfall during this period, which was linked to the movement of the Intertropical Convergence Zone (ITCZ) over the country (Figure 1).

Compared to the normal range (mean values from 1990 to 2025) for the same period, the southeast region recorded the highest rainfall while the north and northwest region recorded the lowest rainfall. Rainfall typically varies between **37.20mm** and **107.84mm**during this period (Figure 2).

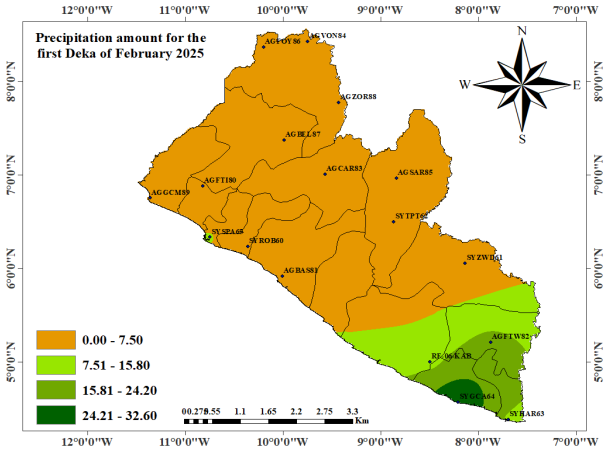

Figure 1: Precipitation amount for the for the first deka of Feb.

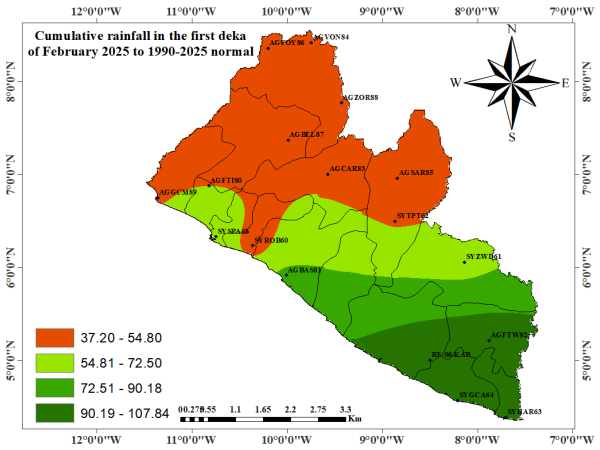

Figure 2: Cumulative rainfall in the first deka of Feb. 2025 to 1990-2025 normal

Considering the seasonal rainfall from November 1, 2024, to February 9, 2025, the total rainfall during this period ranged from **58.40mm** to **413.95mm**. Harper and Grandcess recorded the highest rainfall, with totals of **499.5mm** and **573.4mm**, respectively, while Zorzor experienced the lowest rainfall, measuring **209.00mm**.

In comparison to the normal (mean values from 1990 to 2025), the southeastern counties recorded the highest rainfall while southwestern counties recorded the lowest rainfall.

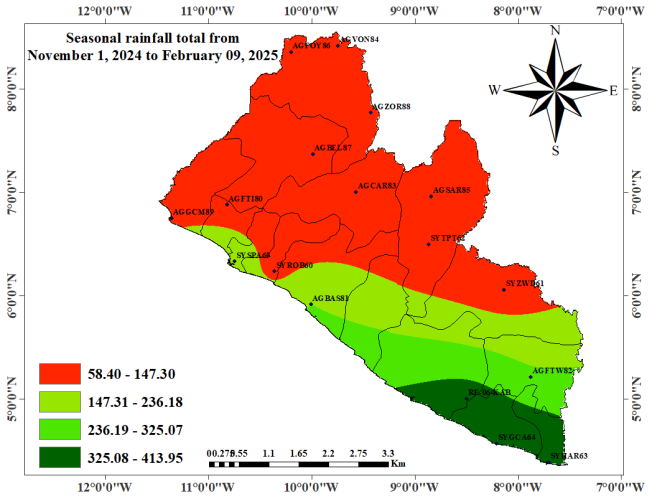

Figure 3: Seasonal rainfall total from November 1 to Feb. 9, 2025

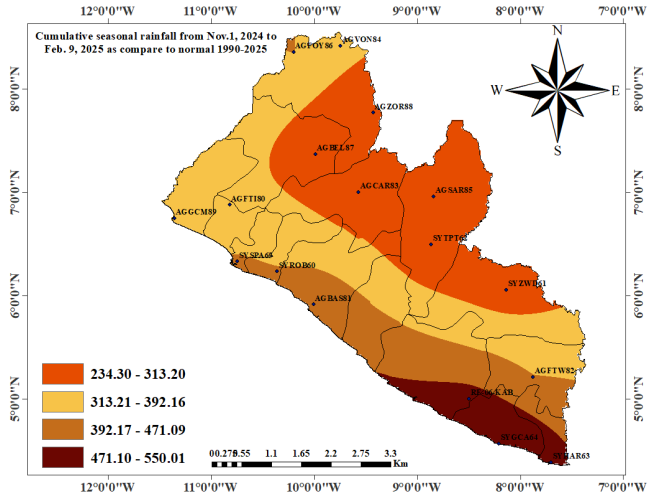

Figure 4: Cumulative seasonal rainfall from Nov. 1 to Feb 9, 2025 as compare to normal 1990-2025

During the First ten days of February 2024, rainfall increased as compared to the same period in February 2025 (Figure 5). The total rainfall recorded during this period in 2024 was **172.00 mm**, whereas in 2025, it was recorded at **91.30mm**.

The seasonal variation indicates that total rainfall ranged from **24.78mm** to **121.96mm** across the country. The north and northwest region received the lowest rainfall while the south, southeast and the costal regions received the highest rainfall (Figure 6).

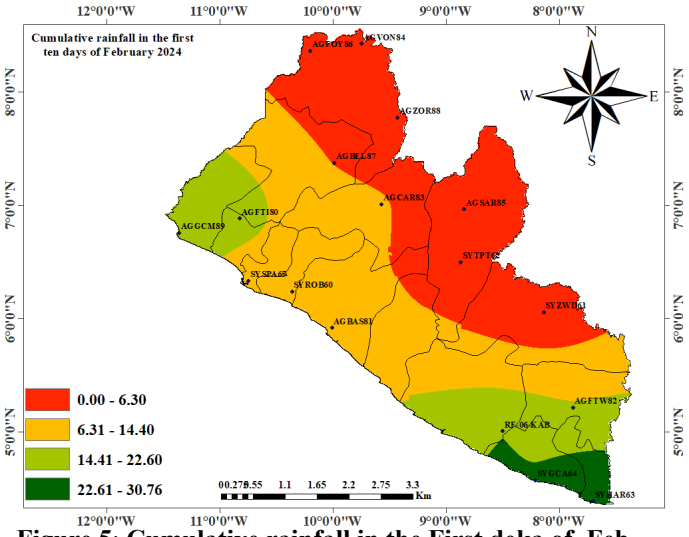

Figure 5: **Cumulative rainfall in the First deka of Feb. 2024**

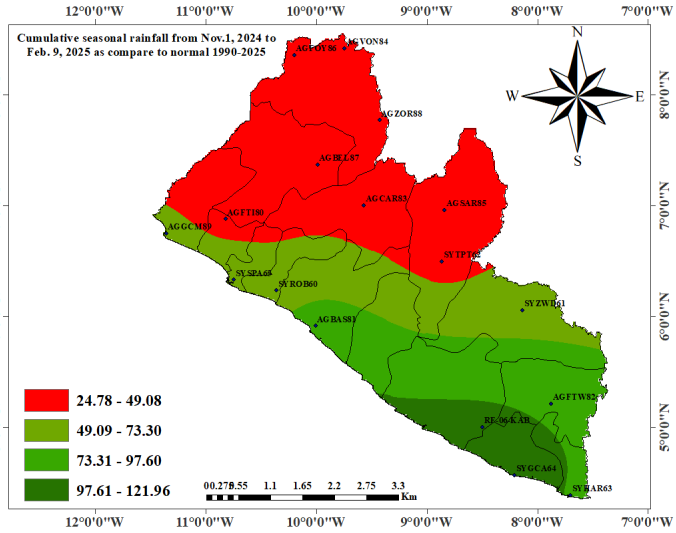

Figure 6: Cumulative seasonal rainfall from Nov. 1, 2024 to Feb. 9, 2025 as compare to the normal 199-2025

EVOLUTION OF TEMPERATURES

The first deka of February 2025 were marked by an increase in maximum temperatures (Tmax) in Grand Bassa and Sarclepea. In contrast, Lofa and most parts of Gbarpolu County recorded the lowest Tmax. During this period, Tmax ranged from **28.1°C** to **33.1°C**, measured at a height of two meters (2 m) above the ground (Figure 7).

Compared to the long-term mean (1990–2025) for the same period, most coastal counties experienced an increase in Tmax, while counties like Lofa and Gbarpolu recorded the lowest values. The Tmax deviations ranged from a significant drop of **–2.5°C** in Lofa County to an increase of **+1.3°C** in Buchanan, Grand Bassa County (Figure 8).

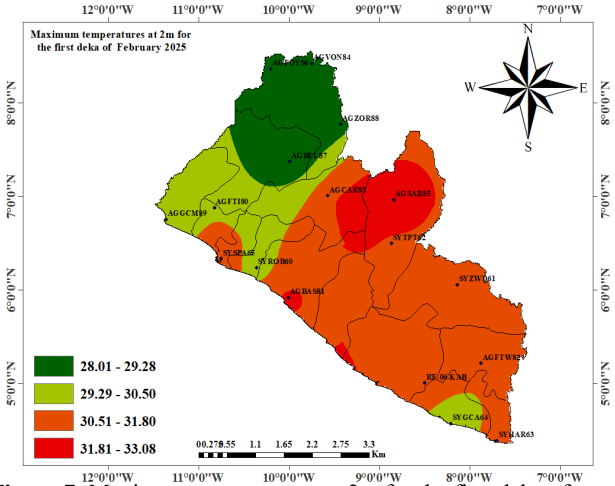

Figure 7: Maximum temperatures at 2m for the first deka of February 2025

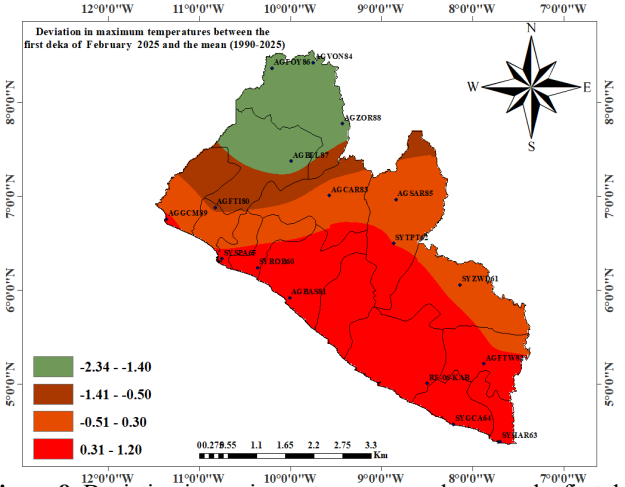

Figure 8: Deviation in maximum temperatures between the first deka of February 2025 and the mean (1990-2025)

The first deka of February 2025 were marked by variations in minimum temperatures (Tmin), with most coastal counties recording the highest values, while the northern and northwestern region experienced the lowest. Tmin during this period ranged from **17.0°C** to **26.1°C** and was measured at two meters (2 m) above the ground (Figure 7).

Compared to the long-term mean (1990–2025) for the same period, Tmin increased in the costal counties, with the southeastern region recording the highest values, while the northern, and northwestern regions recorded the lowest. The differences ranged from **–1.1°C** in Foya and Belleh yalleh to **+1.0°C** in Buchanan, Grand Bassa County (Figure 8).

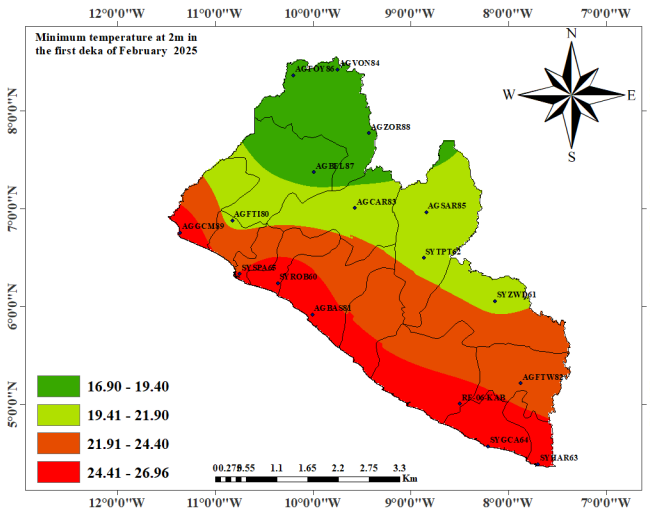

Figure 7: Tmin at 2m in the Second deka of February 2025

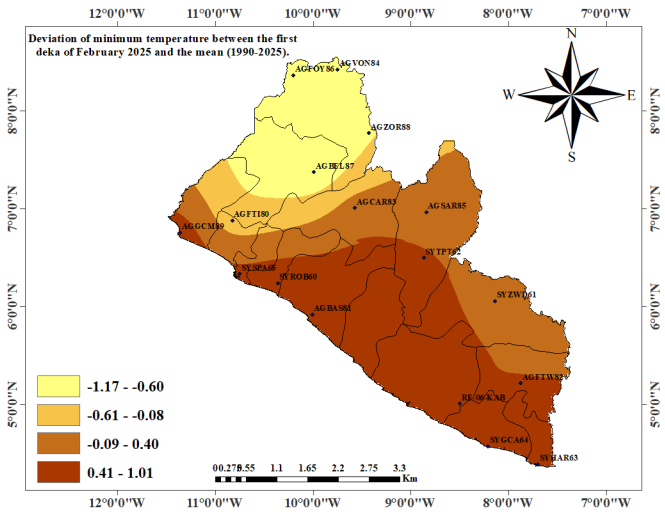

Figure 8: Deviation of Tmin between the second deka February 2025 and the average (1990-2025)

EVAPOTRANSPIRATION

During the first deka of February 2025, majority part the country experienced evapotranspiration rates ranging between low and medium. Lofa and Grand cape mount counties recorded highest evapotranspiration , while the majority part of Nimba County experienced medium evapotranspiration rates (Figure 9).

During the first deka of February 2025, the north and the northwestern part of country were covered by less dense vegetation. However, a significant portion of the southeast counties was characterized by dense vegetation (Figure 10).

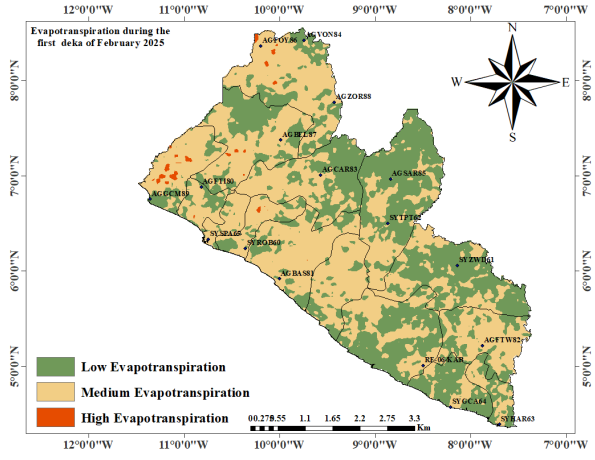

Figure 9: ETO of the first deka of January 2025

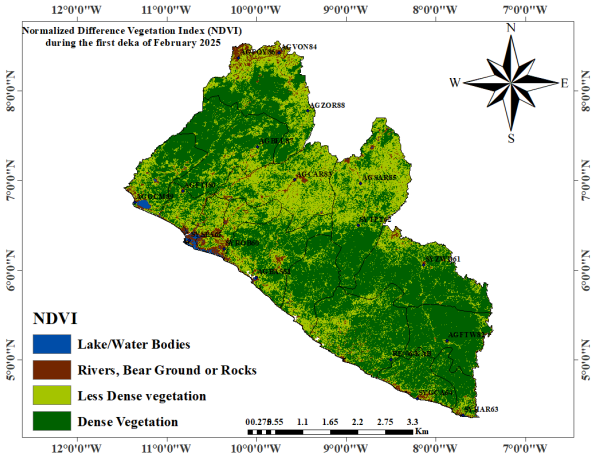

Figure 10: NDVI of the first deka of January 2025

Farmers Advisories

As temperature and evapotranspiration are expect to increase and rainfall decrease in most parts of the country for the coming months, farmers are encourage to take the following steps in their agricultural practices:

- ⇒ Ensure efficient and adequate irrigation system for water-sensitive crops to prevent moisture stress. Prioritize crops such as rice, peppers, tomatoes, legumes and etc.
- ⇒ Apply organic mulches to conserve soil moisture, reduce evaporation, and maintain soil temperature.
- ⇒ Take advantage of the dry season to grow short-cycle crops such as okra, cabbage, and etc. These crops can thrive with minimal water and are in high demand during this period.
- ⇒ Take advantage of the dry conditions to prepare fields for planting, especially for crops suitable for the upcoming season.
- ⇒ Provide sufficient drinking water for livestock as the high temperatures and evaporation rates may lead to water scarcity.
- ⇒ Ensure animals have shaded areas to protect them from heat stress.
- ⇒ Stay informed on weather updates through the Liberia Meteorological Service to prepare for sudden changes in weather events (conditions).
- ⇒ Collaborate with local agricultural extension officers for advice on crop and livestock management tailored to specific regions.

Average values of meteorological parameters for the second deka of January 2025

Stations	Temperature at ten (10) meters			Precipitation	Humidity
	Ave. Tx	Ave. Tn	Ave. Temp	Rainfall Sum	Ave. Hum.
Margibi SYROB60	29.8	27.0	28.4	0.0	75.1
Mont. SYSPA65	31.6	24.5	28.1	8.4	75.6
Zwedru SYZWD61	30.9	21.5	26.2	0.0	70.7
Tarpeta SYTPT62	31.5	21.3	26.4	0.0	68.9
Harper SYHAR63	31	25.4	28.2	14.6	78.3
Cestos SYGCA64	29.9	26.1	28.0	33.0	79.3
Tubman AGFTI80	30.4	21.2	25.8	0.0	77.1
GBassa AGBAS81	32.1	25.2	28.7	1.9	72.6
FishTown AGFTW82	30.7	23.7	27.2	18.6	81.2
CARI AGCAR83	31.6	20.6	26.1	0.0	66.5
Vionjama AGVON84	28.6	17.0	22.8	0.0	60.4
Sarclapae AGSAR85	33.1	20.6	26.9	2.2	61.0
Foya AGFOY86	28.6	17.0	22.8	0.0	60.4
Belleh yalla AGBEL87	28.1	18.6	23.4	0.0	73.7
Zorzor AGZOR88	28.7	17.5	23.1	0.0	62.8
CapeMont AGGCM89	29.4	26.6	28.0	0.0	76.3
Sinoe RF-06-KAB	31.3	25.2	28.3	12.6	74.5

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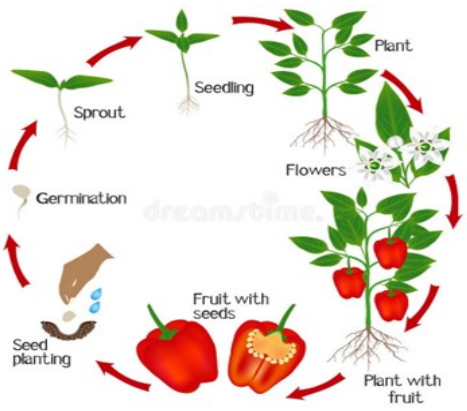
Motto: Weather is everybody business

The Liberia Meteorological Service (LMS) is responsible for providing meteorological services to support the social and economic progress of Liberia, ensure the safety and well-being of its population, and fulfil its international obligations.

It was created by an Act of Legislation in April 1972 and was placed under the Ministry of Transport. Prior to that, it was under the Ministry of Commerce, Industry and Transportation.

Hot pepper

MET. Observation



Phenology of pepper