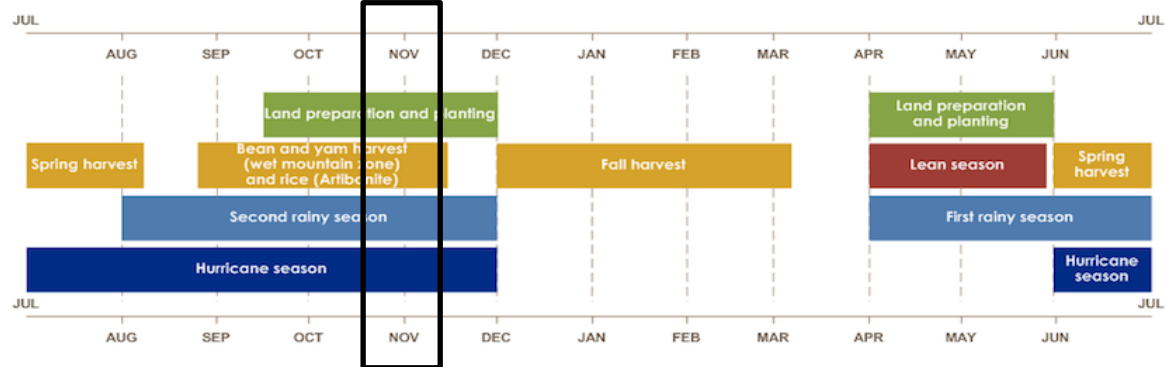


FAMINE EARLY WARNING SYSTEMS NETWORK

*Haiti***Monthly Climate and Weather****19 December 2024****Highlights**

- ENSO-neutral conditions continued in November 2024. La Niña is most likely to emerge during November 2024–January 2025 ([59%](#) chance), with a transition to ENSO-neutral most likely by March–May 2025 ([61%](#) chance). Historically, [El Niño](#) has been associated with drier-than-average conditions, while La Niña tends to bring wetter-than-average conditions to Haiti.
- The second rainy season in Haiti typically begins in August and extends through November.
- The Atlantic hurricane season runs from 1 June to 30 November.
- In November 2024, rainfall in Haiti varied widely, with totals ranging from 10 mm to 750 mm. Western Haiti saw heavier rainfall (100 mm to 750 mm), while eastern regions had lighter rain (10 mm to 150 mm). Central Haiti experienced near-average to below-average rainfall, while northern and southern regions saw above-average rainfall. Anomalies ranged from 25 mm to 500 mm, with the largest anomalies in the northwest and southwest areas.
- The NMME models predict a 36% to 40% chance of above-normal precipitation over eastern central Haiti in January 2025. The rest of the country has equal chances for above-, near-, or below-average rainfall. For the January–March 2025 period, the forecast suggests above-average rainfall in the northeast and southern regions, with a 36% to 40% probability. For other areas, rainfall expectations are uncertain, with equal chances for above-, near-, or below-average conditions. The SPI forecast suggests that wetter-than-average conditions may prevail in northern, western, and southern Haiti, and average conditions in the southeast.

Haiti Seasonal Calendar



Current Climate Modes and Teleconnections

- ENSO-neutral conditions are present. According to the NOAA ENSO Diagnostic Discussion, as of early December 2024, La Niña conditions are expected to emerge during the November 2024–January 2025 season (59% chance) and continue through January–March 2025, followed by a transition to ENSO-Neutral during March–May 2025 (61% chance, Fig. 1). For the latest update from the NOAA Climate Prediction Center (CPC) on ENSO, check [here](#).
- Much of the Caribbean Sea and Gulf of Mexico experienced SSTs from 26°C to 30°C, where positive anomalies of 0.5–2°C prevailed in the region.

Official NOAA CPC ENSO Probabilities (issued December 2024)

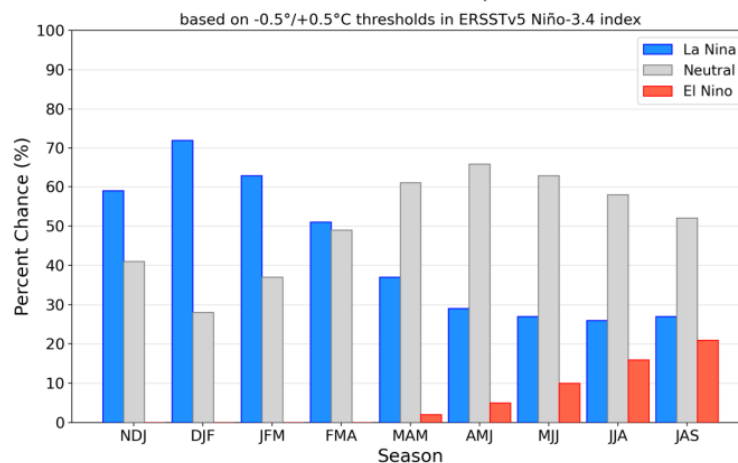


Figure 1. Official ENSO probabilities for the Niño 3.4 SST index (5°N–5°S, 120°W–170°W). Figure updated 12 December 2024. **Source: NOAA/CPC**

- Implications of ENSO conditions: Based on historical records, La Niña conditions are associated with above-average precipitation throughout most of Haiti. In addition, La Niña conditions are associated with near-average mean temperatures for most of

Haiti. The ENSO-precipitation teleconnection pattern can be found [here](#), and the pattern for temperature can be found [here](#).

- Highlighting analogous years/events: Composites of January–March (JFM) rainfall for eight La Niña years during the 1990–2019 period indicates that JFM seasonal rainfall totals vary from 50 mm to 500 mm across Haiti, with amounts exceeding 300 mm over northern Haiti (Annex **Fig. A1a**). During La Niña years, slightly above-normal rainfall anomalies dominate most of Haiti, while below-normal precipitation anomalies prevail in southeastern and southwestern Haiti (**Fig. A1b** and **A1c**).

Extreme Events

- From November 10 to 12, 2024, torrential rains affected the entire Sud department, causing severe flooding. A total of 3,558 families faced urgent humanitarian needs. One person was reported dead, and two others went missing.
- There have been no reports of fire activity in Haiti during November 2024.

Rainfall/Precipitation

- In November, Haiti experiences a decreasing trend in rainfall, marking the transition towards the drier season. During this month, climatological rainfall is between 150 mm and 200 mm in northwestern Haiti and between 120 mm and 150 mm in the southwest (Grand-Anse and Sud). Mean precipitation ranges from 80 mm to 120 mm across eastern Haiti.

Past 3 months (September to November 2024):

- **Totals:** Over the last three months, rainfall accumulations ranged from 25 mm to 100 mm in eastern central Haiti and central Ouest and central Sud-Est, and from 100 mm to 300 mm in the southeast, central west, northeast and north central Haiti. Rainfall totals exceeding 300 mm were recorded in the northwest of Nord-Ouest, Gonave Island, Grand-Anse, and Sud.
- **Anomalies:** Below-normal rainfall dominated eastern and central Haiti over the past three months, with rainfall deficits ranging from 10 mm to 200 mm. To the west, positive rainfall anomalies ranged from 10 mm to 500 mm westward across Grand-Anse and Sud, between 100 mm and 200 mm in western Gonave Island, and from 100 mm to 300 mm across Nord-Ouest.

Past 1 Month (November 2024):

- **Totals:** In November, rainfall across Haiti ranged from 10 mm to 750 mm. Western Haiti saw rainfall totals between 100 mm and 300 mm in the north and between 100 mm and 750 mm in the south. In contrast, eastern Haiti received lighter rainfall, ranging from 10 mm to 150 mm (**Fig. 2a**).
- **Anomalies:** [CMORPH](#) satellite-based rainfall estimates indicate near-average (-10 mm to 10 mm) and below-average (-10 mm to -50 mm) conditions over the central Haiti (**Fig. 2b**). Northern and southern departments experienced above-average rainfall, with anomalies ranging from 25 mm to 100 mm in the northeast, from 100 mm to 300 mm in the northwest, from 10 mm to 200 mm in the southeast, and from 200 mm to 500 mm in the southwest.

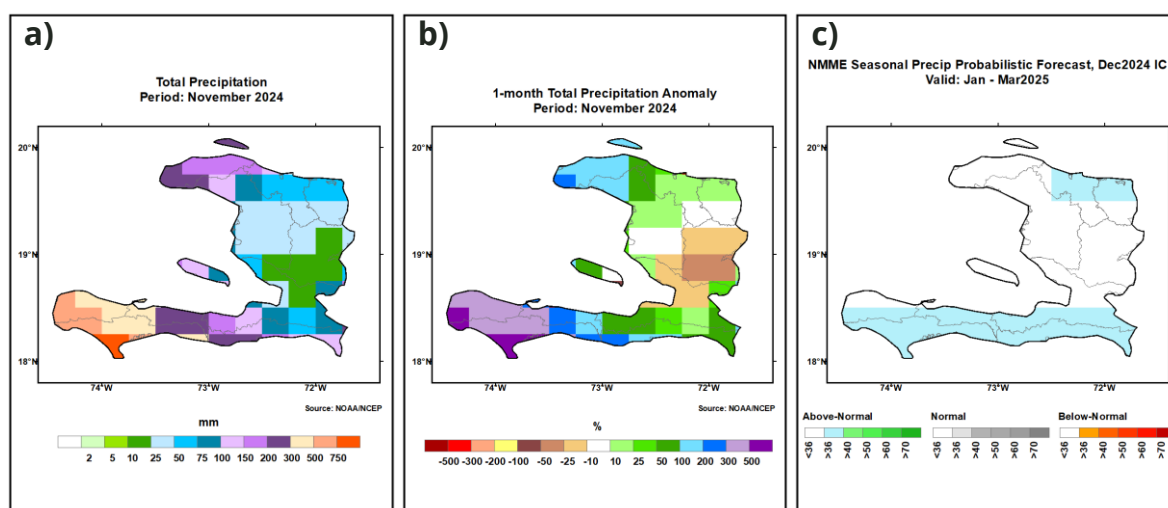


Figure 2. Satellite estimates of precipitation (CMORPH) for November 2024. **(a)** 1-month total accumulation and **(b)** 1-month anomaly. **(c)** NMME seasonal rainfall probabilistic forecast for January–March 2025. **Source: NOAA/NCEP**

Monthly and Seasonal Forecasts (January 2025 and January–March 2025):

- **Monthly:** Based on the North American Multi-Model Ensemble (NMME) models, utilizing observations from December 2024 for model initialization, the forecast indicates a 36% to 40% chance of above-normal precipitation over eastern central Haiti. The rest of the country has equal chances for above-, near-, or below-average rainfall during January 2025.
- **Seasonal:** The NMME seasonal forecast for January–March 2025 suggests above-average rainfall in the northeast and southern regions, with a 36% to 40% probability. For the rest of the country, there are equal chances for above-, near-, or below-average rainfall (**Fig. 2c**).

Temperature

Past 3 months (September to November 2024):

- **Maximums:** Most of Haiti experienced maximum temperatures ranging from 30°C to 35°C, except the southeast with temperatures between 25°C to 30°C. Temperature anomalies were near normal between -1°C and 1°C across the country, with slightly above-normal anomalies between 1°C and 2°C in the northwest and southwest.
- **Minimums:** Minimum temperatures across Haiti ranged from 15°C to 25°C. Most of the country recorded temperatures between 20°C and 25°C, while the southeast saw temperatures between 15°C and 20°C. Overall, near-average temperatures were observed across Haiti, with anomalies ranging from -1°C to 1°C, and above-normal between 1°C and 2°C in the northwest.

Past 1 Month (November 2024):

- **Maximums:** Maximum temperatures ranged from 30°C to 35°C in western central and northeast Haiti and from 25°C to 30°C across the rest of the country, with near-normal temperature anomalies of -1°C to 1°C across the entire country (**Fig. 3a**).
- **Minimums:** Minimum temperatures ranged from 15°C to 25°C across Haiti. Southeastern and eastern central Haiti recorded lower minimums between 15°C and 20°C, while the northern, northwestern and southwestern Haiti experienced higher temperatures ranging from 20°C to 25°C. Overall, Haiti registered near-average minimum temperatures anomalies of -1°C to 1°C (**Fig. 3b**).

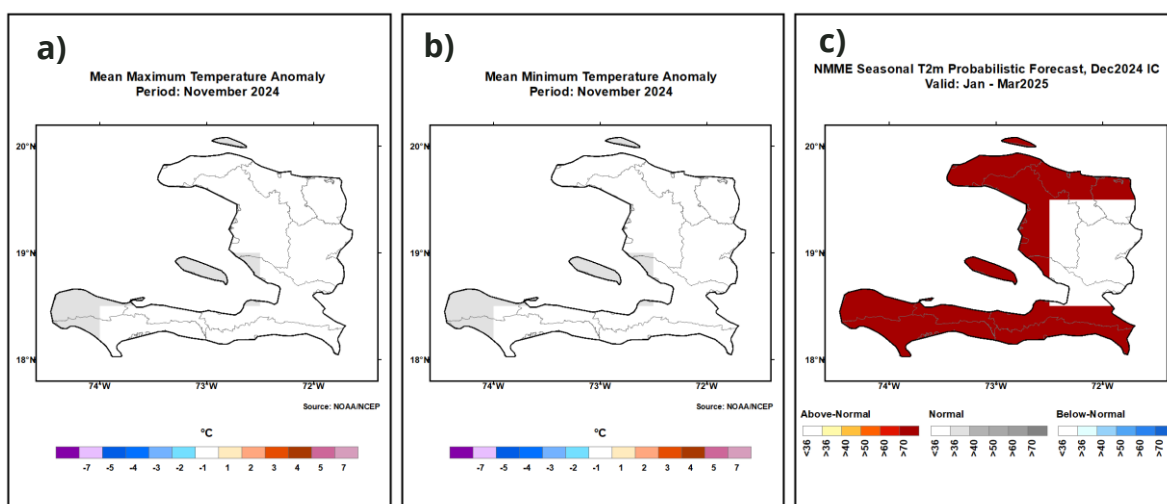


Figure 3. Spatial structure of temperature for November 2024. **(a)** Maximum temperature anomaly and **(b)** minimum temperature anomaly. **(c)** NMME probabilistic forecast of seasonal 2-m temperature anomaly for January–March 2025. **Source:** NOAA/NCEP

Monthly and Seasonal Forecasts (January 2025 and January–March 2025):

- **Monthly:** The NMME forecast shows no clear dominant signal for either below- or above-average temperatures across Haiti during January 2025.
- **Seasonal:** For the January–March 2025 season, there is an increased likelihood (over 70%) of above-average temperatures in the northern, western, and southern regions of Haiti. In contrast, there is no clear signal for near-, above- or below-average temperatures in the central part of the country (**Fig. 3c**).

Drought and Dryness

The Standardized Precipitation Index (SPI) is used to characterize meteorological drought. SPI compares the precipitation over a specific period of time with the climatology from that same period. Therefore, the SPI values can be thought of as the number of standard deviations the observed anomaly deviates from the climatology. The 1-month SPI values are a good representation of the monthly precipitation anomaly as well as the soil moisture and vegetation health. The 3-month SPI values are a good representation of seasonal precipitation anomalies. The Standardized Precipitation Evapotranspiration Index (SPEI) is similar to the SPI, but it also takes evapotranspiration into account (and therefore the impact of temperatures on water demand).

Past 3 Months (11 September – 10 December 2024):

- During the past 18 pentads (90 days), [Haiti showed wet conditions](#) (SPI values of 0.5 to 2.0 standard deviations above the mean) across most of the country, except for the small areas in the southeast and east central where near-average conditions (SPI values of -0.5 to 0.5 standard deviations) were observed.

Past 1 Month (11 November – 10 December 2024):

- During the past six pentads (30 days), most of Haiti experienced [wetter-than-average conditions](#) (SPI values of 0.5 to 2.0 standard deviations above the mean), except for the northeast and east central where near-average conditions (SPI values of -0.5 to 0.5 standard deviations) were observed.

Current/Forecast (11 September – 25 December 2024):

- SPI forecast, which is constructed from observed precipitation from 11 September 2024 to +10 December 2024 and forecasted rainfall data from 11 December to 25 December 2024 suggests that [wetter-than-average](#) conditions may prevail in northern, central, and southern Haiti, with SPI values ranging from 0.5 to 2.0. Average conditions are indicated in the southeast.

Water Requirement Satisfaction Index (WRSI)

- [USGS/EROS crop WRSI](#) Current conditions during the 3rd Dekad of September 2024 depicted 'Average' to 'Good' crop conditions across much of the country. Local areas of Centre and southern Ouest departments depicted 'Very good' conditions, while areas in Nord-Ouest, northwestern Artibonite, and northern Ouest departments depicted 'Mediocre' conditions.

GEOGLAM Crop Monitor

- GEOGLAM Crop Monitor synthesis indicated 'Favorable' conditions across Haiti during November 2024.

Additional Resources

- <https://protectioncivile.gouv.ht/>
- <https://www.meteo-haiti.gouv.ht/>

Annex

- La Niña precipitation composites.

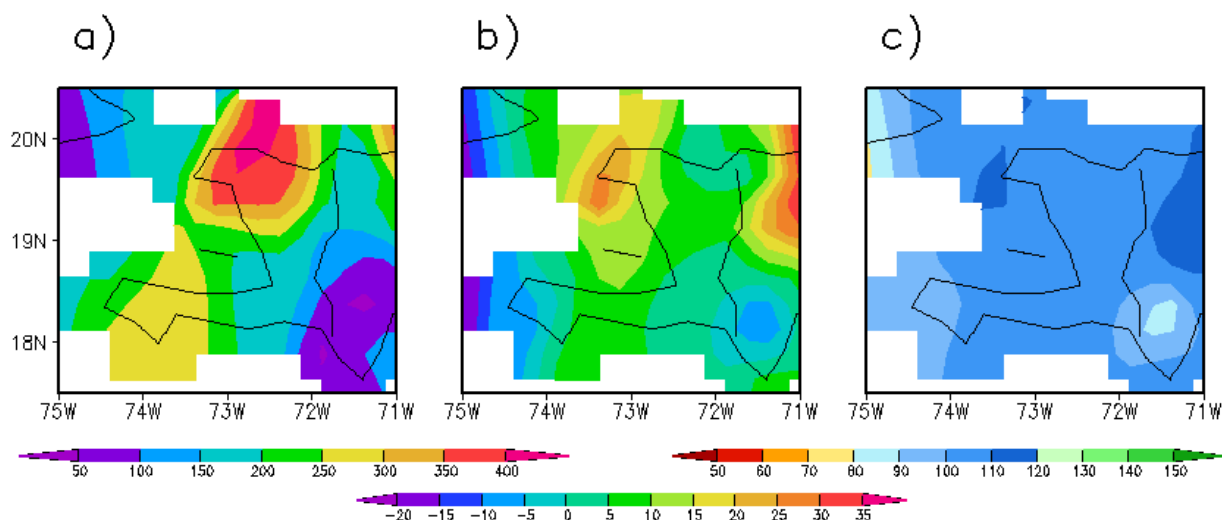


Figure A1. Composite maps of January–March (JFM) precipitation based on eight La Niña years during 1990 – 2019 using the Global Precipitation Climatology Centre (GPCC) dataset (0.25° resolution). (a) JFM total rainfall (mm), (b) JFM rainfall anomalies (mm), and (c) JFM total rainfall expressed as a percentage (%) of mean precipitation.