FAMINE EARLY WARNING SYSTEMS NETWORK

Haiti

Monthly Climate and Weather

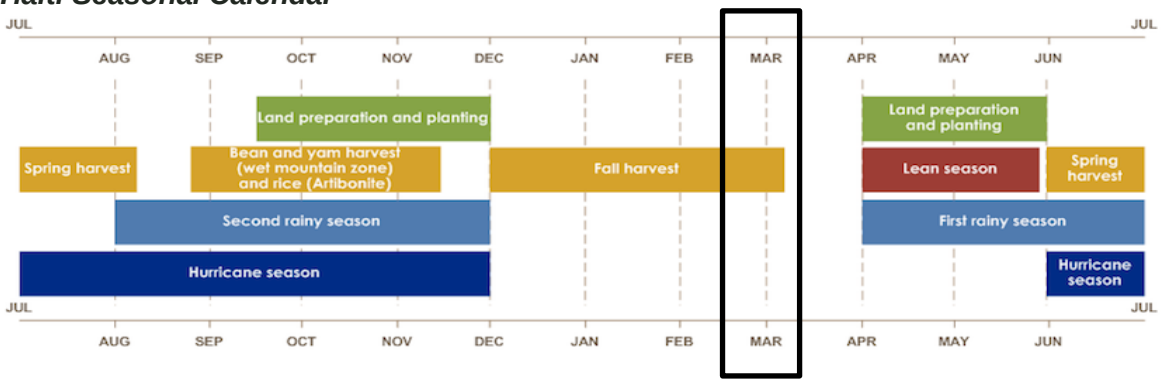
17 April 2025

Highlights

- ENSO-neutral conditions are present, with below-average sea surface temperatures (SSTs) weakening in the central and east-central equatorial Pacific Ocean. According to the NOAA ENSO Diagnostic Discussion, ENSO-neutral conditions are favored through the Northern Hemisphere summer, with over 50% chance. Historically, El Niño is associated with drier-than-average conditions, while La Niña typically brings wetter-than-average conditions to Haiti.
- During March, climatological rainfall ranges from 5 mm to 50 mm in Haiti.
- Most northern and central Haiti received moderate rainfall, ranging from 25 mm to 75 mm. Heavy rain was observed in western Grande-Anse, where rainfall values reached 100 mm. Meanwhile, portions of northeastern, western, and most of southern Haiti received rainfall between 2 mm and 25 mm. Below-normal rainfall dominated over eastern and southern Haiti. On the contrary, the Grand-Anse, northern Haiti, and east Artibonite departments observed above-average conditions between 10 mm and 100 mm.
- The NMME models indicate equal chances for above-, near-, or below-average rainfall conditions across the country for the monthly forecast (May) and the seasonal forecast (May-July) 2025.
- SPI forecast suggests that wetter-than-average conditions will occur in northern, southwestern, and southeastern areas of Haiti, with SPI values ranging from 0.4 to 2 standard deviations above the mean. On the contrary, drier-than-average conditions are expected in the western Artibonite and northwestern Ouest departments.

The FEWS NET Monthly Climate and Weather information bulletin is based on current weather and climate information and monthly and seasonal outlooks from the NOAA CPC. Information on crops, soil moisture, flooding, and evapotranspiration data were produced by FEWS NET, USGS, NASA and USDA. Various sources were used to assess impacts of extreme conditions. Questions or comments about this product may be directed to Dr. Wassila Thiaw, Head, International Desks/NOAA, wassila.thiaw@noaa.gov. Questions about the USAID FEWS NET activity may be directed to Dr. James Verdin, Program Manager, FEWS NET/USAID, jverdin@usaid.gov.

Haiti Seasonal Calendar



Current Climate Modes and Teleconnections

- ENSO-neutral conditions are present, with below-average sea surface temperatures (SSTs) weakening in the central and east-central equatorial Pacific Ocean. According to the NOAA ENSO Diagnostic Discussion, as of early April 2025, ENSO-neutral condition is favored through the Northern Hemisphere summer, with over 50% chance (**Fig. 1**). For the latest update from the NOAA Climate Prediction Center (CPC) on ENSO, check here.

- Much of the Caribbean Sea experienced SSTs from 26°C to 29°C, with positive anomalies of 0.5–1.5°C across the region.

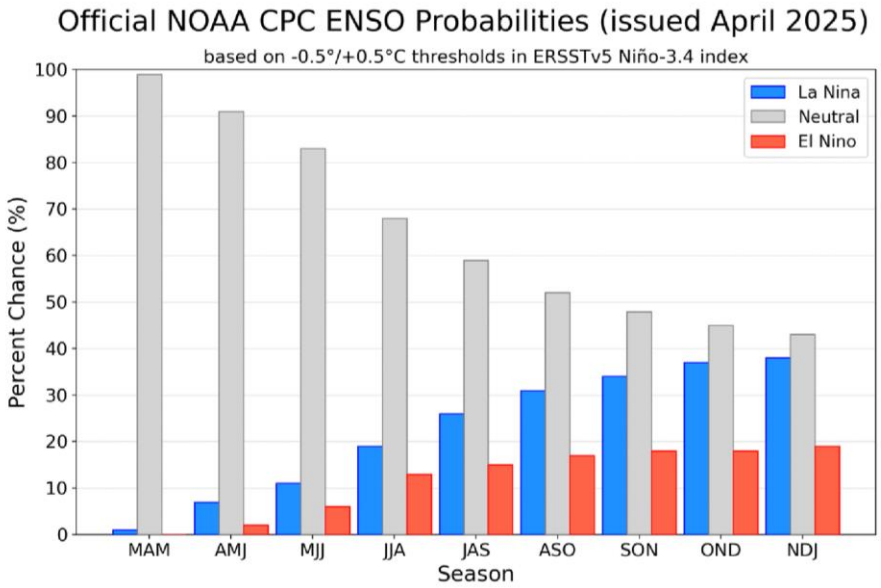


Figure 1. Official ENSO probabilities for the Niño 3.4 SST index (5ºN–5ºS, 120ºW–170ºW). Figure updated 10 April 2025. **Source: NOAA/CPC**

- Implications of ENSO conditions: Based on historical records, La Niña conditions are associated with below-average precipitation throughout most of Haiti from May to July (**Fig. A1, left panels**). Meanwhile, La Niña conditions are related to near-average mean temperatures in Haiti (**Fig. A1, right panels**). The ENSO-precipitation teleconnection pattern can be found here, and the pattern for temperature can be found here

Extreme Events

- There have been no reports of extreme events.
- There have been no reports of fire activity in Haiti during March 2025.

Rainfall/Precipitation

- From December to April, Haiti experiences its dry season. During March, climatological rainfall ranging from 5 mm to 50 mm is normally observed in Haiti. Generally, the highest rainfall totals occur in central Haiti, while the lower rainfall amounts are climatologically expected in northern and southwestern Haiti.

Past 3 months (January 2025 – March 2025):

- **Totals:** Over the last three months, rainfall exceeding 100 mm was recorded in Nord-Ouest, Nord, Grand-Anse and Sud departments. The rest of the country received 5 mm to 100 mm.

- **Anomalies:** During the past three months, rainfall deficits ranged from 10 mm to 200 mm in central and southern departments. On the contrary, above-average rainfall anomalies between 10 mm and 50 mm were registered in northern Haiti and the south of the Sud department. In addition, above-average anomalies ranging from 50 mm to 100 mm were observed in the western Grand-Anse department.

Past 1 Month (March 2025):

- **Totals:** In March, the total rainfall recorded reached 100 mm. Most northern and central Haiti received moderate rainfall, ranging from 25 mm to 75 mm. Heavy rainfall was observed in western Grande-Anse, where rainfall values reached up to 100 mm. Meanwhile, portions of northeastern, western, and most of southern Haiti received rainfall between 2 mm and 25 mm (**Fig. 2a**).

- **Anomalies:** During the past month, below-normal rainfall dominated over eastern and southern Haiti. In these areas, rainfall deficits ranged from 10 mm to 100 mm. However, the Grand-Anse department, northern Haiti, and eastern Artibonite departments observed above-average anomalies between 10 mm and 100 mm. Meanwhile, near-average (-10 mm to 10 mm) conditions were observed in portions of central, southwestern, and southeastern Haiti.

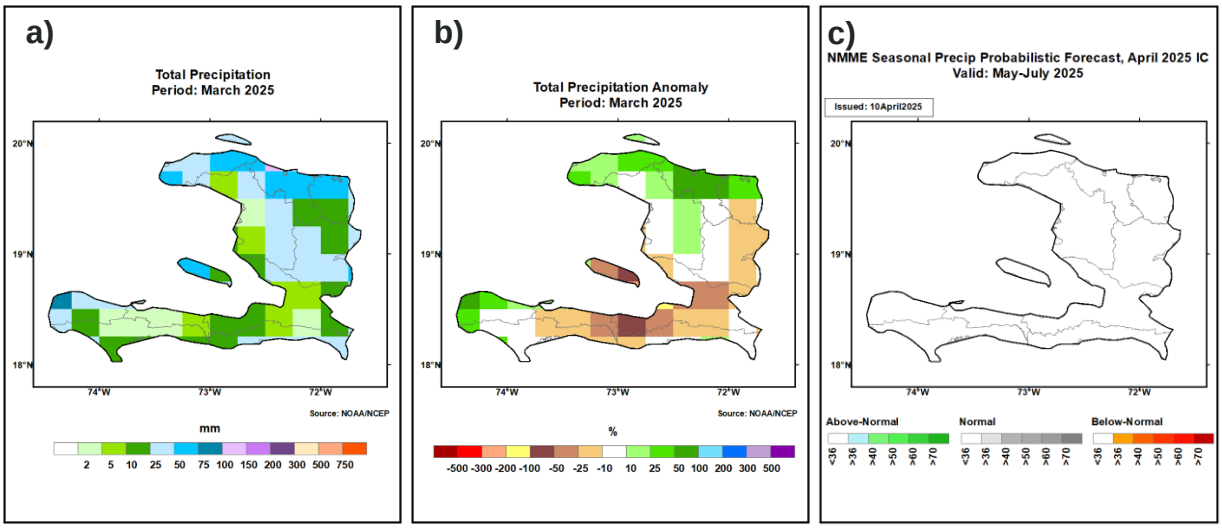


Figure 2. Satellite estimates of precipitation (CMORPH) for March 2025. **(a)** 1-month total accumulation and **(b)** 1-month anomaly. **(c)** NMME seasonal rainfall probabilistic forecast for May - July 2025. **Source: NOAA/NCEP**

Monthly and Seasonal Forecasts (May 2025 and May – July 2025):

- **Monthly**: Based on the North American Multi-Model Ensemble (NMME) models, utilizing observations from April 2025 for model initialization, the forecast for May 2025 indicates equal chances for above-, near-, or below-average rainfall across the country.

- **Seasonal:** The NMME seasonal forecast for May–July 2025 suggests equal chances for above-, near-, or below-average rainfall in Haiti (**Fig. 2c**).

Temperature

Past 3 months (January 2025 – March 2025):

- **Maximums:** Haiti experienced maximum temperatures ranging from 25°C to 35°C. Most of the country experienced slightly above-normal anomalies between 1°C and 2°C. Meanwhile, near normal temperature anomalies between -1°C and 1°C were registered in northeastern Haiti and southwestern Centre, central Quest, and central Sud-Est departments.

- **Minimums:** Minimum temperatures ranged from 15°C to 20°C in the majority of Haiti. Meanwhile, western Nord-Ouest, northeastern Nord-Est, central-west Artibonite, Nippes, Sud, and eastern Grande-Anse departments recorded the highest minimums between 20°C and 25°C. During this month, Haiti registered near-average minimum temperature anomalies of -1°C to 1°C

Past 1 Month (March 2025):

- **Maximums**: Maximum temperatures ranged from 25°C to 35°C across Haiti. Slightly above-normal anomalies between 1°C and 2°C were observed mostly in Haiti, while near-

normal temperature anomalies of -1°C to 1°C were confined to southern Ouest and Sud-Est departments (**Fig. 3a**).

- **Minimums:** Northern, western, and most southern portions of the country recorded temperatures between 20°C and 25°C. Additionally, central, central-east and south-east registered temperatures between 15°C and 20°C. Near-average minimum temperatures were observed across Haiti, with anomalies ranging from -1°C to 1°C (**Fig. 3b**).

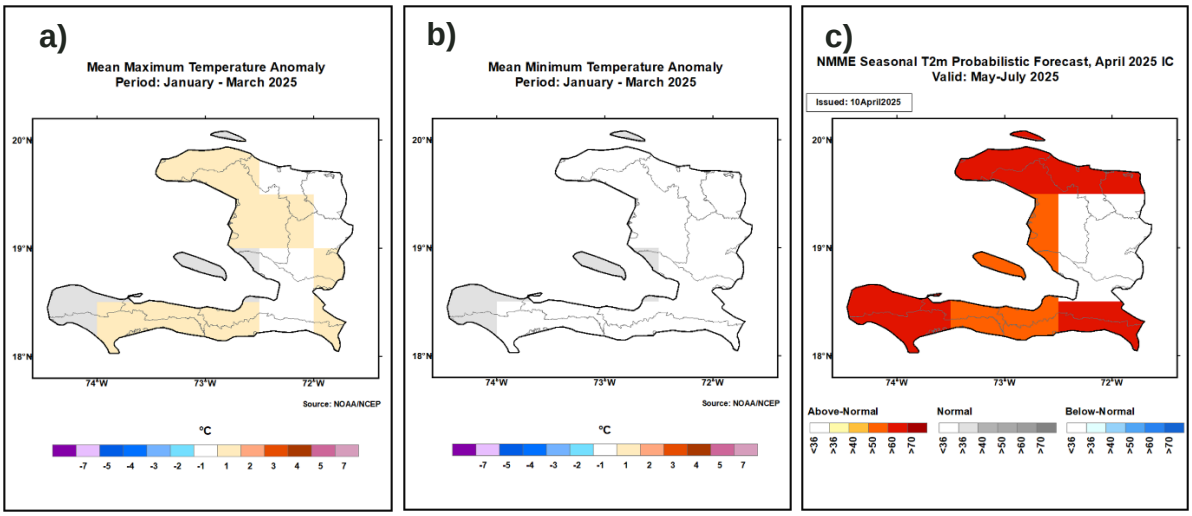


Figure 3. Spatial structure of temperature for March 2025. **(a)** Maximum temperature anomaly and **(b)** minimum temperature anomaly. **(c)** NMME probabilistic forecast of seasonal 2-m temperature anomaly for May - July 2025. **Source: NOAA/NCEP**

Monthly and Seasonal Forecasts (May 2025 and May – July 2025):

- **Monthly:** The NMME forecast indicates a 36% to 40% chance for above-average temperatures in Central Haiti during March 2025. For the rest of the country, there is no clear dominant signal for either below- or above-average temperatures.

- **Seasonal:** For the May – July 2025 season, there is an increased likelihood (over 70%) of above-average temperatures in the northern, southwestern, and southeastern departments. Meanwhile, there are 50% to 60% chances of above-average temperatures in the western and southern central regions. In contrast, there is no clear signal for near-, above-, or below-average temperatures in the central parts 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 (January 2025 – March 2025):

- The SPI analysis for the past 3 months indicated drier-than-average conditions (SPI values of 0.4 to 2 standard deviations below the mean) in portions of central-western, central, central-eastern, and southern Haiti. On the contrary, most areas in northern and southwestern Haiti experienced wetter-than-average conditions (SPI values of 0.4 to 1.5 standard deviations above the mean).

Past 1 Month (March 2025):

- The SPI analysis for March 2025 indicated that northern and southwestern areas of Haiti experienced wetter-than-average conditions (SPI values of 0.8 to 2 standard deviations above the mean). On the contrary, drier-than-average conditions (SPI values of 0.8 to 2 standard deviations below the mean) were observed in central-western Haiti.

Current/Forecast (29 January 2025 to 28 April 2025):

- SPI forecast suggests that wetter-than-average conditions will occur in northern, southwestern, and southeastern portions of Haiti, with SPI values ranging from 0.4 to 2 standard deviations above the mean. On the contrary, drier-than-average conditions (SPI values of 0.8 to 2 standard deviations below the mean) are expected in western Artibonite and northwestern Ouest departments.

Water Requirement Satisfaction Index (WRSI)

- Not Available

GEOGLAM Crop Monitor

- GEOGLAM Crop Monitor synthesis indicated ‘Favorable’ conditions across Haiti during March 2025.

Additional Resources

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

Annex

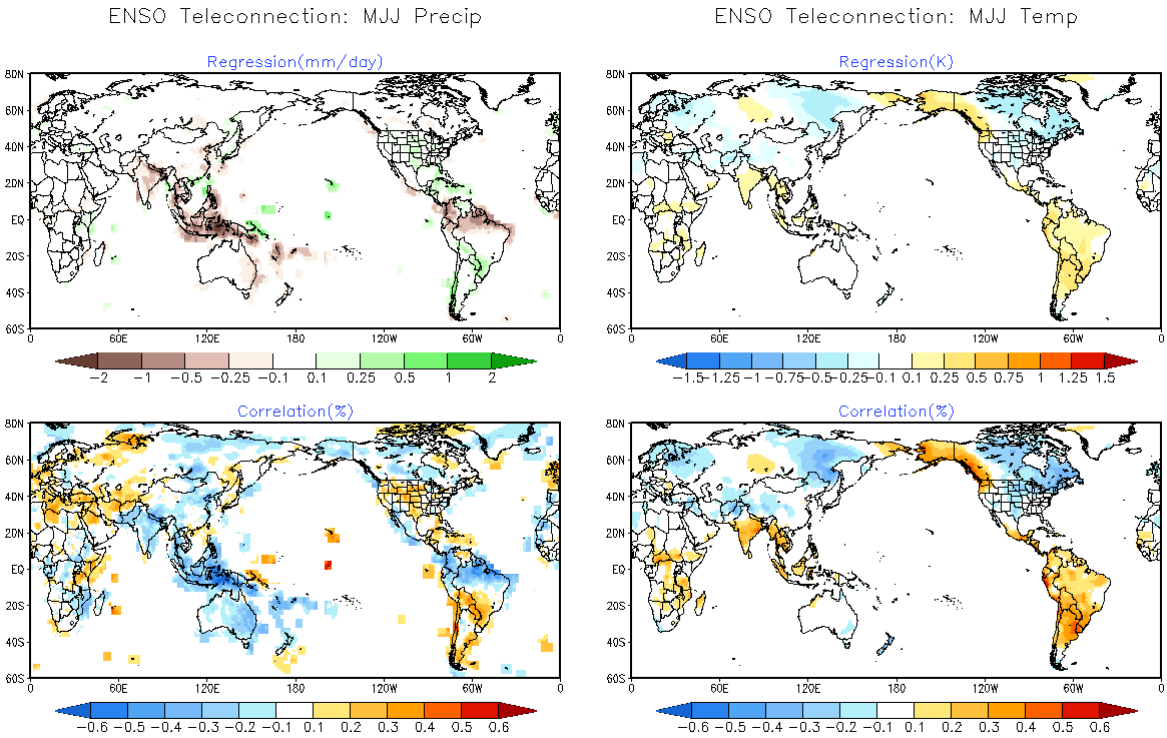


Figure A1. ENSO teleconnection for the May-June-July season. The upper-level panel shows the precipitation and temperature anomalies regressed onto the standardized Niño-3.4 index. The bottom panel shows the correlation between Nino-3.4 and the anomalies. Source: https://www.cpc.ncep.noaa.gov/products/precip/CWlink/ENSO/regressions/