THE CARIBBEAN, CENTRAL AMERICA, AND MEXICO STATE OF THE CLIMATE AND RECENT EVOLUTION

Update prepared by the Climate Prediction Center / NCEP
08 April 2024

For more information, please visit:
http://usregionalclimatecenter.noaa.gov/

OUTLINE

- Highlights
- Recent Evolution and Current Conditions
- NCEP GEFS Forecasts
- Summary

HIGHLIGHTS

Over the past 7 days

- Very little rain was observed across Mexico during the last 7 days. In general, close to normal conditions are observed across the country. Few areas in eastern and southern Mexico showed light negative conditions, while northern Baja California registered positive anomalies between 10-25 mm.

- In Central America, light to heavy rainfall between 10 mm and 100 mm was registered in a local area in western Guatemala, a few areas in Honduras and Nicaragua, eastern El Salvador, most of Costa Rican, and Panama.

- In the Caribbean, near-average conditions were observed, except in southern Cuba and portions of Hispaniola, where light negative anomalies (5 – 25 mm) were registered.

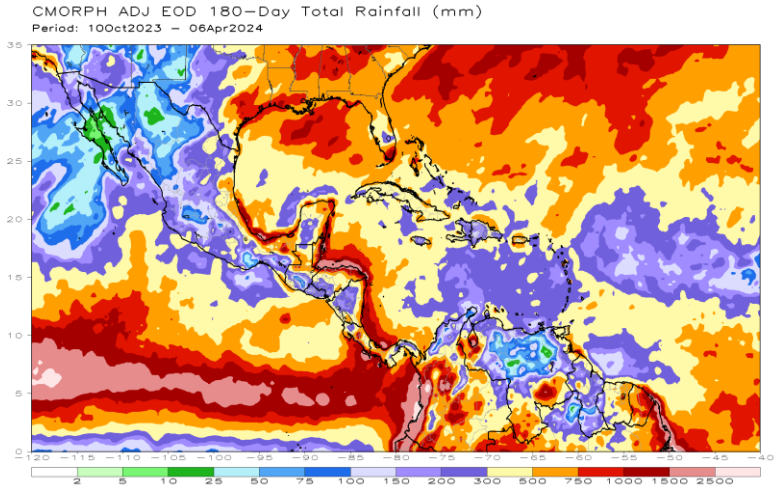
Week-1 and week-2 forecasts

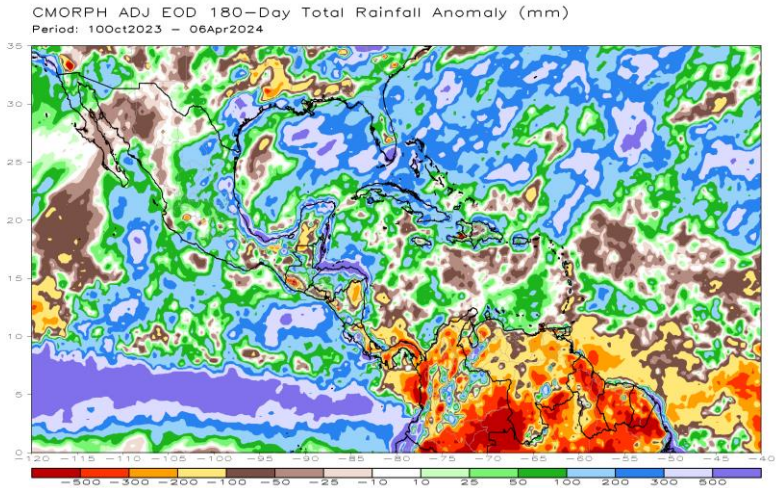
- Week 1: There is an increased chance (probability > 60%) for weekly rainfall to exceed 25 mm in western Guatemala, Costa Rica and Panama.

- Week 2: There is an slightly increased chance (probability > 50%) for weekly rainfall to exceed 25 mm in eastern Honduras, and in coastal areas facing the Caribbean Sea of Nicaragua and Costa Rica, Panama, and portions of Hispaniola.

RAINFALL PATTERNS
LAST 180 DAYS

Last 180 days





Mexico

Rainfall values ranged from 500 mm to 1500 mm in eastern Mexico, except in eastern Campeche, which observed 200 mm to 300 mm. Below-normal rainfall conditions were observed along many northwestern and southern areas of Mexico. The largest positive precipitation anomalies (larger than 300 mm) were found in parts of Tamaulipas, northern Nuevo Leon, western Oaxaca, northern Chiapas, northeastern Queretaro, northwestern Hidalgo, northeastern Puebla, Veracruz, coastal and central Tabasco, and coastal areas of the Yucatan Peninsula. On the contrary, rainfall deficits larger than 200 mm were observed in localized areas in western Jalisco, south-central Oaxaca, and southern Chiapas.

Central America

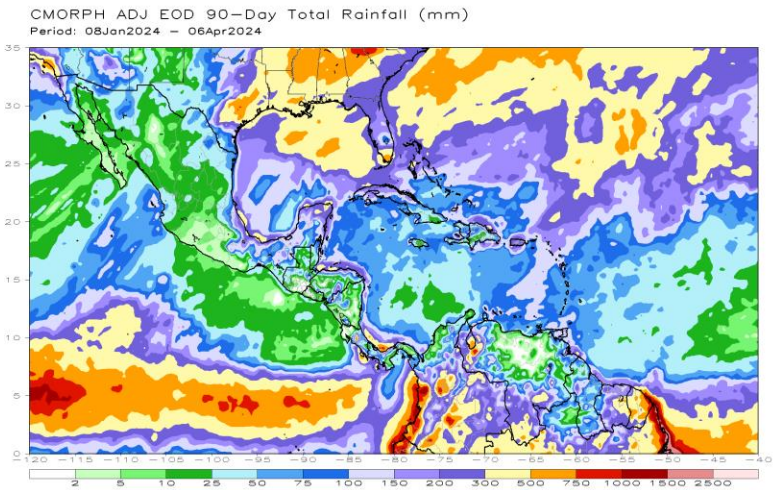
During the last 180 days, large rainfall values have been observed along the coastal areas facing the Caribbean Sea, where values have reached up to 2500 mm. Positive precipitation anomalies greater than 200 mm were observed in western Guatemala, northern and southern Honduras, southern Nicaragua, central/western Costa Rica, and eastern Belize. On the contrary, negative anomalies larger than 300 mm were observed in Panama, southern Guatemala, northwestern Nicaragua, and southern Costa Rica.

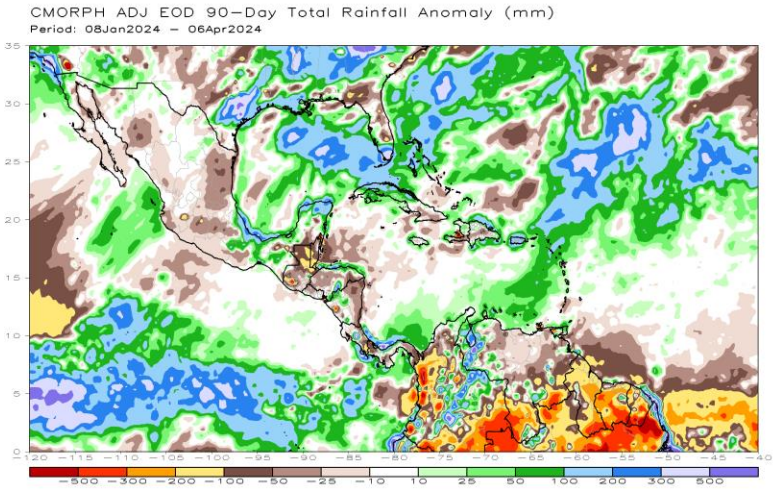
The Caribbean

Rainfall values in the Caribbean ranged from 150 mm to 750 mm. Some islands of the northern Lesser Antilles, western parts of The Bahamas, Cuba, southwestern and central Haiti, some coastal portions of the Dominican Republic, and western and eastern Jamaica received above-average rainfall (100 mm to 500 mm above the mean). Conversely, the western/central Dominican Republic, central Jamaica, and most islands of the Lesser Antilles observed below-average rainfall with deficits of 50 – 200 mm.

RAINFALL PATTERNS
LAST 90 DAYS

Last 90 days





Mexico

Most parts of Mexico registered rainfall deficits between 25 and 100 mm below the mean. Some localized areas observed deficits between 100 mm and 200 mm in central and southern Mexico. Meanwhile, positive precipitation anomalies larger than 100 mm were observed in parts of coastal Veracruz, Tabasco, northern Yucatán and Quinta Roo, and northern Baja California.

Central America

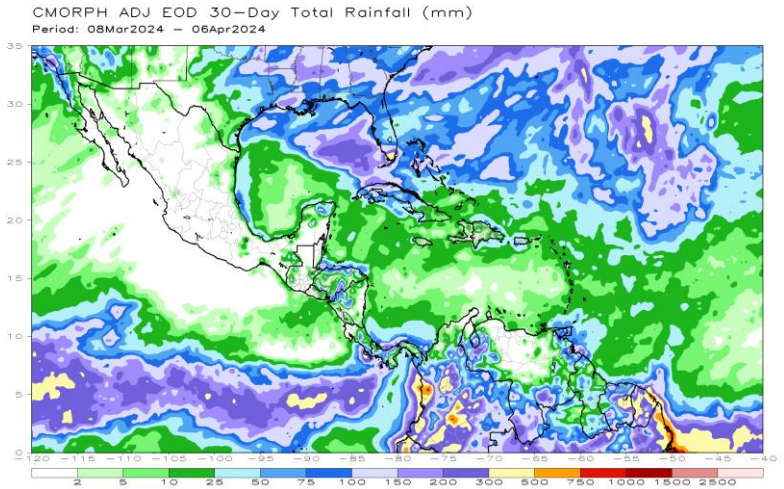
Rainfall totals larger than 200 mm were observed in central-eastern Guatemala, parts of coastal areas of Honduras, southern Honduras, central and southern Costa Rica, and coastal areas in northern Panama. Positive anomalies bigger than 100 mm were observed in southern Honduras, central Costa Rica, and localized areas in Panama. In contrast, below-average conditions larger than 100 mm were registered in southwestern, northern, central/eastern Guatemala, western Belize, western Nicaragua, and southern Costa Rica.

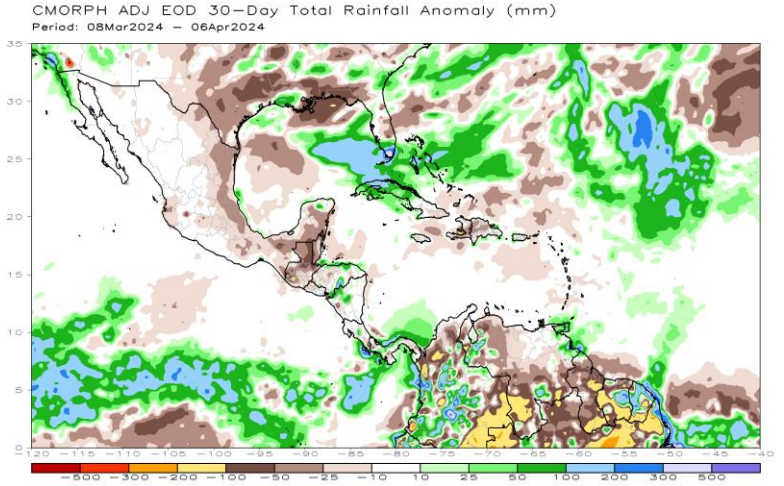
The Caribbean

The largest rainfall values (between 200 mm and 500 mm) were recorded in the northern Bahamas, parts of western Cuba, central Haiti, coastal parts of the Dominican Republic, and the northern Lesser Antilles. Positive rainfall anomalies between 50 mm and 200 mm, were registered in northern Cuba, the northern Bahamas, and some islands in the northern Lesser Antilles. Additionally, rainfall was below average (between 25 mm to 100 mm below the mean) along the southern islands in the windward Antilles, southern Cuba, southern Bahamas, and parts of Hispaniola.

RAINFALL PATTERNS
LAST 30 DAYS

Last 30 days





Mexico

Similar conditions to last week prevailed across Mexico, which has been largely dry over the last 30 days. Light to moderate rain conditions (values larger than 50 mm) were observed in northern and central Baja California and Yucatan states. The pattern yielded negative anomalies in many places, with larger anomalies greater than 50 mm observed in eastern and southern Mexico. Positive anomalies larger than 25 mm were registered in Baja California and Yucatan states.

Central America

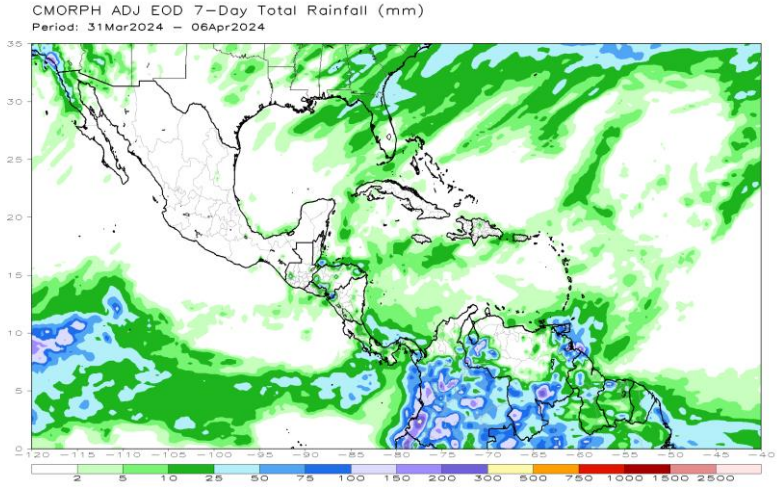
Rainfall totals above 75 mm were recorded in coastal areas of Honduras and southern Honduras, northern Nicaragua, central and southern Costa Rica, and northern and central Panama. In these areas, positive rainfall anomalies between 50 mm and 200 mm were observed. Deficits from 25 mm to 200 mm were observed in most parts of Guatemala, Belize, a local area in northwestern Nicaragua, southern Costa Rica, and eastern and western Panama.

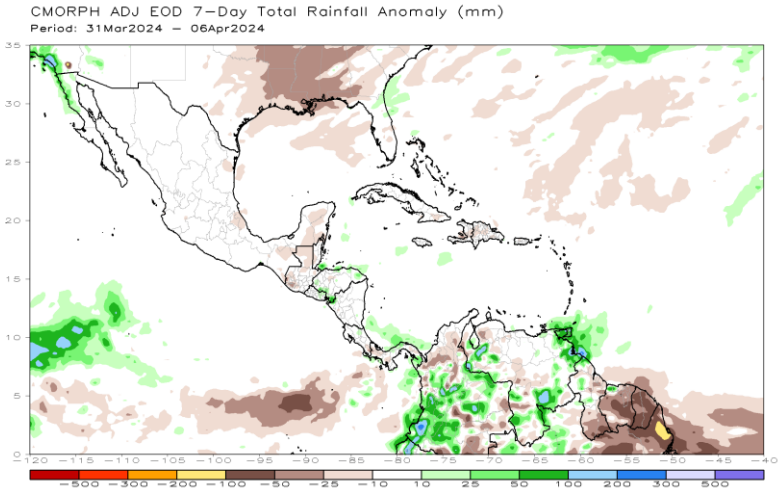
The Caribbean

Rainfall values between 10 mm and 200 mm were registered across the Caribbean. Most parts of Hispaniola registered deficits of 25 mm to 50 mm. In contrast, positive rainfall anomalies between 25-200 mm were observed in northern Cuba and the northern half of the Bahamas.

RAINFALL PATTERNS
LAST 7 DAYS

Last 7 days





Mexico

Very little rain was observed across Mexico during the last 7 days. Rainfall values between 10-500 were recorded only in northern Baja California and northern Sonora. In general, close to normal conditions are observed across the country. Few areas in eastern and southern Mexico showed light negative conditions, while northern Baja California registered positive anomalies between 10-25 mm.

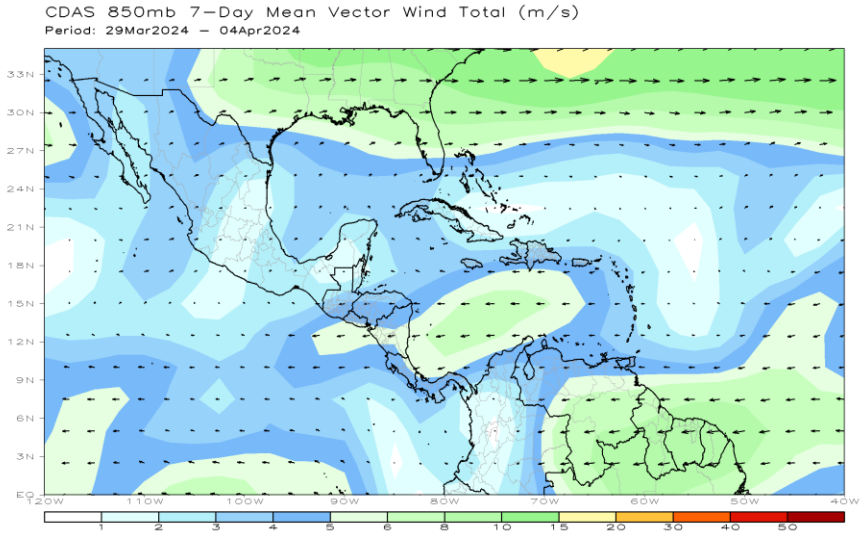
Central America

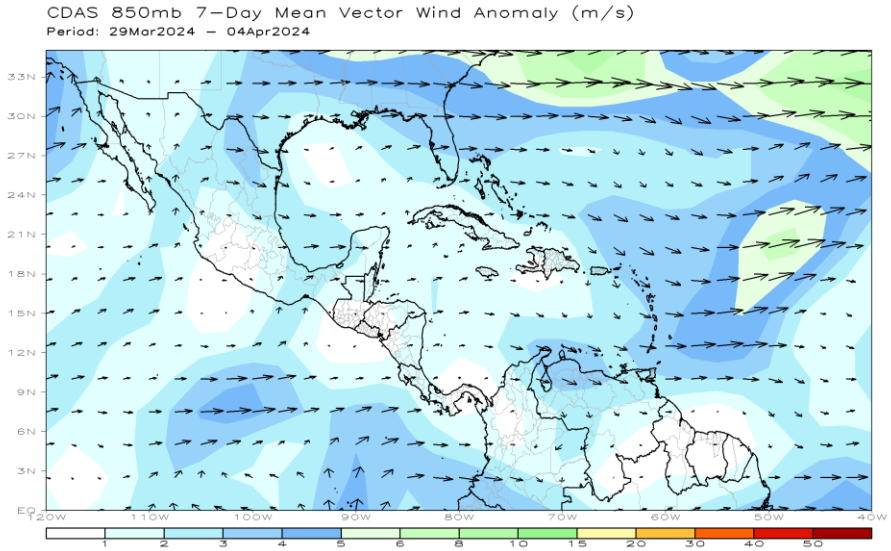
Light to heavy rainfall between 10 mm and 100 mm was registered in a local area in western Guatemala, a few areas in Honduras and Nicaragua, eastern El Salvador, most of Costa Rican, and Panama. Light negative anomalies were registered in parts of Guatemala, western Belize, southern Costa Rica, and areas across Panama, while positive anomalies were registered in northern and southern Honduras and southern Panama.

The Caribbean

In the Caribbean, near-average conditions were observed, except in southern Cuba and portions of Hispaniola, where light negative anomalies (5 – 25 mm) were registered. Total rainfall between 10 mm and 25 mm was observed in local areas in the northern Dominican Republic and across the Lesser Antilles islands.

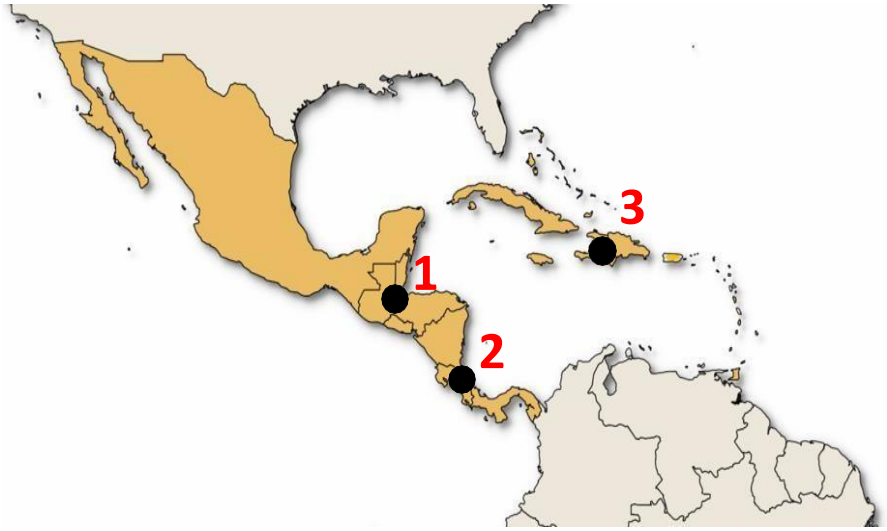
ATMOSPHERIC CIRCULATION
LAST 7 DAYS





- The 850 hPa circulation featured anomalous westerly winds over almost the entire region. The largest anomalies were observed across northern Mexico, Bahamas and the Lesser Antilles.

DAILY RAINFALL EVOLUTION AT SELECTED LOCATIONS – LAST 90 DAYS



(1) Guatemala

During the past 9 days, Guatemala has observed little rainfall, which has resulted in deficits across the country, including eastern Guatemala.

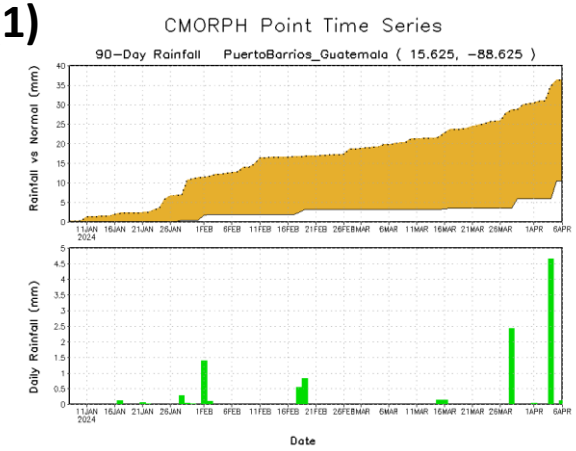
(2) Costa Rica

Continuing light to moderate rains during the last months has helped to maintain positive anomalies in central Costa Rica.

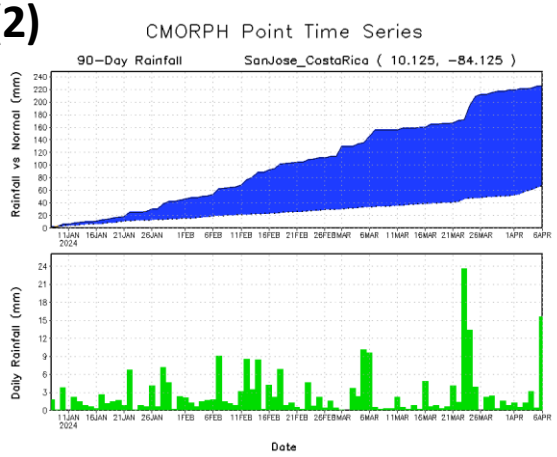
(3) Haiti

No rainfall during the past week further increased the deficits that had already existed in southwestern Haiti for the last three months.

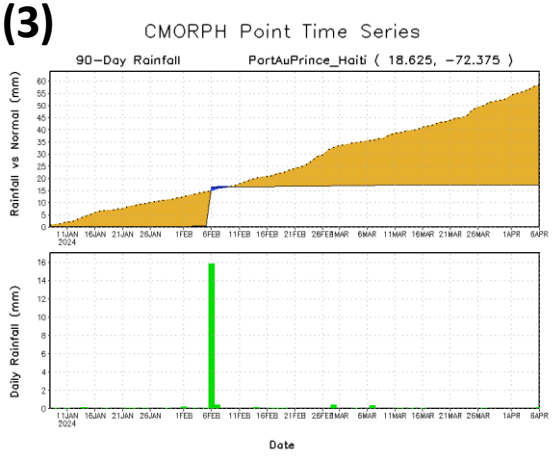
(1)



(2)

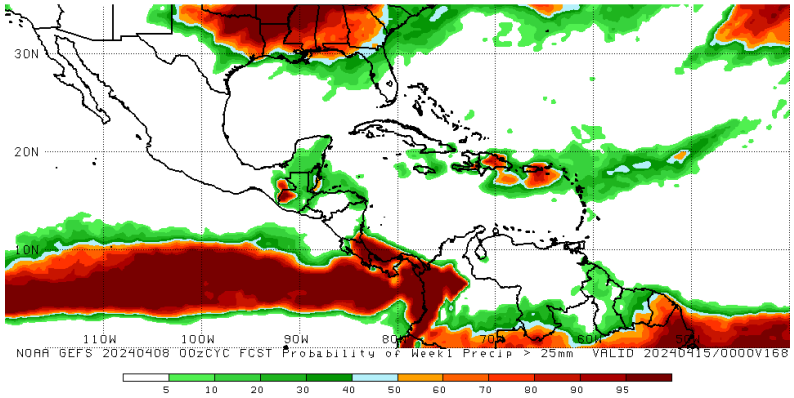


(3)

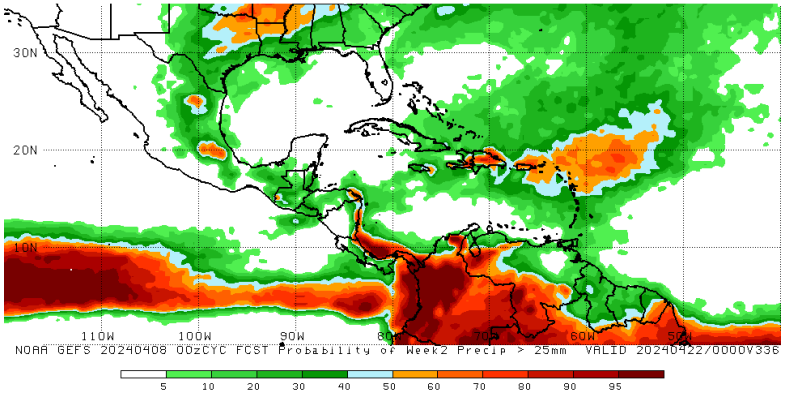


PROBABILITY FORECASTS OF PRECIPITATION EXCEEDANCE (PRECIP > 25 mm)

Week-1 forecast
Valid period: 09 – 15 April 2024



Week-2 forecast
Valid period: 16 - 22 April 2024



For week-1

- There is an increased chance (probability > 60%) for weekly rainfall to exceed 25 mm in western Guatemala, Costa Rica and Panama.

For week-2

- There is an increased chance (probability > 60%) for weekly rainfall to exceed 25 mm in eastern Honduras, and in coastal areas facing the Caribbean Sea of Nicaragua and Costa Rica, Panama, and portions of Hispaniola.

SUMMARY

Past rainfall conditions

- During the past 180 days, below-normal rainfall conditions were observed along many northwestern and southern areas of Mexico. Rainfall deficits larger than 200 mm were observed in localized areas in western Jalisco, south-central Oaxaca, and southern Chiapas. In Central America, positive precipitation anomalies greater than 200 mm were observed in western Guatemala, northern and southern Honduras, southern Nicaragua, central/western Costa Rica, and eastern Belize. Meanwhile, in the Caribbean, rainfall values in the Caribbean ranged from 150 mm to 750 mm, while western/central Dominican Republic, central Jamaica, and most islands of the Lesser Antilles observed below-average rainfall with deficits of 50 – 200 mm.

- During the past 90 days, some localized areas observed deficits between 100 mm and 200 in central and southern Mexico. Meanwhile, positive precipitation anomalies larger than 100 mm were observed in parts of coastal Veracruz, Tabasco, northern Yucatán and Quinta Roo, and northern Baja California. In Central America, positive anomalies bigger than 100 mm were observed in southern Honduras, central Costa Rica, and localized areas in Panama. In contrast, below-average conditions larger than 100 mm were registered in southwestern, northern, central/eastern Guatemala, western Belize, western Nicaragua, and southern Costa Rica. In the Caribbean, the largest rainfall values (between 200 mm and 500 mm) were recorded in the northern Bahamas, parts of western Cuba, central Haiti, coastal parts of the Dominican Republic, and the northern Lesser Antilles.

- During the past 30 days in Mexico, light to moderate rain conditions (values larger than 50 mm) were observed in northern and central Baja California and Yucatan states. Meanwhile, in Central America, deficits from 25 mm to 200 mm were observed in most parts of Guatemala, Belize, a local area in northwestern Nicaragua, southern Costa Rica, and eastern and western Panama. In the Caribbean, rainfall values between 10 mm and 200 mm were registered across the Caribbean. Most parts of Hispaniola registered deficits of 25 mm to 50 mm.

- During the past 7 days, very little rain was observed across Mexico during the last 7 days. In general, close to normal conditions are observed across the country. Few areas in eastern and southern Mexico showed light negative conditions, while northern Baja California registered positive anomalies between 10-25 mm. In Central America, light to heavy rainfall between 10 mm and 100 mm was registered in a local area in western Guatemala, a few areas in Honduras and Nicaragua, eastern El Salvador, most of Costa Rican, and Panama. In the Caribbean, near-average conditions were observed, except in southern Cuba and portions of Hispaniola, where light negative anomalies (5 – 25 mm) were registered.

Week-1 and week-2 forecasts

- Week 1: There is an increased chance (probability > 60%) for weekly rainfall to exceed 25 mm in western Guatemala, Costa Rica and Panama.
- Week 2: There is an slightly increased chance (probability > 50%) for weekly rainfall to exceed 25 mm in eastern Honduras, and in coastal areas facing the Caribbean Sea of Nicaragua and Costa Rica, Panama, and portions of Hispaniola.

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