



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

**Update prepared by the Climate Prediction Center / NCEP  
29 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

- Moderate localized rainfall was observed across eastern and southern Mexico during the last 7 days. Total rainfall between 25 mm and 150 mm was observed in northeastern Tamaulipas, central Veracruz, Puebla, Oaxaca, southwestern Chiapas, and eastern Yucatán Peninsula.
- In Central America, rainfall values between 50 mm and 200 mm were recorded in southwestern Honduras, southern Costa Rica, and northern and southern Panama. Positive anomalies between 50 mm and 200 mm were observed in southwestern Honduras and northern and southern Panama.
- In the Caribbean, rainfall values ranged from 10 mm to 50 mm in southern Cuba, the Dominican Republic, southern Jamaica, and the central islands in the Lesser Antilles. Near-average conditions were observed in most areas.

## Week-1 and week-2 forecasts

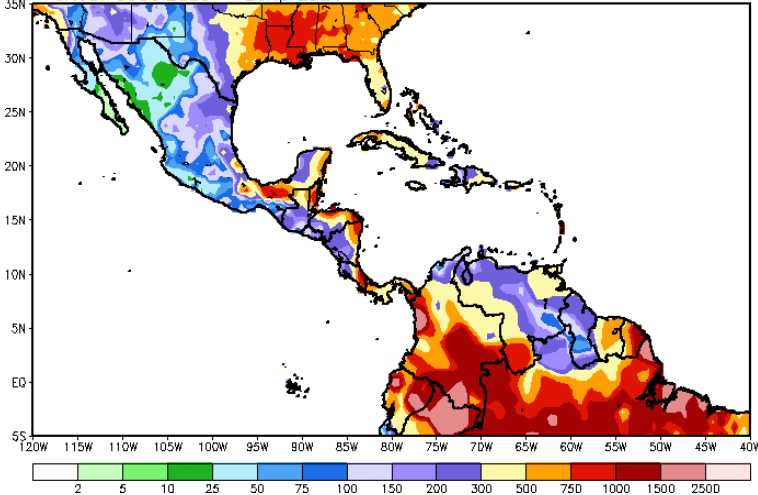
- Week 1: There is an increased chance (probability > 70%) for weekly rainfall to exceed 25 mm in southern Guatemala, western Honduras, eastern El Salvador, northwestern Nicaragua, western Costa Rica, and Panama. In the Caribbean, there is also an increased chance for rainfall to exceed 25 mm in southern Cuba, southern Las Bahamas, Jamaica, Hispaniola, and some islands in the northern Lesser Antilles.
- Week 2: There is a slightly increased chance (probability > 70%) for weekly rainfall to exceed 25 mm across Costa Rica and Panamá, as well as over Hispaniola.



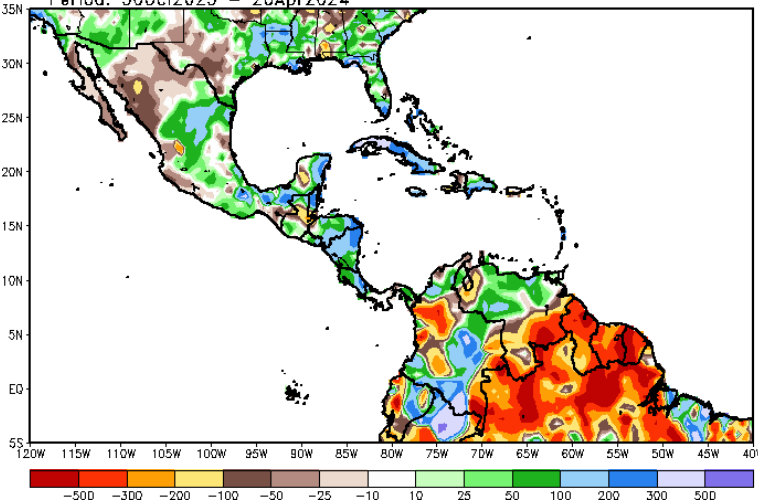
# RAINFALL PATTERNS LAST 180 DAYS

## Last 180 days

CPC Unified Gauge 180-Day Total Rainfall (mm)  
Period: 30Oct2023 - 26Apr2024



CPC Unified Gauge 180-Day Total Rainfall Anomaly (mm)  
Period: 30Oct2023 - 26Apr2024



### Mexico

Rainfall values ranged from 10 mm to 1500 mm across Mexico, with the largest values located in central/southern Veracruz, northeastern Chiapas, and in the Yucatan Peninsula. Negative anomalies between 50 mm and 300 mm were observed along the northern and western parts of Mexico, and in Chiapas and Campeche states. Meanwhile, positive anomalies larger than 200 mm were registered in southern Veracruz, Oaxaca, northern Chiapas, Tabasco, Campeche, and Quintana Roo states.

### Central America

During the last 180 days, large rainfall values have been mostly observed along the coastal areas facing the Caribbean Sea, where values larger than 500 mm have been recorded. Positive precipitation anomalies greater than 200 mm were observed in Belize, southeastern Honduras, northeastern Nicaragua, and eastern and southern Costa Rica, while negative anomalies ranged from 100 mm to 200 mm in central Guatemala and southern Belize.

### The Caribbean

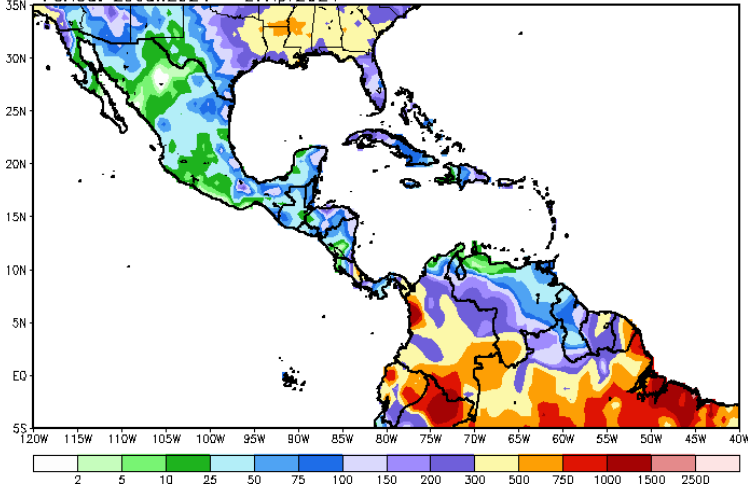
Rainfall values in the Caribbean ranged from 100 mm to 750 mm. Northern parts of The Bahamas, central/northern Cuba and southern coastal areas of the Dominican Republic observed positive anomalies (200 mm to 300 mm above the mean). On the contrary, most parts of Haiti observed negative values that ranged from 25 mm to 100 mm.



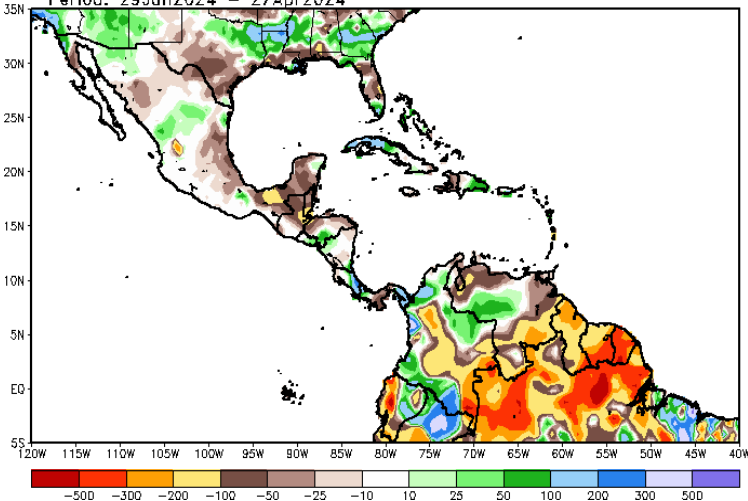
# RAINFALL PATTERNS LAST 90 DAYS

## Last 90 days

CPC Unified Gauge 90-Day Total Rainfall (mm)  
Period: 29Jan2024 - 27Apr2024



CPC Unified Gauge 90-Day Total Rainfall Anomaly (mm)  
Period: 29Jan2024 - 27Apr2024



## Mexico

Most part of Mexico registered rainfall deficits between 25 and 100 mm below the mean. Localized areas in Jalisco, Michoacán, northern Chiapas, and Tabasco observed deficits between 100 mm and 300 mm. Meanwhile, positive precipitation anomalies larger than 50 mm were observed in northwestern Baja California, western Durango, and northern Oaxaca.

## Central America

Rainfall totals larger than 150 mm were observed in parts of coastal areas of Honduras, southwestern Honduras, northeastern and southeastern Nicaragua, most parts of Costa Rica, and northern and southern Panama. Positive anomalies bigger than 100 mm were observed in Costa Rica, northern and southern Panama.

## The Caribbean

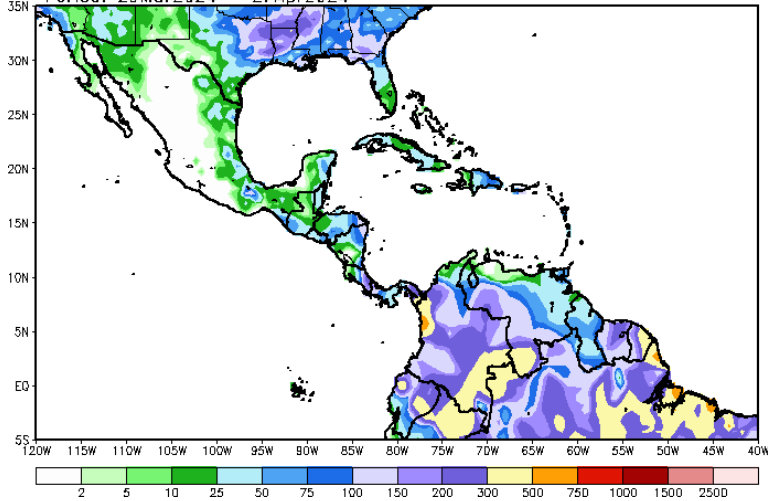
The largest rainfall values (between 150 mm and 300 mm) were recorded in the northern Bahamas, parts of western Cuba, central and eastern Dominican Republic, and in a few islands in the Lesser Antilles. Positive rainfall anomalies between 50 mm and 200 mm, were registered in northern Cuba, the northern Bahamas, and eastern Hispaniola. Additionally, rainfall was below average (between 25 mm to 100 mm below the mean) in southern Cuba, southern The Bahamas, and Haiti.



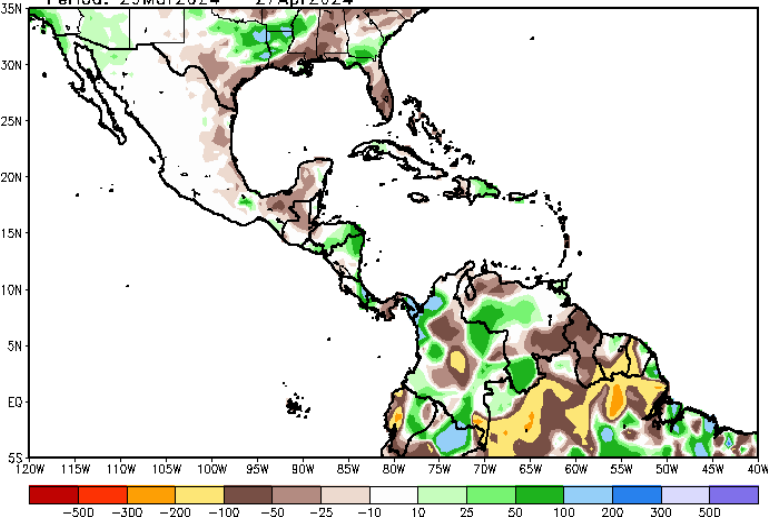
# RAINFALL PATTERNS LAST 30 DAYS

## Last 30 days

CPC Unified Gauge 30-Day Total Rainfall (mm)  
Period: 29Mar2024 - 27Apr2024



CPC Unified Gauge 30-Day Total Rainfall Anomaly (mm)  
Period: 29Mar2024 - 27Apr2024



## Mexico

Over the last 30 days, local moderate total rainfall values larger than 50 mm were observed in northern Baja California, Tamaulipas, central Veracruz, northern Chiapas, and Quintana Roo States. The pattern yielded positive anomalies larger than 10 mm in northern Baja California, northwestern Sonora, northern Oaxaca, and southwestern Chiapas. However, rainfall deficits have continued across eastern Mexico.

## Central America

Rainfall totals above 50 mm were recorded in southern Guatemala, southern and eastern Honduras, northeastern Nicaragua, most parts of Costa Rica, and northern and southern Panama. Positive rainfall anomalies between 50 mm and 200 mm were registered in southeastern Honduras, northeastern Nicaragua, eastern and southern Costa Rica, and northern and southern Panama. Deficits from 25 mm to 100 mm were observed in central and northern Guatemala, and central Panama.

## The Caribbean

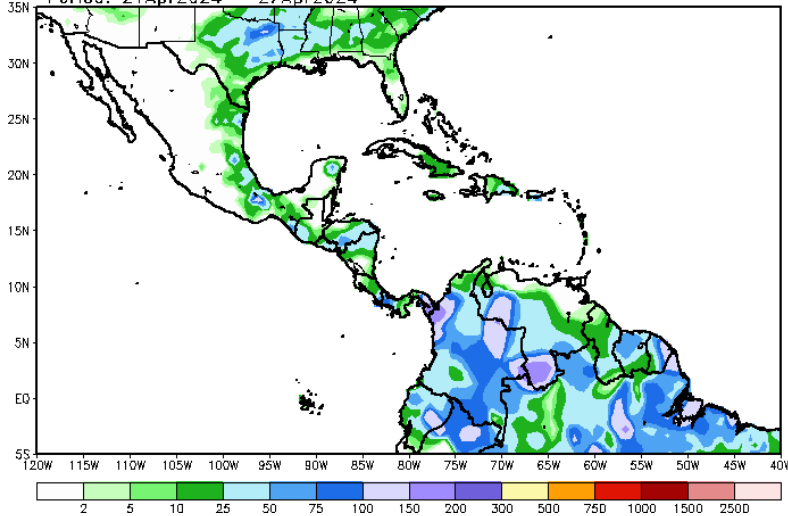
Rainfall values between 10 mm and 100 mm were recorded in the Caribbean. Deficits of 25 mm to 100 mm were registered in Haiti, the Bahamas, and the central island of the Lesser Antilles. In contrast, positive rainfall anomalies between 25 mm and 50 mm were observed in most of the Dominican Republic.



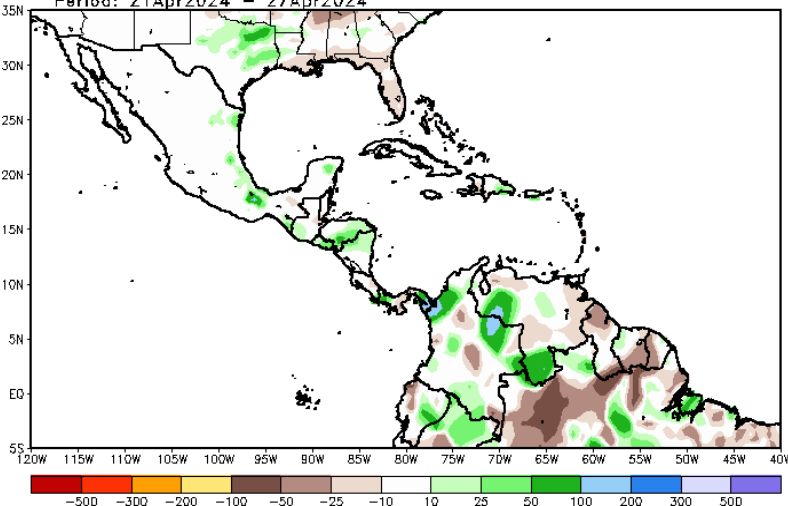
# RAINFALL PATTERNS LAST 7 DAYS

## Last 7 days

CPC Unified Gauge 7-Day Total Rainfall (mm)  
Period: 21Apr2024 - 27Apr2024



CPC Unified Gauge 7-Day Total Rainfall Anomaly (mm)  
Period: 21Apr2024 - 27Apr2024



## Mexico

Moderate localized rainfall was observed across eastern and southern Mexico during the last 7 days. Total rainfall between 25 mm and 150 mm was observed in northeastern Tamaulipas, central Veracruz, Puebla, Oaxaca, southwestern Chiapas, and eastern Yucatán Peninsula. These areas showed positive anomalies that ranged from 25 mm to 200 mm. Meanwhile, the rest of Mexico observed near-average rainfall conditions.

## Central America

Total rainfall values between 50 mm and 200 mm were recorded in southwestern Honduras, southern Costa Rica, and northern and southern Panama. Slight negative anomalies were registered in localized areas in eastern Guatemala, eastern central Costa Rica, and central Panama. Meanwhile, positive anomalies between 50 mm and 200 mm were observed in southwestern Honduras and northern and southern Panama.

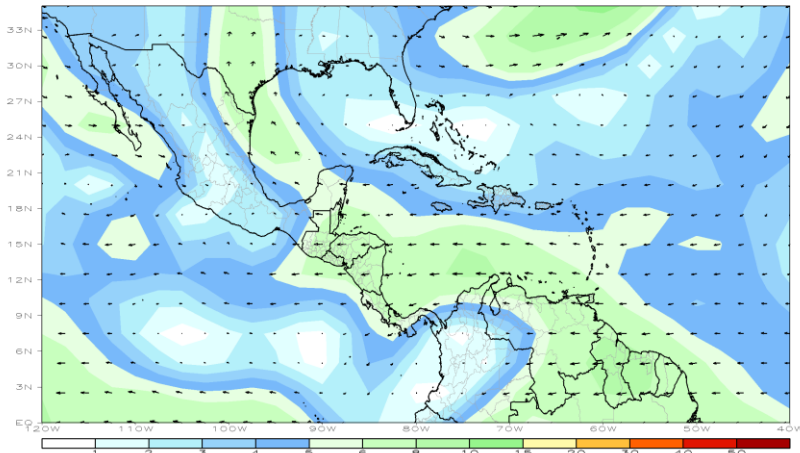
## The Caribbean

In the Caribbean, rainfall values ranged from 10 mm to 50 mm in southern Cuba, Dominican Republic, southern Jamaica, and central islands in the Lesser Antilles. Near-average conditions were observed in most areas across the Caribbean, except for the eastern Dominican Republic, which showed positive anomalies (10 - 50 mm).

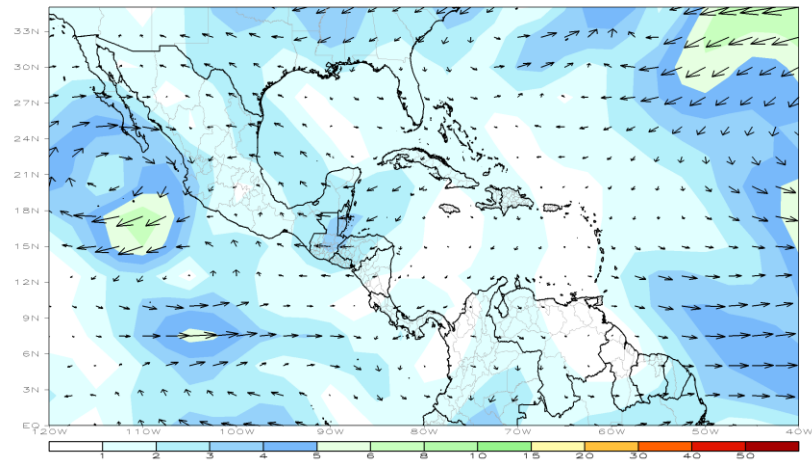


# ATMOSPHERIC CIRCULATION LAST 7 DAYS

CDAS 850mb 7-Day Mean Vector Wind Total (m/s)  
Period: 20Apr2024 - 26Apr2024



CDAS 850mb 7-Day Mean Vector Wind Anomaly (m/s)  
Period: 20Apr2024 - 26Apr2024



- The 850 hPa circulation featured an anomalous anticyclone toward the western of central Mexico. This feature contributed to suppressing rainfall over central/western Mexico. Meanwhile, strong easterly wind anomalies predominated over Guatemala, Belize, northwestern Honduras, and northwestern El Salvador. Further, southern Nicaragua, Costa Rica, and Panama observed near-average conditions. In the Caribbean, northerly wind anomalies were registered in the northern Bahamas, while the Lower Antilles observed near-average conditions.

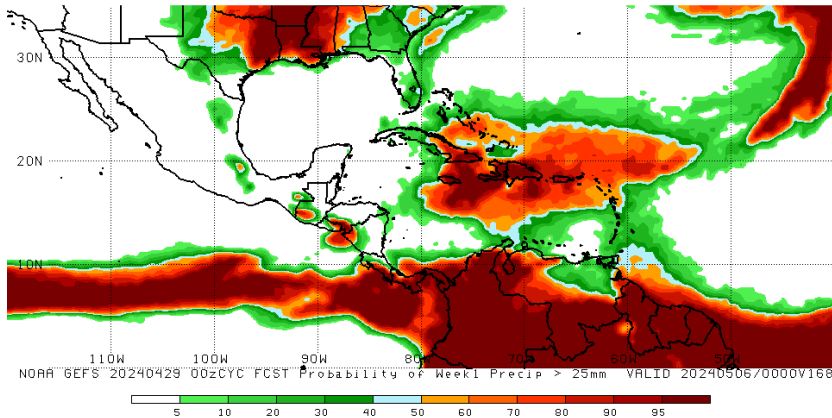




# PROBABILITY FORECASTS OF PRECIPITATION EXCEEDANCE (PRECIP > 25 mm)

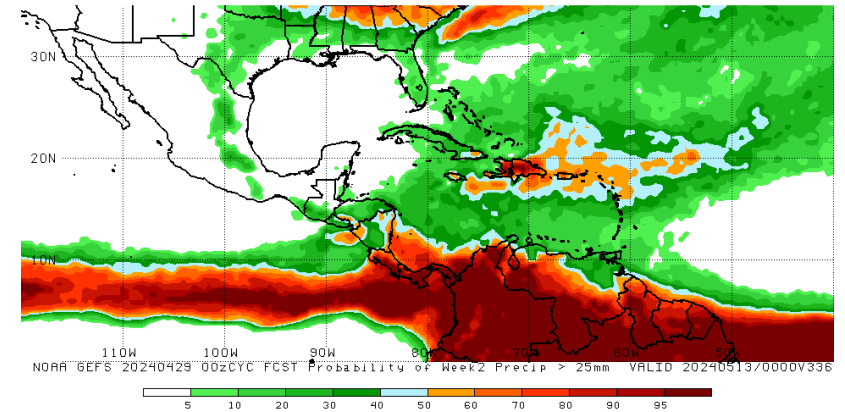
## Week-1 forecast

Valid period: 30 April - 06 May 2024



## Week-2 forecast

Valid period: 07 - 13 May 2024



### For week-1

- There is an increased chance (probability > 70%) for weekly rainfall to exceed 25 mm in southern Guatemala, western Honduras, eastern El Salvador, northwestern Nicaragua, western Costa Rica, and Panama. In the Caribbean, there is also an increased chance for rainfall to exceed 25 mm in southern Cuba, southern Las Bahamas, Jamaica, Hispaniola, and in some islands in the northern Lesser Antilles.

### For week-2

- There is an increased chance (probability > 70%) for weekly rainfall to exceed 25 mm across Costa Rica and Panamá, as well as over Hispaniola.



# SUMMARY

## Past rainfall conditions

- During the past 180 days, negative anomalies between 50 mm and 300 mm were observed along the northern and western parts of Mexico, and in Chiapas and Campeche states. In Central America, positive precipitation anomalies greater than 200 mm were observed in Belize, southeastern Honduras, northeastern Nicaragua, and eastern and southern Costa Rica. Meanwhile, in the Caribbean, northern parts of The Bahamas, central/northern Cuba and southern coastal areas of Dominican Republic observed positive anomalies (200 mm to 300 mm above the mean).
- During the past 90 days, most parts of Mexico registered rainfall deficits between 25 and 100 mm below the mean. In Central America, rainfall totals larger than 150 mm were observed in parts of coastal areas of Honduras, southwestern Honduras, northeastern and southeastern Nicaragua, most parts of Costa Rica, and northern and southern Panama. In the Caribbean, the largest rainfall values (between 150 mm and 300 mm) were recorded in the northern Bahamas, parts of western Cuba, central and eastern Dominican Republic, and in a few islands in the Lesser Antilles
- During the past 30 days in Mexico, local moderate total rainfall values larger than 50 mm were observed in northern Baja California, Tamaulipas, central Veracruz, northern Chiapas, and Quintana Roo States; however, rainfall deficits have continued across eastern Mexico. Meanwhile, in Central America, positive rainfall anomalies between 50 mm and 200 mm were registered in southeastern Honduras, northeastern Nicaragua, eastern and southern Costa Rica, and northern and southern Panama. Rainfall values between 10 mm and 100 mm were recorded in the Caribbean. Positive rainfall anomalies between 25-50 mm were observed in most of the Dominican Republic.
- During the past 7 days, in Mexico, moderate localized rainfall was observed across eastern and southern Mexico during the last 7 days. Total rainfall between 25 mm and 150 mm was observed in northeastern Tamaulipas, central Veracruz, Puebla, Oaxaca, southwestern Chiapas, and eastern Yucatán Peninsula. In Central America, rainfall values between 50 mm and 200 mm were recorded in southwestern Honduras, southern Costa Rica, and northern and southern Panama. Positive anomalies between 50 mm and 200 mm were observed in southwestern Honduras and northern and southern Panama. In the Caribbean, rainfall values ranged from 10 mm to 50 mm in southern Cuba, the Dominican Republic, southern Jamaica, and the central islands in the Lesser Antilles. Near-average conditions were observed in most areas.

## Week-1 and week-2 forecasts

- Week 1: There is an increased chance (probability > 70%) for weekly rainfall to exceed 25 mm in southern Guatemala, western Honduras, eastern El Salvador, northwestern Nicaragua, western Costa Rica, and Panama. In the Caribbean, there is also an increased chance for rainfall to exceed 25 mm in southern Cuba, southern Las Bahamas, Jamaica, Hispaniola, and in some islands in the northern Lesser Antilles.
- Week 2: There is a slightly increased chance (probability > 70%) for weekly rainfall to exceed 25 mm across Costa Rica and Panamá, as well as over Hispaniola.



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