SEASONAL OUTLOOK CENTRAL AMERICA & CARIBBEAN

July to September 2025

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OVERVIEW

Highlights of the April-June Seasons (AMJ) Review

- Rainfall has been relatively similar to, or slightly below the seasonal average for the last few months for most of the region.
- There have already been two powerful hurricanes so far this year, which is relatively early in the season, one in the Atlantic Basin and one in the Pacific Basin (making landfall in Mexico) which has caused significant flooding and infrastructure damages.
- Above-average temperatures were recorded across most of the region, with some heatwaves in Mexico, Belize and Puerto Rico.

Summary of the July-September (JAS) Outlook

- We are expecting an above average hurricane season in the Atlantic, whilst an average hurricane season is likely in the Pacific.
- Rainfall forecasted to be average, with some small pockets of slightly above average rainfall in Panama, Colombia and Venezuela.
- Floods are likely in areas with above-average rainfall and within hurricane tracks.
- Above average temperatures are forecasted for across the region, with the highest risk of heatwaves across the Caribbean. This together with poor air quality caused by Saharan Dust outbreaks may worsen cardiovascular and respiratory episodes.

REVIEW FOR APRIL TO JUNE

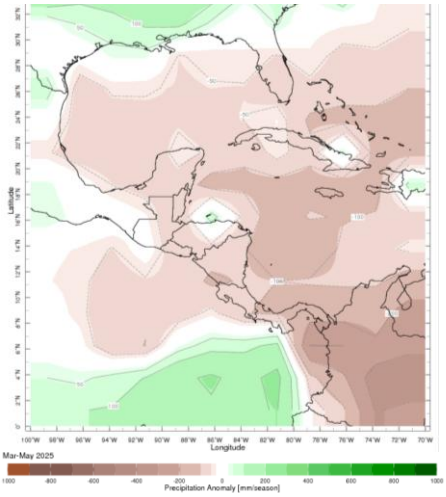
Rainfall: Over recent months, rainfall has been similar to average levels for the season, with the Caribbean and northern South America seeing slightly below average (figure 1). However, recent weeks have seen heavy rain along Central American coast [FEWSNET].

Floods: In Colombia, strong rainfall caused infrastructure damage and left 50,000 without access to services, with severe flooding and landslides affecting >80,000 people. In Northeast Haiti, there were significant floods in May, affecting >3,000 families, on a backdrop of worsening violence and food insecurity [RW].

Temperature: Above-average temperatures were experienced across the Caribbean, with record-high temperatures reported in Belize and Puerto Rico. Central America experienced above average temperatures (+1 to +3C) with higher temperatures (+3 to +5C) in southern Guatemala and eastern Honduras. The first heat wave of 2025 arrived last week in western Mexico, primarily affecting the Pacific coast states of Jalisco, Michoacán, Guerrero, Oaxaca and Chiapas.

Hurricanes: We are now already >1 month into the Atlantic and East Pacific Hurricane Season, with the first named storm (Alvin) forming earlier than usual [OCHA], and one major hurricane forming in each basin. There have been 4 tropical storms and one category 4 Hurricane (Erick), which made landfall in Oaxaca on the 19th June, causing at least 2 fatalities and leaving >123,000 people in need of assistance.

Figure 1 - Seasonal precipitation anomaly from March-May 2025, showing where rainfall was above average (green) and below average (brown) compared to the 1991-2020 average [IRI]



Droughts & Wildfires: From March to May, Mexico experienced above-normal temperatures and below-average rainfall in March and April. The increased precipitation in May helped to slightly reduce drought in parts of Coahuila, Nuevo León, and Tamaulipas. However, drought persisted in northwestern Mexico due to strong upper-level pressure, with exceptional drought expanding in Sonora and Chihuahua. The Caribbean has remained in good condition expect for northwestern Belize which activated the drought watch in May. May saw the year's peak wildfire activity in Mexico, with 5,764 wildfires reported as of May 29, affecting 697,002 hectares—95% in grass and brush and 5% in timber. Between March-June, Venezuela was the country most affected by wildfires in Southern America. Colombia saw below average wildfires (Global Forest Watch).

Climate sensitive infectious diseases: There has been an increase in yellow fever cases in Colombia over 2025 with over 100 cases and >37 deaths [WHO]. Other arbovirus cases have been high in the region, with reports of zika, chikungunya, oropouche and especially dengue cases rising significantly [PAHO]. Malaria transmission has been reported in some areas, with rising cases in recent years for example in mining areas of Venezuela [Fletcher et al]. In Haiti, the Malaria risk increases with the rainy season, and Cholera is resurging, with >2000 suspected cases and 28 deaths reported so far in 2025 as of May [OCHA].

Food insecurity: More than half of Haiti's population—approximately 5.7M people—are facing high levels of acute food insecurity, driven by relentless gang violence and ongoing economic collapse [IPC]. There is also ongoing needs in Honduras and Guatemala.

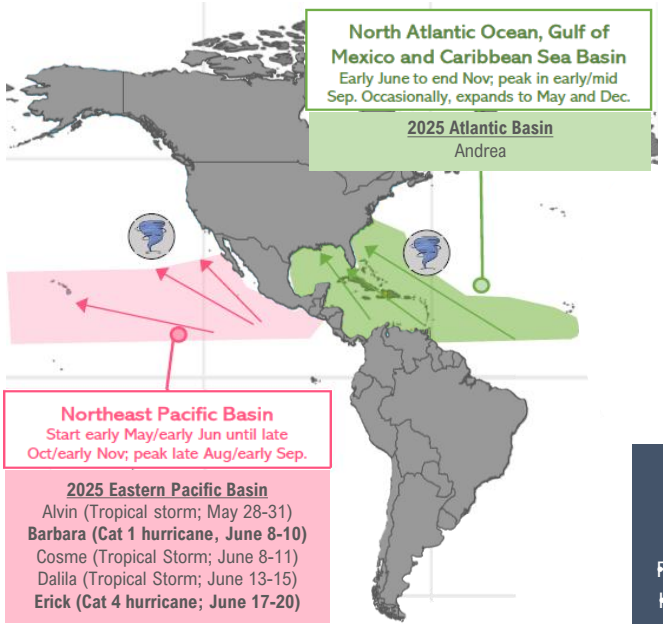
Volcano: On 9 March 2025, the Fuego Volcano in Guatemala began erupting, prompting the evacuation of over 300 people.

2025 HURRICANE SEASON OUTLOOK

East Pacific Basin Outlook

Near-normal season. 12-18 named storms forecasted (seasonal average: 15), including 5-10 hurricanes (average: 8), of which 2-5 major hurricanes (average: 4).

Latest update (as per June 25th): Eastern Pacific hurricane season began May 15, 2025. The first storm, Alvin, formed May 28–31. By mid-June, the basin recorded five named storms—an unprecedented early pace, according to **NOAA**. Hurricane Erick, the second hurricane, arrived earlier than usual and became the **first major hurricane (Cat 3+) on record to strike Mexico before July**.



Atlantic Basin Outlook

Above-normal season. 13-19 named storms forecasted (seasonal average: 14), including 6-10 hurricanes (average: 7), of which 3-5 major hurricanes (average: 3).

Latest update (as per June 25th) Tropical Storm Andrea formed on June 24 close to the average first storm date.

Tools & Resources

Hurricane Tracker (Windy | NOAA)
Rainfall / Wind / Wave Forecast (Windy)
Flood Prone Areas (GeoHazards Fathom 2)
Heath impacts & Preparedness (Spotlight)

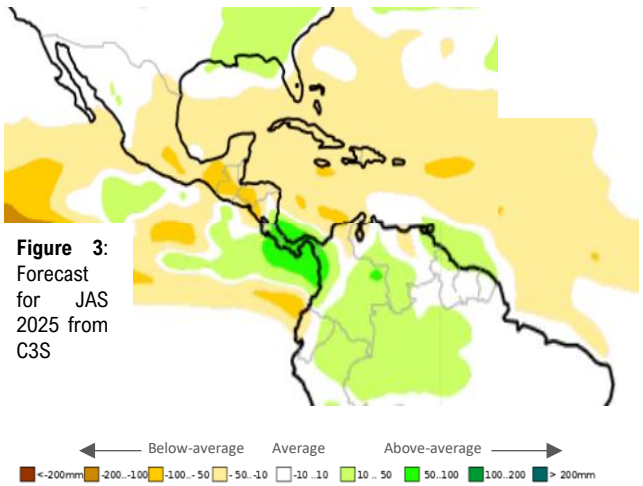


Figure 3: Forecast for JAS 2025 from C3S

RAINFALL / TEMPERATURE OUTLOOK

Rainfall

Near-average conditions across the region with some exceptions:

- Slightly (-10 to -50mm) below-average rainfall over the Caribbean (medium probability; 50-60%) and dry corridor (low probability;<50%).
- Slightly above-average rain (+10 to +50mm) forecasted for the Northwest coast of Mexico and parts of northern South America (Colombia, Venezuela and Panama) (low probability; <50%) and slightly more (+50 to +100mm) near the Isthmus of Panama (medium probability; 50-60%).

Temperatures

- Above-average temperatures of at least 0.3-0.5°C with some parts in Northern Mexico and Yucatan, and the Caribbean experiencing 0.5-1°C (extremely high probability; >70%).

2025 SAHARAN DUST

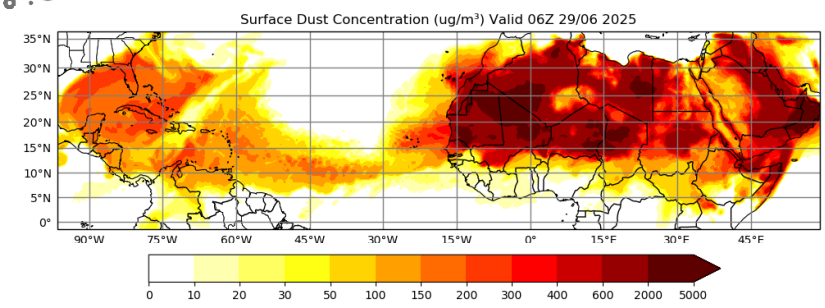


Figure 4: Map showing Saharan Dust exposure in the Region

Latest update (as per June 25th): The first major dust wave of the season reached the Caribbean on June 3 and moved toward the U.S. with high concentrations.

Recommendation: Monitor Caribbean Institute for Meteorology & Hydrology forecasts

The dust originates from a 2 to 2.5-mile-thick layer of dry, dusty air—called the Saharan Air Layer—which forms over the Sahara Desert and moves west across the Atlantic from late spring through early fall.

- **Peak Season**: Mid-June to mid-August
- **Frequency**: Every 3 to 5 days during peak
- **Impacts**: These dust outbreaks reduce air quality, cause hazy skies, and can trigger respiratory and cardiovascular issues. The SAL also suppresses tropical storm development by bringing hot, dry, and windy conditions.

The Humanitarian Action for Climate and Environment is an MSF-Canada choice initiative established in 2020 **to support Climate Change Adaptation within the movement.**

EXPECTED IMPACTS FOR JULY TO SEPTEMBER

Hurricanes: The area may be affected by Pacific (near-normal) or Atlantic (above-normal) hurricanes, bringing strong winds, storm surges, heavy rain, tornadoes, floods, and landslides. *Recommendations: (1) Monitor hurricane tracks (Windy | NOAA); (2) Rainfall / Wind / Wave Forecast (Windy) and (3) prepare for short-term (0–7 days: waterborne diseases, WASH issues, trauma), medium-term (1–4 weeks: atypical and rodent-borne infections), and long-term (>4 weeks: vector-borne diseases) impacts. Expect gender-based violence, contamination, mental health issues, and reduced healthcare access throughout. Also monitor for heatwaves, which may worsen health risks and violence.*

Extreme heat: The hot season has ended in northern South America (Colombia, Venezuela, and Panama), which typically peaks around October. Meanwhile, Central America and the Caribbean are currently in their hot season (May to October), with dry heat peaking between June and August (or 'Canicula'), followed by increasing humid heat as the rainy season strengthens. Heat intensity varies across the Caribbean, requiring continuous monitoring. Above-average temperatures are forecasted across the region, especially in Central America and the Caribbean, where the risk of extreme heat spells is gradually rising, and this also increases the risk of wildfires. To the heat risk we need to add the impacts of the Sharan Dust, which can worsen heat-related outcomes. *Recommendations: Review E-PREPS for heat, ensure supply cold-chain. Check weekly and monthly forecasts from C3S weekly Windy extreme heat forecasts. If working on a healthcare facility, consider doing the WHO heat vulnerability assessment. Monitor vulnerable groups (refer to list here).*

Floods: With the rainy season upcoming, flooding risk increases, especially in areas where there is above average rainfall predicted such as Colombia and Venezuela. However, most of the region is forecasted to have average or slightly below average rainfall. Flooding related to hurricanes is more likely this season, on both coasts but could be particularly higher in the Atlantic coast if the above-average hurricane season forecasted happens. *Recommendations: Review E-PREPs and consider WASH. Seasonal rainfall forecasts only show changes above or below average over long time periods, so check weekly and monthly forecasts from C3S and ICPAC. Refer to Google Flood Hub.*

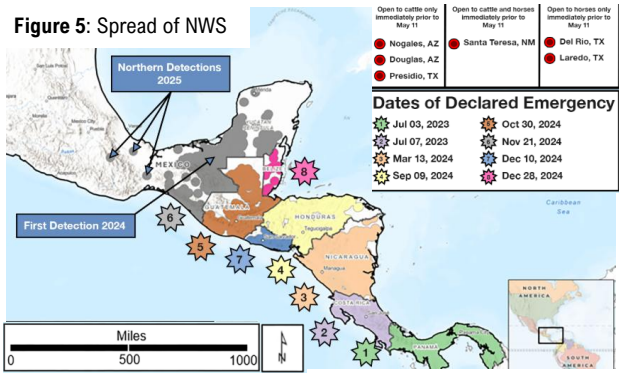
Air Pollution: Saharan dust (see previous page) is expected to reach the region on several occasions throughout the season, causing hazy skies and dry conditions which could lead to exacerbations of respiratory (e.g., allergic rhinitis and asthma) and cardiovascular conditions. *Recommendations: Check IQair to monitor air quality and Windy for forecasts (3 days) for PM2.5 (unhealthy threshold: >15) and NO2 (>25). More information in our Spotlight.*

Wildfires: Each dry season, roughly December to May, open areas such as agricultural lands, roadsides and forests are ravaged by bush and forest fires. The region is entering the wet season, marking the end of the wildfire season (Jan-June). However, the hotter-than usual temperatures and drought conditions in parts of Northen Mexico reported in June may prolong wildfire risk to July/August, especially in the northern Baja California Peninsula. A slower decrease in wildfire potential has also been forecasted for the Antilles, Belize and coastal Suriname. *Recommendations: Check IQair or Windy for forecasts up to 2 weeks in advance on Forest Fires.*

Climate-sensitive infectious diseases: Where flood and hurricanes strike, the risk of waterborne gastrointestinal diseases, tetanus, rodent-borne infections (like leptospirosis) and skin infections increases, due to contact with stagnant contaminated water [HACE]. In the aftermath, stagnant water can also favour breeding of mosquitos associated with malaria, dengue, chikungunya and zika. Recent evidence suggests there may also be under-recognized cases of melioidosis, a deadly bacterial infection related to heavy rainfall in the region too [Limmathurotsakul et al.] The above average temperatures forecasted, can favour mosquito development, and is also considered to increase the risk of acute Chagas disease in some settings [Cortés et al and Millan et al]. Allergic rhinitis and asthma cases may increase with Saharan Dust, soot and smoke from bushfires until the wet season rains moisten the soil. *Recommendations: monitor PAHO Dengue Surveillance Dashboard and WHO for outbreak alerts. Review mosquito prevention activities [CARPHA].*

Pests: In 2023, cases of **New World Screwworm (NWS)**, a flesh-eating fly that causes myiasis in animals and occasionally humans, rose to record-breaking numbers (from 25/year to 6,500/year) in Darién, Panama, marking the first major outbreak north of the biological barrier that had contained the pest to South America for decades. Since then, the screwworm has spread to Costa Rica, Nicaragua, Honduras, Guatemala, Belize, El Salvador, and Mexico. Thousands of livestock have already been infected in 2025. Typically found year-round in tropical and subtropical areas. As temperatures rise, NWS can spread into areas where they do not typically survive the winter, such as northern Mexico and the southern/central United States. Though rare, human infections are rising—this year alone: Costa Rica (42), Nicaragua (30), Honduras (40), Guatemala (1), and Mexico (8), with 2 confirmed deaths.

Figure 5: Spread of NWS



Those most at risk include livestock workers and individuals with open wounds or who sleep outdoors. There is no treatment; prevention and larvae removal are essential. **Locust swarms** also pose a serious threat to crops like corn, beans, sugar cane, and cocoa. The locust presents two broods per year with adults being active in August-September and December-May. Drought conditions followed by rains, favour their development. *Recommendations: Monitor the COPEG website for NWS and for locusts.*

Nutrition: Acute food insecurity in the Latin American and the Caribbean is expected to worsen over June-September due to the escalation of gang violence in Haiti (current situation: Phase 3-Crisis and 4-Emergency), weather shocks in Guatemala (Phase 2- Stressed and Phase 3-Crisis), El Salvador, and Honduras (Phase 2- Stressed and Phase 3-Crisis), and the persistent economic crisis in Venezuela. While the Primera harvest is expected to alleviate food insecurity in August and September, the degree of improvement among subsistence farmers will be limited by crop yield losses [FEWSNET]. *Recommendations: monitor IPC and GFAS updates.*