HurricaneZone

Tracking Tropical Cyclones Around the World™

Hurricane MELISSA

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Hurricane Melissa Advisory Number  31
NWS National Hurricane Center Miami FL       AL132025
1100 PM EDT Tue Oct 28 2025

...MELISSA RE-STRENGTHENING AS IT APPROACHES EASTERN CUB
...EXPECTED TO MAKE LANDFALL THERE AS AN EXTREMELY DANGE
MAJOR HURRICANE IN THE NEXT FEW HOURS...

SUMMARY OF 1100 PM EDT...0300 UTC...INFORMATION
-----------------------------------------------
LOCATION...19.3N 76.6W
ABOUT 110 MI...175 KM SW OF GUANTANAMO CUBA
ABOUT 300 MI...485 KM S OF THE CENTRAL BAHAMAS
MAXIMUM SUSTAINED WINDS...130 MPH...215 KM/H
PRESENT MOVEMENT...NE OR 40 DEGREES AT 9 MPH...15 KM/H
MINIMUM CENTRAL PRESSURE...950 MB...28.06 INCHES
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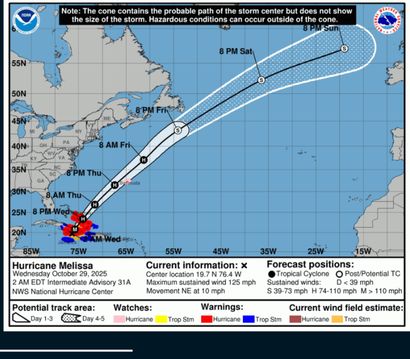

Tropical Storm SONIA

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Tropical Storm Sonia Advisory Number  18
NWS National Hurricane Center Miami FL       EP182025
800 PM PDT Tue Oct 28 2025

...SONIA REMAINS A TROPICAL STORM, EXPECTED TO WEAKEN IN
LOW LATER TONIGHT...

SUMMARY OF 800 PM PDT...0300 UTC...INFORMATION
-----------------------------------------------
LOCATION...15.4N 125.3W
ABOUT 1130 MI...1815 KM WSW OF THE SOUTHERN TIP OF BAJA
MAXIMUM SUSTAINED WINDS...40 MPH...65 KM/H
PRESENT MOVEMENT...W OR 270 DEGREES AT 12 MPH...19 KM/H
MINIMUM CENTRAL PRESSURE...1005 MB...29.68 INCHES
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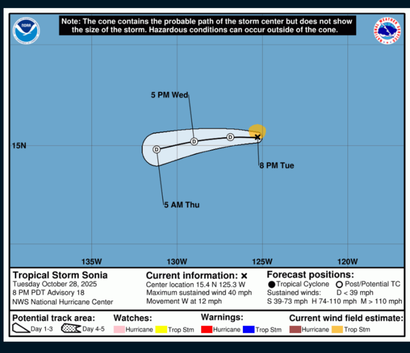

Tropical Cyclone MONTHA

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1. TROPICAL CYCLONE 03B (MONTHA) WARNING NR 011
   01 ACTIVE TROPICAL CYCLONE IN NORTHIO
   MAX SUSTAINED WINDS BASED ON ONE-MINUTE AVERAGE
   WIND RADII VALID OVER OPEN WATER ONLY
   ---
   WARNING POSITION:
   290000Z --- NEAR 16.9N 81.4E
     MOVEMENT PAST SIX HOURS - 005 DEGREES AT 09 KTS
     POSITION ACCURATE TO WITHIN 060 NM
     POSITION BASED ON CENTER LOCATED BY SATELLITE
   PRESENT WIND DISTRIBUTION:
   MAX SUSTAINED WINDS - 035 KT, GUSTS 045 KT
   WIND RADII VALID OVER OPEN WATER ONLY
   DISSIPATING AS A SIGNIFICANT TROPICAL CYCLONE OVER LA
   RADIUS OF 034 KT WINDS - 090 NM NORTHEAST QUADRANT
                           120 NM SOUTHEAST QUADRANT
                           120 NM SOUTHWEST QUADRANT
                           060 NM NORTHWEST QUADRANT
   REPEAT POSIT: 16.9N 81.4E
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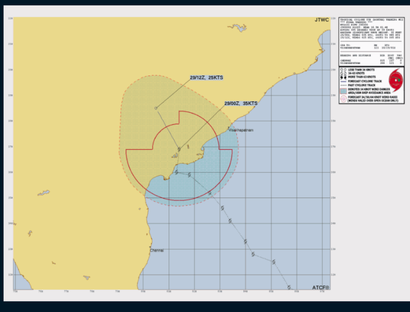

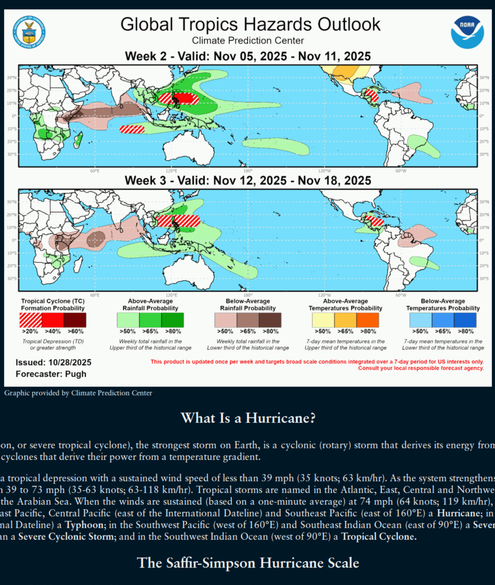

Graphic provided by Climate Prediction Center

What Is a Hurricane?

A hurricane (or typhoon, or severe tropical cyclone), the strongest storm on Earth, is a cyclonic (rotary) storm that derives its energy from cloud formation and rainfall, unlike frontal cyclones that derive their power from a temperature gradient.

A hurricane begins as a tropical depression with a sustained wind speed of less than 39 mph (35 knots; 63 km/hr). As the system strengthens, it becomes a tropical storm with winds from 39 to 73 mph (35-63 knots; 63-118 km/hr). Tropical storms are named in the Atlantic, East, Central and Northwest Pacific, in the South Indian Ocean, and in the Arabian Sea. When the winds are sustained (based on a one-minute average) at 74 mph (64 knots; 119 km/hr), the storm becomes: in the Atlantic Ocean, East Pacific, Central Pacific (east of the International Dateline) and Southeast Pacific (east of 160°E) a **Hurricane**; in the Northwest Pacific (west of the International Dateline) a **Typhoon**; in the Southwest Pacific (west of 160°E) and Southeast Indian Ocean (east of 90°E) a **Severe Tropical Cyclone**; in the North Indian Ocean a **Severe Cyclonic Storm**; and in the Southwest Indian Ocean (west of 90°E) a **Tropical Cyclone.**

The Saffir-Simpson Hurricane Scale

Category 1 – 64-82 knots (74-95 mph; 119-153 km/h). Damage is limited to foliage, signage, unanchored boats and mobile homes. There is no significant damage to buildings. The main threat to life and property may be flooding from heavy rains.

Category 2 – 83-95 knots (96-110 mph; 154-177 km/h). Roof damage to buildings. Doors and windows damaged. Mobile homes severely damaged. Piers damaged by storm surge. Some trees blown down, more extensive limb damage.

Category 3 – 96-112 knots (111-129 mph; 178-208 km/h). Major Hurricane. Structural damage to some buildings. Mobile homes are completely destroyed. Roof damage is common. Storm surge begins to cause significant damage in beaches and harbors, with small buildings destroyed.

Category 4 – 113-136 knots (130-156 mph; 209-251 km/h). Structural failure of some buildings. Complete roof failures on many buildings. Extreme storm surge damage and flooding. Severe coastal erosion, with permanent changes to the coastal landscape not unheard of. Hurricane force winds extend well inland.

Category 5 – 137+ knots (157+ mph; 252+ km/h). Complete roof failure on most buildings. Many buildings destroyed, or structurally damaged beyond repair. Catastrophic storm surge damage. In the Northwest Pacific, a typhoon that reaches 150 mph (241 km/hr) is called a Super Typhoon.

SAFFIR-SIMPSON SCALE

Category	Knots	MPH	KM/H	Damage
1	64-82	74-95	119-153	Minimal
2	83-95	96-110	154-177	Moderate
3	96-112	111-129	178-208	Extensive
4	113-136	130-156	209-251	Extreme
Super Typhoon	130+	150+	241+	Catastrophic
5	137+	157+	252+	Catastrophic

Storm Surge

Historically, storm surge is the primary killer in hurricanes. The exact storm surge in any given area will be determined by how quickly the water depth increases offshore. In deep-water environments, such as the Hawaiian islands, storm surge will be enhanced by the rapidly decreasing ocean depth as the wind-driven surge approaches the coast. The peak storm surge is on the right-front quadrant (left-front in the Southern Hemisphere) of the eyewall at landfall, where on-shore winds are the strongest, and at the leading edge of the eyewall. Contrary to a popular myth, the storm surge is entirely wind-driven water—it is not caused by the low pressure of the eye. Another factor in the severity of the storm surge is tide. Obviously, an 18-foot storm surge at high tide is that much worse than an 18-foot surge at low tide.

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