

NASA sees tropical cyclones march across Atlantic: Ernesto, Florence, TD7, System 92L

August 10 2012



NOAA's GOES-13 satellite captured an image of four tropical systems marching across the Atlantic Ocean basin on Aug. 10, 2012. From left to right (west to east) is Ernesto over Mexico, the remnants of Florence north of Puerto Rico, Tropical Depression 7 west of the Windward Islands, and System 93L near the Cape Verde Islands and Africa. Credit: NASA GOES Project

Four tropical systems are marching across the Atlantic Ocean basin on August 10, 2012. NASA's GOES Project, located at NASA Goddard Space Flight Center in Greenbelt, Md. has been busy creating images and animations of the four tropical cyclones, Ernesto, the remnants of Florence, Tropical Depression 7, and System 93L.

NASA's GOES Project uses data from NOAA's Geostationary Operational Environmental Satellites (GOES), and the GOES-13 satellite

covers the Atlantic Ocean basin and the eastern U.S. from a fixed orbit. GOES-13 provides continuous data that NASA makes into images and animations. An image captured on August 10, 2012 at 1145 UTC (7:45 a.m. EDT) shows the four [tropical cyclones](#) marching across the Atlantic Ocean basin.

Tropical Depression Ernesto Dropping Heavy Rainfall Over Mexico's Mountains

At 10 a.m. EDT on August 10, the National Hurricane Center noted that Ernesto's center was near 18.0 North and 99.2 West. That places Ernesto's center about 215 miles (345 km) west-southwest of Veracruz, Mexico. Ernesto is now a remnant low pressure area and continues to weaken over the mountains of Mexico as it moves toward the eastern Pacific Ocean. As Ernesto continues on its westward track at 15 mph (24 kmh), it is generating heavy rainfall. Ernesto's [maximum sustained winds](#) were near 35 mph (55 kmh) and weakening.

The GOES-13 satellite image reveals the clouds associated with Ernesto over south-central Mexico, and just to the west of Ernesto lies another low pressure area off the coast in the Eastern Pacific Ocean.

The National Hurricane Center expects heavy rainfall over the next day or two over the Mexican states of Tabasco, Veracruz, Puebla, Oaxaca and Guerrero, which could cause life threatening flash floods and mudslides. Ernesto's remnant circulation could regenerate in the Eastern Pacific Ocean after the weekend.

Ernesto's remnants are expected to move into the Eastern Pacific and possibly become a tropical cyclone again. If that happened it will acquire a new depression number or a new name if it becomes a tropical storm.

The Remnants of Florence Linger Near Puerto Rico

The remnants of Tropical Storm Florence is located several hundred miles north of Puerto Rico, near 23 North latitude and 67 West longitude. The remnants are generating showers and thunderstorms. Those showers and thunderstorms appear as a small, disorganized area of clouds on the GOES-13 satellite image.

The NHC gives this a near zero chance of redevelopment as it moves to the northwest. Radar in Puerto Rico during the morning of August 10 detected a line of showers associated with the remnants of tropical storm Florence just east of Puerto Rico and the U.S. Virgin Islands.

Tropical Depression 7 Trying to Slowly Organize

[Tropical Depression](#) 7 is struggling to organize on August 10, but conditions may improve over the weekend of August 11-12.

Satellite data on August 10 shows a well-defined circulation with a small band of thunderstorms and convection (rising air that forms the thunderstorms that make up a tropical cyclone) to the northeast of the center, but the circulation of the depression is not apparent on the GOES-13 imagery.

Currently dry air surrounding the storm seems to be inhibiting further development. Further development may also be prevented because of increasing southerly to southwesterly shear over the next couple of days.

At 5 a.m. EDT Tropical Depression 7's (TD7) maximum sustained winds were near 35 mph (55 kmh). The center of TD7 was located near latitude 13.6 north and longitude 49.5 west, about 775 miles (1,245 km) east of the Windward Islands. TD7 is moving toward the west near 23

mph (37 kmh).

The National Hurricane Center expects TD7 to intensify and organize into a tropical storm while moving into an area of light wind shear and warm sea surface temperatures. It is then forecast to move across the Windward Islands over the weekend on its way into the Caribbean Sea. The National Hurricane Center noted "Interests in the windward and leeward islands should monitor the progress of the depression since [tropical storm](#) watches or warnings could be required at any time."

System 93L Organizing in Far Eastern Atlantic

The fourth area for possible development in the Atlantic is a tropical wave and associated low pressure area, called "System 93L" that has just moved off the African coast into the eastern Atlantic. It's located between the Cape Verde Islands and Africa and is generating a small area of showers and thunderstorms and appears as a rounded area on the GOES-13 satellite imagery.

It is moving to the west-northwest near 20 mph, and may bring strong, gusty winds to the Cape Verde Islands over the next day or two. Because environmental conditions are favorable for development: low wind shear and warm waters over 80 Fahrenheit (26.6 Celsius), the National Hurricane Center gives System 93L a 50 percent chance of organizing into a tropical depression over the weekend of August 11-12, 2012.

Over the weekend of August 11 and 12, forecasters will have a lot to keep track of with the fading Ernesto and Florence and the developing Tropical Depression 7 and System 93L.

Provided by NASA's Goddard Space Flight Center

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