NASA's IMERG measures Hurricane Earl's deadly rainfall in Mexico

9 August 2016

The analysis of rainfall from Aug. 2 through Aug. 8, 2016, showed the period from when Earl became a tropical storm until Earl's remnants interacted with an area of disturbed weather along the Pacific coast. Some areas in extreme southern Mexico received up to 43.3 inches (1,100 mm) of rain. Earl's locations and intensities, as defined by the National Hurricane Center (NHC), are shown overlaid in white. Credit: NASA/JAXA/Hal Pierce

Hurricane Earl began as a tropical wave that was tracked by the National Hurricane Center (NHC) from the African coast to the Caribbean Sea. The tropical wave drenched the Dominican Republic, where it was blamed for the deaths of six people. Southwest of Jamaica on Aug. 2, 2016, the tropical wave developed a closed circulation, and Earl was upgraded to a tropical storm.

On Aug. 3, Earl became a hurricane when it was located about 150 miles east of Belize. On Aug. 4 Earl made landfall just southwest of Belize City, Belize, at about 2 a.m. EDT (6 a.m. UTC). At landfall Earl had winds of about 81 mph (70 knots). Earl weakened to tropical depression intensity over the Yucatan but regained tropical storm wind speeds of about 58 mph (50 knots) when it emerged over the Bay of Campeche. On Aug. 6, Earl hit Mexico again just south of Veracruz. Earl was then disrupted by Mexico's rough terrain and dissipated.

Data from NASA's Integrated Multi-satellite Retrievals for GPM (IMERG) were used to estimate the amount of rain that fell from Aug. 2 through Aug. 8. GPM is the Global Precipitation Measurement mission, a joint mission of NASA and the Japan Aerospace Exploration Agency.

The analysis, created at NASA's Goddard Space Flight Center in Greenbelt, Maryland, showed rainfall over the period from when Earl became a tropical storm until Earl's remnants interacted with an area of disturbed weather along the Pacific coast. Some areas in extreme southern Mexico received up to 43.3 inches (1,100 mm) of rain.

The IMERG analysis showed the extreme amount of rain that was dropped by Earl over Belize, Guatemala, eastern Mexico and Mexico's Pacific coast.

According to the official Twitter account of Luis Puente, Mexico's national civil protection coordinator, at least 40 people were reported killed by landslides in the Mexican states of Puebla and Veracruz.

The remnants of Earl interacted with an area of disturbed weather along the Pacific coast of Mexico and aided in the formation of a tropical depression that became Tropical Storm Javier on Aug. 7.

Provided by NASA's Goddard Space Flight Center