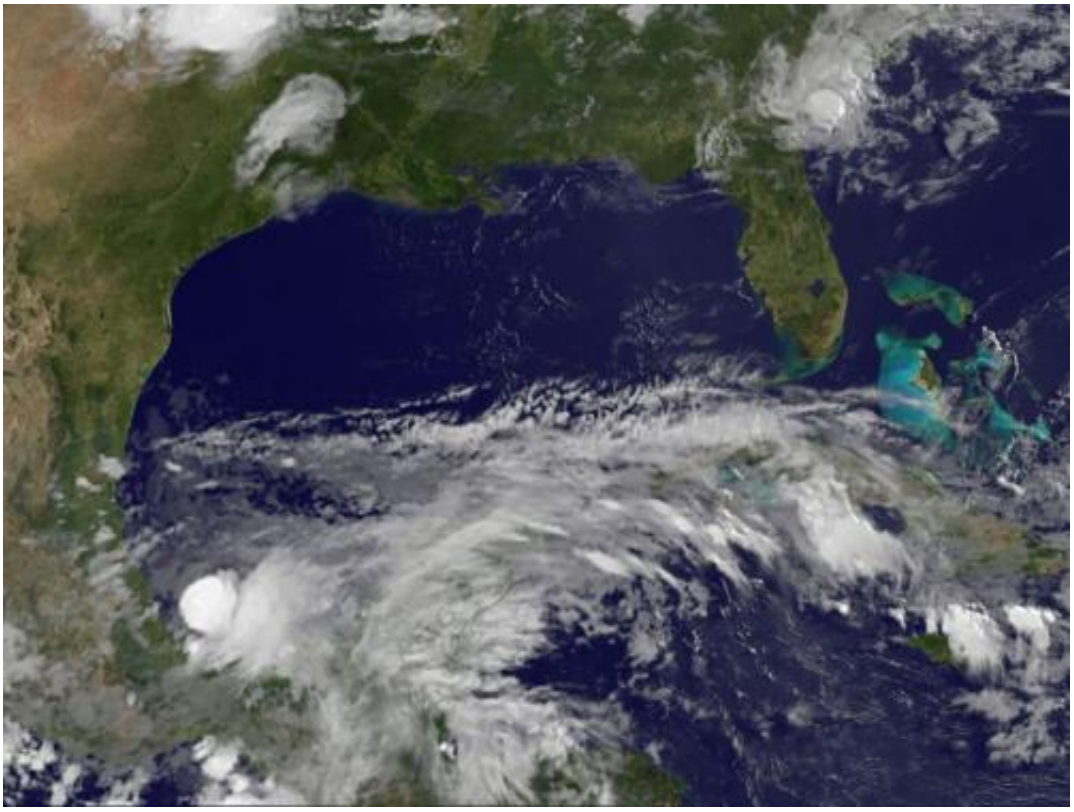
NASA and NOAA satellites eyeing Mexico's tropical soaker for development

June 6 2014



This visible image from NOAA's GOES-East satellite shows developing System 90L in the Bay of Campeche (bottom left) on June 6 at 7:30 a.m. EDT. The center is near the rounded area of clouds. Credit: NASA/NOAA GOES Project

NASA and NOAA satellites are gathering visible, infrared, microwave and radar data on a persistent tropical low pressure area in the southwestern Bay of Campeche. System 90L now has a 50 percent

chance for development, according to the National Hurricane Center and continues to drop large amounts of rainfall over southeastern Mexico.

The Atmospheric Infrared Sounder (AIRS) instrument aboard NASA's Aqua satellite gathered infrared data on the developing low on June 5 at 18:59 UTC (2:59 p.m. EDT).

Basically, AIRS looks at the infrared region of the spectrum. In a spectrum, infrared light has a wavelength just greater than that of the red end of the visible light spectrum but less than that of microwaves. Looking at infrared light, instruments are able to detect temperature and AIRS gathered temperature information about the heights of the tops of the thunderstorms that make up System 90L (a tropical cyclone or developing low pressure area can consist of hundreds of thunderstorms).

AIRS data revealed that the tropical low had cloud-top temperatures near -63F (-52C). Cloud top temperatures that cold indicate thunderstorms strong enough with the potential to drop heavy rainfall, and the National Hurricane Center warned about flash flooding and mudslides in the Yucatan peninsula and southeastern Mexico.

The low has been hanging around the Bay of Campeche since June 2. When it developed it was an elongated and broad area of low pressure with a near zero chance of development. Today, June 6, that's changed.

At 1200 UTC (8 a.m. EDT) on June 6, System 90L was sitting in the Bay of Campeche, but has moved west of its position from earlier in the week. System 90L was located near 19.3 north latitude and 94.5 west longitude.

The National Hurricane Center (NHC) noted that shower and thunderstorm activity associated with System 90L has changed little in organization overnight from June 5 to June 6. NHC uses visible and

infrared imagery from the two GOES satellites to monitor the changes in System 90L in addition to data from several NASA satellites.

NOAA's GOES-East satellite sits in a fixed orbit in space and captures visible and infrared imagery of all weather over the eastern U.S. and Atlantic Ocean. A visible image from GOES-East on June 6 at 7:30 a.m. EDT, showed developing System 90L's center is near the rounded area of clouds. The image was made by NASA/NOAA's GOES Project at NASA's Goddard Space Flight Center in Greenbelt, Md. System 90L is sitting off the coasts of the Mexican states of Veracruz and Tabasco.

The NHC Discussion noted that regardless of tropical cyclone formation, this disturbance could produce heavy rains, along with life-threatening flash floods and mud slides, over portions of southeastern and eastern Mexico during the next few days.

The Mexican Weather Service (MWS) noted in an advisory on June 6 that System 90L has the potential to bring rain to the states of Central, South and Southeast parts of the country, as well as in the Yucatan Peninsula. The MWS forecasts between 150 to 250 mm (~6 to ~10 inches) of rainfall for the state of Veracruz; between 75 to 150 mm (~3 to ~6 inches) for the Guerrero, Oaxaca, Puebla y Chiapas, and rainfall between 50 to 75 mm (~2 to ~3 inches) for México, Michoacán, Hidalgo, Morelos, Tabasco, Distrito Federal y Tlaxcala. For updated forecasts (in Spanish) from the MWS, visit: smn.cna.gob.mx.

Provided by NASA