

NASA sees Gonzalo affect Bermuda's ocean sediment: Stirred, not shaken

October 21 2014



Comparison of NASA satellite imagery before (Oct. 4) and after (Oct. 19) Hurricane Gonzalo passed shows the sediment stirred up (green, blue). Credit: NASA Goddard MODIS Rapid Response Team

NASA's Aqua and Terra satellites captured before and after images of Bermuda and surrounding waters before and after Hurricane Gonzalo struck the island on Oct. 17. The images revealed how Gonzalo stirred up the sediment from the ocean bottom.

The MODIS instrument or Moderate Resolution Imaging Spectroradiometer that flies aboard NASA's Aqua and Terra satellites

provided imagery of Bermuda and the stirred sediment. In a comparison of imagery before and after Hurricane Gonzalo passed, the after image showed sediment streaming east and south of Bermuda. The MODIS instrument aboard NASA's Aqua satellite captured a "before" look of Bermuda on Oct. 4 at 17:20 UTC (1:20 p.m. EDT). The MODIS instrument aboard NASA's Terra satellite captured the "after" image from Oct. 19 at 15:00 UTC (11 a.m. EDT).

Whenever a hurricane moves over an area, it stirs up sediment from the ocean bottom. In more shallow areas the mixing of sediment to the surface is more visible on satellite imagery.

Around Bermuda, the ocean is shallow. There are coral reefs and banks that can be seen under the surface when waters are clear. Bermuda's [coral reefs](#) are some of the northern-most reefs in the North Atlantic. In the MODIS images a lighter blue area traces the outline of the shallow waters around the reef. The deeper water around it appears dark blue. Run off of sand dirt from the island fans out in tan and light green plumes. The extra nutrients that the run-off and bottom sediment bring to the surface may be feeding surface-dwelling ocean plants, which may also color [ocean](#) waters turquoise.

As the [sediment](#) settles around Bermuda, the United Kingdom was dealing with post-tropical cyclone Gonzalo's remnants.

Gonzalo's remnants were bringing heavy rains and gusty winds to much of the United Kingdom on Tuesday, Oct. 21. The U.K. Meteorological Service forecast wind gusts between 40 and 50 mph. In some coastal areas, winds could reach 60 to 70 mph. For updated forecasts from the U.K. Met Service, visit: <http://www.metoffice.gov.uk>.

Provided by NASA's Goddard Space Flight Center

Citation: NASA sees Gonzalo affect Bermuda's ocean sediment: Stirred, not shaken (2014, October 21) retrieved 3 May 2024 from <https://phys.org/news/2014-10-nasa-gonzalo-affect-bermuda-ocean.html>

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