



## Bahamas paradise lost after Dorian hurricane struck

Sentinel-3 SLSTR RBT acquired on 28 August 2019 at 02:18:38 UTC Sentinel-5P TROPOMI CLOUD acquired on 28 August 2019 at 18:07:57 UTC

Sentinel-1 CSAR IW acquired on 04 September 2019 at 11:09:34 UTC Sentinel-2 MSI acquired on 05 September 2019 at 15:55:29 UTC

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Keyword(s): Emergency, natural disaster, coastal, flooding, archipelago, lagoon, coral reef, water colour, erosion, sediments.

2D view

Fig. 1 - S1 (29.08.2019) - vv,vh,ndi(vh,vv) colour composite - Eye of Hurricane Dorian while it was building up.

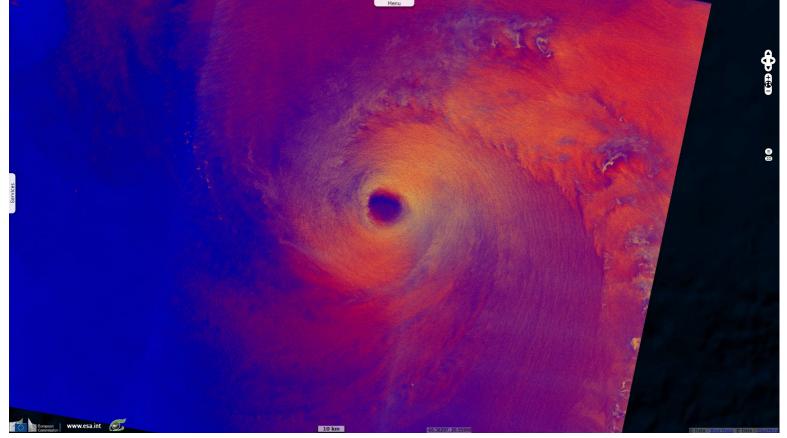


Fig. 2 - S5P TROPOMI (30.08.2019) - red: cloud fraction, green: cloud base pressure, blue: cloud top height - It had not yet a spiral shape. 2D yi

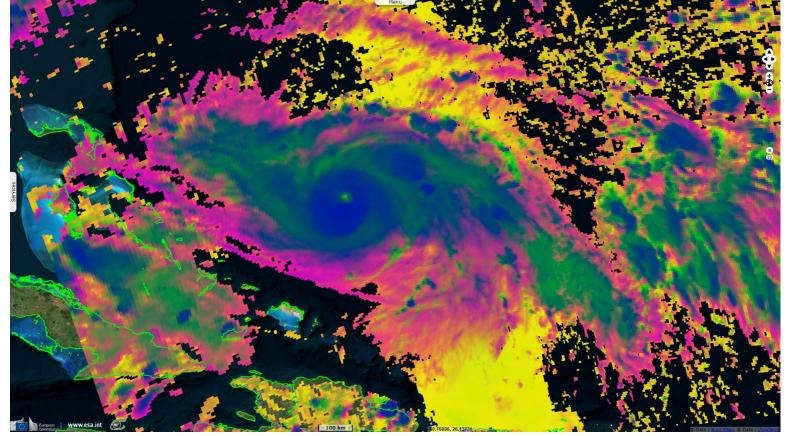
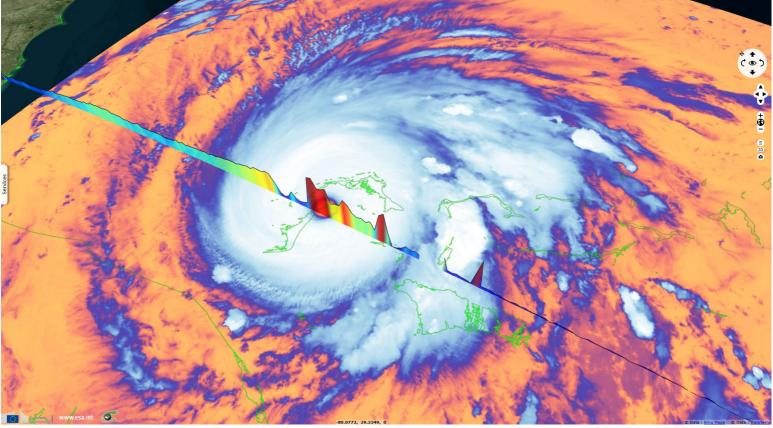
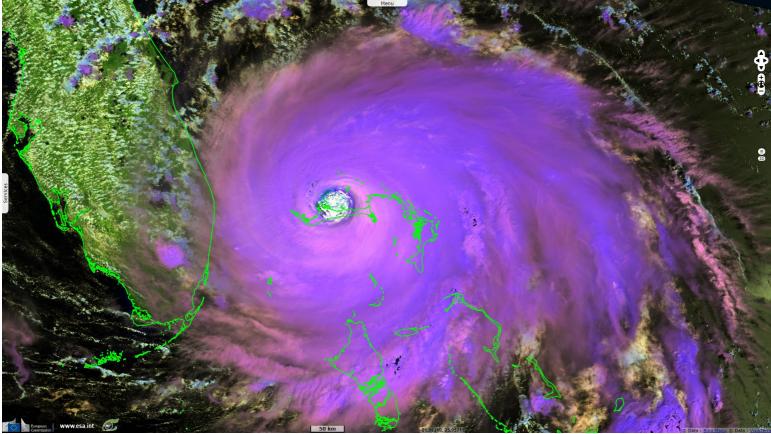


Fig. 3 - S3 SRAL + SLSTR (02.09.2019 02:53) - Corrected ocean significant waveheight Plrm Ku 1Hz + S8 thermal band with colour map. <u>3D view</u>



Dorian is tied with the 1935 Labor Day hurricane for the highest sustained winds at landfall in an Atlantic hurricane; it also reached the strongest highest sustained winds among Atlantic hurricane since Wilma in 2005.

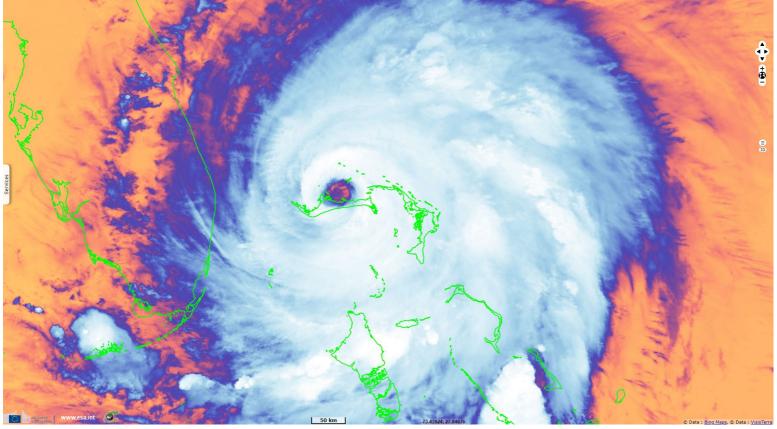
Fig. 4 - S3 SLSTR (02.09.2019 15:16) - S6,S5,S2 colour composite - The eye of Dorian widened when it made landfall. 2D view 3D animation



Tim Stelloh <u>reported</u> for NBC News: "The slow-moving Category 5 storm had [300 km/h] maximum sustained winds, gusts that topped [320 km/h] and a storm surge that reached nearly 7m. The most powerful hurricane on record to strike the Bahamas, Dorian made a direct hit on the Abaco Islands and Grand Bahama."

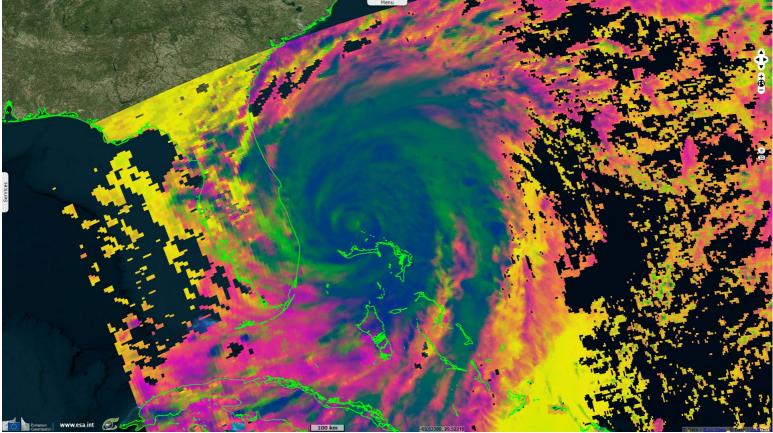
Fig. 5 - S3 SLSTR (03.09.2019 03:06) - While Dorian has been hovering over Bahalas for a day, Florida curbs its strength.

2D view 3D animation



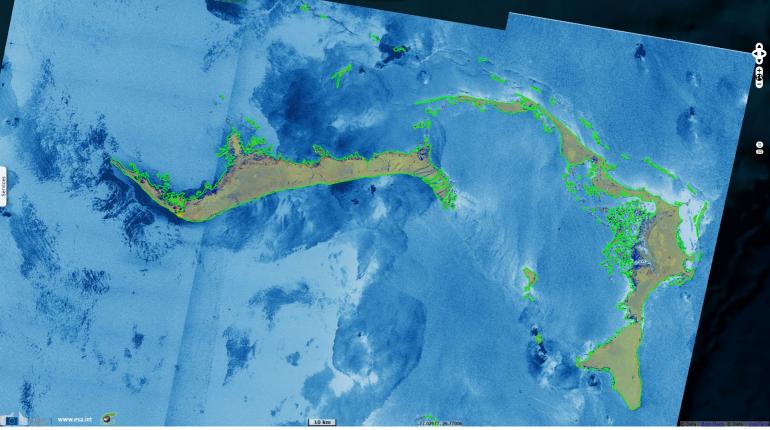
Ron Brackett <u>developed</u> the aftermath of the Hurricane Dorian in weather.com as of 09.09.2019: "A statement from the Royal Bahamas Police Force said 45 bodies have been recovered, 37 in Abaco Island and eight in Grand Bahama Island. 'The numbers are staggering just as the Minister of Health Dr. Duane Sands suggested last week. The government though continues to confirm the number to be a mere 43 confirmed victims in one of the deadliest disasters on record in the Bahamas."

Fig. 6 - S5P TROPOMI (30.08.2019 17:58) - Dorian then followed the coast of mainland Florida from afar. <u>2D view 3D animation</u>

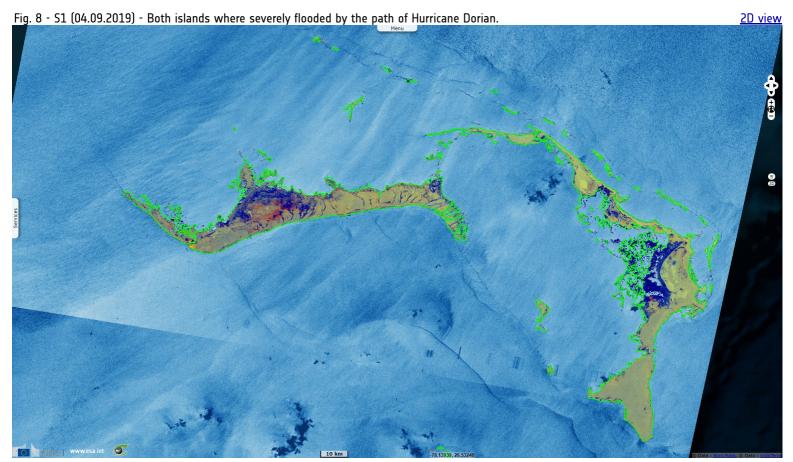


"Bahamian officials have warned that the number of deaths is likely to rise as security forces and other teams search devastated areas of the northern Bahamas. 'The public needs to prepare for unimaginable information about the death toll and the human suffering,' Sands told local radio."

Fig. 7 - S1 (29.08.2019) - RCSE with colour map on sea, vv,vh,ndi(vh,vv) colour composite on land - Abaco & Grand Bahama islands.



"On Monday, the Bahamas Press reported that observers on those two hardest hit islands say more than 3000 people could have died in the hurricane. That number is far much higher,' according to the newspaper, which is an outspoken critic of Prime Minister Hubert Minnis and his government. Reports from survivors also point to a much higher death toll."

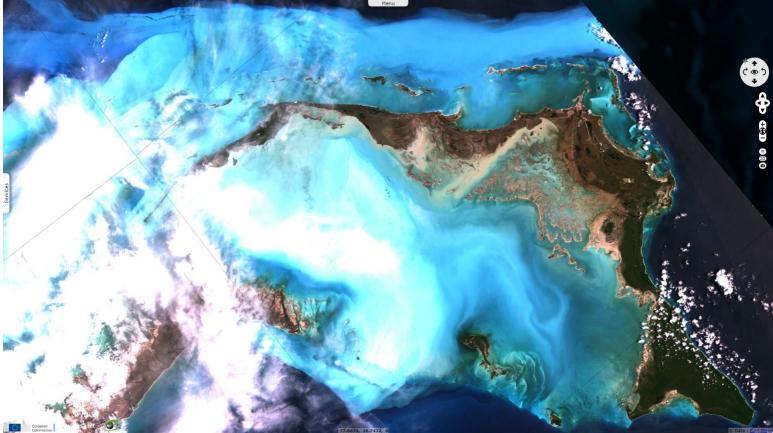


"Hundreds of other residents desperate to escape the devastation left by Dorian lined up at airports and ports hoping for a way off the hardest hit islands. On Abaco Island, some people spent days at the Treasure Cay airport waiting to get a flight. About 30 miles to the south, more than 200 people sweltered under a baking sun at the the Marsh Harbour International Airport, pleading to be taken to New Providence, which is home to the capital city of Nassau."



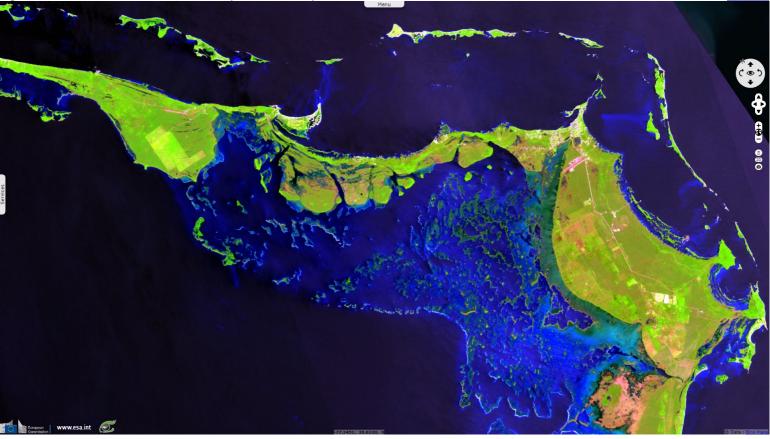
"Hundreds more, many of them Haitian immigrants, waited at the port in hopes of leaving Abaco on vessels arriving with aid, the Associated Press reported. Bahamian security forces were organizing evacuations on a landing craft. Other boats, including yachts and other private craft, were also helping to evacuate people."

Fig. 10 - S2 (05.09.2019) - The change in water colour shows the hurricane has eroded the islands, coral reefs have likely suffered as well. <u>3D view</u>



"On Grand Bahama, where Dorian stalled and scoured the island for 36 hours, scores of residents lined up at the international airport for a chance at leaving on one of the private charter flights bringing in relief supplies, the Guardian reported."

Fig. 11 - S2 (16.08.2019) - 11,8,4 colour composite - Central part of Abaco island.



"Government officials said more than 900 members of the Bahamian police and military are on Abaco and Grand Bahama islands to help with hurricane relief. The government also says 120 Jamaican security personnel arrived on Saturday evening and 100 troops from Trinidad and Tobago arrive Sunday as part of the aid effort."

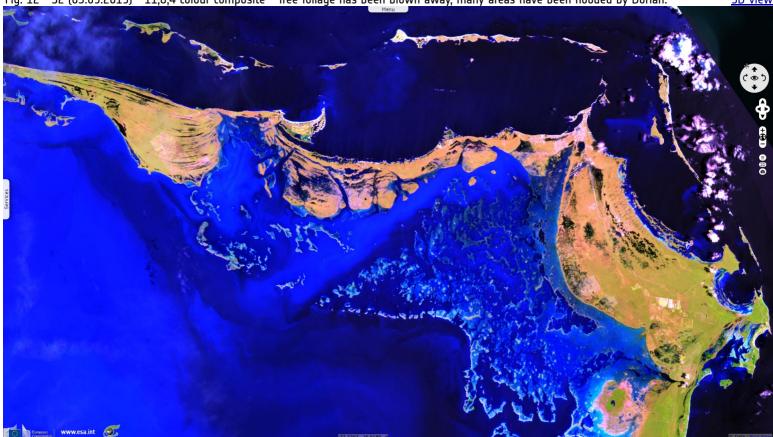


Fig. 12 - S2 (05.09.2019) - 11,8,4 colour composite - Tree foliage has been blown away, many areas have been flooded by Dorian.

"The United Nations said 8 tons of food supplies were to arrive by ship on Saturday. This first supply shipment of UNICEF humanitarian items was freighted by the International Federation of Red Cross and Red Crescent Societies (IFRC) and included more than 400 000 water purification tablets, several 5000-liter tanks for at least 2000 people and 1000 jerry cans."



Fig. 14 - S2 (05.09.2019) - 4,3,2 natural colour - The coast and the vegetation have been damaged

<u>2D view</u>



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