



Tropical Storm Dorain Advisory

By:

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DATE- 26th August, 2019

TIME- 2130 UTC

National Hurricane Center Discussion and Outlook

BULLETIN

Tropical Storm Dorian Advisory Number 10

NWS National Hurricane Center Miami FL AL052019

500 PM AST Mon Aug 26 2019

...TROPICAL STORM WATCH ISSUED FOR PUERTO RICO...

...TROPICAL STORM CONDITIONS EXPECTED IN THE
WINDWARD ISLANDS LATER TONIGHT WITH HURRICANE
CONDITIONS POSSIBLE ON TUESDAY...

SUMMARY OF 500 PM AST...2100 UTC...INFORMATION

LOCATION...12.7N 58.8W

ABOUT 60 MI...95 KM SE OF BARBADOS

ABOUT 165 MI...270 KM ESE OF ST. LUCIA

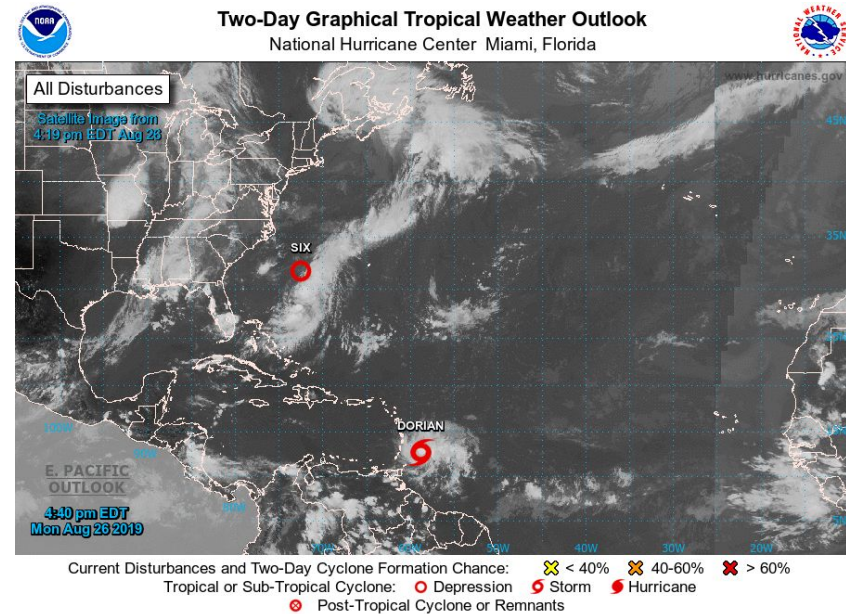
MAXIMUM SUSTAINED WINDS...60 MPH...95 KM/H

PRESENT MOVEMENT...WNW OR 290 DEGREES AT 14 MPH...22

KM/H

MINIMUM CENTRAL PRESSURE...1002 MB...29.59

INCHES



National Hurricane Center- Outlook

WATCHES AND WARNINGS

CHANGES WITH THIS ADVISORY:

A Tropical Storm Watch has been issued for Puerto Rico.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT:

A Hurricane Watch is in effect for...

- * St. Lucia

A Tropical Storm Warning is in effect for...

- * Barbados
- * Martinique
- * St. Lucia
- * St. Vincent and the Grenadines

A Tropical Storm Watch is in effect for...

- * Dominica, Grenada and its dependencies
- * Saba and St. Eustatius, Puerto Rico



Hazards

HAZARDS AFFECTING LAND

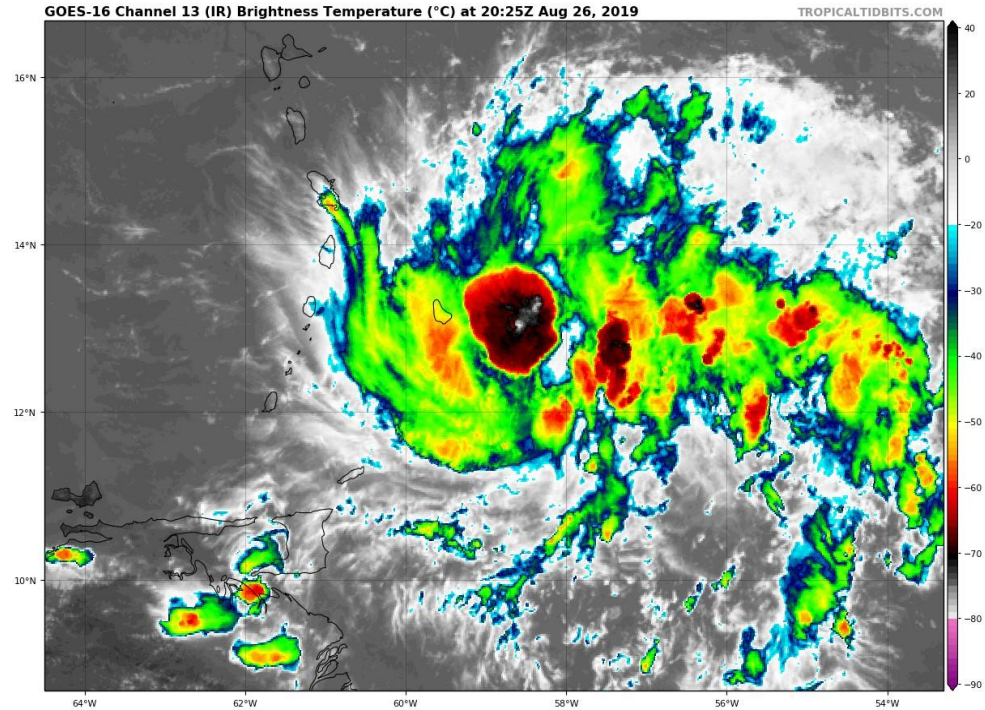
Rainfall: Dorian is expected to produce total rain accumulations of 3 to 8 inches in the Windward Islands from Martinique south to St. Vincent, including Barbados. Isolated maximum totals of 10 inches are possible across the northern Windward Islands. Rainfall totals of 1 to 3 inches are expected from the Grenadines, south to Grenada and across Dominica. Rainfall totals of 2 to 4 inches with maximum totals of 6 inches are possible across Puerto Rico and St. Croix.

WIND: Hurricane conditions are possible tonight and early Tuesday within the Hurricane Watch area. Tropical storm conditions are likely in the warning area by late today. Tropical storm conditions are possible within the tropical storm watch area in the Lesser Antilles tonight or Tuesday and in Puerto Rico on Wednesday.

SURF: Swells generated by Dorian will begin affecting portions of the Lesser Antilles tonight and continue into Tuesday. These swells could cause life-threatening surf and rip current

Observations

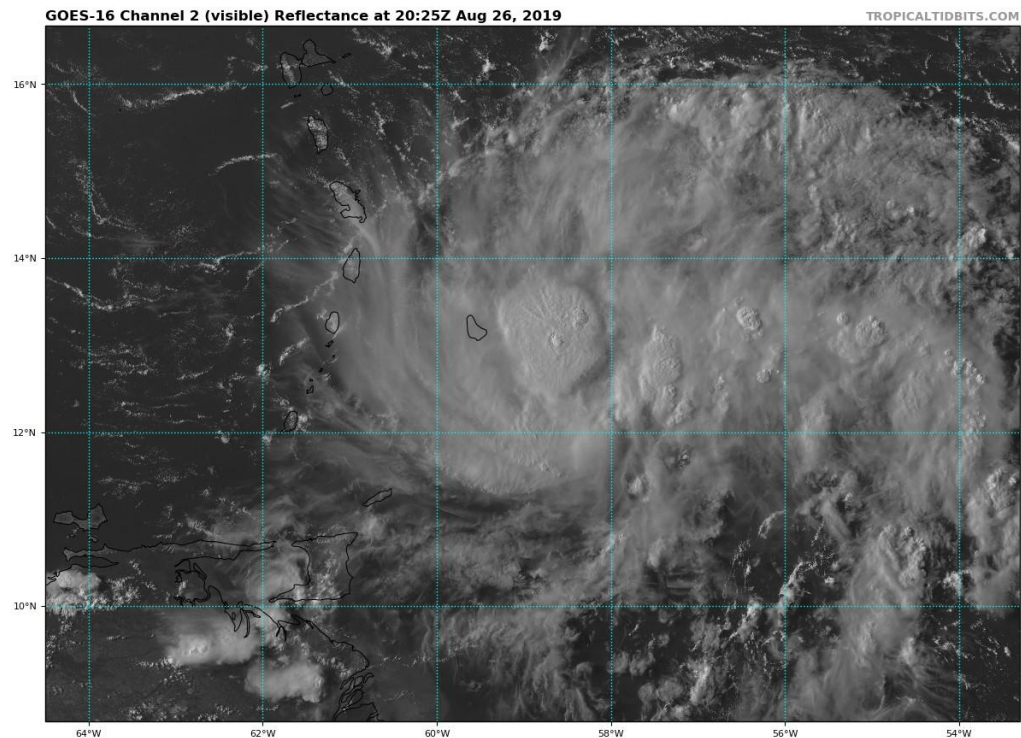
Satellite imagery shows the deep convection associated with Dorian continues to get more compact as the system strengthens.



Caribbean Clean IR Satellite Image:
2019/08/26

Observations

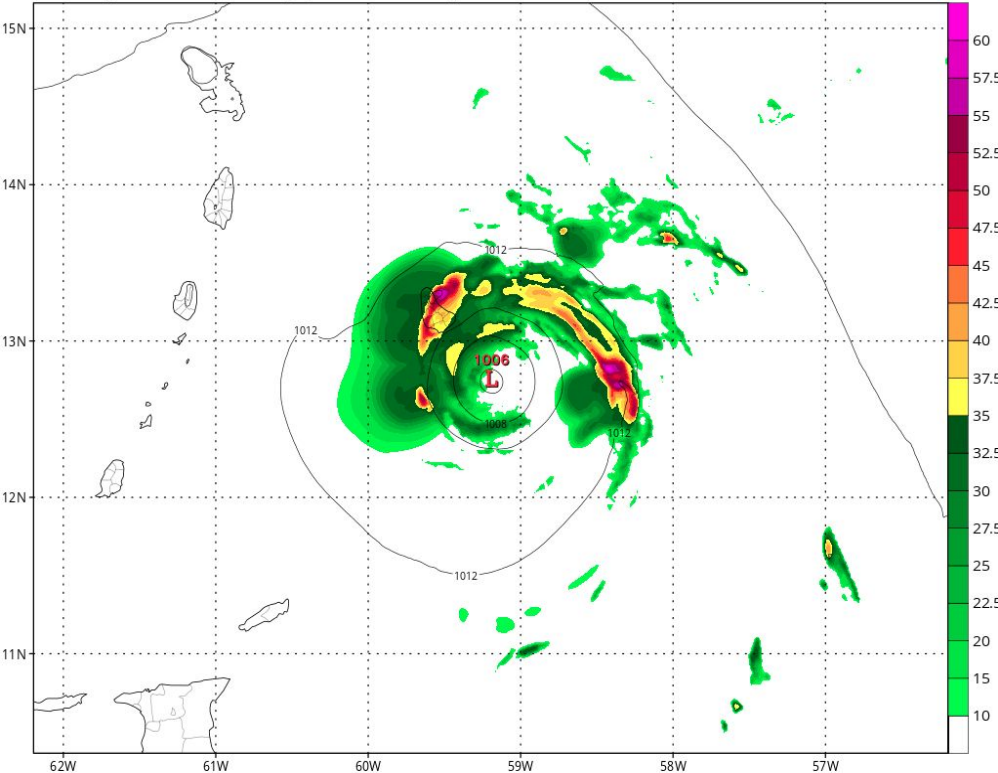
The high resolution Visible image also shows a compact system



Outlook - HWRF model

HWRF DORIAN-05L Composite Reflectivity (dBZ) & MSLP (mb)
Init: 12z Aug 26 2019 Forecast Hour: [12] valid at 00z Tue, Aug 27 2019

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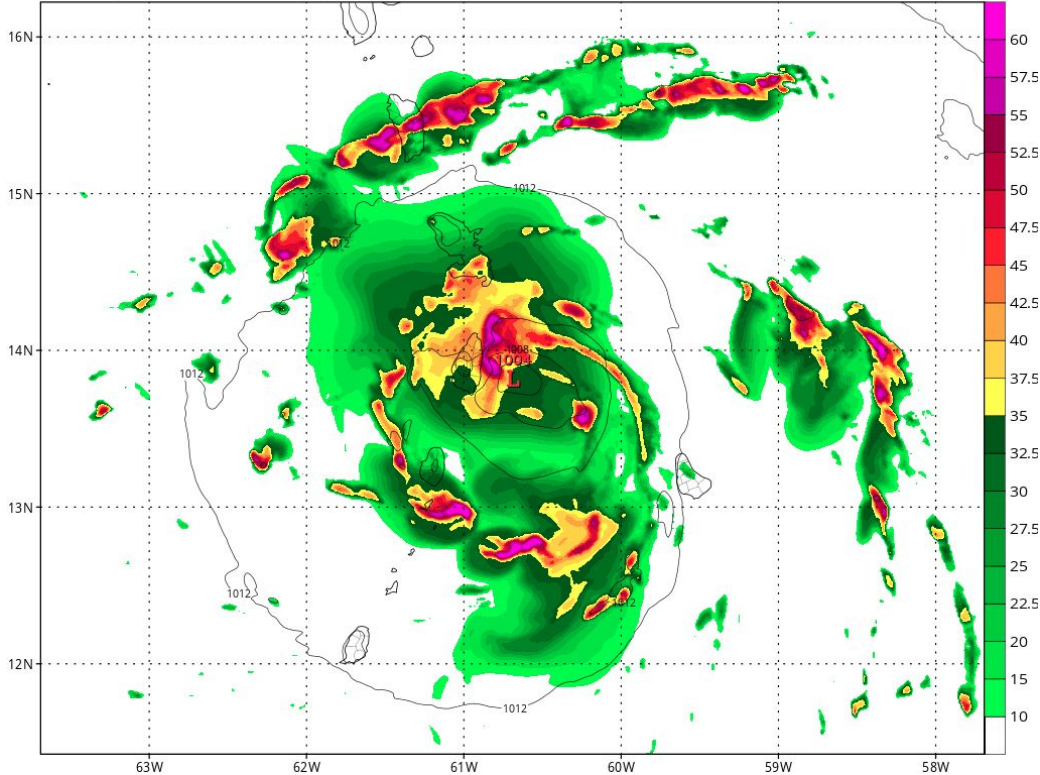


Simulated radar precipitation echoes show significant echoes near the centre as Dorian passes near Barbados by 8pm August 26, 2019.

Outlook - HWRF model

HWRF DORIAN-05L Composite Reflectivity (dBZ) & MSLP (mb)
Init: 12z Aug 26 2019 Forecast Hour: [21] valid at 09z Tue, Aug 27 2019

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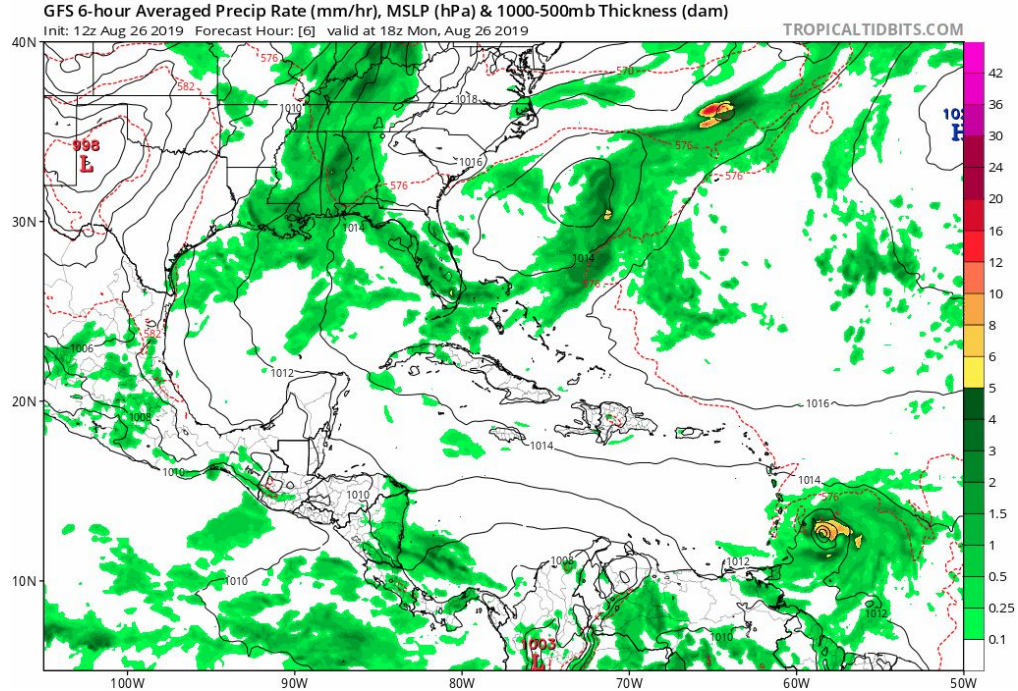
Radar echoes as Dorian near St
Lucia near 12z, August 27

Observations...Satellite Rainfall



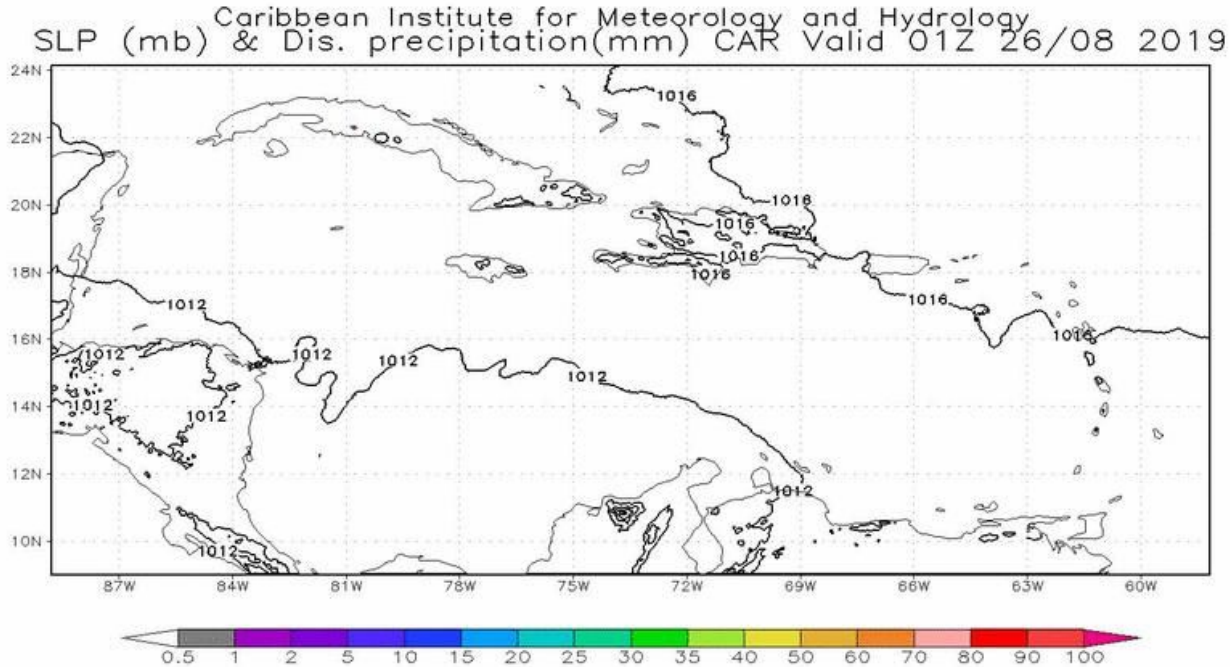
IMERg 24hr accumulation observation suggests maximum 100 mm (4 in) - 150 mm (6 in) on approach to the Eastern Caribbean

Model Outlook



GFS Rainfall Model Loop at 2019/08/26 1200 UTC + 72 hr OUTLOOK guidance continues to suggest that Dorian will track to the south or over Barbados

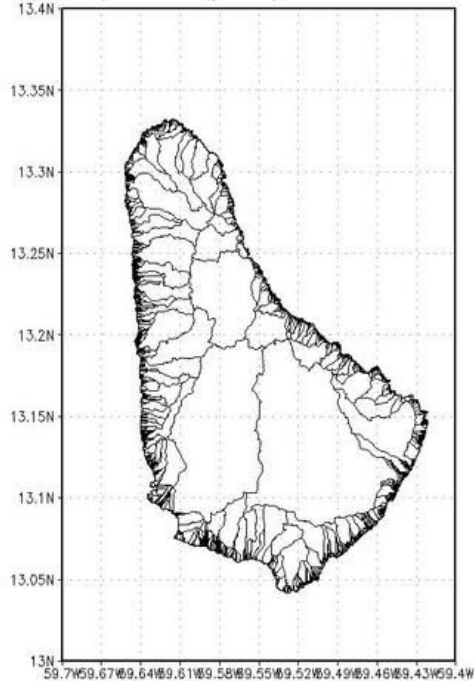
Model Outlook...cont'd



CIMH WRF 4km ARW Rainfall Loop OUTLOOK guidance continues to suggest that Dorian will impact Barbados this evening into tomorrow. It is expected that the center will track to the south or over Barbados. Concern remains for portions of the Windward Islands

Model Outlook...cont'd

Caribbean Institute for Meteorology and Hydrology
Disaggregated precipitation(mm) BAR Valid 01Z 26/08 2019

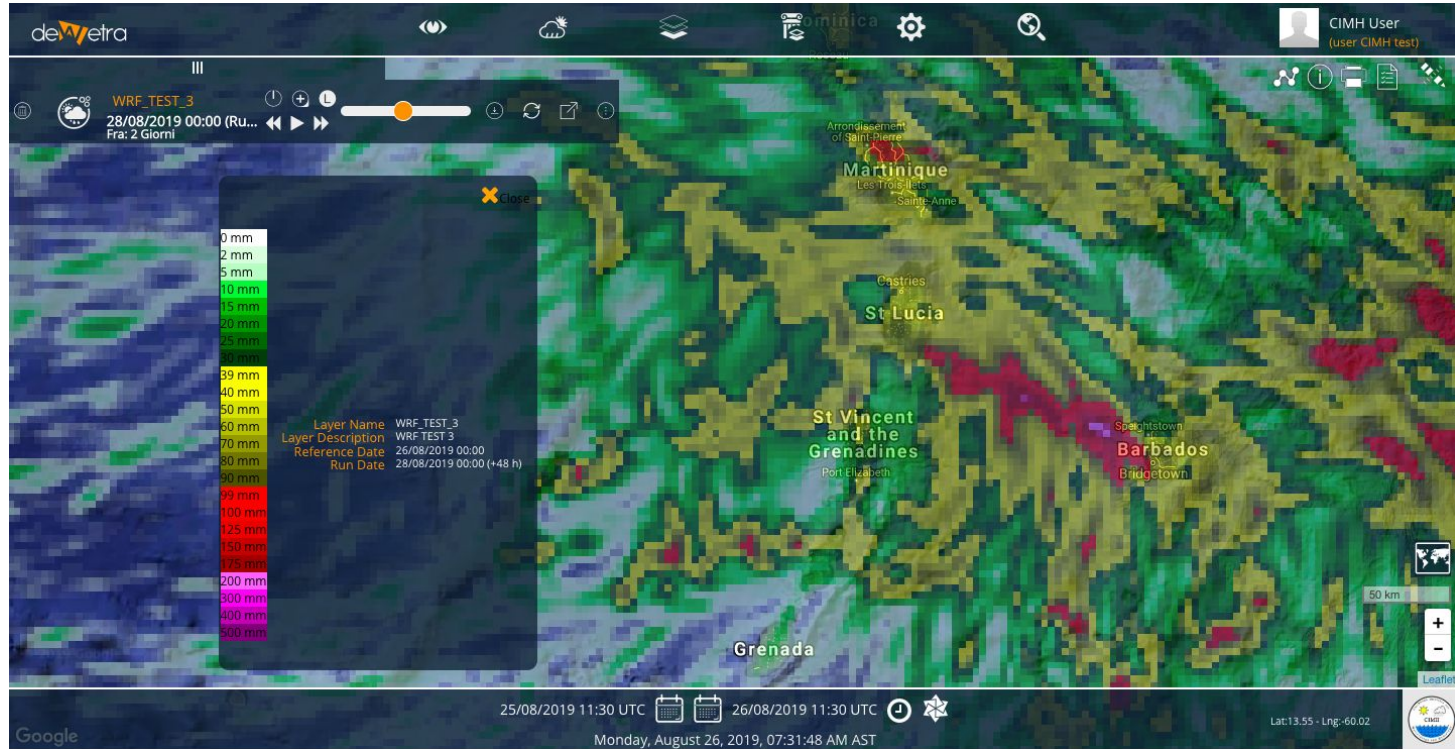


CIMH WRF 4km ARW Rainfall Loop guidance for Barbados continues to suggest that Dorian will produce significant rainfall over Barbados

Maximum isolated hourly rainfall totals in excess of 50 mm are possible over Barbados with the possibility of 150 - 200 mm over 24 hours

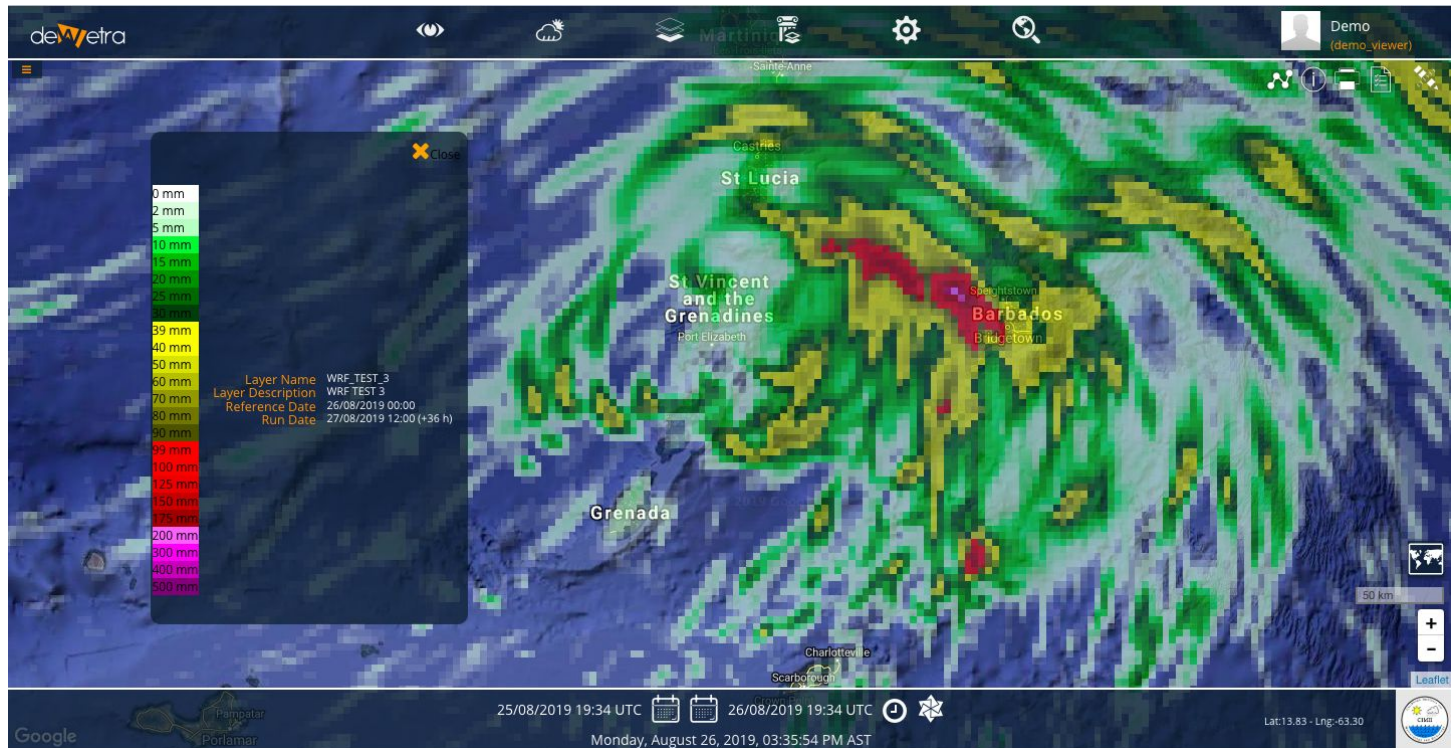
Regardless of the location of the centre tropical storm force winds, thundershowers with periods of intense rainfall can be expected.

Model Outlook...cont'd



CIMH WRF 4km ARW Rainfall Accumulation guidance suggests maximum 24 hour rainfall totals of ~150 (6 in) - 200mm (8 in) as the system traverses in the vicinity of Barbados

Model Outlook...cont'd



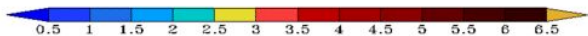
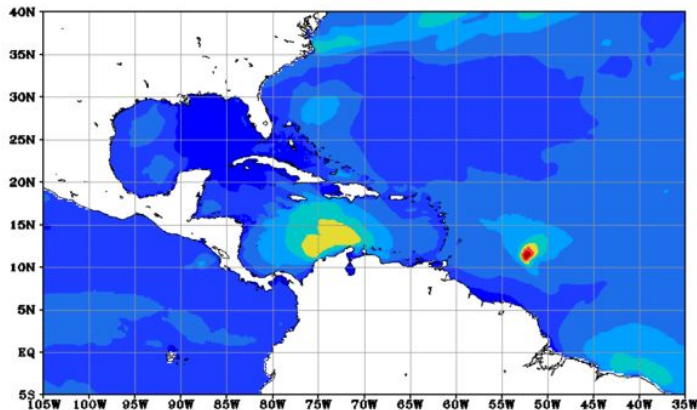
CIMH WRF 4km ARW Rainfall Accumulation guidance suggests maximum 12 hour rainfall totals of ~150 (6 in) - 200mm (8 in) as the system traverses in the vicinity of Barbados

Model Outlook...cont'd

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Wave Heights(m) for the Caribbean

Valid 20190825 12Z +0



GrADS: COLA/IGES

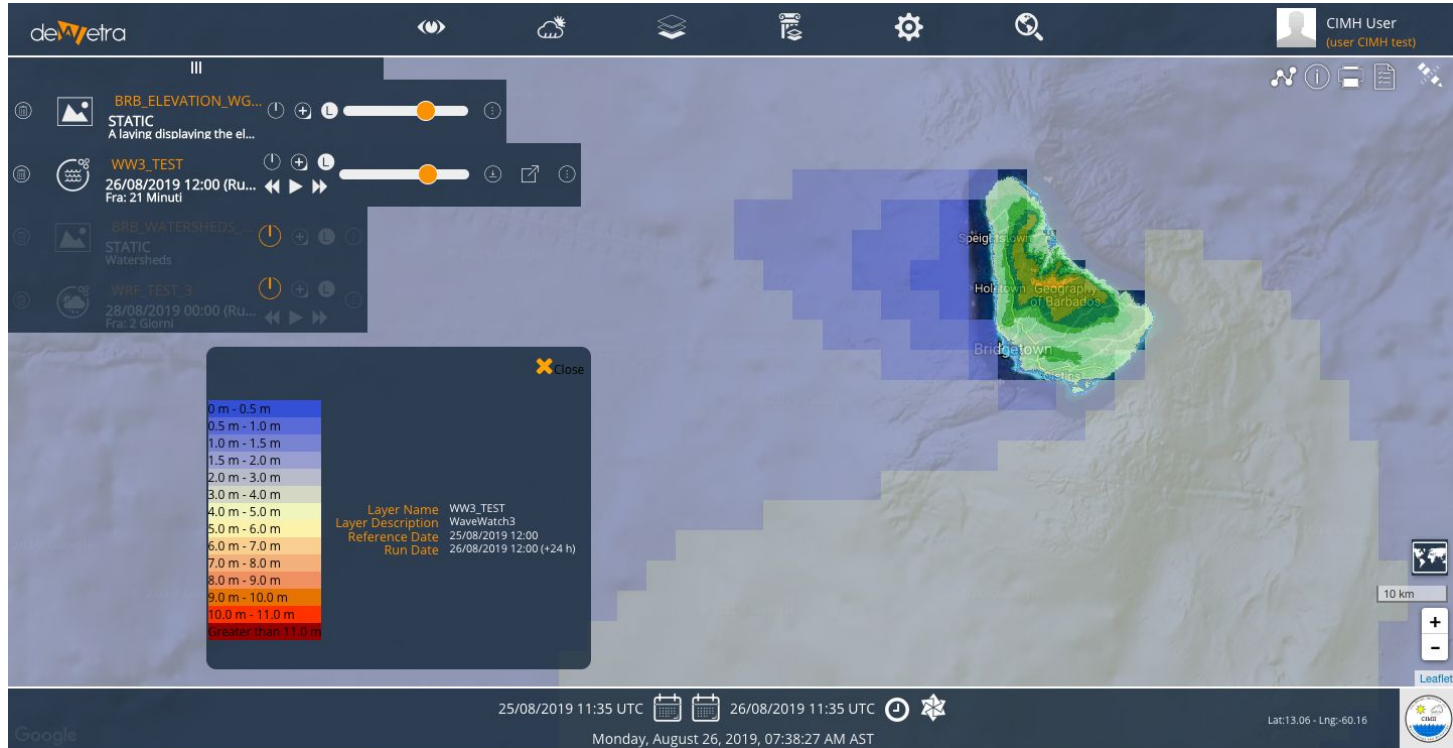
2019-08-26-04:52

CIMH WaveWatch 3 significant wave height guidance suggests maximum wave heights of ~3 - 4 m in open waters to the east and south of Barbados

Maximum significant wave heights guidance of ~1 - 3 m in open waters expected to impact the Windward Islands

Rough seas and dangerous waves can be expected

Model Outlook...cont'd



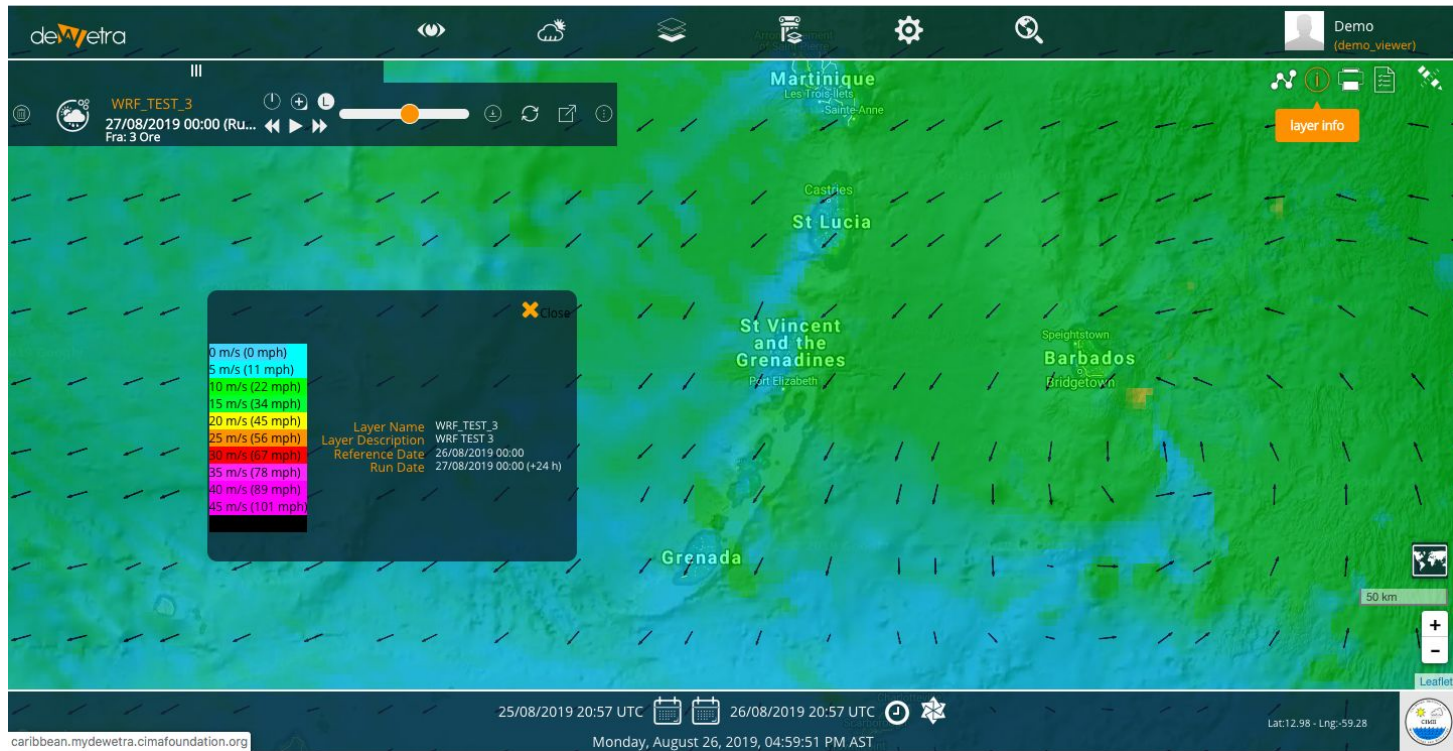
CIMH WaveWatch 3 significant wave height guidance suggests maximum wave heights of ~3 - 4 m in open waters to the east and south of Barbados

Model Outlook...cont'd



CIMH WaveWatch 3 maximum significant wave heights guidance of ~1 - 3 m in open waters expected to impact the Windward Islands

Model Outlook...cont'd



CIMH WRF 4km sustained wind speed at 10m guidance suggests 45 - 56 mph close to the center as the system approaches Barbados

Expected Impacts

Risk Matrix					Risk Level	Response	
Likelihood	High						
	Medium				High	Take Action	
	Low				Medium	Be Prepared	
	Very Low				Low	Be Aware	
		Minimal	Minor	Significant	Severe		
		Potential Impacts					
					Very Low	No Action	

Suggested likelihood: High

Suggested potential impact: Significant

Please see attached documents for guidance on expected impacts...

Summary Page

Tropical Storm Dorain continues to move WNW towards the Lesser Antilles.

Winds - Winds will be in the range of Tropical Storm force winds as TS Dorain moves over the Lesser Antilles.

Waves - Wave heights will be in the range of 2 - 2.5 metres. This can exacerbate coastal flooding when superimposed on heavy rainfall.

Rainfall - THIS COULD BE A SIGNIFICANT RAINFALL EVENT- Accumulations of 100 - 400 mm of rainfall may be experienced in the northern and central areas of Barbados and most of St Lucia during late Monday into Tuesday.

It is suggested that rainfall will trigger life threatening flash floods and landslides in St. Lucia and neighbouring countries.

Disclaimer

CIMH is providing special weather interpretation of the current and forecasted tropical weather affecting the Caribbean region.

CIMH is not an official forecasting agency

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End of Briefing