



DOMINICA METEOROLOGICAL BULLETIN

VOL 1 ISSUE 04

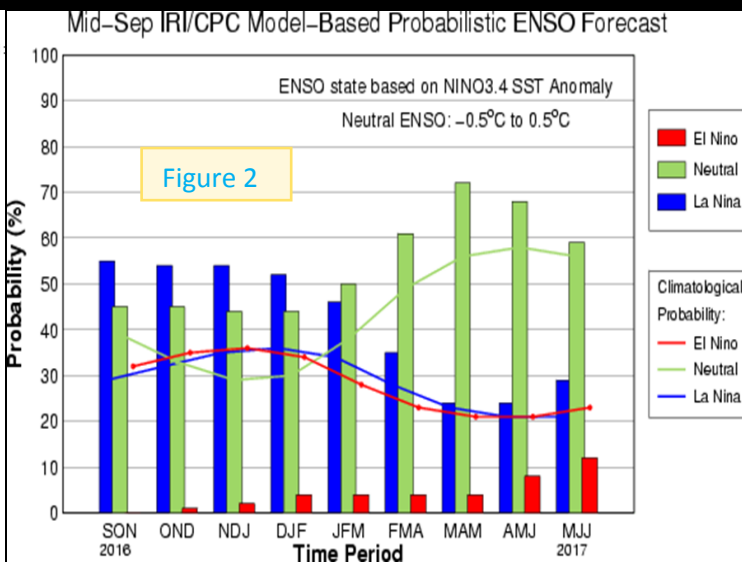
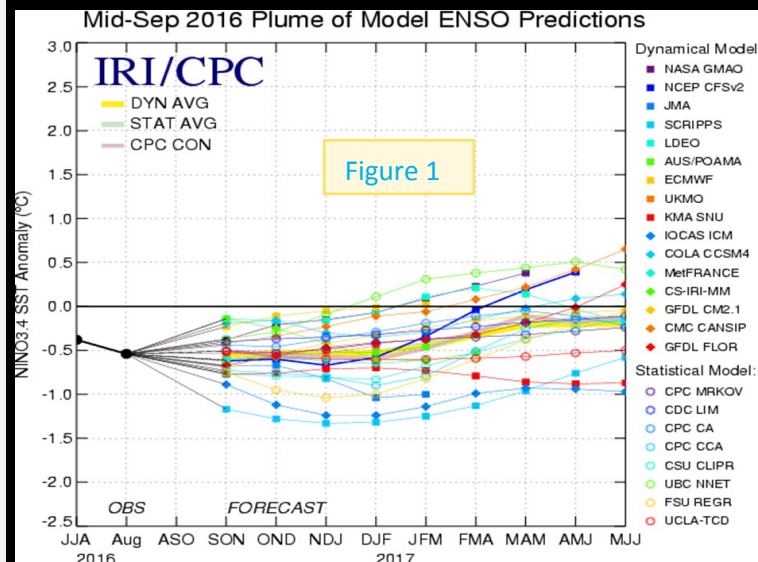
OCTOBER—DECEMBER

YEAR 2016

ENSO NEUTRAL VS LA NIÑA

Observations done in August 2016 showed Nino3.4 Sea Surface Temperatures (SSTs) anomalies at weak La Niña (-0.54). (See figure 1 below). Figure 2. shows the probabilities for La Niña are between 50% and 70% from September-November through to December-February 2016-17, then drops into the 40s during the latter and below 25% from March-May 2017 onward. The probability for neutral conditions rises to 50% for November-January and December-February, and still higher thereafter.

Source: (www.cpc.ncep.noaa.gov & iri.columbia.edu)

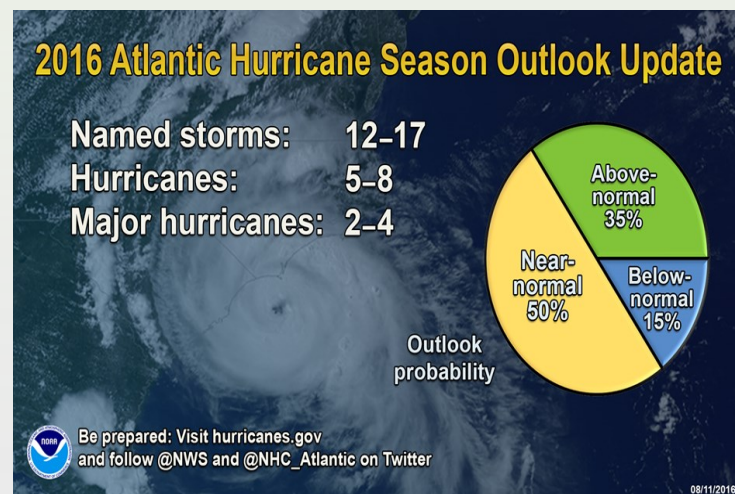


2016 Atlantic Hurricane Season

In its updated 2016 Atlantic Hurricane Season Outlook, the National Oceanic and Atmospheric Administration (NOAA) calls for a higher likelihood of a near-normal or above-normal season, and decreases the chance of a below-normal season to only 15 percent, from the initial outlook issued in May. The season is still expected to be the most active since 2012.

Forecasters now expect a 70-percent chance of 12–17 named storms, of which 5–8 are expected to become hurricanes, including 2–4 major hurricanes. The initial outlook called for 10–16 named storms, 4–8 hurricanes, and 1–4 major hurricanes. The seasonal averages are 12 named storms, 6 hurricanes and 3 major

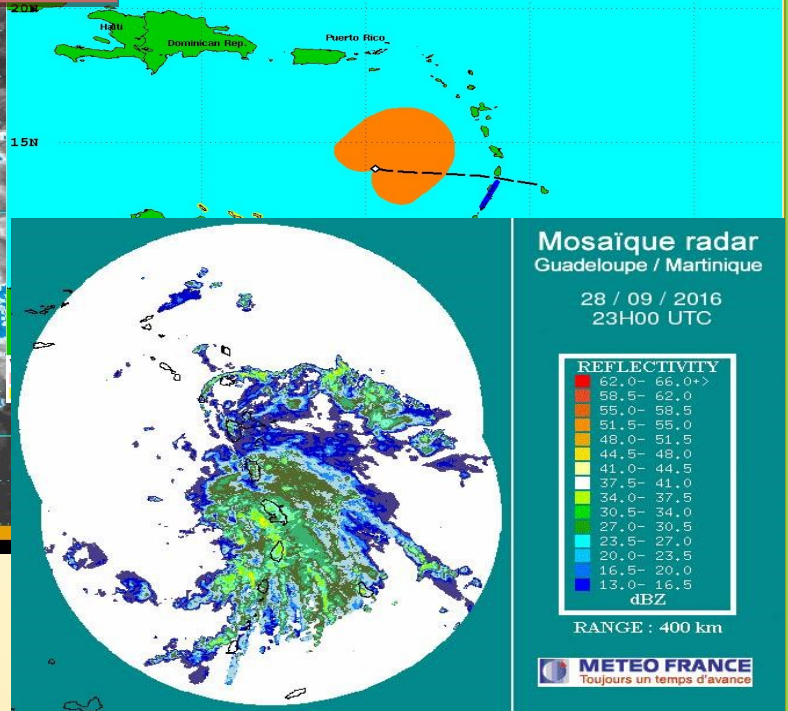
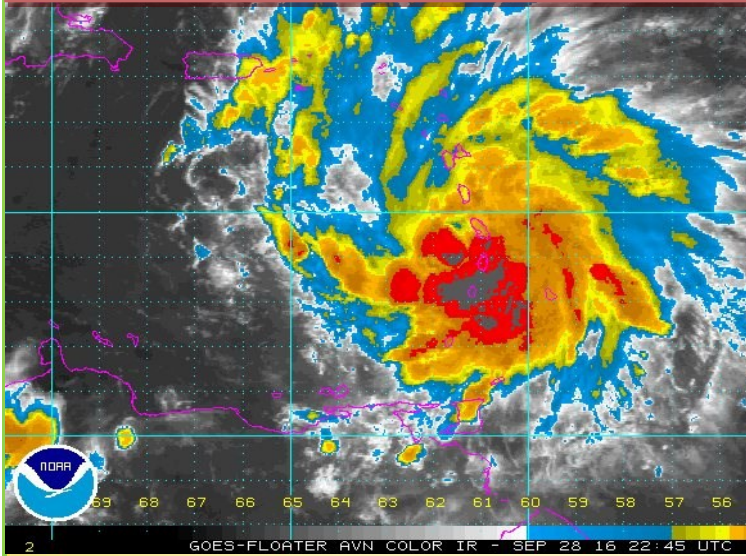
hurricanes. At the end of September 2016, there were 13 name storms, 5 hurricanes of which 2 were major hurricanes.



LOOKING BACK

Record breaking Hurricane Matthew

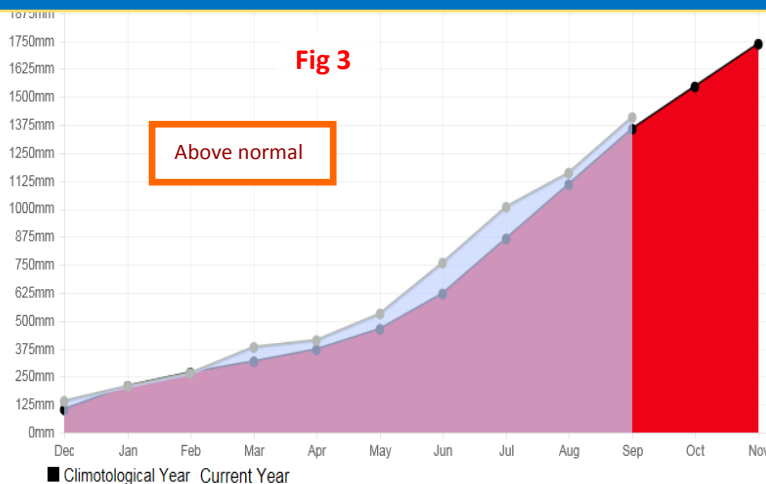
Surface Wind Field of Tropical Storm Matthew
Sustained Winds as of 500 AM AST Thu Sep 29, 2016 Advisory Number 4



Hurricane Matthew the 13th named storm of the 2016 Atlantic Hurricane Season formed about 150 miles south of Dominica as a tropical storm. Tropical-storm-force winds extended outwards up to 205 miles primarily to the northeast of the center. The island was placed under a tropical storm warning on the 28th of September at 11am. Matthew generated maximum wind gust of 58mph with 109.2mm/ 4.30in of rainfall at the Canefield Airport and 53mph winds and 47.5mm/ 1.87in of rainfall at the Douglas-Charles Airport. Matthew went on to becoming a dangerous category 5 hurricane causing 100s of deaths and destructions in Haiti and neighbouring islands. In fact, before all is said and done, Matthew may be one of the longest-lived Atlantic major hurricanes (category 3 or stronger) in the past 50 years of satellite records. Matthew's resilience has been due to a relative lack of wind shear (a change in wind speed and/or direction with height) and lack of dry air around the system.

Canefield Accumulated Rainfall

Dec 2015 -Nov 2016



Douglas-Charles Accumulated Rainfall

Dec 2015 -Nov 2016

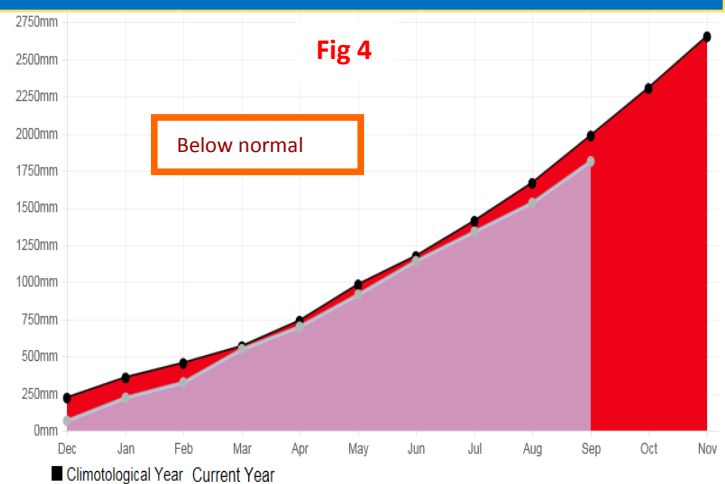


Fig 3 illustrates that at Canefield climatologically 1355.7mm of rainfall is recorded by the end of September. At the end of September 2016 at total of 1408.4mm was recorded. Fig 4 illustrates that at Douglas-Charles climatologically 1984.5mm of rainfall is recorded by the end of September. At the end of September 2016 at total of 1813.7mm was recorded.

Weather Summary for July—August– September 2016

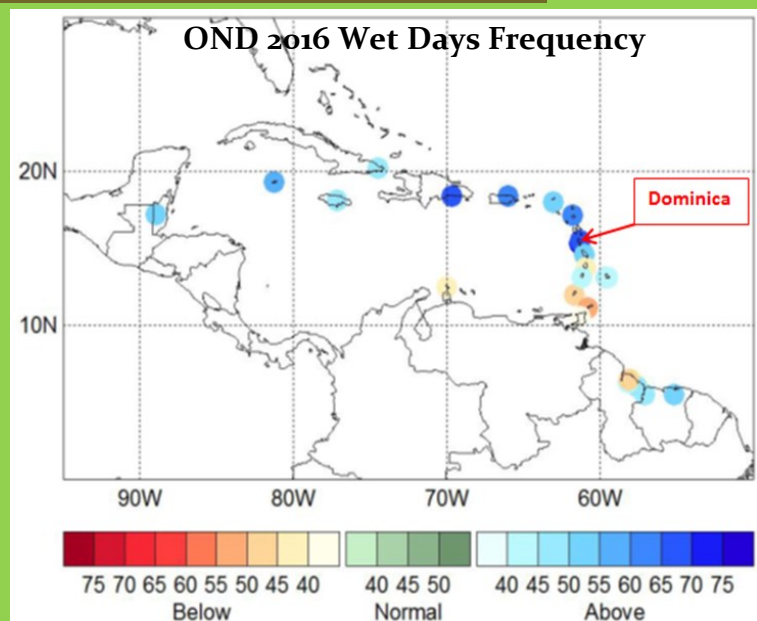
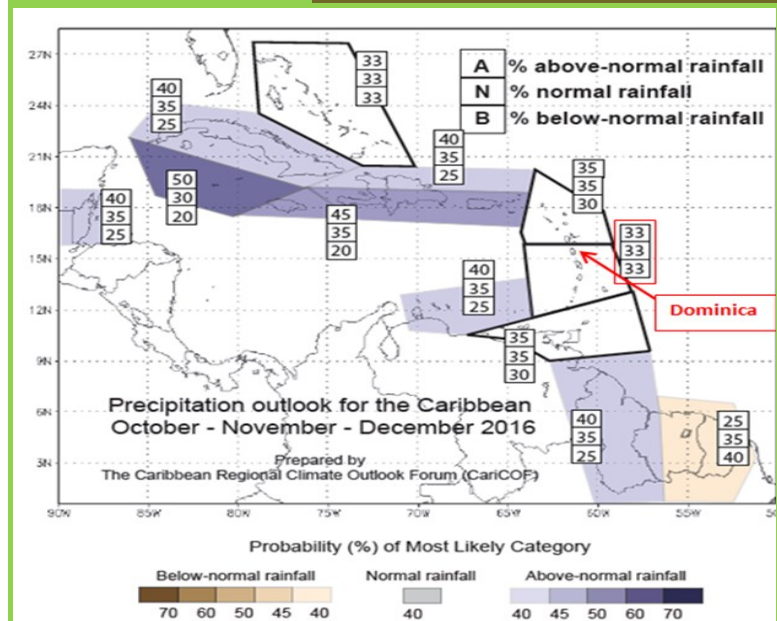
Parameter	Douglas-Charles Airport			Canefield Airport		
Month	July	August	September	July	August	September
Rainfall total	197.4mm	194.3mm	280.1mm	250.0mm	152.2mm	248.9mm
Temperature (avg)	29.0°C	29.2°C	27.5°C	29.2°C	29.5°C	29.1°C
-maximum	32.1°C (15th)	32.3°C (23rd)	32.3°C (22nd)	34.0°C (7th)	34.6°C (8th)	34.4°C (27th)
-minimum	23.3°C (18th)	23.0°C (22nd)	22.4°C (4th)	22.7°C (18th)	23.1°C (10th)	22.5°C (7th)
Wind	ESE @ 8kts	ESE @ 7kts	ESE @ 7kts	SE @ 4kts	SSE @ 4kts	SSE@ 4kts
Relative Humidity	76%	76%	78%	67%	68%	71%
Sunshine hours	8hrs 6mins	8hrs 36mins	7hrs 12mins	-	-	-

LOOKING AHEAD (Climatological averages for October-November-December)

Parameter	Douglas-Charles Airport (1981-2010)			Canefield Airport (1982-2011)		
Month	October	November	December	October	November	December
Rainfall normal	249.6 to 358.0mm	241.9 to 376.3mm	140.7 to 209.6mm	137.2 to 213.3mm	127.5 to 252.6mm	76.7 to 113.6mm
-highest total	644.9mm (1998)	912.0mm (2004)	631.4mm (2001)	439.1mm (1985)	438.3mm (1984)	294.2mm (2013)
-lowest total	94.2mm (1991)	97.2mm (1983)	66.5mm (2015)	27.6mm (1992)	28.4mm (2001)	23.8mm (2010)
Temperature	28.2°C	27.4°C	26.6°C	28.5°C	27.8°C	26.9°C
-maximum	33.9°C (2015)	32.8°C (1999)	31.1°C (1987)	35.5°C (2015)	33.8°C (2013)	32.4°C (1997/2003)
-minimum	17.2°C (1995)	18.9°C (2010)	16.9°C (1991)	20.8°C (1994)	19.4°C (2008)	18.0°C (1991)
Wind	ESE @6kts	ESE @6kts	ESE @7kts	SSE @ 4kts	SE @ 4kts	SE @ 5kts
Chance of 5 day dry spell	24%	27%	31%	68%	77%	93%

REGIONAL OVERVIEW ON SEASONAL FORECASTS FOR OCTOBER-NOVEMBER-DECEMBER 2016

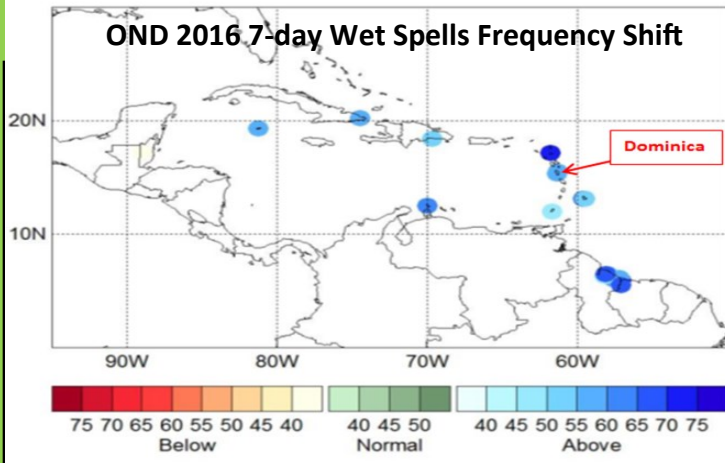
Rainfall Outlook



There is uncertainty for rainfall amounts for Dominica for the period October- November-December 2016. Chances are that rainfall totals will most likely be that of climatological averages. **Probability: 33% chance of above normal; 33% chance normal; 33% chance of below normal.** More wet days than normal (*high confidence*) are forecast for the period. This will in turn result in an increase in disruptions of outdoor activities due to increase rainfall days. There are no drought concerns for the period.

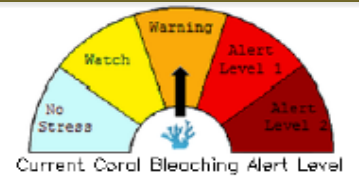
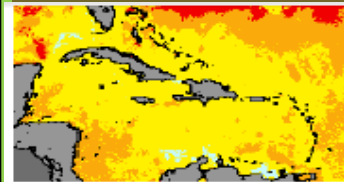
Wet Spells Outlook

OND 2016 7-day Wet Spells Frequency Shift

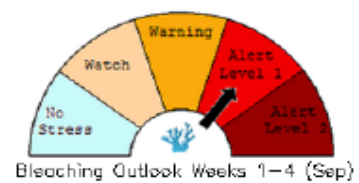
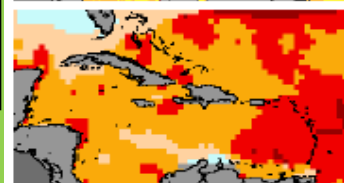


Forecast: More 7-day wet spells and very wet spells with no significant shift in the amount of 3-day extreme wet spells. (*medium confidence*.)

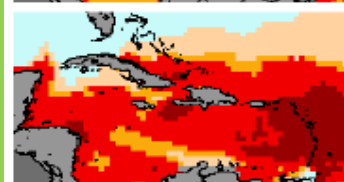
Coral Bleaching Alert Area and Outlook



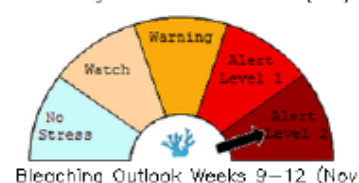
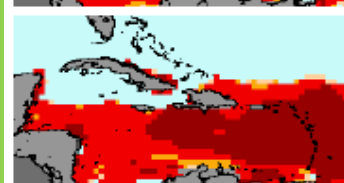
Current Coral Bleaching Alert Level



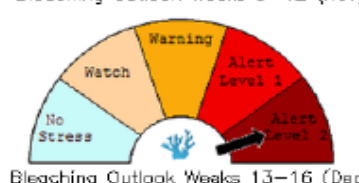
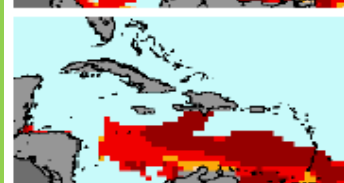
Bleaching Outlook Weeks 1-4 (Sep)



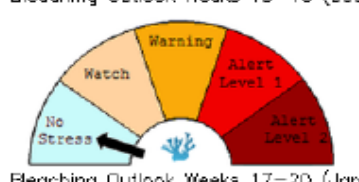
Bleaching Outlook Weeks 5-8 (Oct)



Bleaching Outlook Weeks 9-12 (Nov)



Bleaching Outlook Weeks 13-16 (Dec)

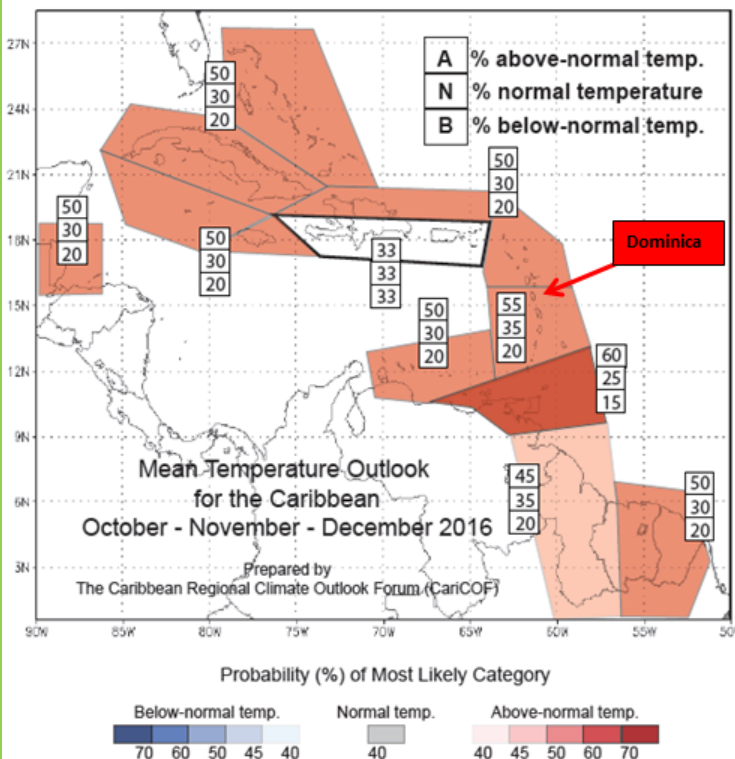


Bleaching Outlook Weeks 17-20 (Jan)

A bleaching Alert Level 1-2 is predicted for the Caribbean in 1-4 weeks. Thermal stress conditions are predicted to return to below bleaching levels in 17-20 weeks (Jan).

ALERT LEVEL 2: Widespread bleaching and some mortality expected.

Temperature Outlook



Air temperatures are expected to be above to normal. Night and day-time temperatures are expected to be warmer.

DOMINICA METEOROLOGICAL SERVICE

Canefield / Douglas-Charles Airports

Contact: Email: metoffice@cwdom.dm / metoffcan@cwdom.dm; Website: www.weather.gov.dm. Tel. (767) 4491990/4457878