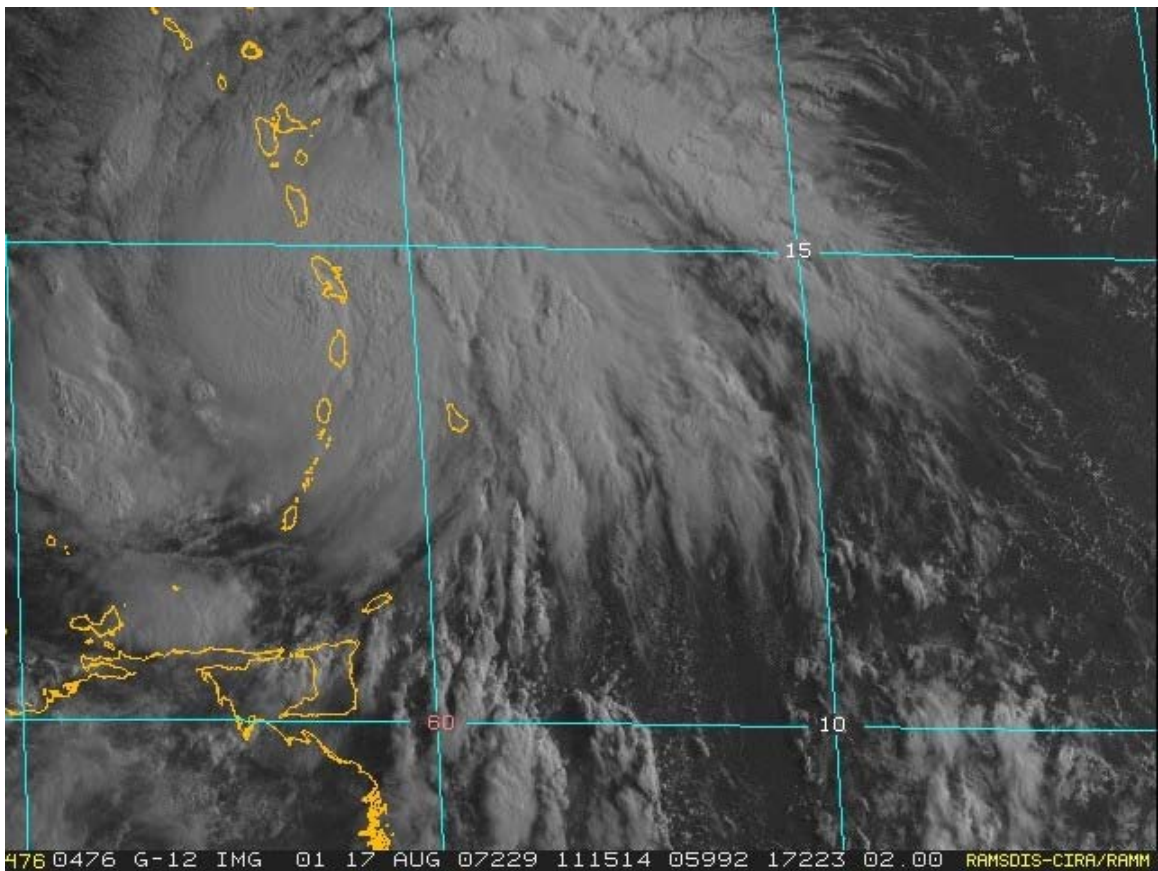


REPORT ON
PASSAGE
OF
HURRICANE DEAN
ST. LUCIA



Satellite image (visible spectrum) at 7:15 a.m. 17 Aug 2007.

Thomas Auguste
Director
Saint Lucia Meteorological Services.

BRIEF HISTORY

Tropical Depression No. 6 (TD # 6) developed from an area of low pressure associated with a tropical wave at 11:00 a.m. on Monday 13 August, 2007. Its center was located near latitude 12.0 degrees north, longitude 31.6 degrees west or approximately 1700 miles east of the Windward Islands. Movement was just south of due west near 21 m.p.h. Maximum sustained winds were estimated at 35 m.p.h. Although there was some easterly wind shear inhibiting the development of the system, environmental conditions were expected to become more conducive to its development and strengthening was forecast as it moved west towards the Lesser Antilles.

At 11:00 a.m. on the following day TD # 6 had strengthened sufficiently to be named Tropical Storm Dean. The center of T.S. Dean was located near latitude 11.7 degrees north, longitude 39.4 degrees west or about 1270 miles east of the Windward Islands. Maximum sustained winds had increased to 40 m.p.h. In spite of persistent easterly wind shear, strengthening was forecast based on warm sea surface temperatures and an expected relaxing of the wind shear. Interestingly, T.S. Dean's continued to move just south of due west at a lively forward speed of near 23 m.p.h. The main steering influence was a high pressure system centered to the north of the storm and this scenario was forecast by some models, and supported by the N.H.C., to continue for a few more days. This set Dean on a collision course with the Windward Islands.

Dean became a hurricane, the first for this year's season, at 5:00 a.m. on Thursday, 16 August, 2007. By then the center had progressed westward to about 590 miles east of Saint Lucia and Martinique. Maximum sustained winds were now 75 m.p.h. and environmental conditions continued to support intensification. Its direction of movement had shifted to just north of due west but its forward speed remained a brisk 24 m.p.h. The center of Dean was forecast to pass over the south of Martinique, with category one hurricane status, early on the following day.

Dean reached Category Two hurricane status (Saffir-Simpson hurricane scale) just prior to its center or eye crossing over the Saint Lucia-Martinique channel early on Friday morning. At 2:00 a.m. the center of Dean was located, based on a Martinique radar fix, at latitude 13.8 degrees north, longitude 59.8 degrees west or about 65 miles east north east of Castries, Saint Lucia. Its forward motion remained brisk, which was fortunate for islands in its path, since this meant a shortening of the period of impact. By 11:00 a.m. the center of Dean had moved over the Caribbean Sea, northwest of Saint Lucia (lat 14.6 N, long 62.6 W). It was moving away from the Windward Islands and the worst of its effects on Saint Lucia was over.

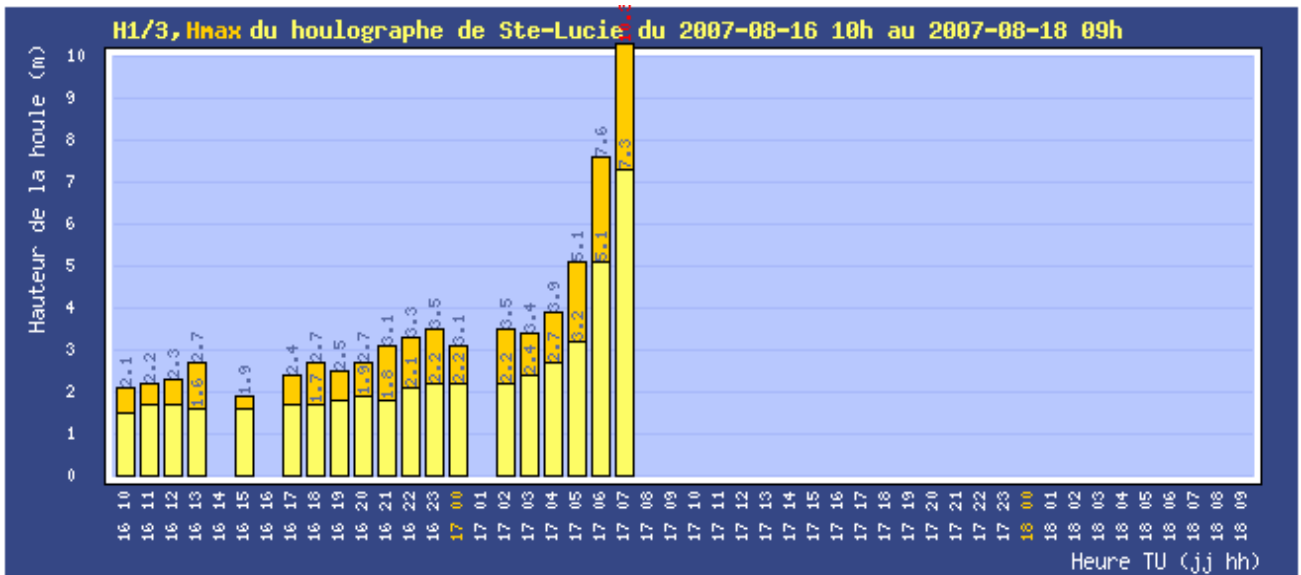
Hurricane Dean continued to become a Category Five hurricane and caused considerable damage especially over Jamaica and the Yucatan Peninsula.

IMPACT

Dean remained a marginal Category Two hurricane during its passage over Saint Lucia. Its impact in terms of the three main hazards associated with hurricanes, namely storm surge, high winds and heavy rainfall, was significant and in some sectors disastrous.

Storm Surge

Storm surge is a combination of the raised water level associated with low pressure systems and the piling of water in coastal regions by strong winds. The storm surge associated with Dean was enhanced by the simultaneous occurrence of normal (lunar) high tide. The impact was most severe along the north western coast of the island where significant coastline erosion and damage to marine equipment and infrastructure occurred particularly in the Castries harbor and the northern tourist resort area.

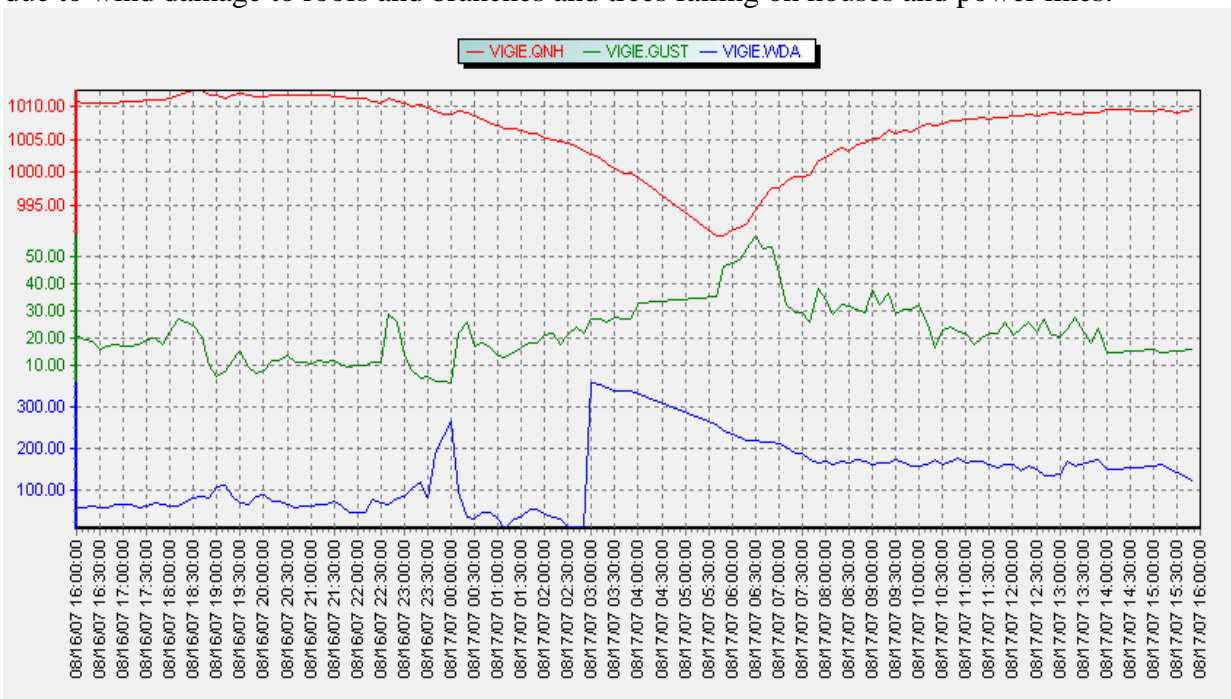


Hourly sea level data from weather buoy located 4 miles north of Saint Lucia 16 – 17 Aug 2007. Note maximum height reported was 10.2 meters or 34 feet at 3:00 a.m. on 17 August after which there were no reports.

Winds

Strongest winds were experienced over the northern section of the island during the early morning hours of 17 August 2007. Winds at that time were coming from the west to southwest because of the center traversing north of Saint Lucia. The maximum gust recorded at both the Hewanorra and GFL Charles airports was 58 knots or 67 m.p.h. There was a report of a 90 m.p.h. gust measured in the region of Cap Estate but the Met Services has not been able verify this reading. It is apparent from observed damage that topography played a role in channeling and enhancing winds particularly over the western section of the island.

The Agriculture Sector and more specifically the fragile banana industry was the hardest hit. Estimated cost of damage in that sector is XCD 17.2million with about 55 per cent of the crop lost. There was also significant damage to housing and infrastructure, mainly due to wind damage to roofs and branches and trees falling on houses and power lines.



Graph from automatic weather station at GFL Charles. Wind speed is in knots (green or middle line), pressure in millibars (red or top line) and wind direction in degrees (blue or bottom line).

Rainfall

Rain/Feeder bands associated with Dean began affecting Saint Lucia as early as 8:00 p.m. on Thursday, 16 August. Thereafter showery periods continued over most of the island throughout Dean's passage. There were torrential downpours in some areas over the north and center of the island resulting in a number of landslides and some minor flooding. In fact the only reported fatality was indirectly due to rainfall.

24-hour accumulated rainfall at GFL Charles Airport at 8:00 a.m. 17 August was 92.1 millimeters and 18 August 37.1 millimeters. The corresponding figures for the Hewanorra Airport were 53.3 millimeters and 15.4 millimeters.

SAINT LUCIA METEOROLOGICAL SERVICES										
HOURLY RAINFALL DATA FROM AUTOMATIC WEATHER STATIONS: 17 AUGUST 2007 (HURRICANE DEAN)										
STATION	ALR	EE	BDL	GRACE	FOR	MILLET	BLA	SOUCIS	BOCAGE	DES
Lat.	13 56N	13 54N	13 55N	13 46N	13 58N	13 54N	13 48N	13 59N	14 00N	13 51N
Lon.	61 02W	60 55W	60 57W	60 58W	60 57W	60 59W	60 56W	60 59W	60 58W	61 01W
Elev.(ft.)	305'	280'	1099'	575'	876'	941'	641'	135'	593'	2070'
HOUR										
2400	0	0	0	0	0	0	0	6	2	0
2300	0	0	0	0	0	0	0	2	2	0
2200	1	0	0	1	1	0	1	4	5	1
2100	2	0	2	2	1	2	2	4	5	3
2000	2	0	4	3	4	4	4	3	5	5
1900	3	1	11	3	7	11	14	4	6	5
1800	0	0	6	0	15	1	3	3	3	0
1700	10	0	2	0	1	3	0	3	3	10
1600	0	3	5	4	7	1	4	3	5	8
1500	0	0	1	0	2	1	0	5	3	1
1400	2	0	1	1	0	1	2	1	4	2
1300	2	7	8	0	12	3	3	4	3	2
1200	0	0	1	0	0	0	0	3	4	0
1100	2	0	1	0	0	0	0	4	6	1
1000	6	1	5	4	5	6	4	2	7	10
900	13	2	2	1	2	3	1	3	7	6
800	9	12	16	13	14	13	23	1	6	20
700	7	18	12	13	6	18	29	2	5	21
600	11	13	12	13	6	10	19	4	6	23
500	2	8	3	3	4	5	4	4	5	9
400	2	3	3	0	2	2	0	4	1	4
300	1	1	2	0	1	1	1	3	5	2
200	14	6	14	4	18	13	4	3	12	14
100	4	1	1	6	0	2	3	2	6	7
TOTAL	93	76	112	71	108	100	121	77	116	154

NOTE:

RAINFALL IN MILLIMETERS

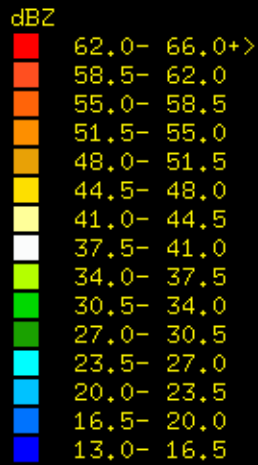
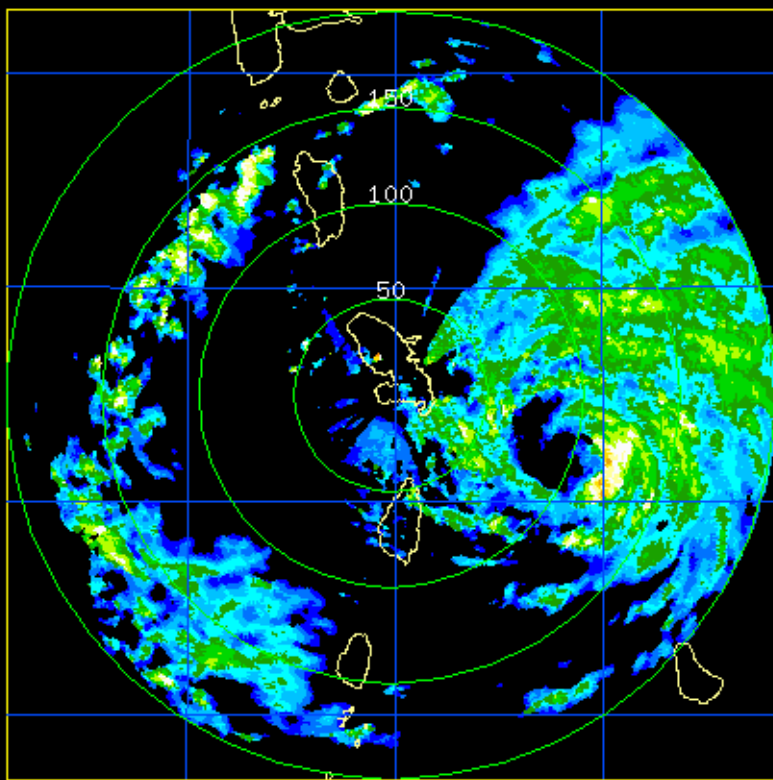
HOURS SORTED IN DESCENDING ORDER

STATIONS

- | | | | |
|-------|--|--------|------------------------------------|
| ALR | Anse la Raye Village | MILLET | Millet, Anse la Raye (rain forest) |
| EE | Errard Estate, Dennerly | BLA | Blanchard, Micoud |
| BDL | Barre de l' Isle, Castries (rain forest) | SOUCIS | Soucis, Castries (school yard) |
| GRACE | Grace, Vieux Fort (school yard) | BOCAGE | Bocage, Castries (city outskirts) |
| FOR | Forestierre, Castries (banana farm) | DES | Desraches, Soufriere (rain forest) |

File : 2007081706551528.ppz
Type : PPI(Z)
Range: 200.0 km

17.08.2007
06:55:15



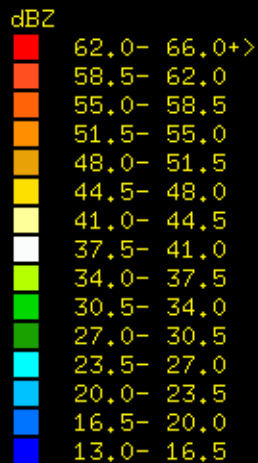
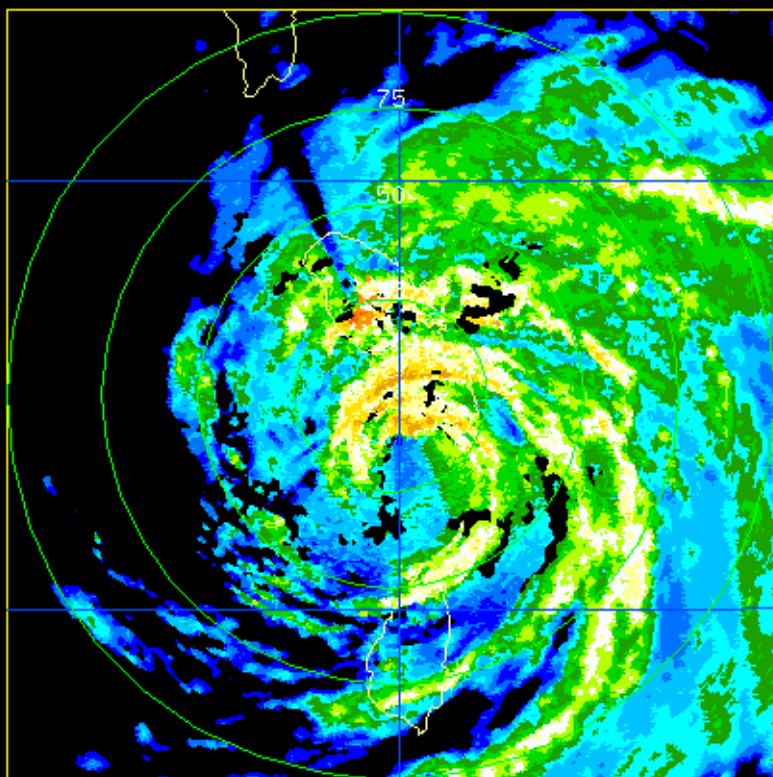
Martinique
Scan R : 200 km
Disp R : 200 km
Disp Res: 1,000 km
PRF: 650 / 0
RS : 4
TS : auto
CC : Doppler 4
AZ : 0.0-359.0
EL : 0.5 deg



1. Radar image of Hurricane Dean at 02:55 a.m. 17 August, as it approached Saint Lucia /Martinique. The eye can clearly be seen (dark area inside rain spirals) east northeast of Saint Lucia.

File : 2007081709451531.ppz
Type : PPI(Z)
Range: 100.0 km

17.08.2007
09:45:15



Martinique
Scan R : 200 km
Disp R : 100 km
Disp Res: 0,500 km
PRF: 650 / 0
RS : 4
TS : auto
CC : Doppler 4
AZ : 0.0-359.0
EL : 0.5 deg



1. Radar image of Hurricane Dean at 05:45 a.m. 17 August. The eye can now be seen (heaviest rain spirals around eye) between Saint Lucia and Martinique.

Met Services actions

Normal tracking and reporting of the progress of Dean in public weather bulletins continued throughout its tropical wave and Tropical Depression phase. A press release was issued by the Met Office at the Hewanorra Airport at 11:00 a.m. 15 August when Dean became a Tropical Storm, 1000 miles east of the Windward Islands.

- 15 August, 11:00 p.m.: First advisory issued by Met Office, Hewanorra Airport. Island placed under hurricane watch.
- 16 August, 5:00 a.m.: Hurricane warning issued for Saint Lucia. Small craft asked to remain in port and residents advised to safeguard life and property in preparation for impact. All relevant parties duly informed in accordance with Hurricane Emergency Procedures.
- 16 August, 1:30 p.m.: NEMAC pre-strike meeting convened in Cabinet room. DMS briefs gathering on approaching system and expected impact. Based on projections decision taken on closure of businesses by 6:00 p.m. 16 August and for total shutdown of normal activities on 17 August.
- 16 August, 4:00 p.m.: Emergency roster implemented for Met Offices at GFL Charles and Hewanorra airports. Government 4WD pick-up trucks delivered to Met Offices on request of DMS.
- 17 August, 11:00 a.m.: Hurricane warning for Saint Lucia downgraded to Tropical Storm Warning.
- 17 August, 4:00 p.m.: All clear issued for Saint Lucia.

DAMAGE BY ECONOMIC SECTOR

SECTOR	ESTIMATED COST
Housing and buildings	\$1,500,000.00
Agriculture and fisheries	\$17, 200,000.00
Utilities	\$550,000.00
Roads and drains	\$1,000,000.00
Sea ports (SLASPA)	\$1,200,000.00
Coastal	\$700,000.00
Education/Schools	\$300,000.00
Hotels and tourism	Assessment not available
TOTAL	\$22,450,000.00