



NATIONAL OFFICE OF METEOROLOGY

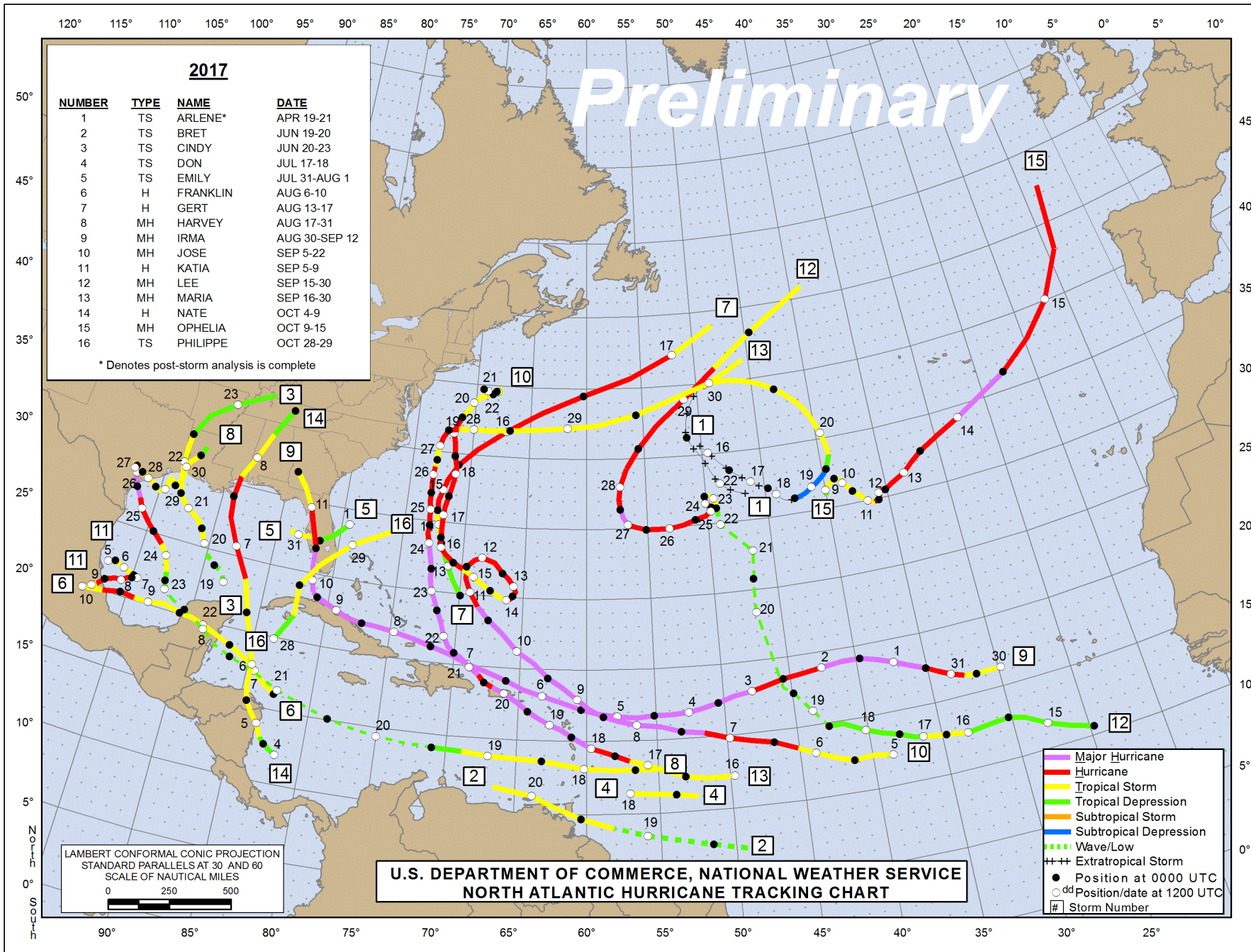
**TSUNAMI ALERT SECTION
HURRICANE IRMA AND MARIA SEP. 2017**



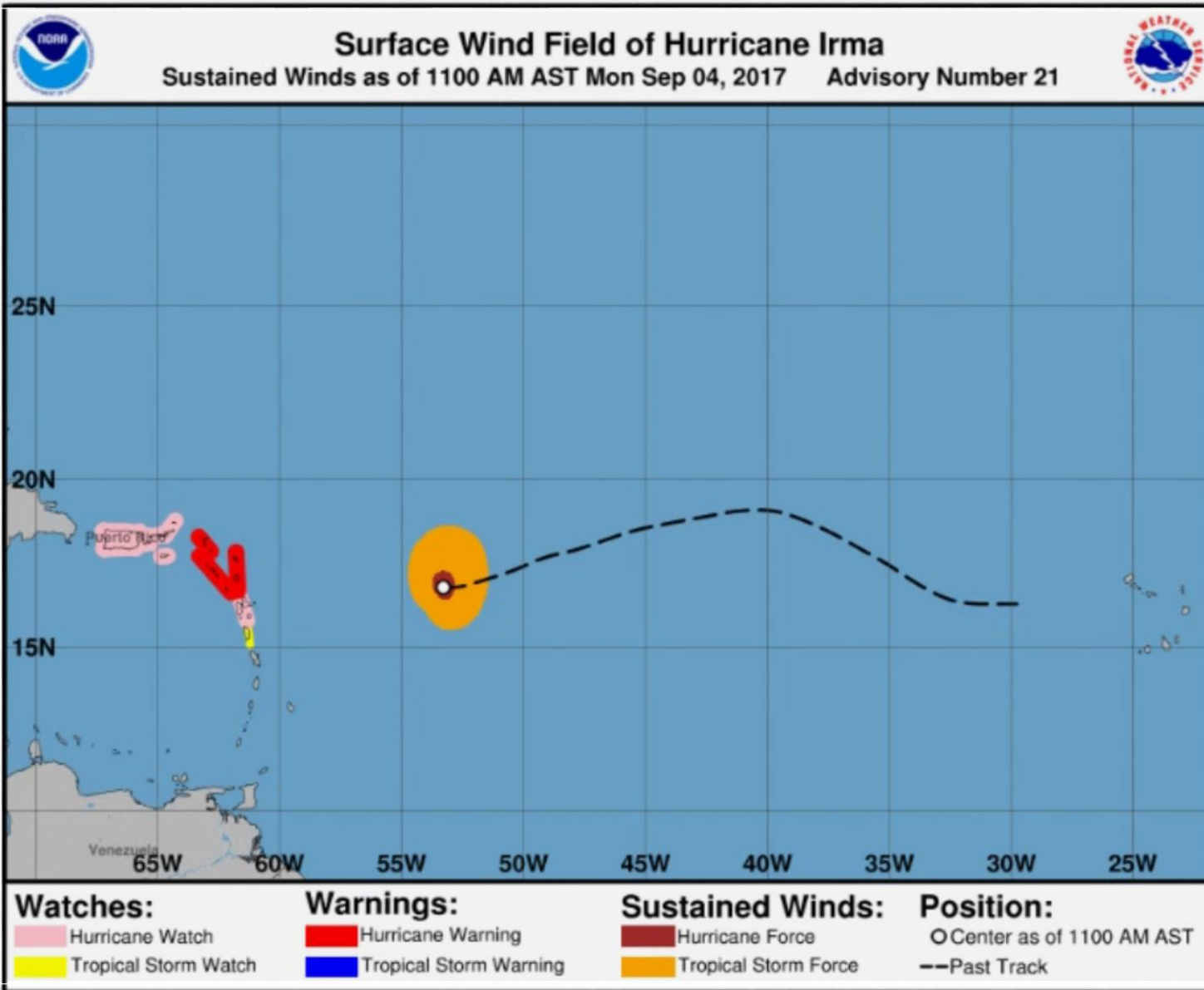
Trainer:

Wagner E. Rivera
Interim Forecaster
Manager Tsunamis Warnin Section





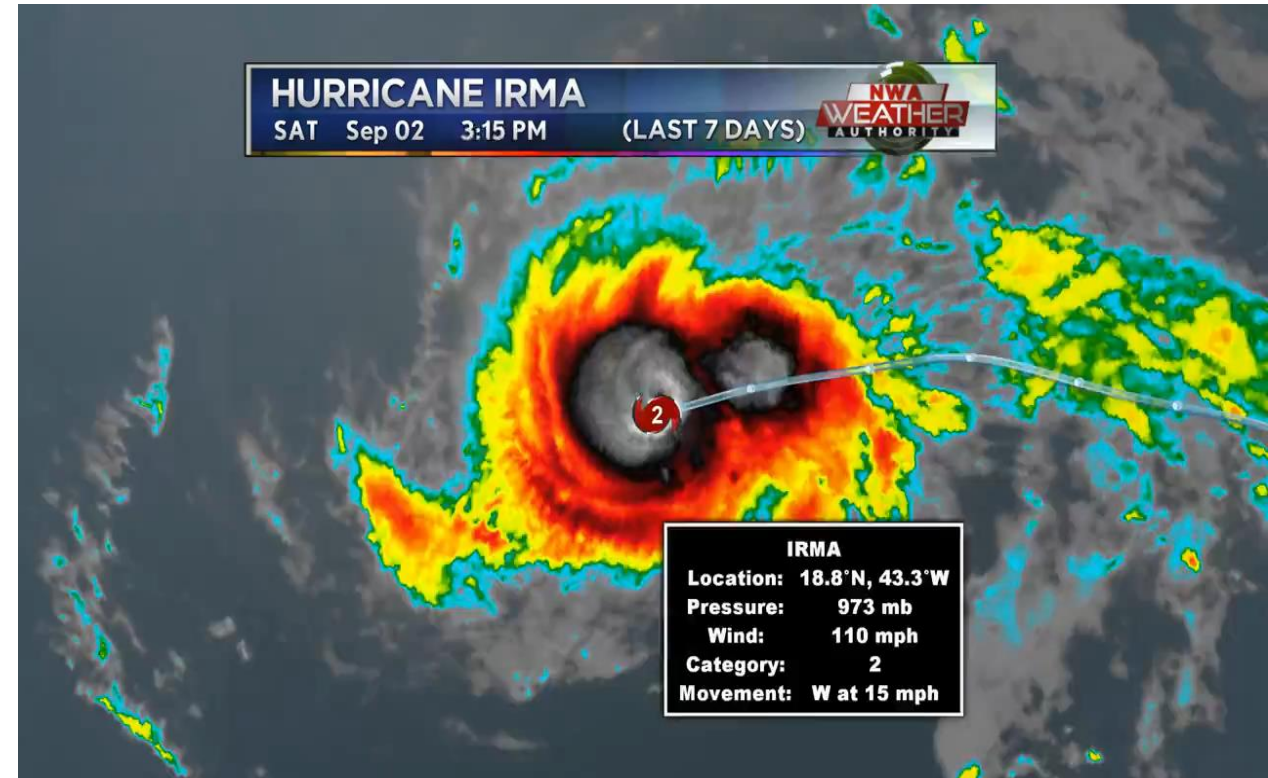
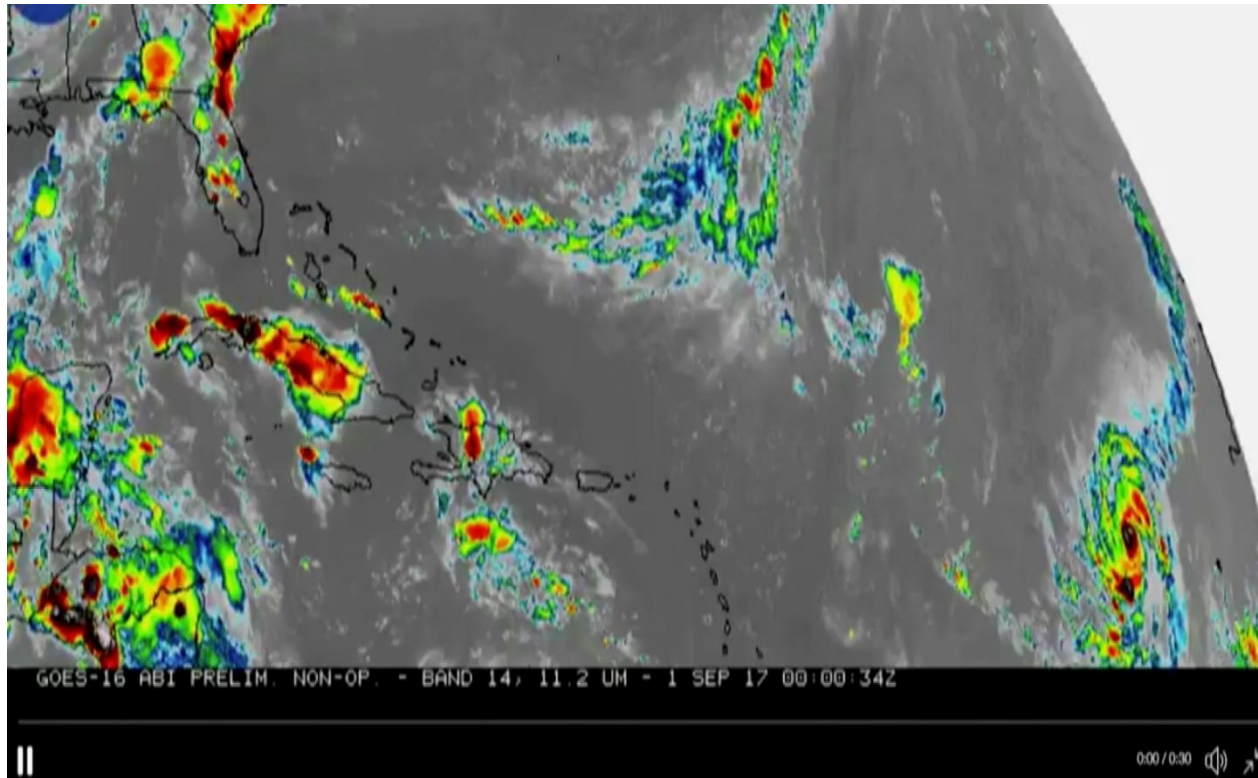
HURRICANE IRMA



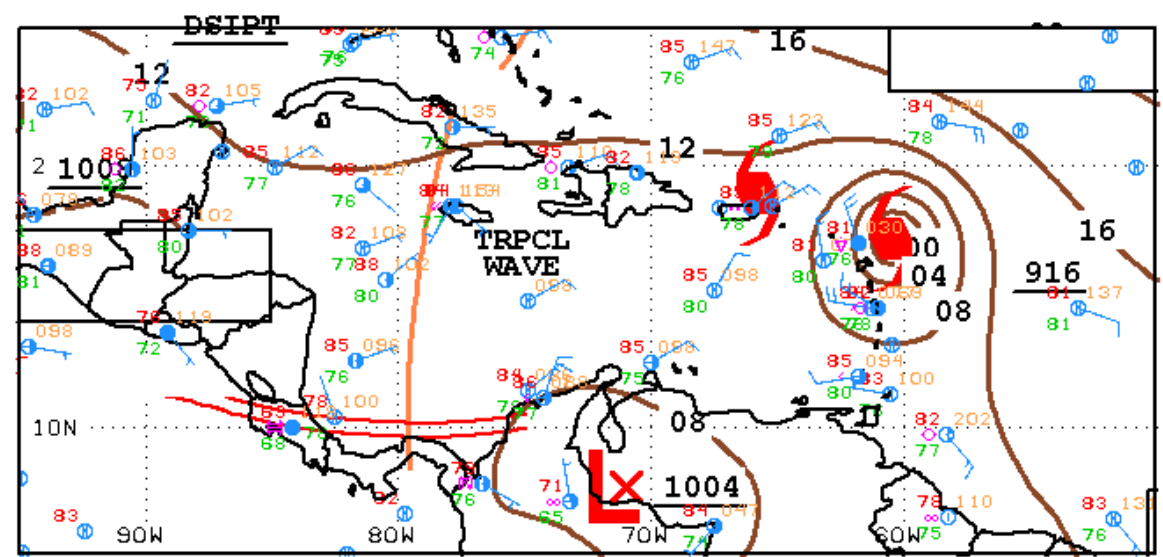
Hurricane Irma with its maximum intensity over the British Virgin Islands on September 6

Duration	August 30-September 15
Maximum winds	295 km/h (185 mph) (1 minute)
Minimum Pressure	914 mbar (hPa ; 26.99 inHg)
Damage	(Fourth most Expensive Hurricane probablemente)
Deaths	134 total Cabo Verde Islas de Barlovento Barbuda San Bartolomé Anguila San Martín Islas Vírgenes Antillas Mayores Cuba Puerto Rico Islas Turcas y Caicos Las Bahamas Estados Unidos Florida
Affectec Areas	

IRMA SATRLITE TRACK

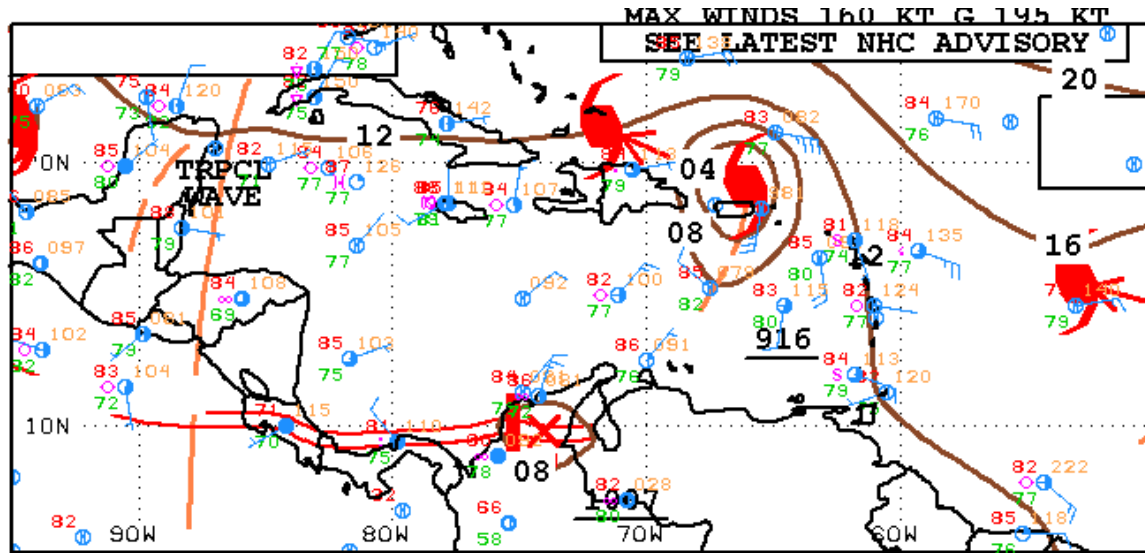


Synoptic map 6 and 7 of Sep. 2017



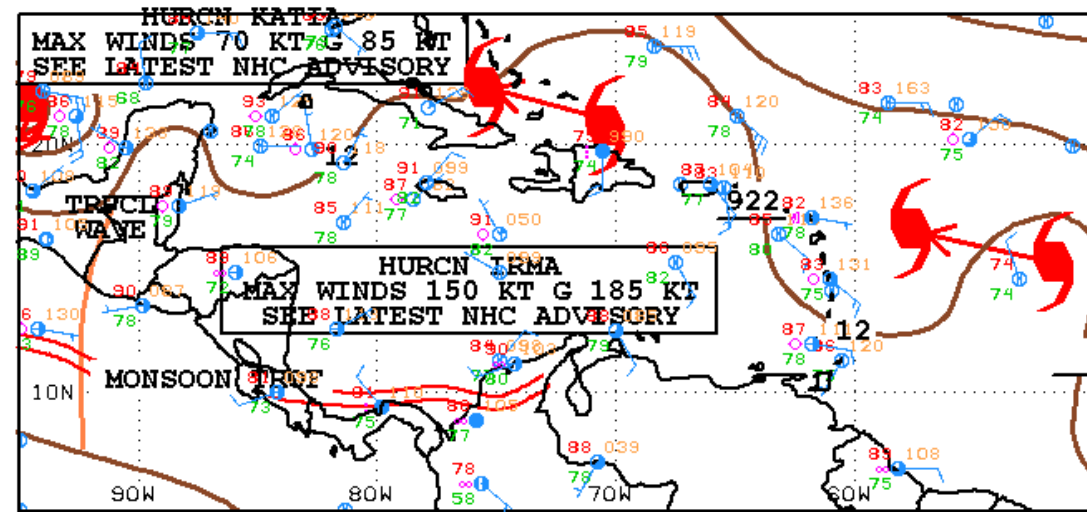
00Z CARIBBEAN SURFACE ANALYSIS
ISSUED:
Wed Sep 6 02:24:36 UTC 2017

NATIONAL HURRICANE CENTER
MIAMI, FLORIDA
BY TAFB ANALYST: HDC
COLLABORATING CENTERS: NHC OPC



00Z CARIBBEAN SURFACE ANALYSIS
ISSUED:
Thu Sep 7 02:32:28 UTC 2017

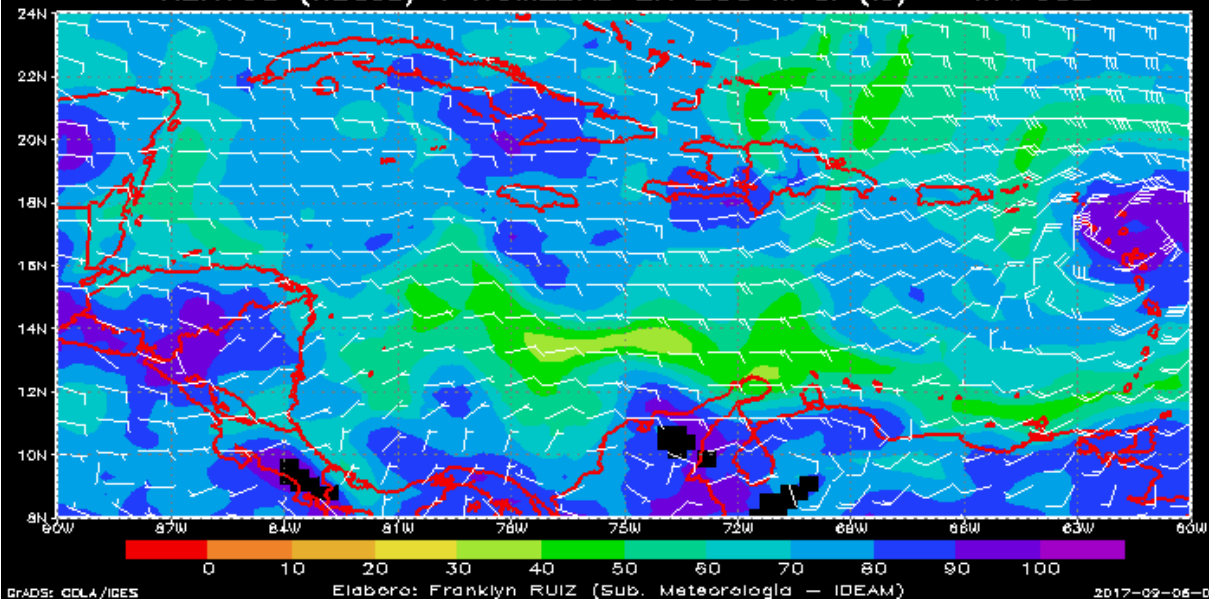
NATIONAL HURRICANE CENTER
MIAMI, FLORIDA
BY TAFB ANALYST: CAM
COLLABORATING CENTERS: NHC OPC



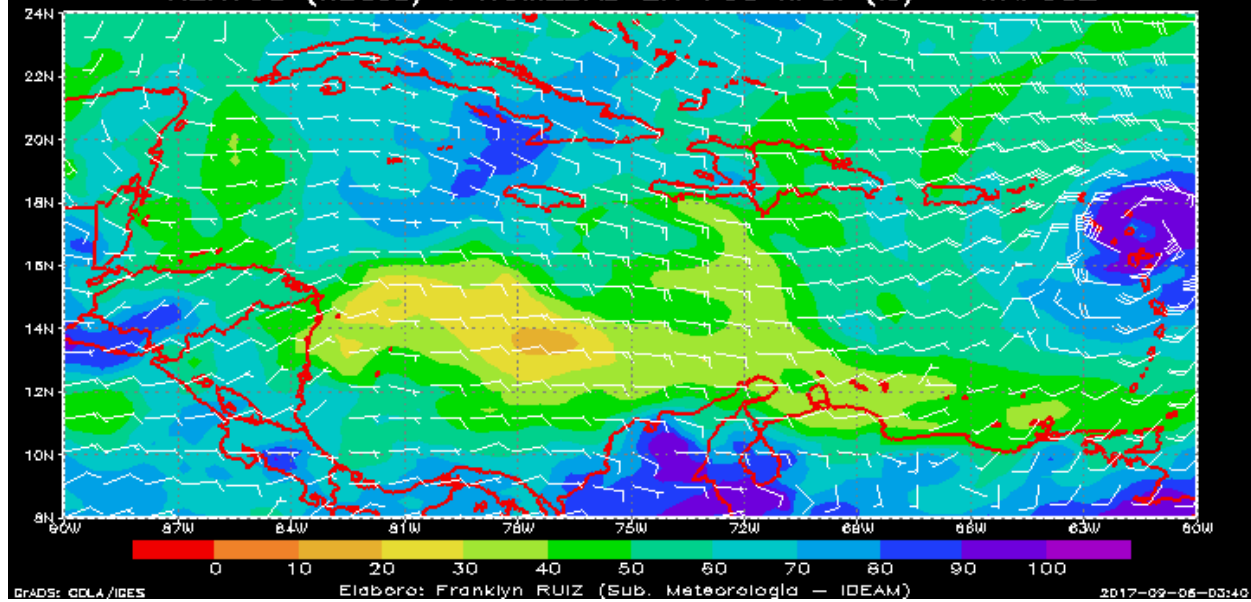
18Z CARIBBEAN SURFACE ANALYSIS
ISSUED:
Thu Sep 7 20:44:05 UTC 2017

NATIONAL HURRICANE CENTER
MIAMI, FLORIDA
BY TAFB ANALYST: CAM
COLLABORATING CENTERS: NHC OPC

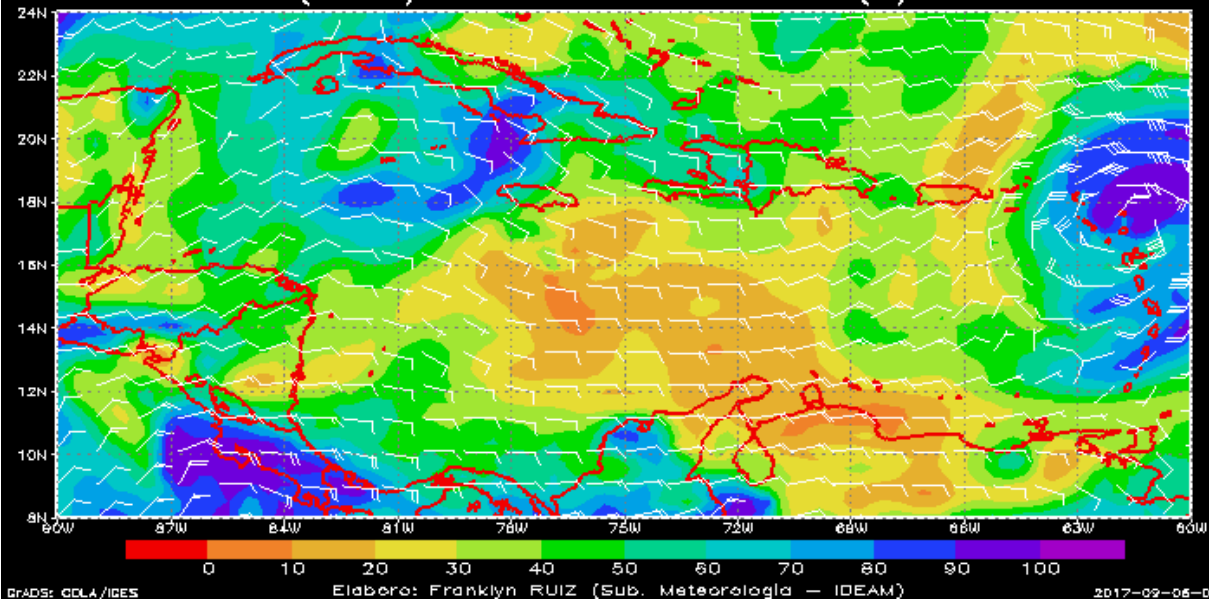
VALIDO PARA: 20170906 A LAS 00 HLC
VIENTOS (nudos) Y HUMEDAD EN 850 hPa. (%) - WRF00Z



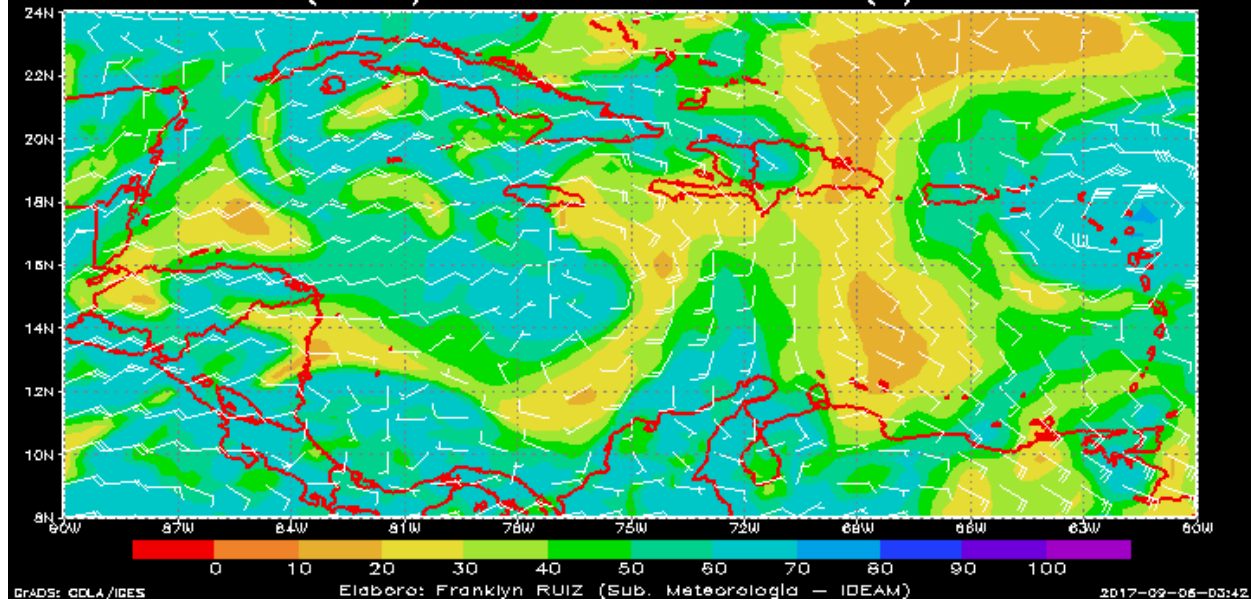
VALIDO PARA: 20170906 A LAS 00 HLC
VIENTOS (nudos) Y HUMEDAD EN 700 hPa. (%) - WRF00Z



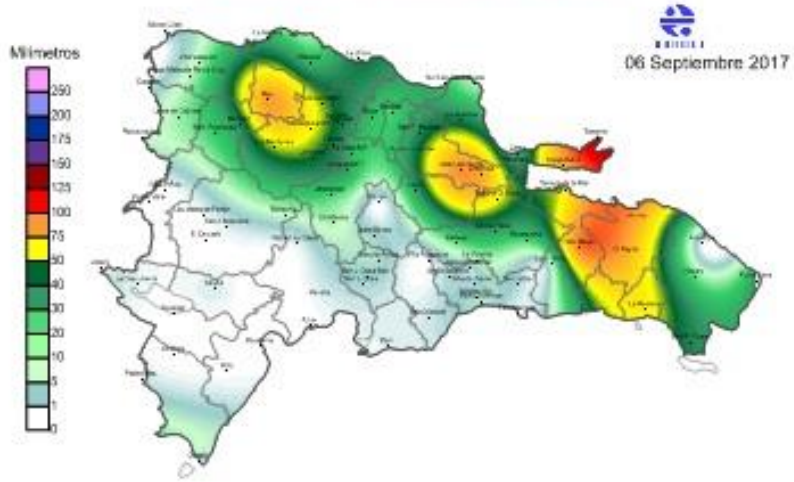
VALIDO PARA: 20170906 A LAS 00 HLC
VIENTOS (nudos) Y HUMEDAD EN 500 hPa. (%) - WRF00Z



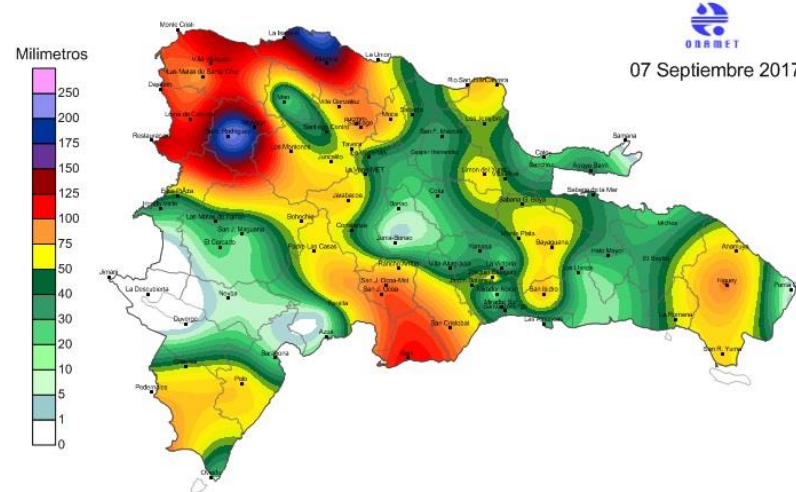
VALIDO PARA: 20170906 A LAS 00 HLC
VIENTOS (nudos) Y HUMEDAD EN 250 hPa. (%) - WRF00Z



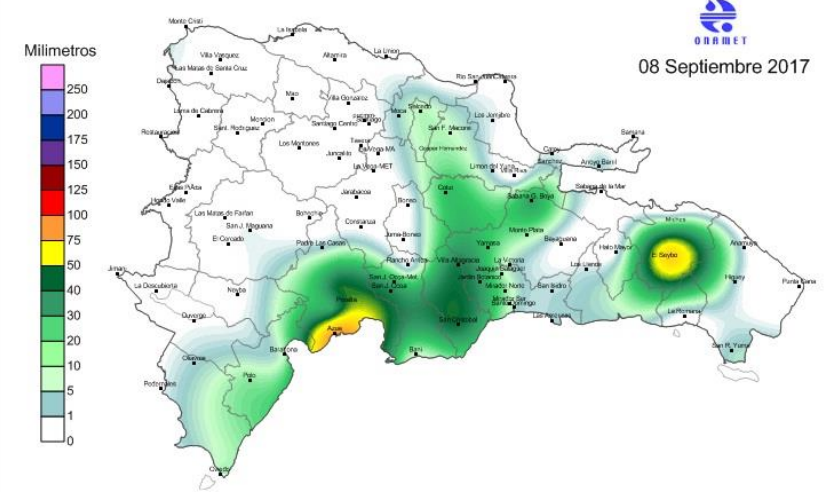
OFICINA NACIONAL DE METEOROLOGIA
Division de Hidrometeorologia
Valores de lluvias acumuladas (24 horas)



OFICINA NACIONAL DE METEOROLOGIA
Division de Hidrometeorologia
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OFICINA NACIONAL DE METEOROLOGIA
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Valores de lluvias acumuladas (24 horas)



OFICINA NACIONAL DE METEOROLOGIA

Division de Hidrometeorologia

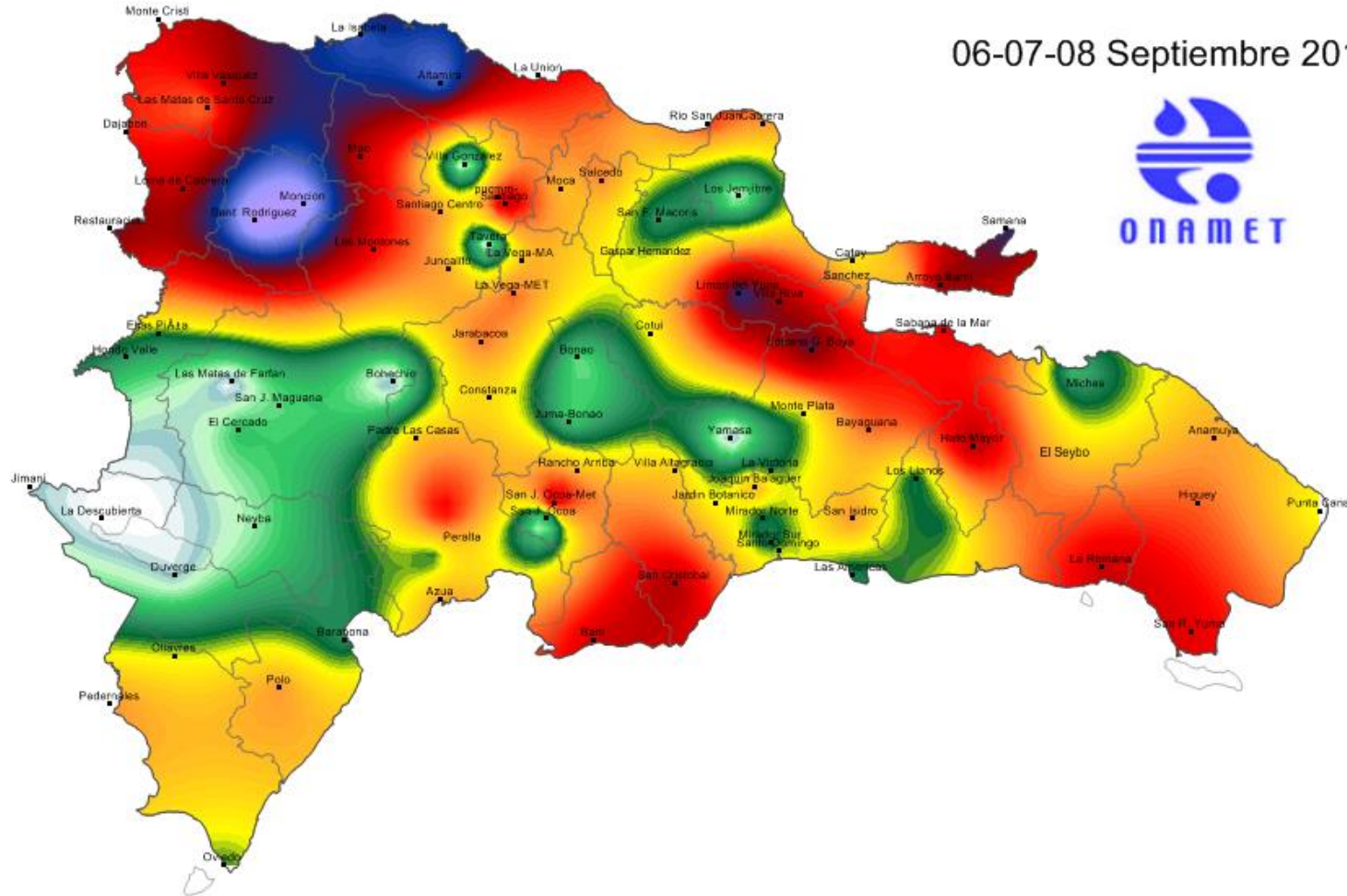
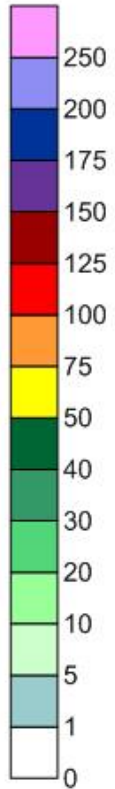
Mapa Especial del Huracan Irma

Valores de lluvias acumuladas (72 horas)

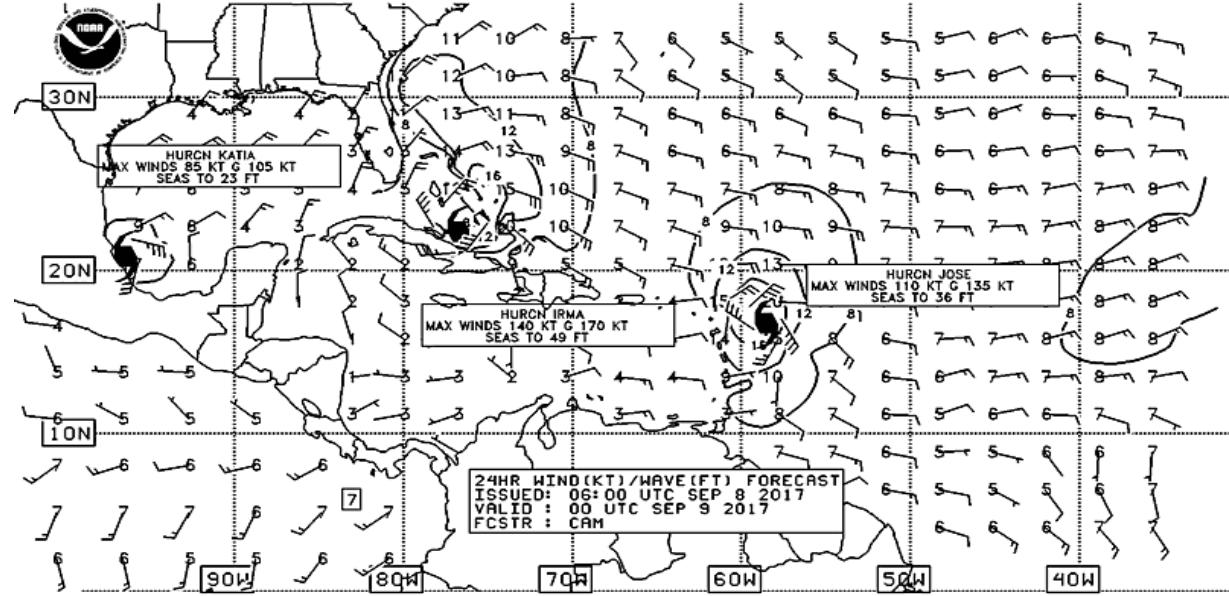
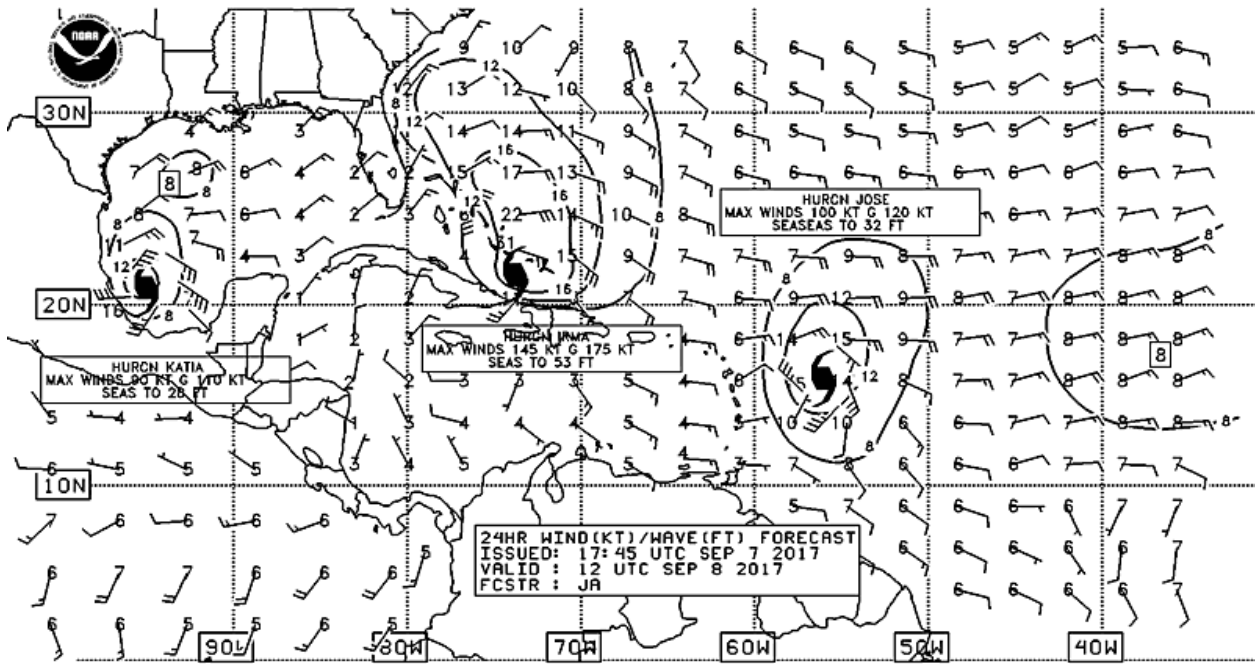
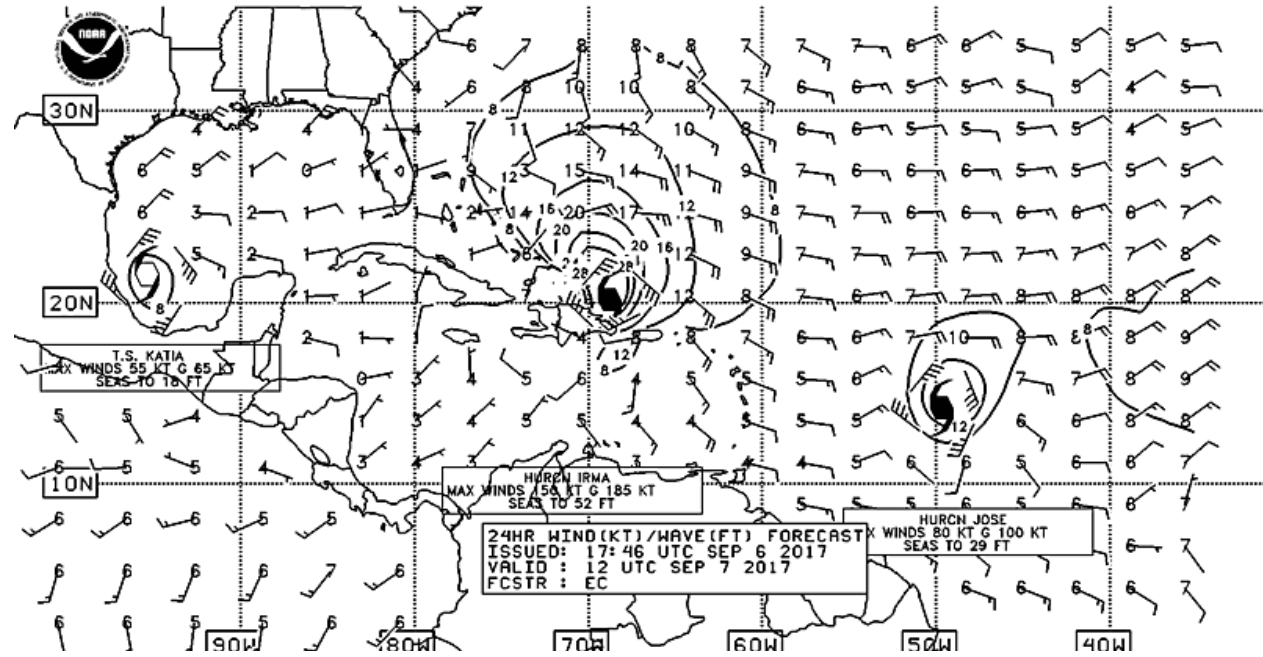
06-07-08 Septiembre 2017



Milímetros



Sig. Wave Map Show the AVG wave IN feet. 6, 7 and 8 of Sep. 2017



NWS/NHC/TROPICAL ANALYSIS AND FORECAST BRANCH
SIG WAVE HT IS SHOWN (THE AVG HT OF THE HIGHEST 1/3 OF THE WAVES)

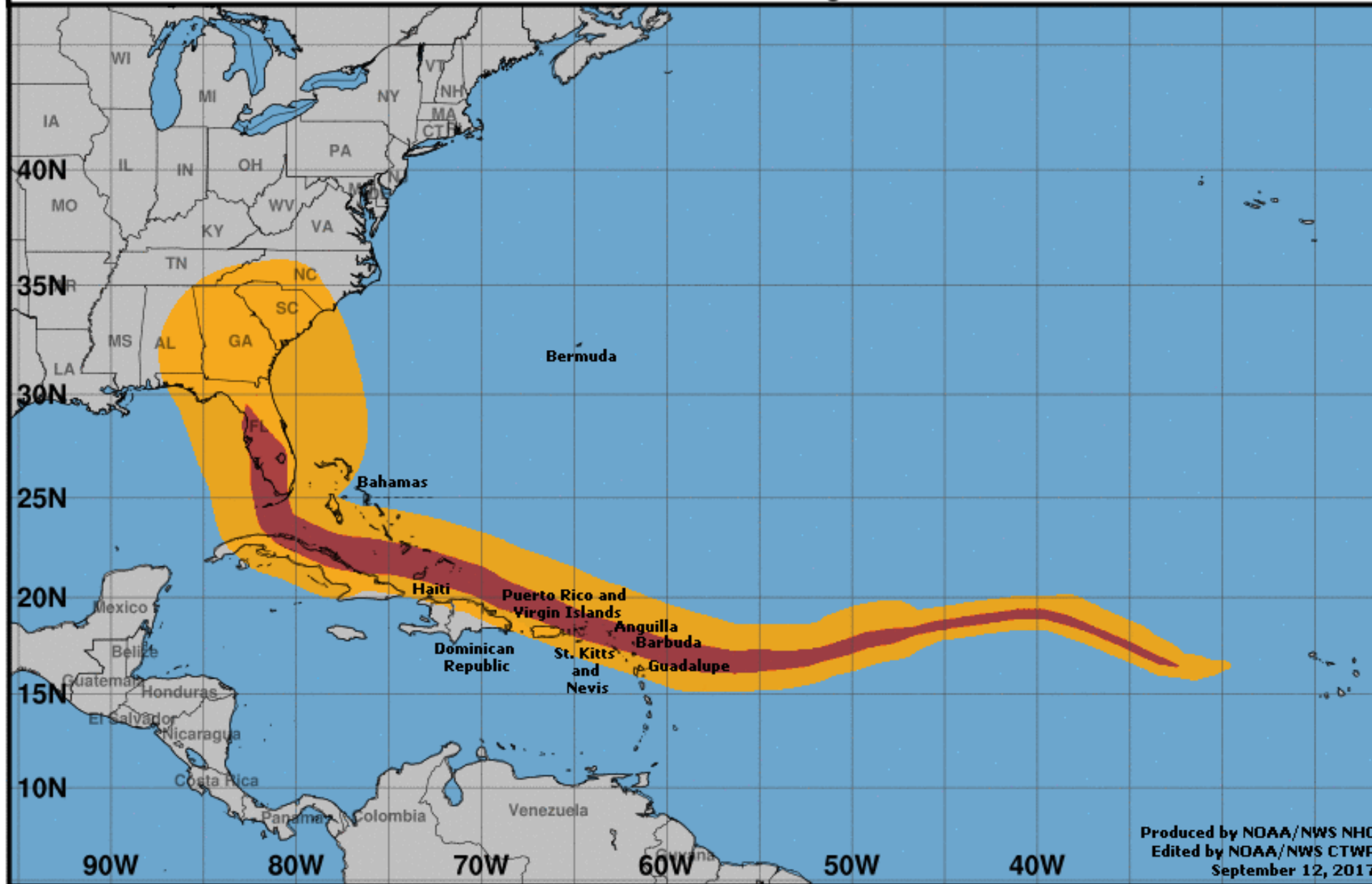
NWS/NHC/TROPICAL ANALYSIS AND FORECAST BRANCH
SIG WAVE HT IS SHOWN (THE AVG HT OF THE HIGHEST 1/3 OF THE WAVES)



National Weather Service - National Hurricane Center

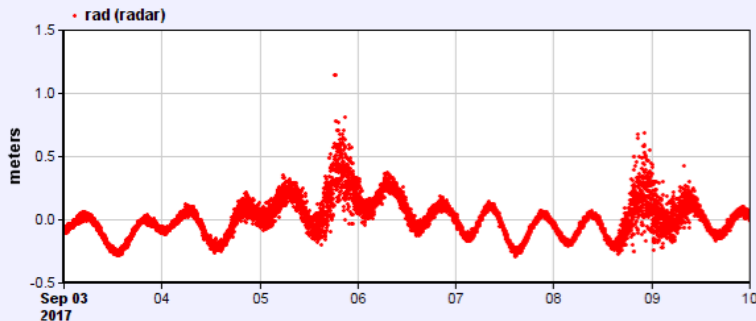
Tropical Storm and Hurricane Force Wind Swaths of Irma

From Advisories 1 Through 52



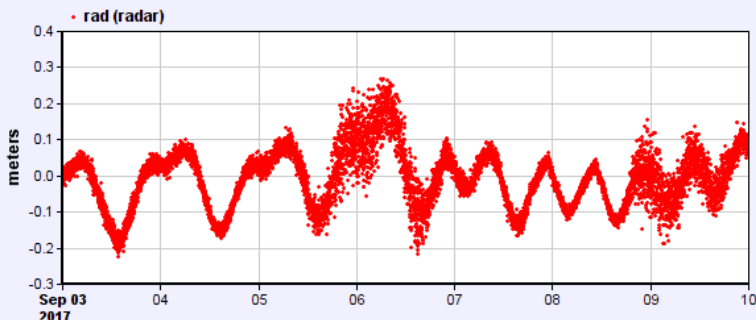
Guadeloupe

Sealevel at La Desirade Island, Guadeloupe station (offset: 0.709 m)



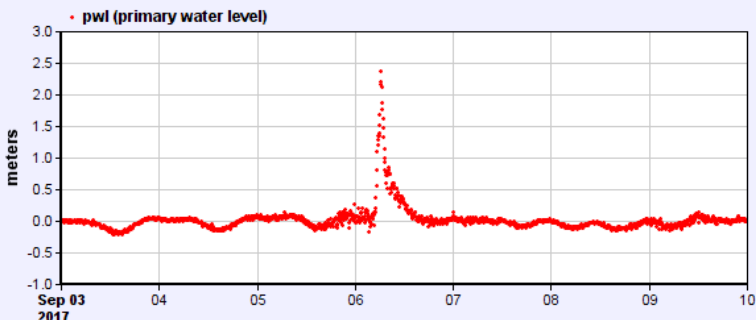
Guadeloupe

Sealevel at Deshaies, Guadeloupe station (offset: 0.753 m)



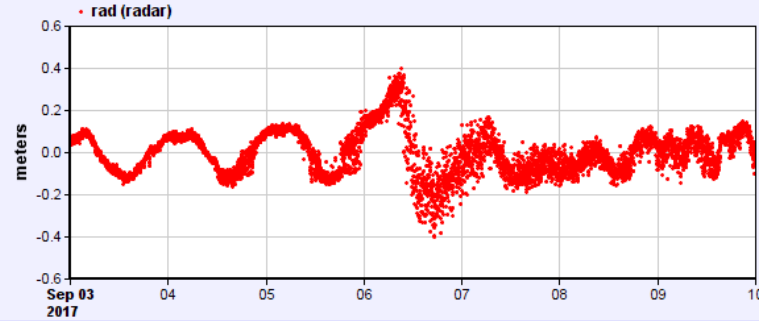
Barbuda

Sealevel at Barbuda station (offset: 0.251 m)



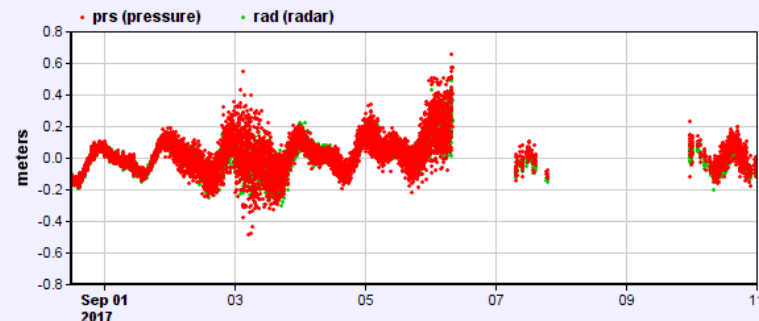
St. Kitts & Nevis

Sealevel at Basseterre (Coast Guard Base) station (offset: -3.006 m)



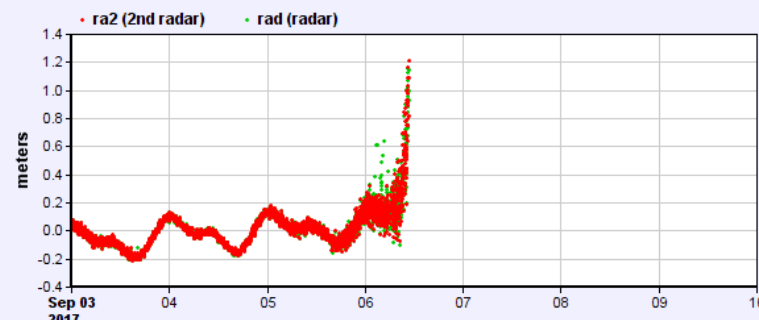
France

Sealevel at Saint Martin Island station (offset: 0.811 m)



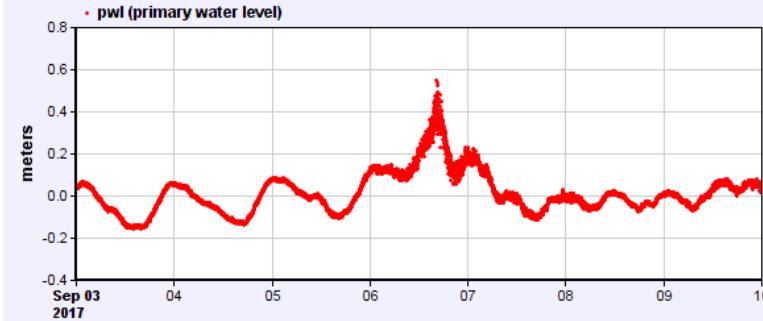
Anguilla

Sealevel at Blowing Point station (offset: 6.919 m)



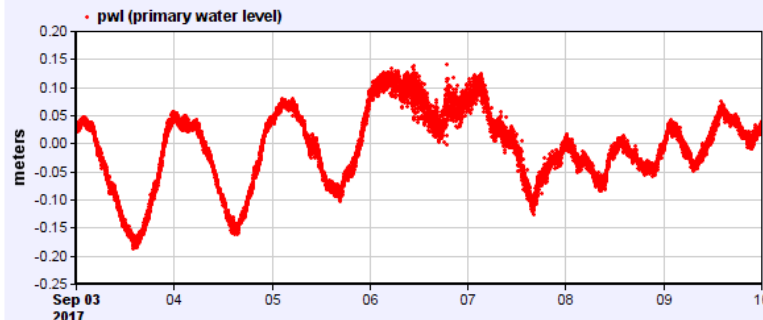
US Virgin Islands

Sealevel at St_Croix_VI station (offset: 0.241 m)



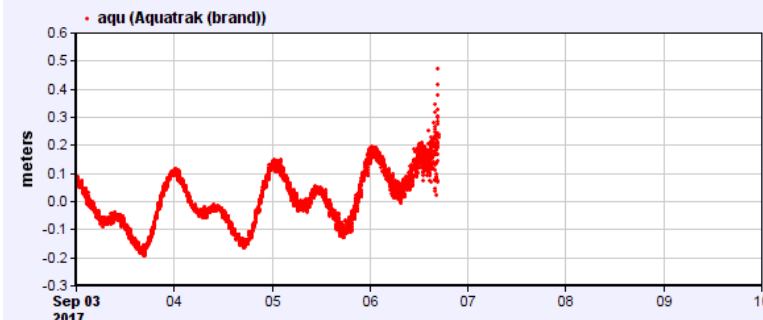
US Virgin Islands

Sealevel at Limetree_VI station (offset: 0.229 m)



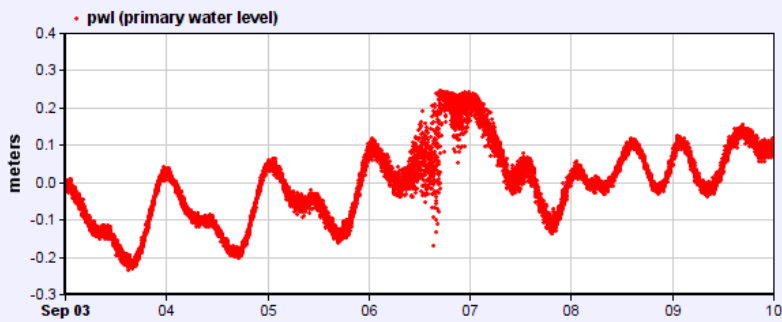
British Virgin Islands

Sealevel at Tortola station (offset: -2.886 m)



US Virgin Islands

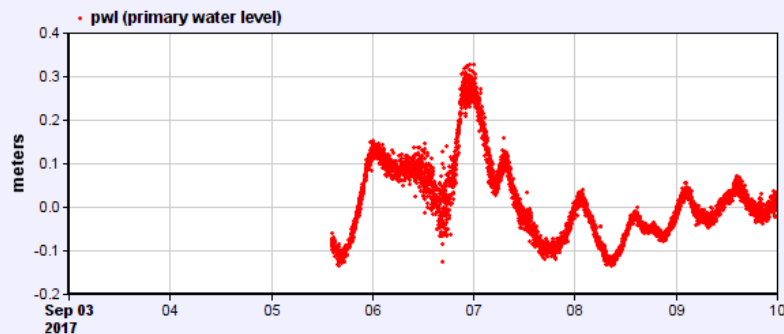
Sealevel at LameshurBayStJohnVI station (offset: 0.359 m)



From 2017-09-03 00:00+00:00 to 2017-09-10 00:00+00:00 ©IOC-VLIZ

Puerto Rico

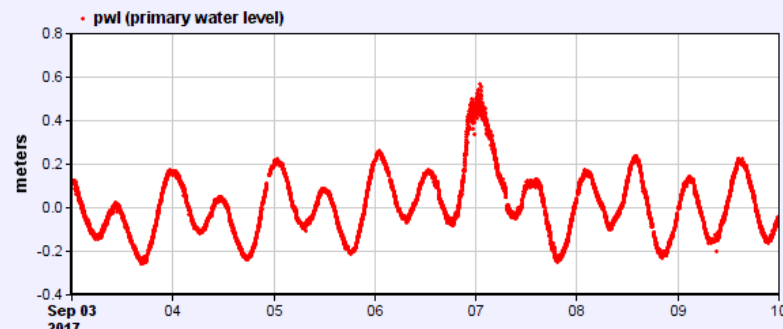
Sealevel at Vieques_PR station (offset: -3.206 m)



From 2017-09-03 00:00+00:00 to 2017-09-10 00:00+00:00 ©IOC-VLIZ

Puerto Rico

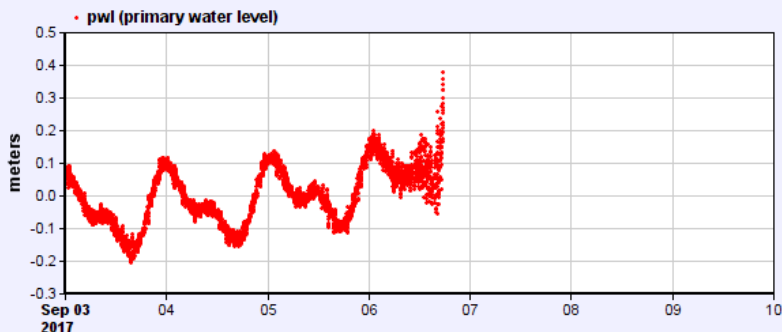
Sealevel at San_Juan_PR station (offset: -2.604 m)



From 2017-09-03 00:00+00:00 to 2017-09-10 00:00+00:00 ©IOC-VLIZ

US Virgin Islands

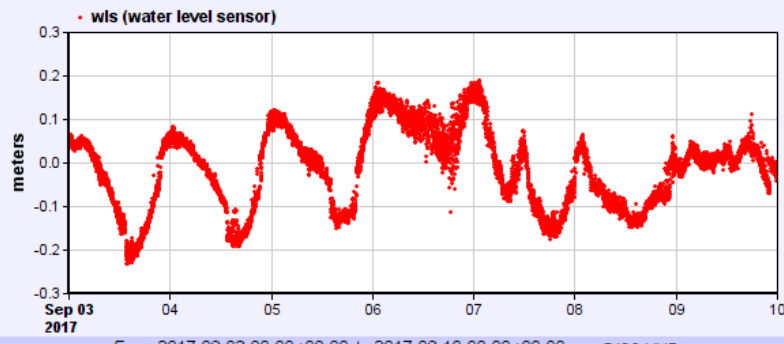
Sealevel at Charlotte-Amalie_VI station (offset: -2.857 m)



From 2017-09-03 00:00+00:00 to 2017-09-10 00:00+00:00 ©IOC-VLIZ

Puerto Rico

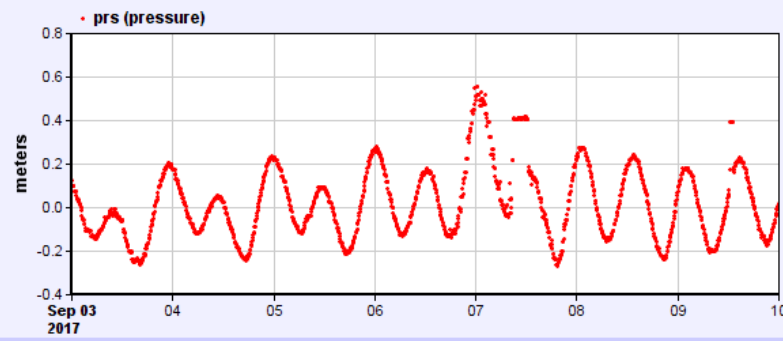
Sealevel at Yabucoa Harbor, PR station (offset: -5.922 m)



From 2017-09-03 00:00+00:00 to 2017-09-10 00:00+00:00 ©IOC-VLIZ

Puerto Rico

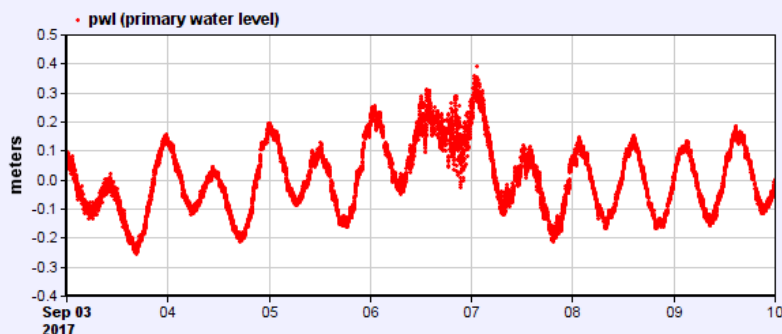
Sealevel at Arecibo station (offset: 0.405 m)



From 2017-09-03 00:00+00:00 to 2017-09-10 00:00+00:00 ©IOC-VLIZ

Puerto Rico

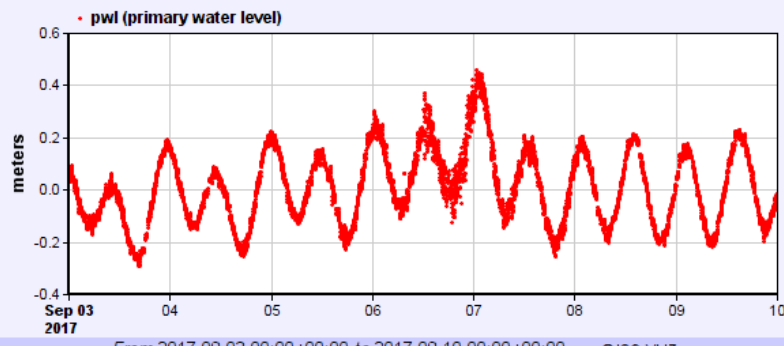
Sealevel at Isabel Segunda station (offset: -2.489 m)



From 2017-09-03 00:00+00:00 to 2017-09-10 00:00+00:00 ©IOC-VLIZ

Puerto Rico

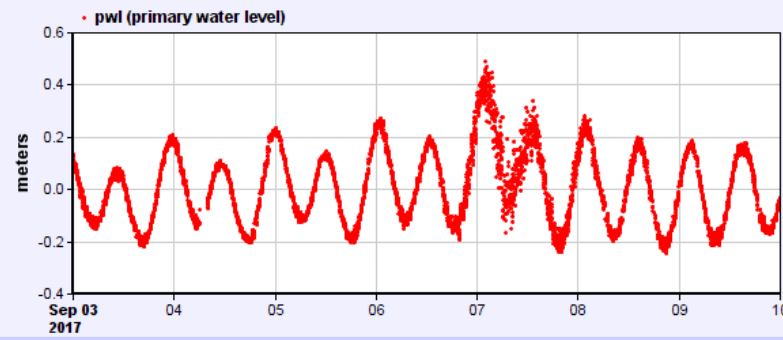
Sealevel at Fajardo_PR station (offset: -2.564 m)



From 2017-09-03 00:00+00:00 to 2017-09-10 00:00+00:00 ©IOC-VLIZ

Puerto Rico

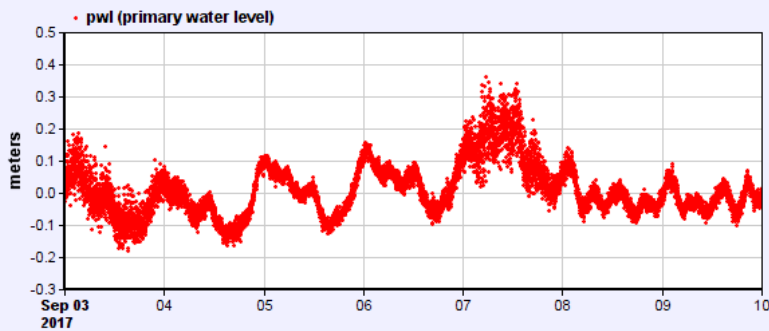
Sealevel at Mayaguez_PR station (offset: -2.794 m)



From 2017-09-03 00:00+00:00 to 2017-09-10 00:00+00:00 ©IOC-VLIZ

Puerto Rico

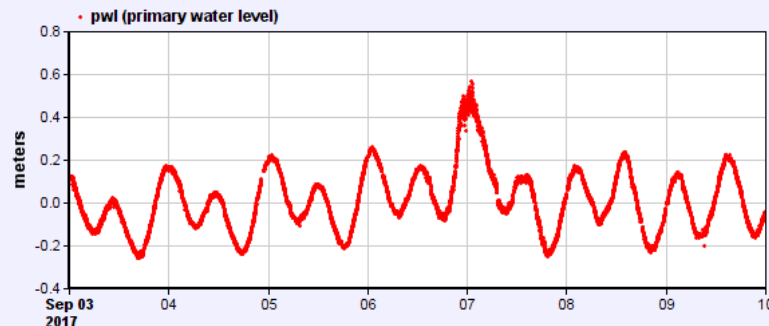
Sealevel at Mona_Island_PR station (offset: 0.32 m)



From 2017-09-03 00:00+00:00 to 2017-09-10 00:00+00:00 © IOC-VLIZ

Puerto Rico

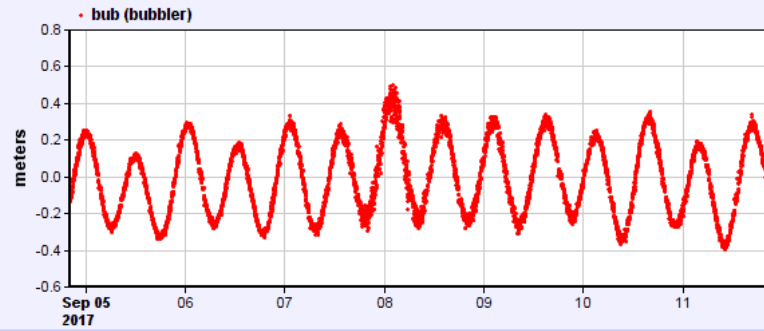
Sealevel at San_Juan_PR station (offset: -2.604 m)



From 2017-09-03 00:00+00:00 to 2017-09-10 00:00+00:00 © IOC-VLIZ

Haiti

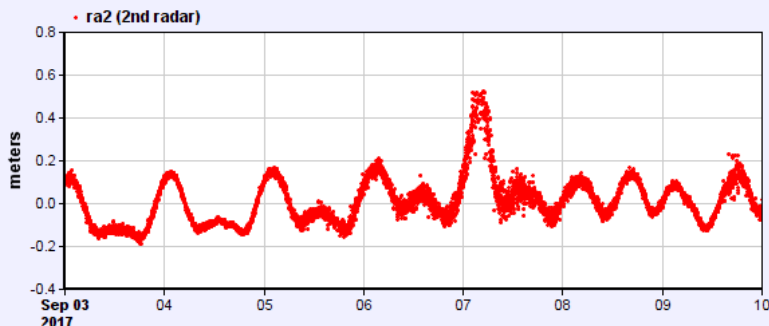
Sealevel at Cap-Haïtien station (offset: 1.478 m)



From 2017-09-04 20:11+00:00 to 2017-09-11 20:11+00:00 © IOC-VLIZ

Dominican Republic

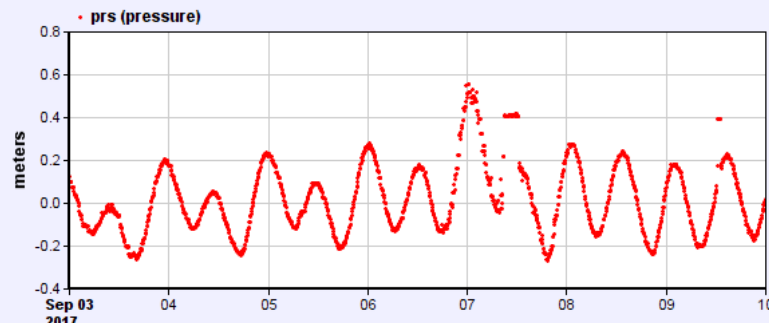
Sealevel at Punta Cana station (offset: 5.657 m)



From 2017-09-03 00:00+00:00 to 2017-09-10 00:00+00:00 © IOC-VLIZ

Puerto Rico

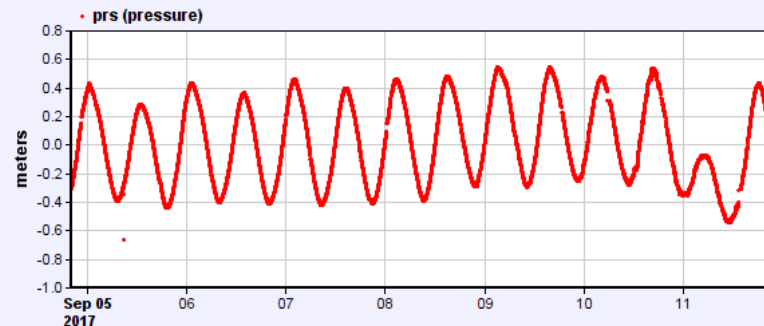
Sealevel at Arcibo station (offset: 0.405 m)



From 2017-09-03 00:00+00:00 to 2017-09-10 00:00+00:00 © IOC-VLIZ

Bahamas

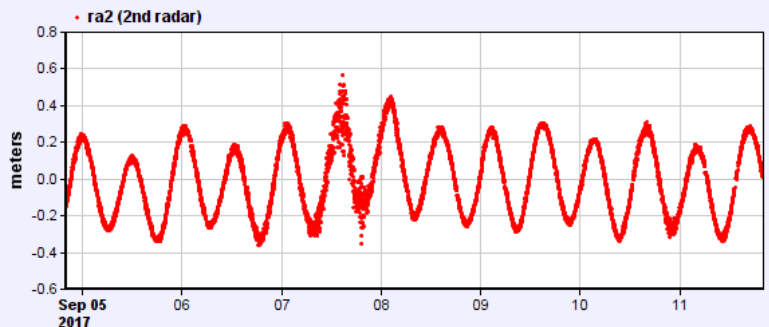
Sealevel at Settlement pt station (offset: 0.6625 m)



From 2017-09-04 20:17+00:00 to 2017-09-11 20:17+00:00 © IOC-VLIZ

Dominican Republic

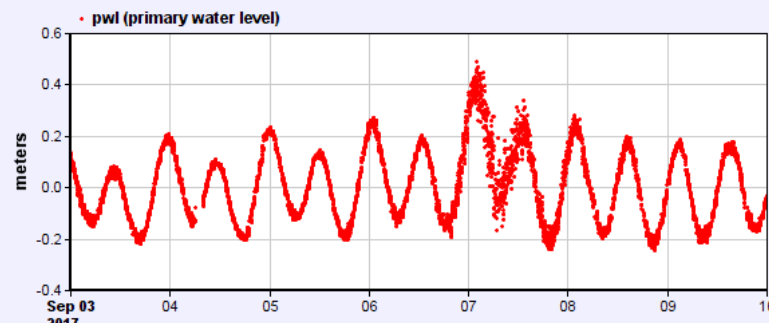
Sealevel at Puerto Plata station (offset: 4.895 m)



From 2017-09-04 20:07+00:00 to 2017-09-11 20:07+00:00 © IOC-VLIZ

Puerto Rico

Sealevel at Mayaguez_PR station (offset: -2.794 m)



From 2017-09-03 00:00+00:00 to 2017-09-10 00:00+00:00 © IOC-VLIZ



Temporada Ciclónica

Huracán Irma

32 Provincias En Alertas

Elaborado el 07 de Septiembre de 2017 Actualizado a las 11:00 AM



En Alerta Roja **24**
En Alerta Amarilla **05**
En Alerta Verde **03**

AlertaCOE GICOE Para mayor información: www.coe.gob.do
www.instagram.com/coe_rd
[www.twitter.com/COE_RD](https://twitter.com/COE_RD)

647,578

Number of people living in affectect areas.

24,076

Number of people saved rescueand displaced to safe areas, because they are in risk.

15,829

Number of people affected directly

1,885,696

Number of people affected inderectly

SUMMARY OF THE SITUATION.

1 Severity of the crisis. Multiple damages to people, their property and infrastructure in several provinces due to a prolonged period of rain germinated by the effects of several troughs, which generated the mobilization of local and national resources to respond to the emergency, in addition to keeping alert (32) provinces and producing a level of impact for national scope (2), because the mobilization of additional local resources was required to attend the emergency, this implies a level of affectation that goes from moderate impact to strong damages.

The most severe damages were concentrated in (5) provinces: Samana, Maria Trinidad Sanchez, Puerto Plata, Montecristi and Dajabon. In these provinces the largest number of people mobilized, homes affected and destroyed, as well as damaged or destroyed road infrastructure, basic services affected, loss of livelihoods and severe damage to agriculture and livestock were manifested. During the emergency, no deaths were reported due to the direct effects of Huranan Irma.

Priority needs

It was identified as a priority to supply the deficiencies of mattresses, blankets, sheets, mosquito nets, drinking water, food and vector control and the habilitation of alternate routes of communication.

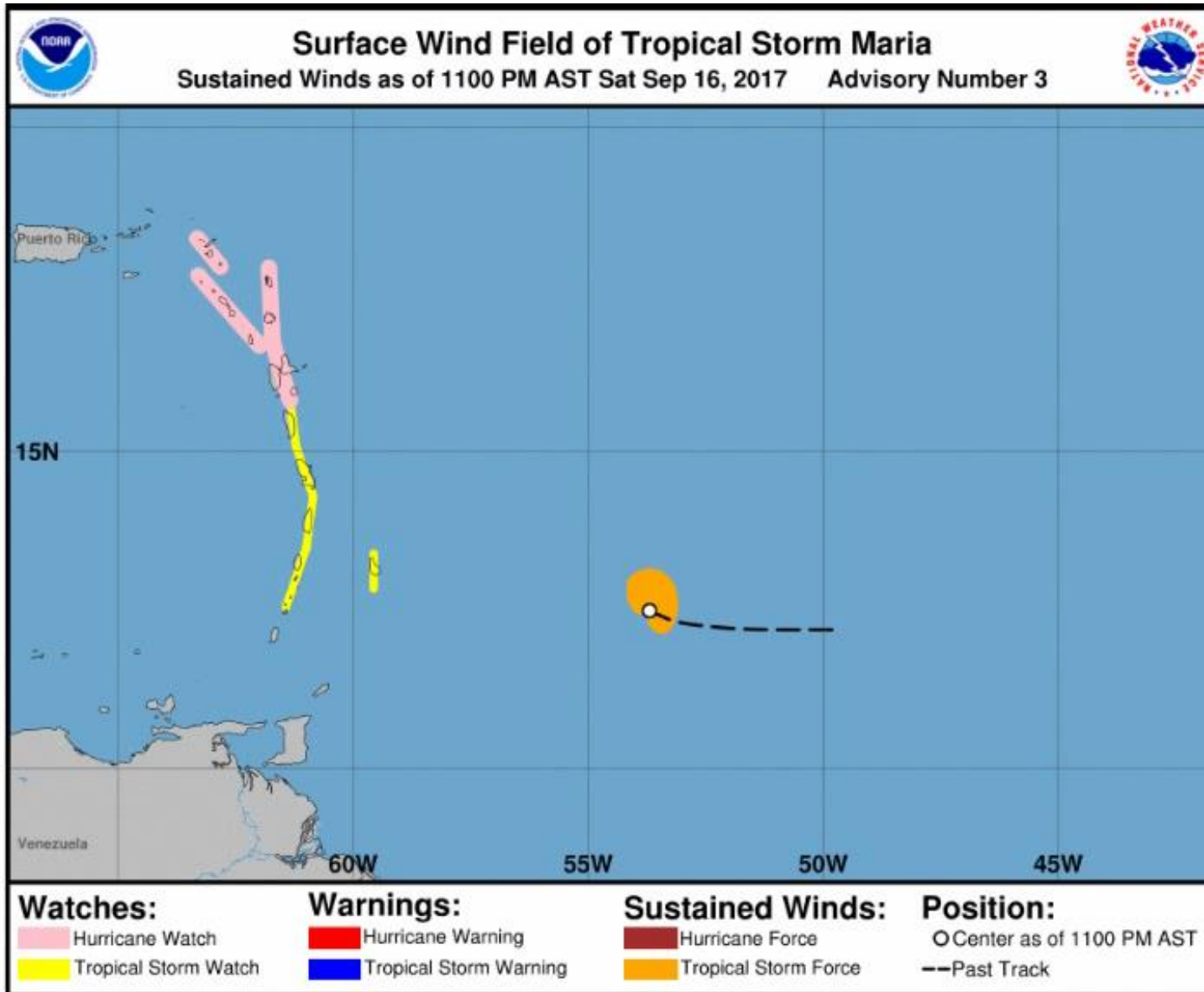
Government response

The Government and its official body for the planning and preparation of the response kept the Emergency Operations Center (COE) activated for more than (9) days to coordinate institutional and inter-institutional and institutional actions.

Operational management of this adverse event was concentrated in search, rescue and rescue actions, attention to people, dissemination of information, people evacuation, pre-positioning of equipment, aircraft and boats, people, supplies and materials, strengthening of hospitals with medicines and expendable material, decompilation and clearance of roads, shelters, health, vector control, water quality, epidemiological surveillance, proper management and final disposal of solid waste. In addition to the humanitarian assistance that was developed fundamentally by the Social Plan of the Presidencies and the Economic Eaters, who distributed thousands of food rations, mattresses, sheets, mosquito nets and distribution of drinking water.

Población total de las 0provincias con mayor nivel afectación. 647,578		Numero de Personas afectadas directas. 15,829	% de la población total afectada 2.4%
Albergues aperturados 196	Numero de personas en Albergues 12,960	00 Heridos	00 Fallecidos

HURRICANE MARIA



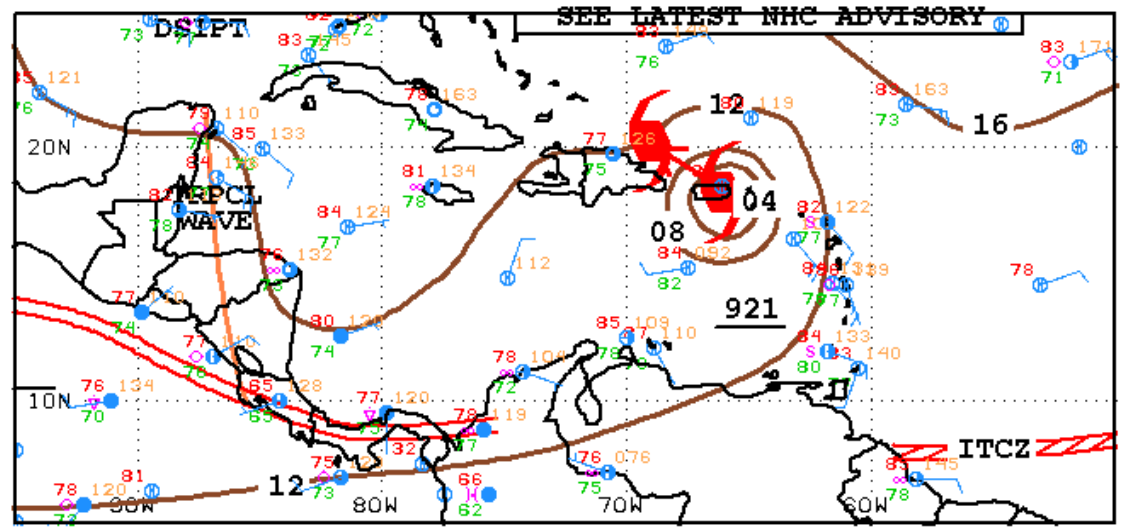
Hurricane Maria with its maximum intensity on September 19

Duration	September 15 to October 1
Maximum winds	280 km/h (175 mph) (1 minute)
Minimum Pressure	908 mbar (hPa ; 26.81 inHg)
Damage	Estimated about 105 billion (USD 2017),
Deaths	1298 total

Affectec Areas

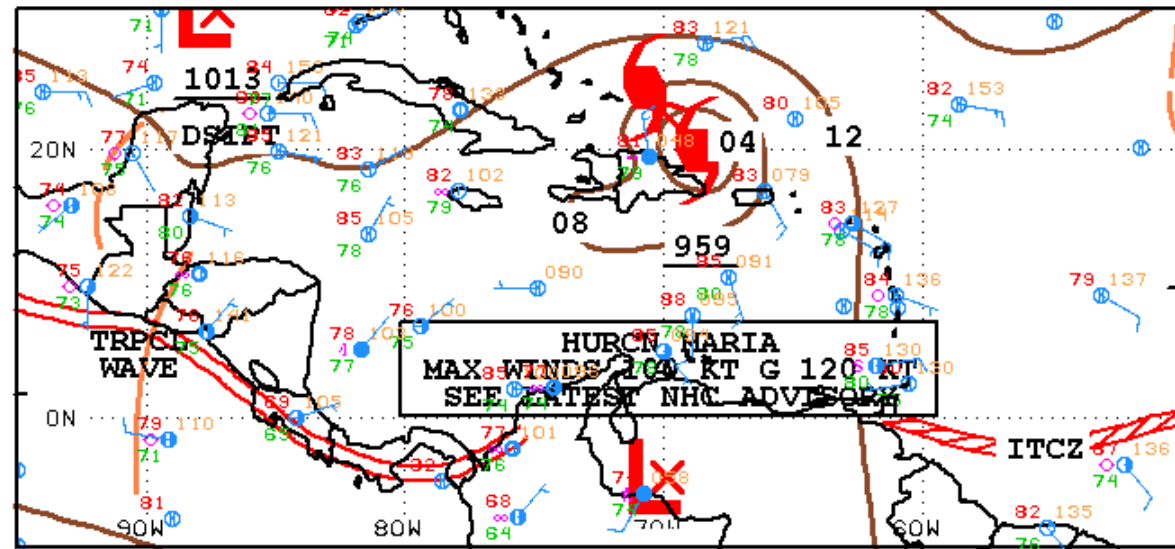
- [Islas de Barlovento](#)
- [Puerto Rico](#)
- [República Dominicana](#)
- [Islas Turcas y Caicos](#)
- [Bahamas](#)
- [Bermudas](#)
- [Islas Vírgenes](#)
- [Carolina del Sur](#)
- [Carolina del Norte](#)
- [Virginia](#)
- [Pennsylvania](#)
- [Nueva Jersey](#)
- [Nueva York](#)

Synoptic Map 20 to 22 of Sep. 2017



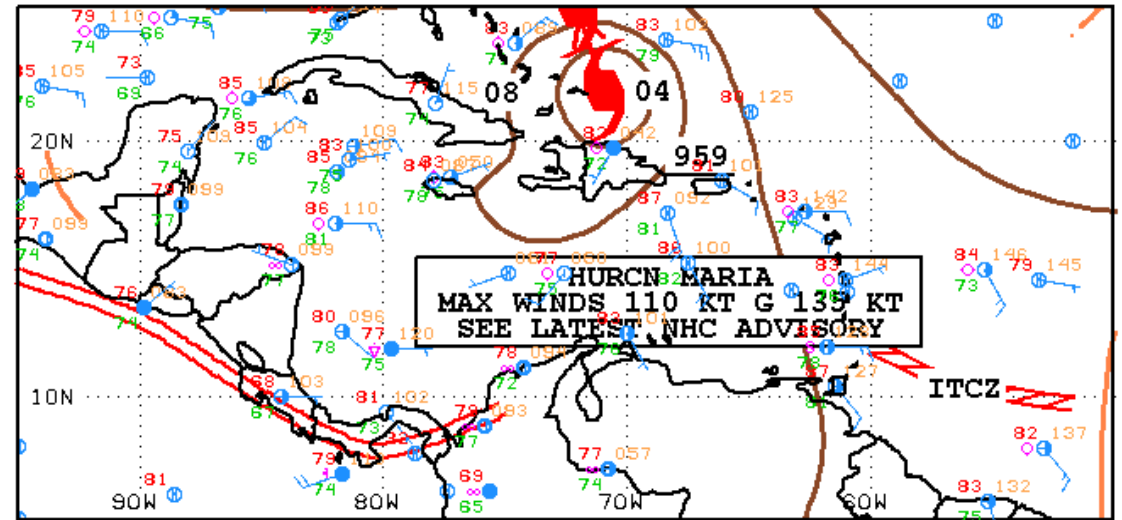
12Z CARIBBEAN SURFACE ANALYSIS
ISSUED:
Wed Sep 20 14:41:00 UTC 2017

NATIONAL HURRICANE CENTER
MIAMI, FLORIDA
BY TAFB ANALYST: FORMOSA
COLLABORATING CENTERS: NHC OPC



12Z CARIBBEAN SURFACE ANALYSIS
ISSUED:
Thu Sep 21 14:34:32 UTC 2017

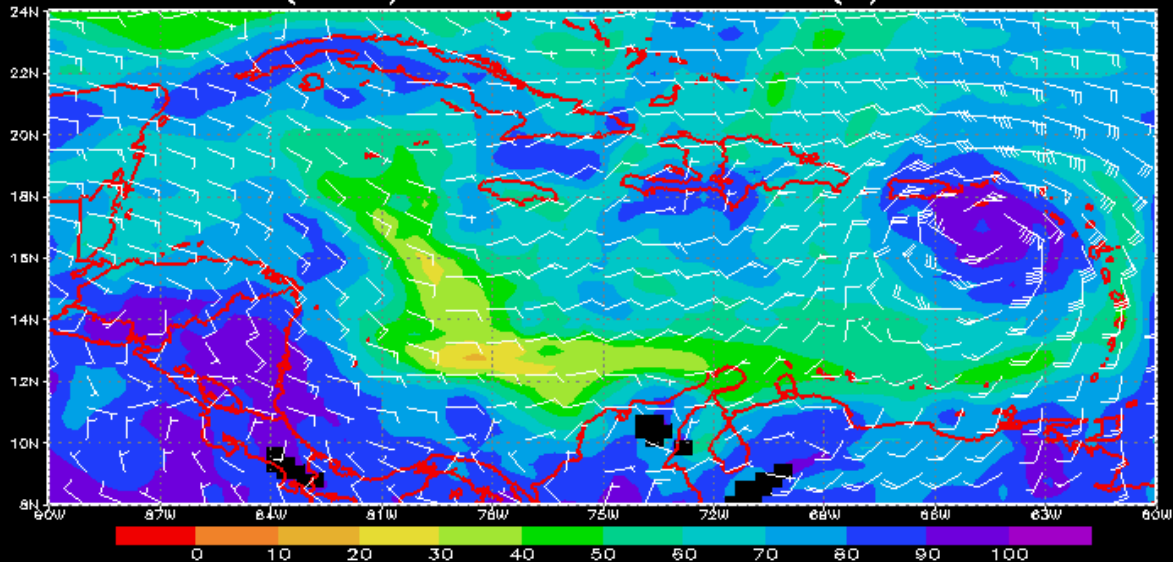
NATIONAL HURRICANE CENTER
MIAMI, FLORIDA
BY TAFB ANALYST: FORMOSA
COLLABORATING CENTERS: NHC OPC



12Z CARIBBEAN SURFACE ANALYSIS
ISSUED:
Fri Sep 22 14:44:43 UTC 2017

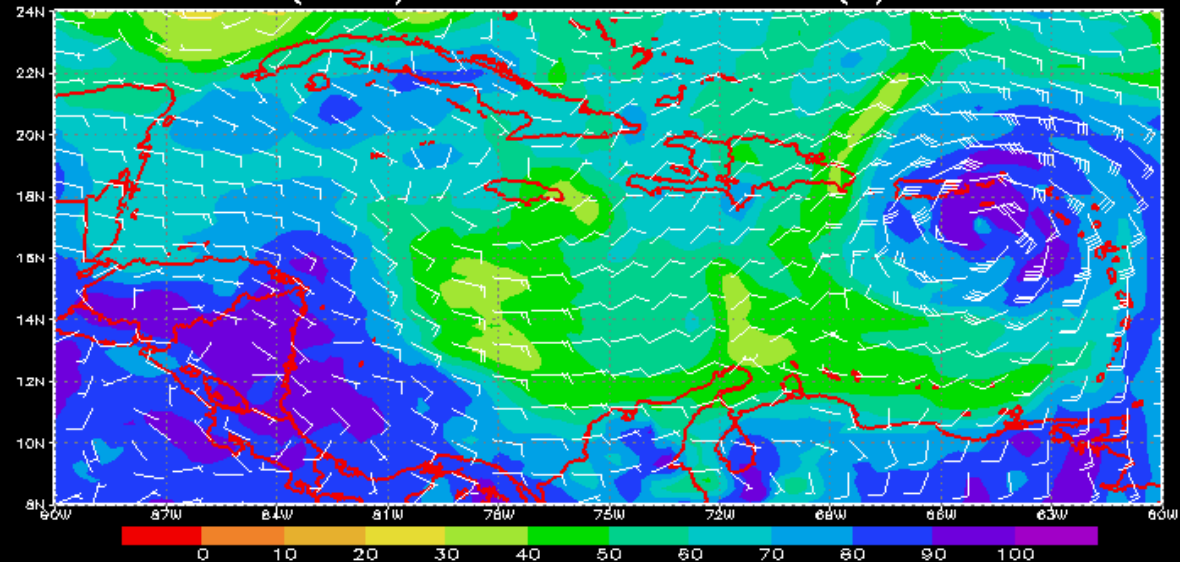
NATIONAL HURRICANE CENTER
MIAMI, FLORIDA
BY TAFB ANALYST: FORMOSA
COLLABORATING CENTERS: NHC OPC

VALIDO PARA: 20170920 A LAS 00 HLC
VIENTOS (nudos) Y HUMEDAD EN 850 hPa. (%) - WRF00Z



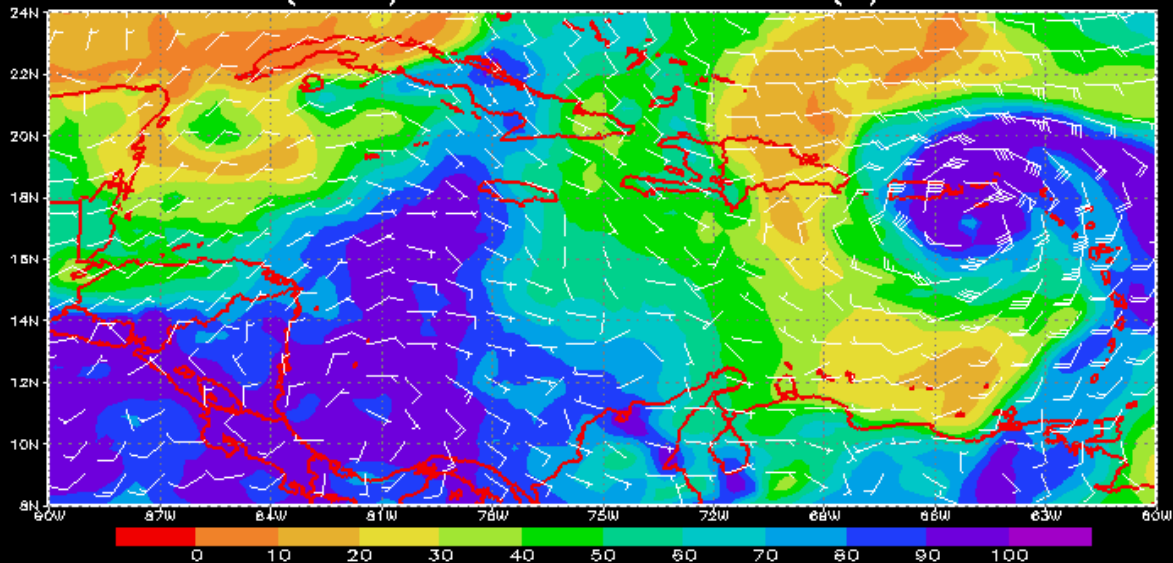
BRADS: CDLA/IDES Elabero: Franklyn RUIZ (Sub. Meteorología - IDEAM) 2017-09-20-03:37

VALIDO PARA: 20170920 A LAS 00 HLC
VIENTOS (nudos) Y HUMEDAD EN 700 hPa. (%) - WRF00Z



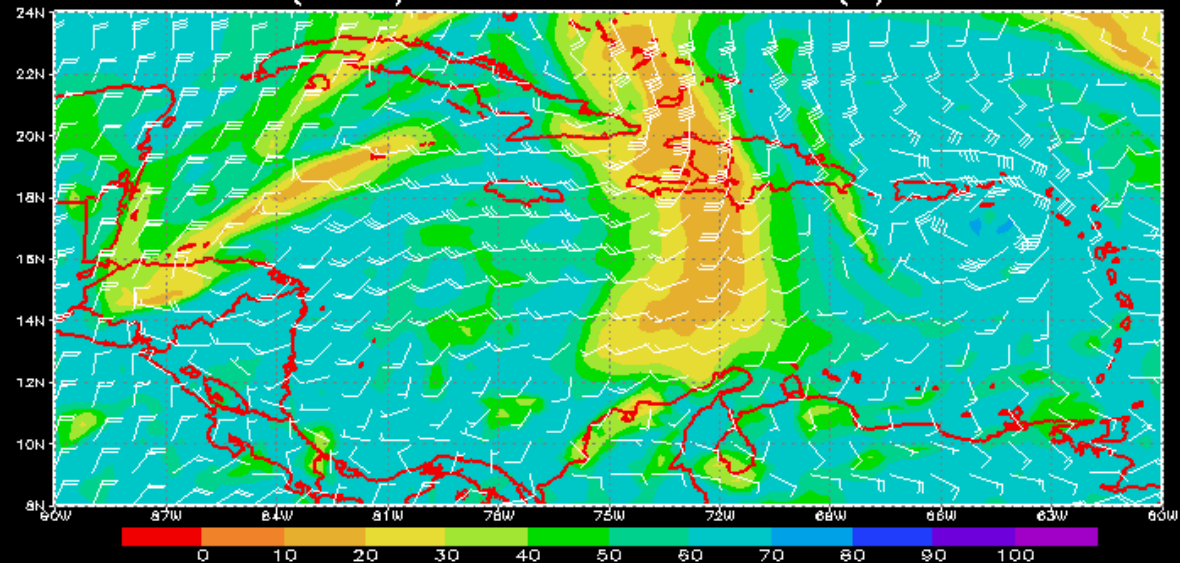
BRADS: CDLA/IDES Elabero: Franklyn RUIZ (Sub. Meteorología - IDEAM) 2017-09-20-03:38

VALIDO PARA: 20170920 A LAS 00 HLC
VIENTOS (nudos) Y HUMEDAD EN 500 hPa. (%) - WRF00Z



BRADS: CDLA/IDES Elabero: Franklyn RUIZ (Sub. Meteorología - IDEAM) 2017-09-20-03:39

VALIDO PARA: 20170920 A LAS 00 HLC
VIENTOS (nudos) Y HUMEDAD EN 250 hPa. (%) - WRF00Z

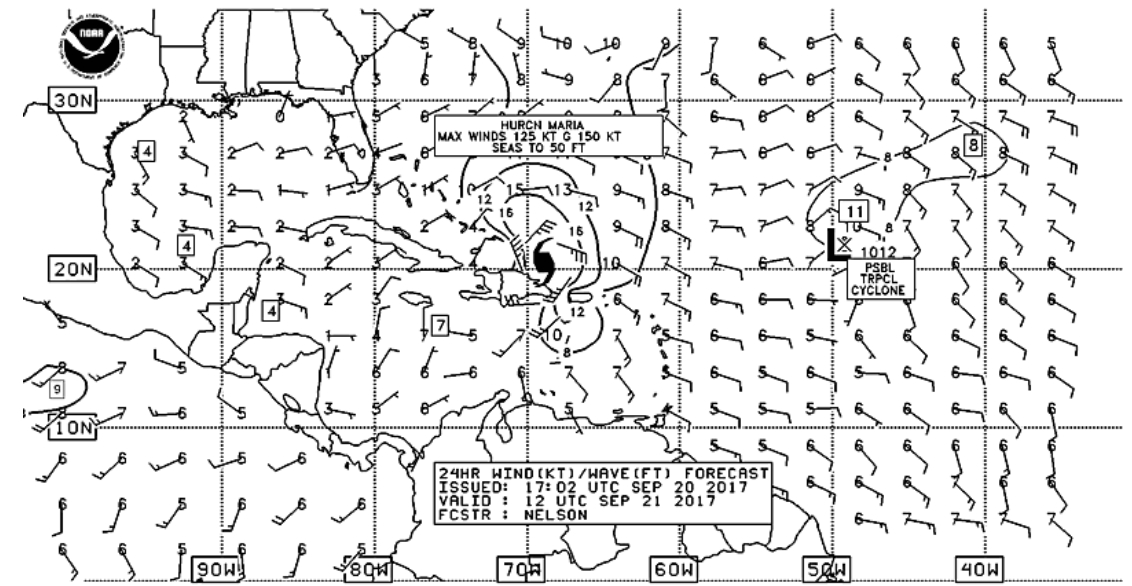


BRADS: CDLA/IDES Elabero: Franklyn RUIZ (Sub. Meteorología - IDEAM) 2017-09-20-03:41

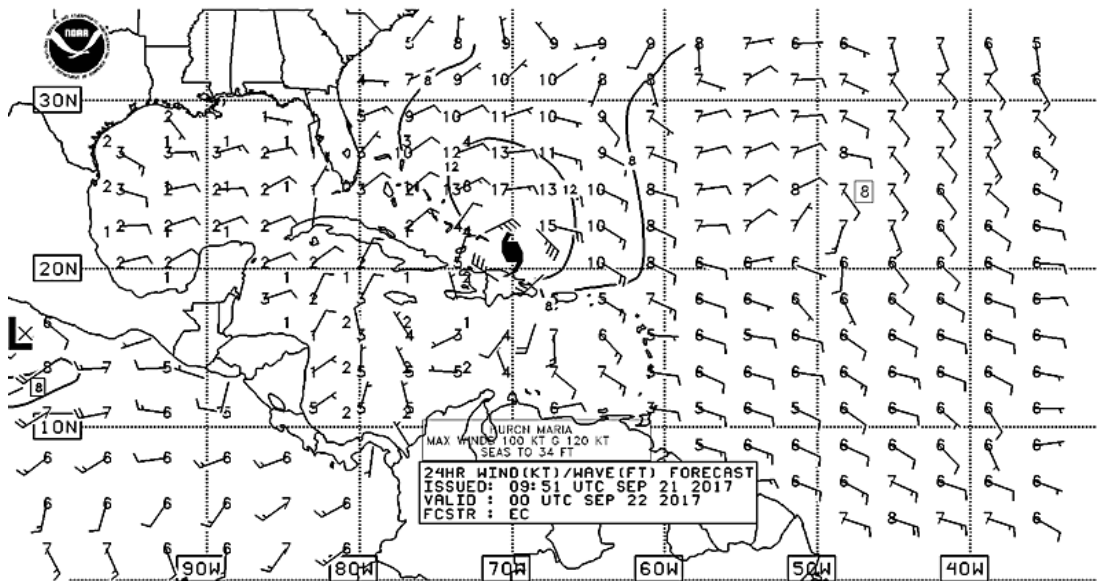
Sig. Wave Map

Show the AVG wave in feet.

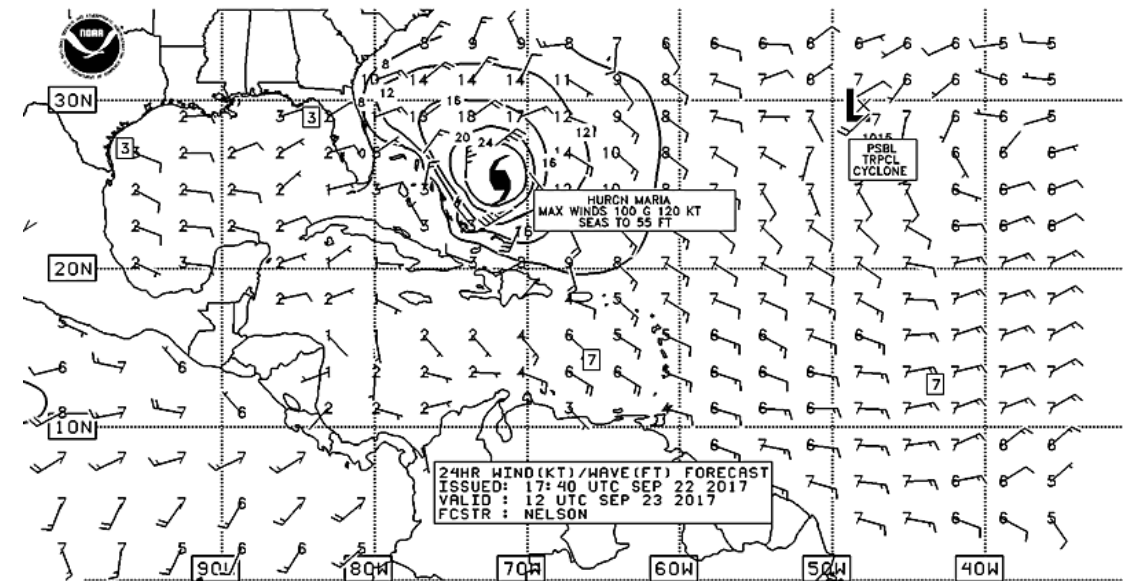
20 to 23 of Sep. 2017



NWS/NHC/TROPICAL ANALYSIS AND FORECAST BRANCH
SIG WAVE HT IS SHOWN (THE AVG HT OF THE HIGHEST 1/3 OF THE WAVES)

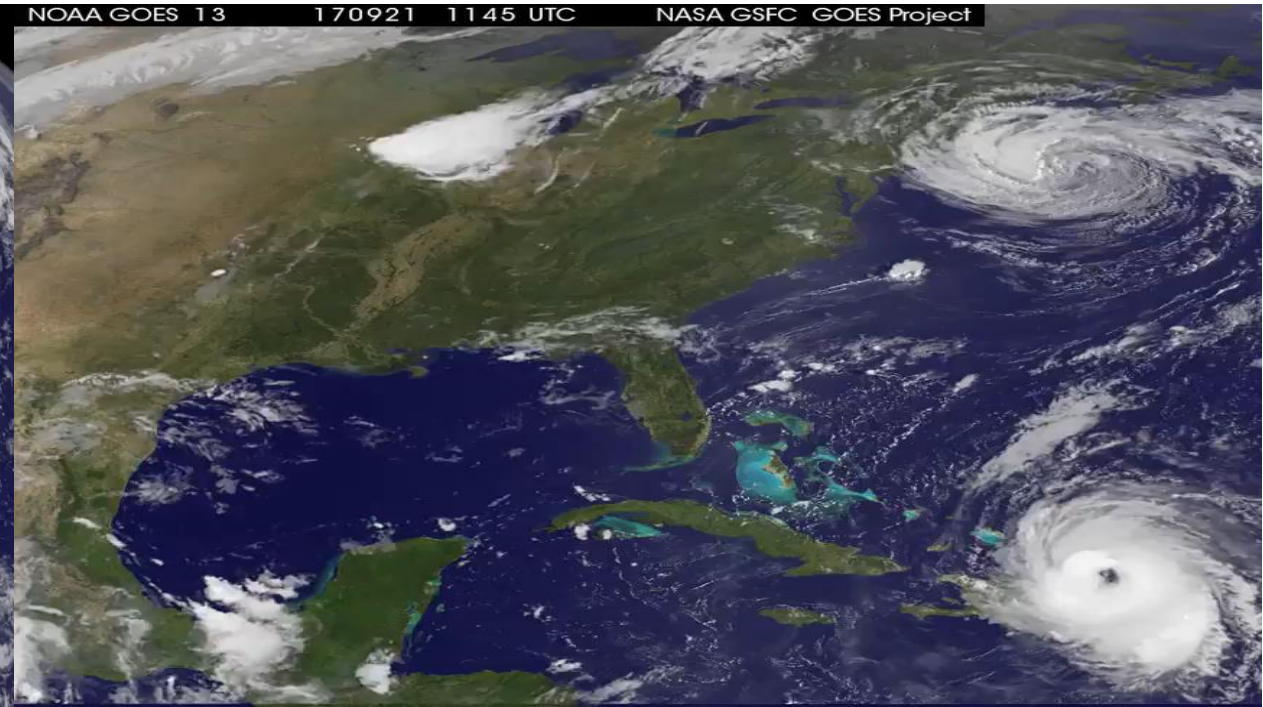
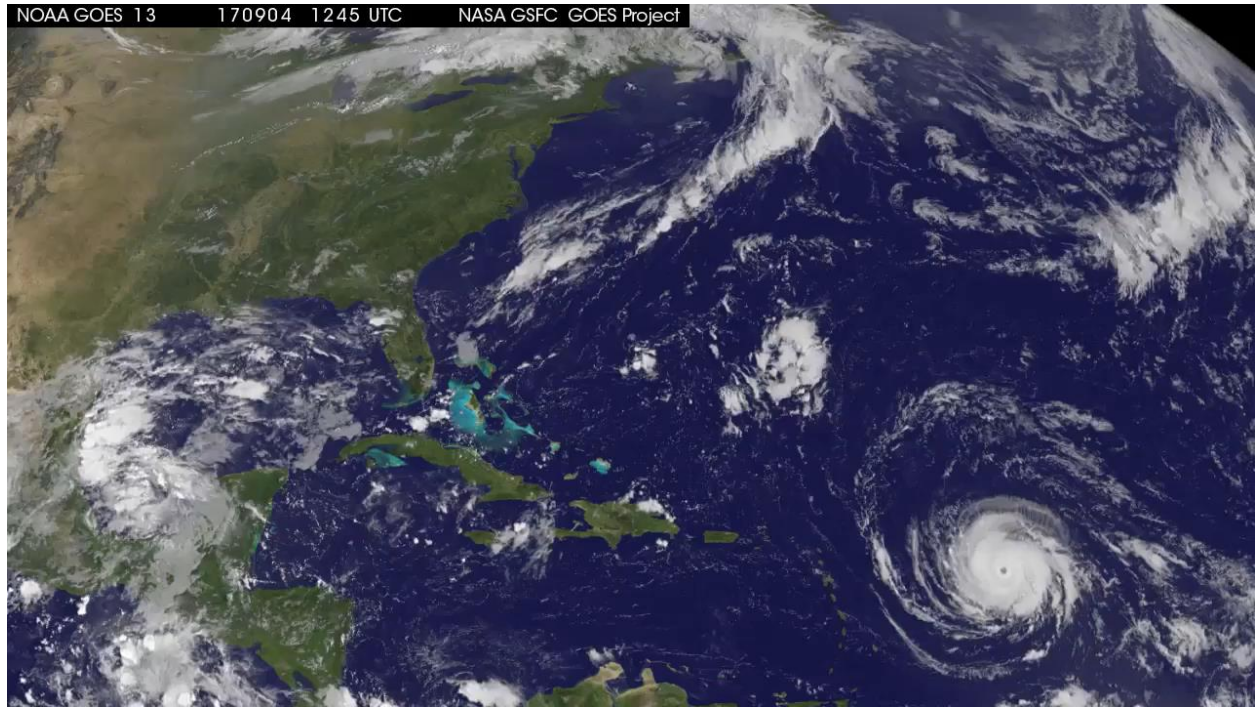


NWS/NHC/TROPICAL ANALYSIS AND FORECAST BRANCH
SIG WAVE HT IS SHOWN (THE AVG HT OF THE HIGHEST 1/3 OF THE WAVES)



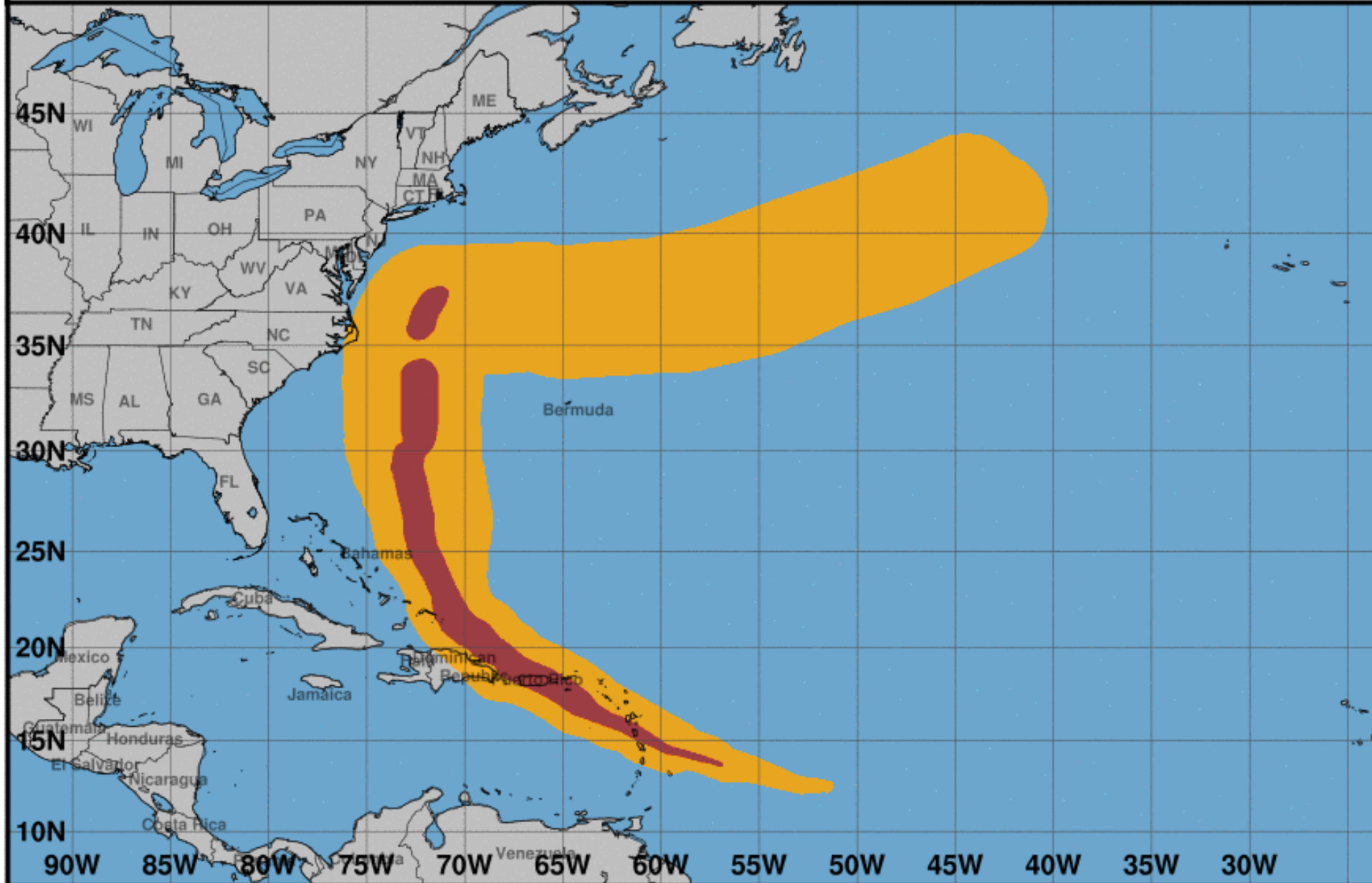
NWS/NHC/TROPICAL ANALYSIS AND FORECAST BRANCH
SIG WAVE HT IS SHOWN (THE AVG HT OF THE HIGHEST 1/3 OF THE WAVES)

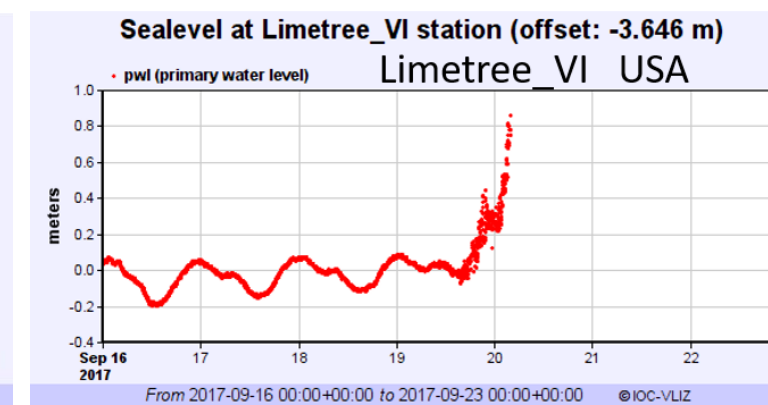
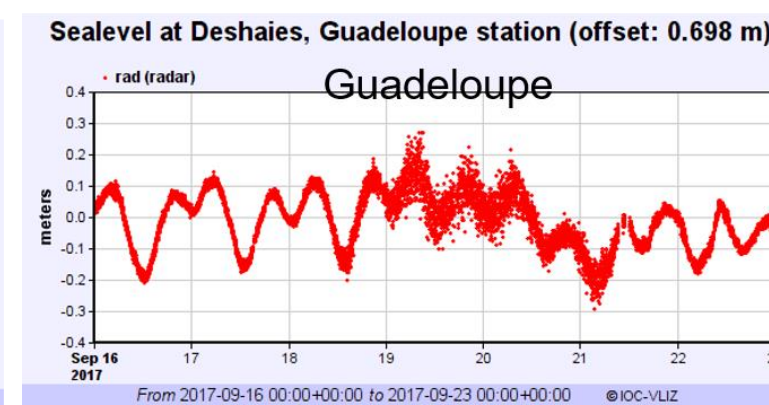
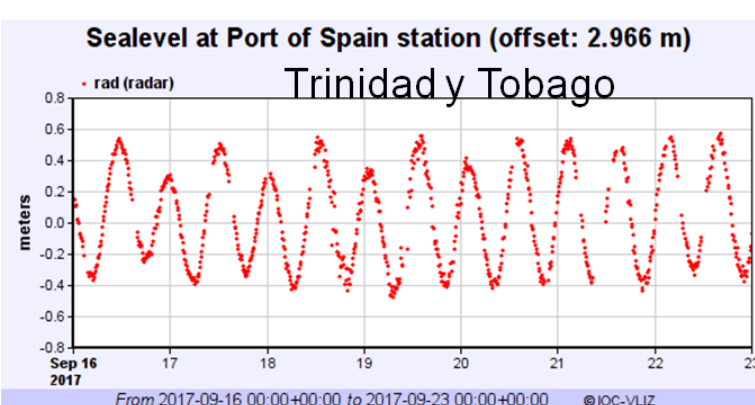
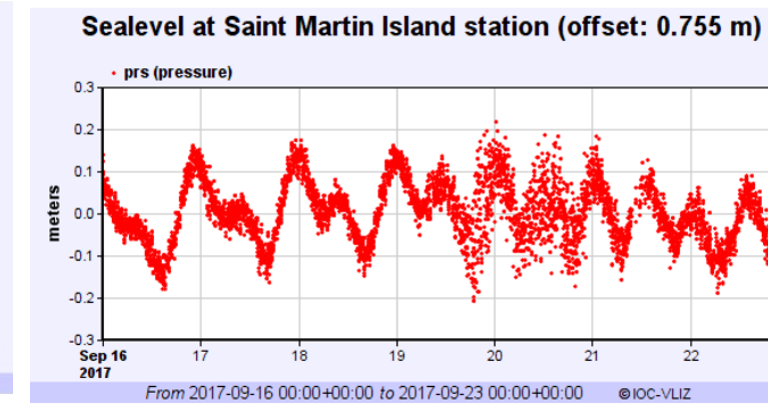
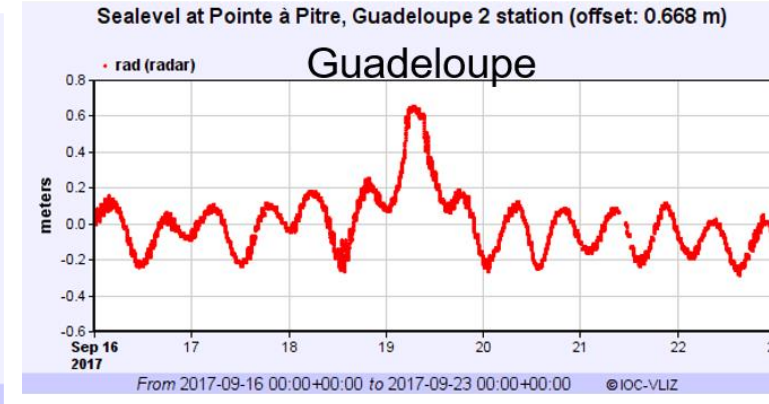
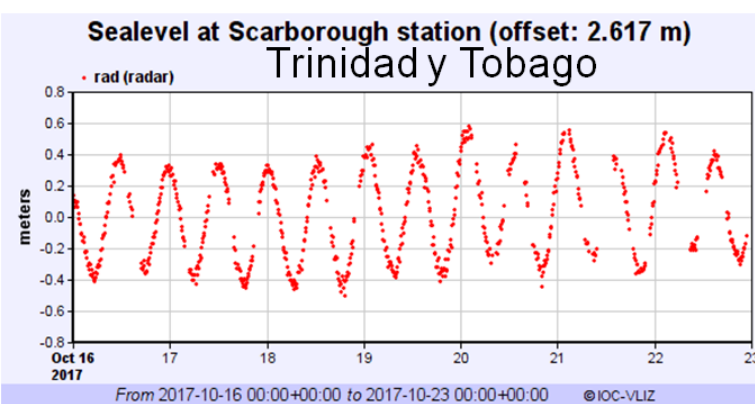
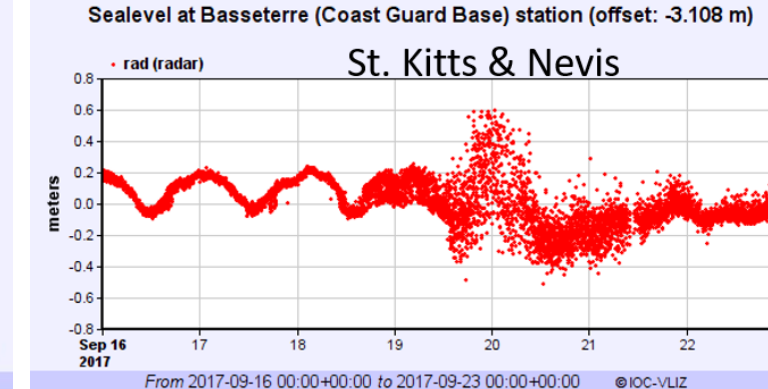
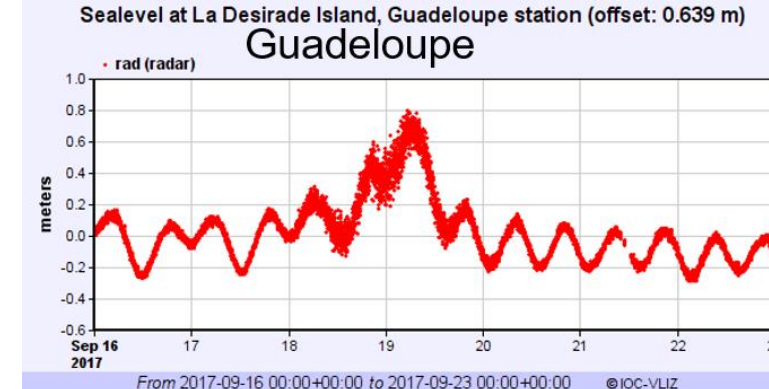
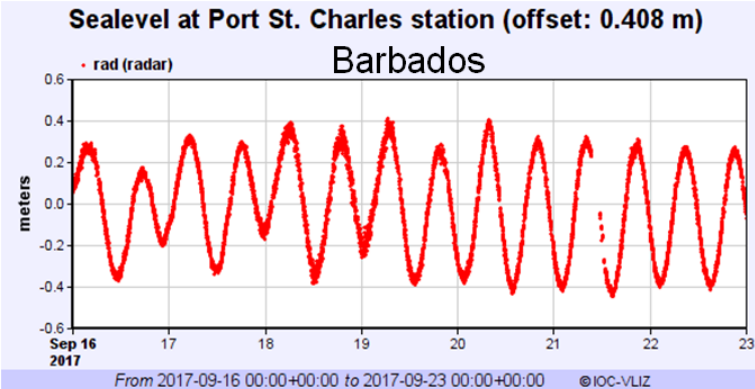
MARIA SATRLITE TRACK



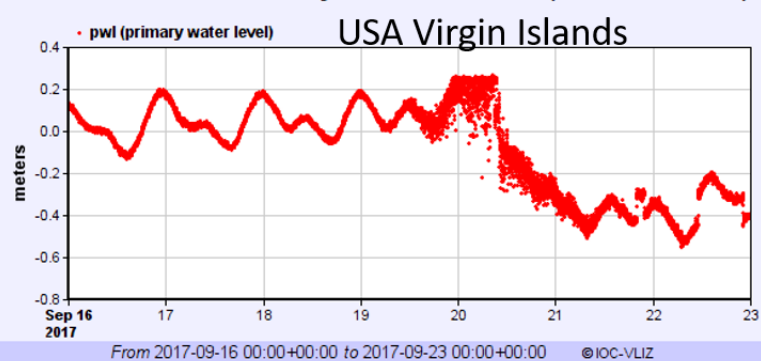


National Weather Service - National Hurricane Center
Tropical Storm  and Hurricane  Force Wind Swaths of Maria
From Advisories 1 Through 59

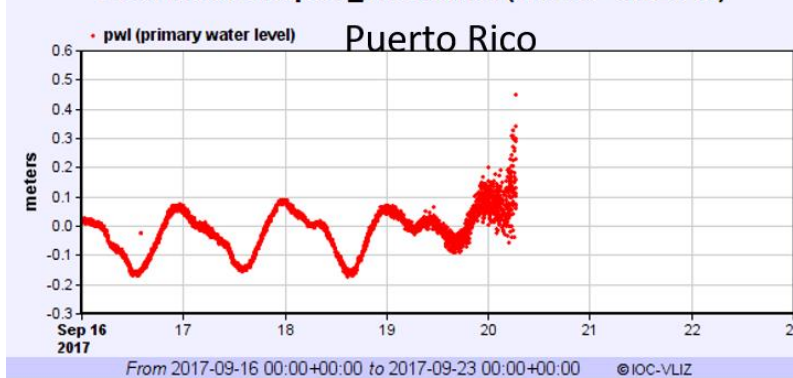




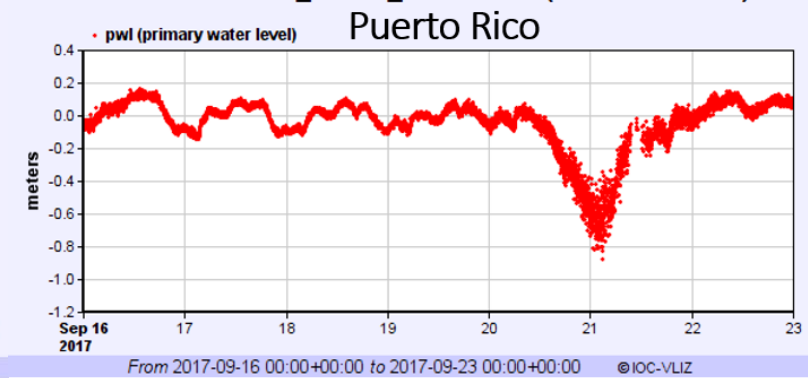
Sealevel at LameshurBayStJohnVI station (offset: 0.343 m)



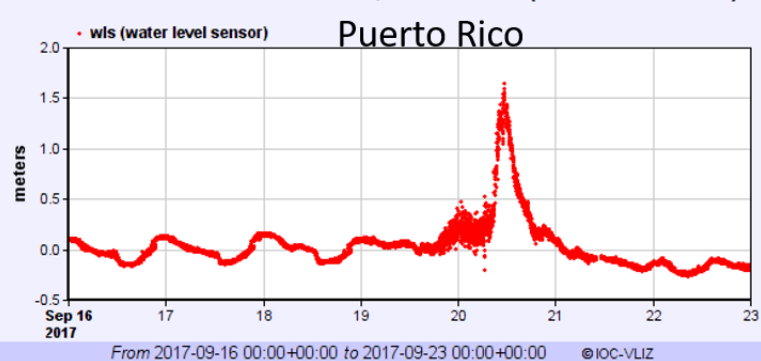
Sealevel at Vieques_PR station (offset: -3.226 m)



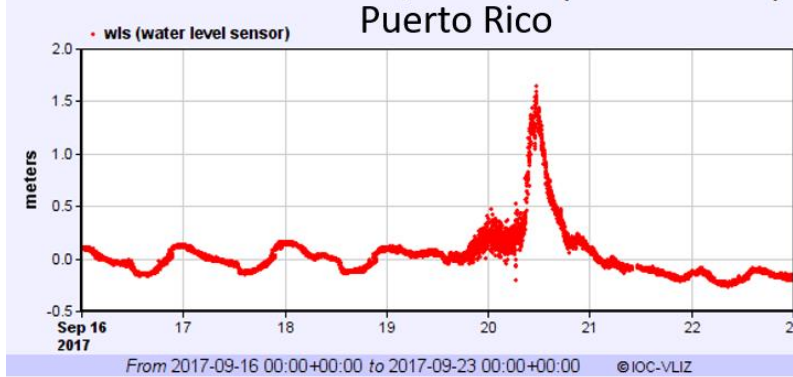
Sealevel at Mona_Island_PR station (offset: -1.99 m)



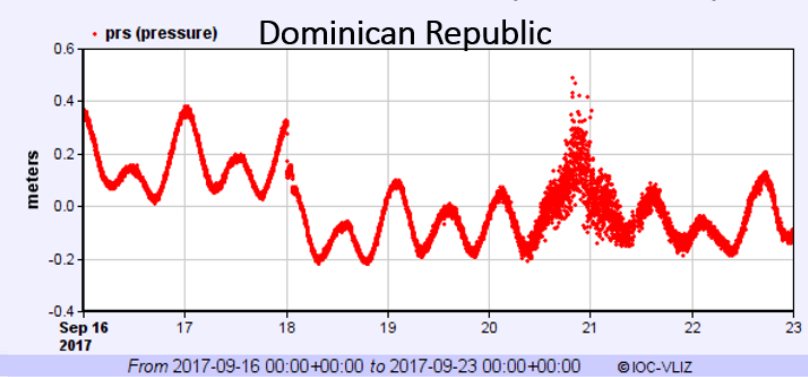
Sealevel at Yabucoa Harbor, PR station (offset: -5.968 m)



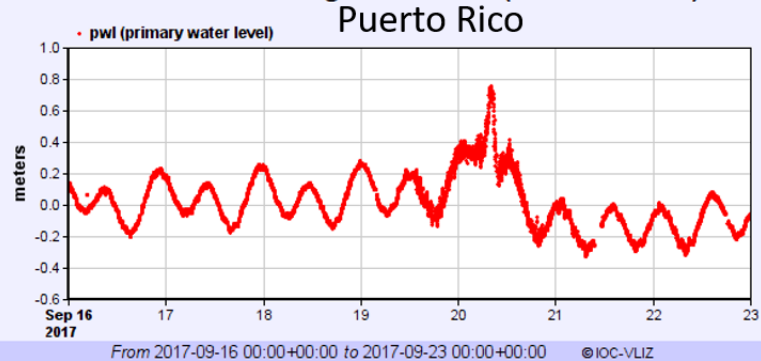
Sealevel at Yabucoa Harbor, PR station (offset: -5.968 m)



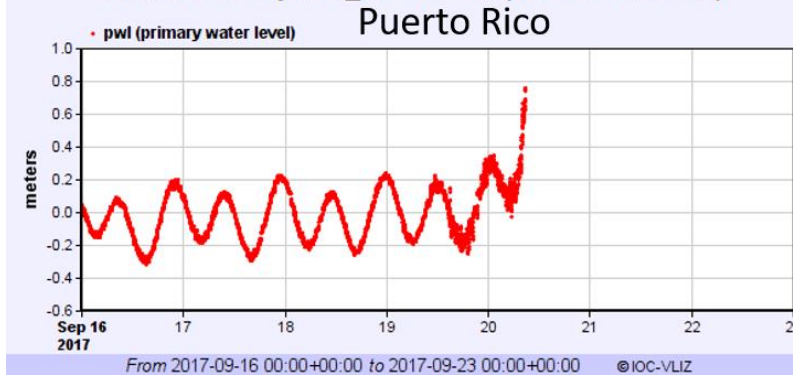
Sealevel at Punta Cana station (offset: 1.855 m)



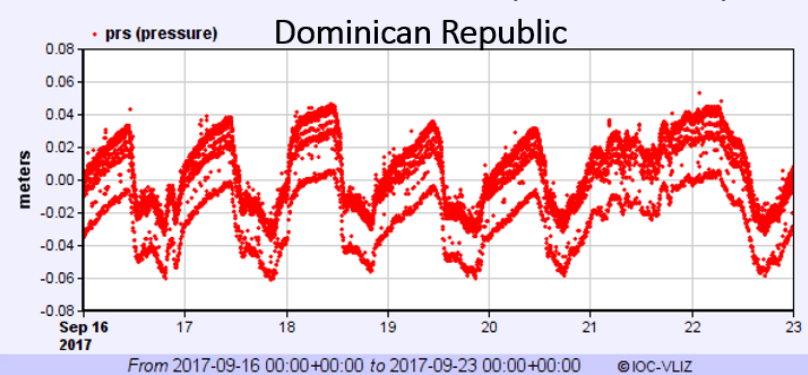
Sealevel at Isabel Segunda station (offset: -2.57 m)



Sealevel at Fajardo_PR station (offset: -2.573 m)



Sealevel at Puerto Plata station (offset: -0.668 m)





INFORME FINAL HURACAN MARIA

SUMMARY OF THE SITUATION.



Severity of the crisis. Multiple damages to people, their goods and infrastructure in several provinces of the country, was the result of the impact of hurricane Maria on the territory, generating the mobilization of local and national resources to respond to the emergency, in addition to keeping alert (32) provinces and producing a level of impact for the regional scope of (3), due to the mobilization of additional resources, provincial, regional, and national to address emergencies, this implies a level of impact ranging from moderate impact to heavy damage .

The most severe damages were concentrated in (10) provinces: El Seibo, Hato Mayor, Puerto Plata, Montecristi, Romana, Monte Plata, La Altagracia, Santiago, Duarte and Espaillat. In these provinces, the largest number of people mobilized, homes affected and destroyed, as well as damaged or destroyed road infrastructure, affected water services, loss of livelihoods and severe damage to agriculture and livestock were manifested.

Priority needs

The shortcomings of mattresses, blankets, sheets, mosquito nets, drinking water, food and vector control and the habilitation of alternate routes of communication were identified as peremptory.

Government response

The Government and its official body for the planning and preparation of the response kept the Emergency Operations Center (COE) activated for more than (13) days to coordinate institutional and inter-institutional actions.

The operational management of this adverse event was concentrated in search, rescue and rescue actions, attention to people, dissemination of information, evacuation of people, pre-positioning of equipment, aircraft and boats, people, supplies and materials, reinforcement of hospitals with medicines and expendable material, decompilation and clearance of roads, shelters, health, vector control, water quality, epidemiological surveillance, proper management and final disposal of solid waste. In addition to the humanitarian assistance that was developed fundamentally by the Social Plan of the Presidency and the Economic Eaters, who distributed thousands of food rations, mattresses, sheets, mosquito nets and distribution of drinking water.

2,679,880.00

Number of people living in affectect areas.

70,885

Number of people saved rescueand displaced to safe areas, because they are in risk.

1,752,415

Number of people affected directly

2,628,623

Number of people affected inderectly

CRISIS IMPACT

Due to the humidity conditions of the soils, the Emergency Operations Center (COE), maintained in its moment of greatest crisis (32) provinces in different levels of alert, for possible urban and rural flash floods, floods of rivers, streams and gullies, as well as landslides for the following provinces:

Red		Yellow	Green
La Altagracia	Distrito Nacional	Peravia	Elías Piña
El Seibo	Provincia Santo Domingo		Independencia
Hato Mayor	La Romana		Bahoruco
Samaná	Montecristi		Pedernales
Españat	Duarte		Barahona
María Trinidad Sánchez	Monte Plata		
Puerto Plata	San Cristóbal		
Santiago	San Juan		
Sánchez Ramírez	Valverde		
Santiago Rodríguez	Dajabón		
San Pedro de Macorís	Azua		
La Vega	San José de Ocoa		
Monseñor Nouel	Hermanas Mirabal		
TOTAL IN RED 26		TOTAL IN YELLOW 1	TOTAL IN GREEN 5
RED ALERT	Cuando el fenómeno tiene una alta probabilidad de impactar una zona, presentando efectos que generan daños a las personas, los bienes, carreteras y a otras infraestructuras o al medio ambiente.		
YELLOW ALERT	Cuando la tendencia ascendente del desarrollo del evento implica situaciones inminentes de riesgo y situaciones severas de emergencia		
ALERT GREEN	Aquella que se declara cuando las expectativas de un fenómeno permiten prever la ocurrencia de un evento de carácter peligroso para la población, puede ser parcial o total.		