

Briefing Note – 08 September 2017

CARIBBEAN

Hurricane Irma: Saffir-Simpson Category 5



Need for international assistance	Not required	Low X	Moderate	Significant	Major
Expected impact	Very low	Low	Moderate	Significant X	Major

Crisis overview

Hurricane Irma made landfall on northeast Caribbean islands during the early hours local time of 6 September, affecting Antigua and Barbuda, Anguilla, British Virgin Islands, St Barthélemy, St. Martin, the Virgin Islands, Puerto Rico, Dominican Republic, Haiti, and other islands in the eastern Caribbean Sea. The hurricane is passing over Turks and Caicos, southern Bahamas, northern Dominican Republic and northern Haiti on 8 September.

Forecast

The National Hurricane Center anticipates that Hurricane Irma will remain a major hurricane through at least 11 September as it tracks towards the southeastern United States. It is moving west-northwest at 26km/h, and this motion is expected to continue for the next day, with a decrease in forward speed. The forecast indicates that the eye of Irma will continue to move westward away from the Turks and Caicos and towards the southeastern Bahamas. The core of the hurricane is then expected to move between the north coast of Cuba and the Bahamas during the next two days, and near the Florida Keys and southern Florida Peninsula Sunday morning.

Hurricane Jose is gaining wind speed and its path is very similar to Hurricane Irma. It is expected to make landfall in Barbuda 8 September early afternoon, and on 9 September go over or near Leeward Islands, Antigua and Barbuda which were hit earlier this week (USAID 07/09/2017, NOAA, 08/09/2017).

Limitations

Information is far from complete: the scope and scale of the disaster is expected to become clearer as access and communications are restored to the affected islands in coming days.

This Briefing Note gives a short outline of the main impact identified so far, by territory.

Affected country	Population.	% of population exposed to high wind zone	Total Population exposed
Anguilla	12,316	100%	12,316
Antigua and Barbuda	87,858	100%	87,858
St Barthelemy and St Martin	37,609	100%	37,609
St Kitts and Nevis	47,897	100%	47,897
Puerto Rico	3,651,232	100%	3,651,232
Turks and Caicos	45,020	100%	45,020
Dominican Republic	10,470,773	99.85%	10,454,596
Haiti	10,596,666	92.77%	9,830,946
Cuba	11,266,280	60.66%	6,834,579
Bahamas	343,735	5.82%	20,015

Sources: USAID 07/09/2017, USAID 07/09/2017, NOAA, 08/09/2017

Key findings

Anticipated scope and scale

There is continued risk of catastrophic damage from hurricane-force winds, storm surge and flooding in areas on Irma's trajectory. Some fluctuations in intensity are expected in the next two days, although the hurricane is forecasted to be a category 4. Hurricane-force winds extend up to 110km from the centre and tropical-storm-force winds extend up to 295km.

- 2 million people are living in areas likely to be exposed to excess of 120 km/h winds
- 32 million people are living in areas likely to be exposed to excess of 60 km/h winds

Key priorities

- Shelter and NFIs: tents and tarpaulin
- WASH: repair of water supplies
- Infrastructure: electricity supply and support to communications
- Worst affected locations: Anguilla, Barbuda, British Virgin Islands, Saint Barthelemy, Saint Martin

Humanitarian constraints

- Damage to access infrastructure (roads, bridges, airports), logistics, and communication
- Hurricane Jose will likely disrupt operations.

Crisis impact per country

Anguilla

- One fatality reported.
- The airport runway and most roads leading to the airport have been cleared of debris.
- Extensive damage to critical services including hospital, schools, fire stations, police stations and prison.
- 90% of roads impassable.
- Approximately 90% of the electricity infrastructure was damaged.

Sources: CDEMA 06/09/2017, CDEMA 07/09/2017, OCHA 08/09/2017.

Antigua

- No fatalities, four minor injuries reported.
- Damage to infrastructure was minor.
- Airport currently open for emergency landings, and VC Bird International Airport was re-open for commercial flights on 7 September.
- The sea port is intact and operational.
- Initial situation overview ongoing.

Sources: CDEMA 06/09/2017, CDEMA 07/09/2017.

Barbuda

- One fatality confirmed.
- Initial reports indicate the destruction of 90% of structures. Approximately 50% percent of the island's homes have been destroyed, with more reports of major roof damage.
- Water and phone services damaged.
- Damage to the only airport in Barbuda means supplies have to be sent by boat and helicopter from Antigua.
- Critical facilities including roads and communication systems have been destroyed.
- Some residents are expected to be evacuated to Antigua, especially as a hurricane watch has been issued for Hurricane Jose.

Sources: CDEMA 07/09/2017, USAID 07/09/2017, OCHA 07/09/2017, OCHA 08/09/2017.

Bahamas

- Irma poses a direct threat to the islands of Mayaguana, Inagua, Crooked Island, Acklins, Long Cay and Ragged Island. The government has ordered a mandatory evacuation of

these islands. As of 6 September, approximately 1,020 people had evacuated from the southern islands of Acklins, Crooked, Inagua, Mayaguana, and Ragged to shelters on New Providence Island, the most populous island in the Bahamas, according to the government.

- Storm surge of up to 6m is expected in the islands of the Southern Bahamas. Rough seas and damaging waves are expected to lead to inundation and damage along coastlines.

Sources: OCHA 06/09/2017, USAID 7/09/2017.

British Virgin Islands

- Four confirmed dead.
- 100 people are housed in 9 shelters.
- Critical facilities, homes and businesses have been devastated.
- Communication systems have been impacted.
- The airport is operational but the tower has been compromised.
- National Emergency Operations Centre has been destroyed and temporarily relocated to the 911 Centre

Sources: CDEMA 06/09/2017, CDEMA 07/09/2017, OCHA 08/09/2017.

Cuba

- Government declared the Hurricane Alarm Phase in seven provinces (Camagüey, Ciego de Ávila, Granma, Guantánamo, Holguín, Las Tunas, Santiago de Cuba and Villa Clara), affecting 5.2 million people.
- More than 1,130,000 people are expected to be evacuated
- Coastal flooding is expected, with up to 9m waves in the northern coast of Guantanamo and Holguín.
- Heavy tidal waves have begun to affect the northern coast of Cuba's eastern provinces. The storm surge will extend over the northern coast of the central provinces of Cuba on 9 September, before arriving in the capital on 10 September.

Sources: CUBA ORC 07/09/2017, OCHA 07/09/2017, UN Country Team 07/09/2017.

Dominica

- Some rains, gusty winds, and flash flooding in the south of the island.
- The Tropical Storm Warning has been lifted, and the population has still been advised to exercise caution.

Sources: CDEMA 07/09/2017.

Dominican Republic

- Irma is expected to affect the island between 9 and 10 September with 32 provinces under red alert.
- Thousands of people have been evacuated: 3,000 are in evacuation centres.
- It is estimated that the number of evacuees will rise to 3 million, 40% of whom live in poverty

Sources: OCHA 07/09/2017, Save the Children 07/09/2017, COE 07/09/17, OCHA 08/09/2017.

Haiti

- Irma hit the northern coast of Haiti on Thursday night. Floods have been reported close to the boarder with the Dominican Republic but the impact is smaller than expected. The north of Haiti may expect 25cm (10in) of rain. Intense rainfall activity will lead to flash flooding, dangerous river conditions, landslides and debris flows. Flooding likely to be significantly enhanced within coastal bays due to expected runoff, wave run up, storm surge and tides.
- Three departments have been put on hurricane alert: Nord, Nord-Ouest and Nord-Est (the entire northern seaboard), and three others have been put on tropical-storm alert (lower intensity): Centre, Ouest (Port-au-Prince) and Artibonite.
- Evacuations along the northern coast are under way.
- There is concern that number of cholera cases could increase.

Sources: OCHA 08/09/2017, OCHA 06/09/2017, OCHA 08/09/2017.

Puerto Rico

- Three fatalities reported
- 42 hospitals in the island are without electricity
- More than two thirds of homes are without electricity
- 17% of homes are without water

Sources: OCHA 08/09/2017.

Saint Barthélemy

- The French government has confirmed widespread flooding and power outages on the islands of St Barthélemy, described as “devastating” and “apocalyptic”.
- Homes have been damaged and roofs blown off.

Sources: OCHA 06/09/2017.

Saint Kitts

- Damage to homes in areas such as Conaree, Molineaux and St.Paul’s Keys
- Disruption to electricity supply

Sources: CDEMA 06/09/2017, OCHA 08/09/2017.

Nevis

- There is no electricity
- 12 shelters were opened with 33 persons housed. Several people had to be evacuated due to roofs being blown off houses.

Sources: CDEMA 06/09/2017, OCHA 08/09/2017.

Saint Martin

- Two fatalities have been reported and two serious injuries.
- 95% of St Martin is estimated destroyed.
- Power and water supplies in the Dutch part, Saint Maartin, have been destroyed.
- Saint Maartin, Saba and Saint Eustatius were impacted, but Saint Martin sustained the most damage.

Sources: OCHA 06/09/2017.

Turks and Caicos

- Wave heights likely to exceed 8m with storm surge in excess of 4m.
- Satellite-based estimates of more than 300mm in 24 hours.
- The National Emergency Operations Centre has been moved.
- Tourism officials are urging visitors to leave if they have the means to do so safely.

Sources: OCHA 06/09/2017, OCHA 08/09/2017.

United States Virgin Islands

- A public health emergency has been declared
- Extensive damage to homes and buildings has been reported
- Land has been stripped of vegetation.

Sources: OCHA 08/09/2017.

Response capacity

Local and national response capacity

The Barbados-based Caribbean Disaster Emergency Management Agency (CDEMA) is coordinating the emergency and disaster response. Under CDEMA, the United Nations and donor agencies in the Caribbean, including USAID/OFDA, ECHO, DFID, Global Affairs Canada and others, are mobilising resources in light of the impact of Hurricane Irma and in readiness for the approaching Tropical Storm Jose. Technical experts drawn from across the Caribbean, regional offices, and the various agency headquarters are deploying to support CDEMA and the affected countries as needed.

International response capacity

As of 6 September, OCHA had pre-deployed a United Nations Disaster Assessment and Coordination (UNDAC) team to Barbados to support CDEMA in the regional response across the Caribbean.

Gaps and needs

The scope and scale of the disaster is expected to become clearer as access and communications are restored. WASH, shelter and NFI needs are expected to be high.

Lessons learned

The lessons learned below are a result of the analysis of main findings and lessons from the impact and response to past hurricanes, specifically Hurricane Matthew in 2016

On Assessment Techniques:

- Consult on the questions vital to assessment quality
- Including return areas in assessments improves understanding of needs

On Communication with Affected Populations:

- A dialogue-based approach is more effective than a one-way information campaign
- Messages must be clear, well-defined and unambiguous
- Repetition of messaging is key
- The response must take the result of consultations into account

On Coordination between responders:

- Lack of coordination in the response process can result in unreliable response
- Communication and coordination between actors can prevent secondary impacts

On Health:

- Delays in treatment for injuries heighten the risk of tetanus and infection
- Waterborne diseases can break out among the affected population
- Rehydration treatment, provision of NFIs and water purification, and the dry season are key to cholera response
- Social mobilisation is essential in the fight against cholera
- Overcrowding due to displacement facilitates the transmission of disease
- Mosquito-borne disease incidence may fall in the first few weeks after the hurricane

On WASH:

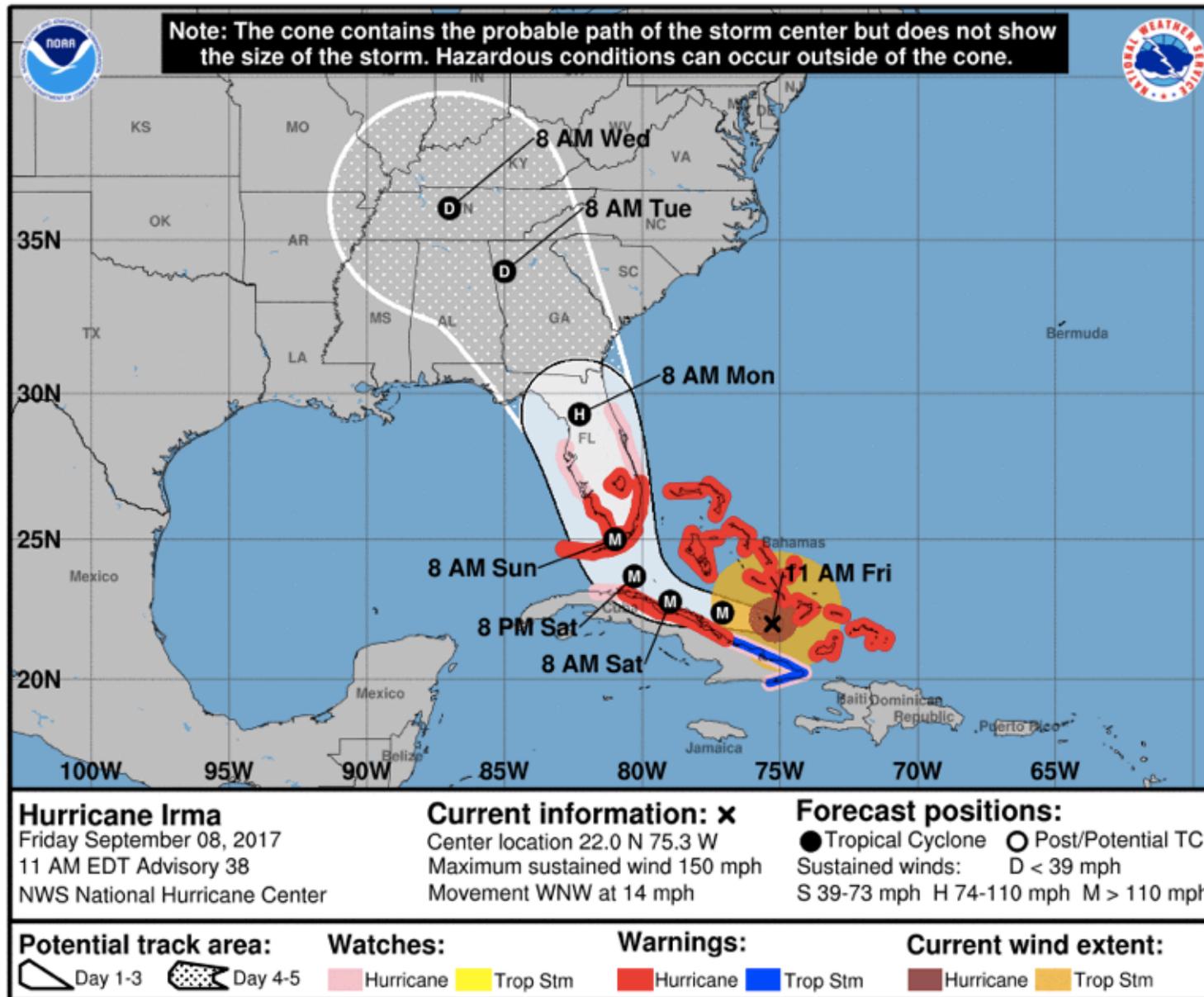
- Chlorine is the most effective drinking-water disinfectant
- Rainwater catchment systems can make a long-term improvement to water supply
- Water trucking is not sustainable after the initial response

On Shelters and NFIs

- Building camp management capacity by involving local authorities and community leaders
- Involving community members in shelter management benefits everyone
- Collective housing enables better response planning but can cause tensions and heighten health risks
- Shelter must take into account other sectorial needs, and carry out integrated planning

Sources: ACAPS

Coastal Watches /Warnings and Forecast Cone for Storm Centre



Source: NOAA