

CARIBBEAN

Hurricane Irma: Saffir-Simpson Category 5



| Regional need for int. assistance | Not required | Low | Moderate | Significant | Major |
|-----------------------------------|--------------|-----|----------|-------------|-------|
| | | X | | | |
| Impact | Very low | Low | Moderate | Significant | Major |
| | | | | X | |

Crisis overview

Hurricane Irma first made landfall on the northeast Caribbean islands during the early hours local time of 6 September. Antigua and Barbuda, Anguilla, Bahamas, British Virgin Islands, Cuba, Dominican Republic, Haiti, Puerto Rico, St Barthélemy, St. Martin, Sint Maarten, Turks and Caicos, and the US Virgin Islands were all affected.

169,000 people and 75,000 buildings were exposed to wind speeds higher than 252km/h. 5.5 million people lived in areas exposed to winds in excess of 120km/h. At least 37 people have been reported dead.

A large part of the populations of Anguilla, Barbuda, British Virgin Islands, Sint Maarten and Turks and Caicos have been directly affected and will require extensive assessment and support in the coming months. Some islands have had close to 100% of their population displaced. There is significant damage to infrastructure, livelihoods, housing, communications, and essential services, including electricity. Despite the humanitarian response underway in the majority of the islands, communications and logistics continue to be impaired.

Between 70-90% of houses have been damaged in Barbuda, Anguilla, Bahamas, Turks and Caicos and British Virgin Islands. 1.2 million people have been affected by damage to water infrastructure. In Anguilla and Barbuda, 70–90% of infrastructure has been destroyed. 32,000 people have been displaced, with 17,000 of these in need of shelter. An estimated 20,000 children have been affected throughout the region. Some locations have reported a wide-scale breakdown in law and order, leaving to violence and looting.

A new Category 5 Hurricane Maria is moving roughly over the same path as Hurricane Irma. It is expected to affect Dominica, Guadeloupe, Martinique, Puerto Rico, St. Kitts and Nevis, Montserrat and the US and British Virgin Islands. Communities have been advised to take shelter. States of emergency have been declared in number of locations.

Note: Crisis Impact and Need for assistance based on number of population affected along with ongoing response efforts.

Key findings

Worst affected islands

- Anguilla
- Barbuda
- British Virgin Islands
- Saint Martin

Key priorities

- Infrastructure: restoration of essential services (electricity and telecommunication), equipment to clean islands
- WASH: water and sanitation kits
- Shelter: building materials for reconstruction
- Food Security: canned food, seeds and agricultural goods
- Health: vector control, health and dignity kits
- Fuel

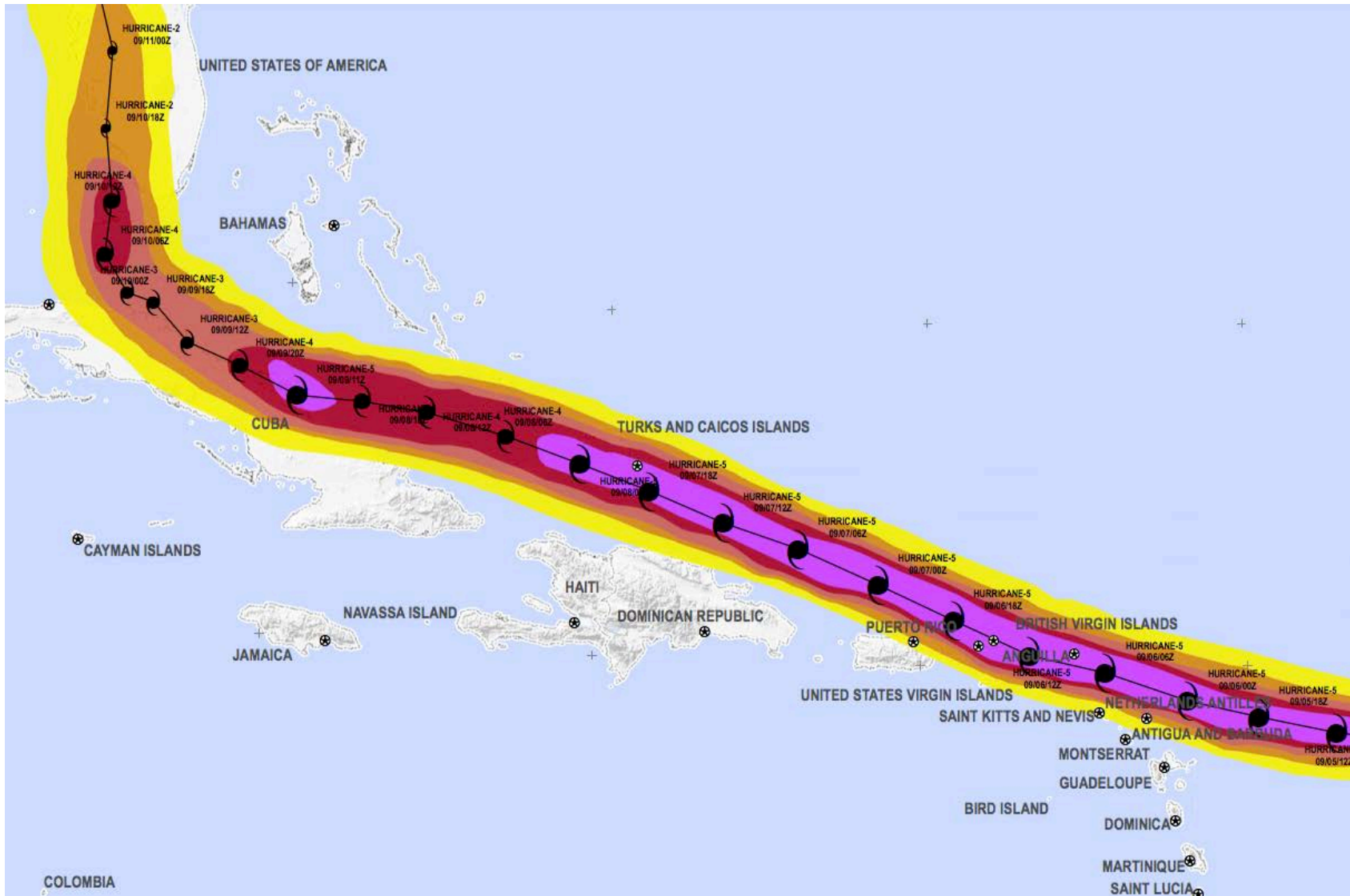
Humanitarian constraints

- Saint Martin, Cuba, Dominica, Puerto Rico, Guadeloupe are in the path of **Hurricane Maria** (Category 5 Hurricane), which is affecting relief efforts.
- Lack of proper coordination mechanisms
- Logistical restrictions: most commercial flights were cancelled, as many airports remain closed due to damage, making the shipment of equipment and movement of staff challenging.
- Security issues, such as crime and looting, are complicating the response.
- Exact number of affected population in certain territories still remains unclear

Crisis Impact and Priority Needs per territory

| CRISIS IMPACT | Priority Needs | | | | | | | | | |
|------------------------|----------------|--------|------|---------|------------|------------|-----------|----------------|-------------|--|
| | WASH | HEALTH | FOOD | SHELTER | LIVELIHOOD | PROTECTION | NUTRITION | INFRASTRUCTURE | AGRICULTURE | |
| Major | | | | | | | | | | |
| Significant | | | | | | | | | | |
| Moderate | | | | | | | | | | |
| Low | | | | | | | | | | |
| Very low | | | | | | | | | | |
| Anguilla | X | | | X | | | | X | | |
| Barbuda | | X | | X | X | | | X | | |
| British Virgin Islands | X | | X | | | | X | X | | |
| Saint Martin | X | | X | X | | | | | | |
| Sint Maarten | X | | | | | X | | X | | |
| Turks and Caicos | X | | X | | | | | X | | |
| US Virgin Islands | | | | | | | | X | | |
| Cuba | X | | X | X | | | X | | X | |
| Haiti | | | X | X | | | | | X | |
| Antigua | | X | | X | | | | | | |
| Bahamas | X | X | | X | | X | | | | |
| Dominican Republic | X | | | X | | | | | | |
| Dominica | | | | | | | | | | |
| Puerto Rico | X | | | X | | | | | | |
| Saint Barthélemy | X | | | | | | | | | |
| Saint Kitts and Nevis | | | | | | | | X | | |

Path and Wind Speed Zones



Source: UNOSAT

Crisis impact per territory

Anguilla

| | Not required | Low | Moderate | Significant | Major |
|---------------------|--------------|-----|----------|-------------|---------|
| Need for assistance | | X | | | |
| Impact | Very low | Low | Moderate | Significant | Major X |

Priority needs: Shelter, WASH, Infrastructure (electricity)

No fatalities were reported. The government aims to have critical sector services such as tourism, health, and education functional over the next six months. Almost 5,000 children have been affected.

Operational constraints: The airport runway and most roads leading to the airport have been cleared, and air traffic has resumed for emergency flights. The majority of primary and secondary roads have been cleared of debris and other obstructions. Shortage of fuel is a concern. Road Bay Port in Sandy Ground is functional to receive cargo. Blowing Point Ferry Terminal is closed until further notice.

Infrastructure: 42% of structures have been damaged. Around 90% of government buildings have been substantially damaged and critical government functions (police and National Emergency Operations) have been temporarily affected. Telecommunications, power supply, and water systems remain down.

Health: The only hospital on the island, Princess Alexandra, is now operational and providing regular health services. Generators are powering electricity and water is available through cisterns. Medical supplies and first aid kits have been identified as needs.

Food: Shortage of food continues to be of concern. Canned food or milk particularly for children are priority needs according to the Caribbean Disaster Emergency Agency (CDEMA). Livelihoods have been severely affected as the tourism industry has been severely affected and the economy is highly dependent on this industry. Banking institutions are operational from 0900 to 1200.

WASH: Access to potable water is of concern. Water cases and water bowser containers (mobile tanks) are priority needs.

Shelter and NFIs: Structural assessments are ongoing for damaged houses. Tarpaulins, family-size shelter tents, cleaning supplies, warehouse shelving, and debris-removing tools are key needs.

Protection: 4,800 children were affected. Given the destruction of schools, there are child protection concerns.

Education: All six primary schools have been badly damaged and schools may not reopen until 1 October. Thousands of children will have their education disrupted.

Sources: IOM 15/09/2017, OCHA 15/09/2017, PAHO 14/09/2017, Local News 17/09/2017, CDEMA 14/07/2017

Antigua

| | Not required | Low | Moderate | Significant | Major |
|---------------------|--------------|-----|----------|-------------|-------|
| Need for assistance | | | X | | |
| Impact | Very low X | Low | Moderate | Significant | Major |

Priority needs: Shelter, Health

No fatalities, four minor injuries reported. 1,413 people have been evacuated from Barbuda to Antigua. UNICEF reports there is no detailed timeframe for return to Barbuda. The Prime Minister of Antigua and Barbuda has discouraged returns to Barbuda until essential services are in place.

Operational constraints: The airport is open for emergency landings, and VC Bird International Airport has been re-opened for commercial flights. The seaport is intact and operational. There are significant coordination gaps, particularly between Shelter, WASH and Food, and lack of participation of affected communities. Assessments are being carried out for the feasibility of cash transfer programming.

Food: Barbudan evacuees are in need of food assistance. Supermarkets and stores are open.

Health: Routine healthcare services continue at the public hospitals and 25 health centres. Five health centres are serving evacuees from Barbuda. A standardised surveillance system is necessary to establish strong epidemiological surveillance.

Shelter and NFIs: Less than 1% of buildings were damaged. Evacuees from Barbuda are temporarily residing in shelters or some type of hosting arrangement. Two main shelters house 305 people, and eight additional locations have been identified with evacuated or displaced populations. Despite needing NFIs, clothes and good, hotels housing IDPs from Barbuda show no support by local or international organisations. Needs for camp coordination and management, particularly technical support for collective site management, have been identified. International organisations are assessing possible locations to relocate evacuees, although the local government is seeking longer-term solutions, such as rental subsidies and transitional shelters.

Protection: There are approximately 100 unaccompanied minors from Barbuda among the Barbudan evacuees in Antigua.

Education: Schools have reopened and are functional. Children returned to class on 11 September, yet children from Barbuda were not eligible to attend.

Sources: CDEMA 14/07/2017, OCHA 15/09/2017, IFRC 15/09/2017, UNICEF 14/09/2017, PAHO 14/09/2017

Barbuda

| | | | | | |
|---------------------|--------------|-----|---------------|-------------|------------|
| Need for assistance | Not required | Low | Moderate X | Significant | Major |
| Impact | Very low | Low | Moderate | Significant | Major X |

Priority needs: Shelter repair, Infrastructure (electricity), Livelihoods, Health

One fatality has been confirmed. The entire population of Barbuda, 1,600 people, including 750 children, were evacuated. No one remains in Barbuda given the complete destruction of infrastructure. The parliament of Antigua and Barbuda is maintaining the evacuation order and extensive assessment to determine what can be salvaged. The Prime Minister has discouraged returns to Barbuda until essential services are in place. It is estimated this will take 6 to 8 weeks.

Operational constraints: Damage to the only airport in Barbuda means supplies have to be sent by boat and helicopter from Antigua. Roads and communication systems have been destroyed.

Infrastructure: Assessments report between 75–99% of building infrastructure destroyed. 90% of electrical systems have been damaged, including telephone lines. Basic public services, including electricity, telecommunications, and access to health care and safe drinking water, remain unavailable. The government has requested technical support in debris management. Support to telecommunications is also needed.

Health infrastructure: The only hospital on the island sustained significant damage and is not functioning. Almost all critical facilities have been destroyed, including ambulances. Health promotion and WASH materials and basic drugs have been identified as needs. International organisations have recommended environmental health monitoring and outbreak prevention and control.

Food: Shortage of food is a concern. Preliminary assessments indicate destruction of standing crops, agricultural infrastructure, machinery and equipment, including a 100-hectare coconut plantation and processing facilities. The livestock sector has recorded losses and well as the destruction of animal shelter. The fishery sector has also been affected. Priority needs include dried and canned foods, dried and canned milk and bottled water. Agricultural goods have also been identified by CDEMA as a need.

WASH: WASH infrastructure has been significantly damaged. Shortage of safe water remains a concern. WASH needs include water purifiers, treatment tablets, pumps, and containers for storage.

Shelter and NFIs: Approximately 50% of the island's homes have been destroyed, with additional reports of major roof damage. Medium to long-term recovery needs include building material for reconstruction, equipment to clean the island. IOM conducted an assessment to identify possible locations to erect shelters and two locations have been identified.

Education: Children from Barbuda are not eligible to attend school in Antigua, despite these being reopened. Damaged schools in Barbuda will need to be thoroughly assessed before children can return.

Sources: UNICEF 14/09/2017, OCHA 15/09/2017, PAHO 14/09/2017, IFRC 15/09/2017, FAO 15/07/2017, USAID 15/09/2017

Bahamas

| | Not required | Low | Moderate | Significant | Major |
|---------------------|--------------|-----|----------|-------------|-------|
| Need for assistance | X | | | | |
| Impact | X | | | | |

Priority needs: WASH, Shelter, Protection, Health

The scale of damage has not been fully assessed, but islands of the south including Acklins, Crooked Island, Inagua, Mayaguana, and Ragged have been significantly affected, and Bimini Island in the northwest. Ragged Island, home to about 100 people, is reported to be “unlivable”. After mandatory evacuation of the affected islands, about 1,000 evacuees are returning, except to Ragged Island. Displaced population is being sheltered in Nassau.

Operational constraints: Airports have reopened and flight services resumed.

Infrastructure: Grand Bahamas has limited property damage and power, electricity and water services, but are expected to be restored shortly. Houses in Ragged Island were destroyed, and some government buildings were damaged.

Health: Clinics in Ragged and Acklins Island sustained damage, though not severe.

Sources: OCHA 06/09/2017, USAID 07/09/2017, OCHA 15/09/2017, Local News 18/09/2017

British Virgin Islands

| | Not required | Low | Moderate | Significant | Major |
|---------------------|--------------|-----|----------|-------------|-------|
| Need for assistance | | X | | | |
| Impact | | | | | X |

Priority Needs: WASH, Food, NFIs, and Infrastructure (electricity)

Seven people have been confirmed dead; the number injured is unknown. Reports indicate that the entire population of around 30,000 people has been affected. There was widespread damage to homes, businesses, infrastructure and marine vessels. Logistical difficulties are making it difficult to get supplies into the British Virgin Islands. The situation has improved with the restoration of power in some

locations and opening of local markets. Communities are now bracing for Hurricane Maria, which is expected to make landfall this week.

Operational constraints: The airport has reopened and is operational but the tower has been damaged, with flights carrying emergency relief expected to start arriving on 18 September. Ferries are again operational even though most of the harbours have been severely damaged. Communication systems have been impacted. Roads were severely damaged and heavy equipment operators have been deployed to clear roads to at least single lane traffic. Transportation is limited as a majority of vehicles were damaged.

Infrastructure: Preliminary assessments indicated 60–80% of buildings throughout the territory damaged or destroyed, including critical facilities, homes, and businesses. The north of the island has been particularly affected, with 90% of houses destroyed. Infrastructure for electricity generation, transmission, and distribution has been severely damaged across islands. Electricity supply throughout the islands is provided by power generators except on Anegada, where it has been restored.

Health: 60% of health structures have been affected. Peebles Hospital (Tortola) is partially operational and providing regular services after having suffered minor damage. Iris O’Neal Clinic (Virgin Gorda) suffered minor damage. Medical services have been affected due to damaged utility lines. Limited medical supplies are available. The Pan American Health Organization (PAHO) has reported there are space constraints, and coordination will be critical in receiving larger medical shipments.

Food: Food and water supplies are urgently needed.

WASH: The piped water supply is not functioning due to the lack of electricity. There was a limited stock of safe water available prior to Irma. Both desalination plants on Virgin Gorda were destroyed. Some cisterns are reported contaminated. WASH needs include water jugs and purification tablets.

Shelter and NFIs: 14 official shelters are housing about 350 people, but they ran out of space and many unofficial shelters are now accommodating people, making it difficult to assess evacuees in need. Responders are still considering options for housing the large number of displaced persons. Urgent needs include tarpaulins and

blankets. Needs for camp coordination and camp management, especially technical support for collective site management, have been highlighted.

Protection: Authorities declared a state of emergency and a 6:00pm curfew is still in place. 9,500 children have been affected. The structure of the HM Prison was severely compromised and 142 prisoners escaped. As of 19 September, 112 of these had been recaptured.

Education: Schools have been damaged or destroyed. Thousands of children have had their education disrupted.

Sources: CDEMA 06/09/2017, OCHA 08/09/2017, IPS News 15/09/2017, UNICEF 09/09/2017, OCHA 10/09/2017, OCHA 15/09/2017, PAHO 14/09/2017, UNICEF 14/09/2017, CDEMA 14/09/2017, CDEMA 18/09/2017, The Guardian 16/09/2017

Cuba

| | Not required | Low | Moderate | Significant | Major |
|---------------------|--------------|-----|----------|-------------|-------|
| Need for assistance | | X | | | |
| Impact | Very low | Low | Moderate | Significant | Major |
| | | | X | | |

Priority needs: Shelter repair, NFIs, WASH, Food Security/Agricultural Recovery

Irma has directly affected more than 5.6 million people in Cuba. 2.1 million people have been severely affected, and are considered particularly vulnerable now, being in Hurricane Maria's path. Priority provinces are Holguín, Las Tunas, Camaguey, Ciego de Ávila, Sancti Spíritus, and Villa Clara.

Operational constraints: An unspecified number of communities in several provinces still remain isolated due to river flooding. Massive destruction and widespread flooding have been reported along the northern coast.

Infrastructure: Almost 33,000 houses have been damaged in Villa Clara, 17,000 in Camaguey, 16,500 in Ciego de Ávila, 4,200 in Habana, and 4,000 in Holguin.

Health: 70% of health facilities in affected territories have been damaged, with the most affected communities being Villa Clara, Ciego de Ávila, Havana, Camaguey and Sancti Spíritus. Health authorities are maintaining active epidemiological surveillance and outbreaks of transmissible diseases have not been registered.

Food: There has been severe damage to the agricultural/livestock sector, with 50,500 hectares of productive land damaged and more than 145,000 animals dead. Damage to crops will directly affect 664,000 people. Soil degradation is affecting food security, and salinisation, compaction, and low fertility present serious challenges for the future. Damage has been reported in facilities related to harvest, storage, processing, conservation and distribution of food. In affected municipalities, the food security situation will directly affect the livelihoods of local populations, farmers, and fishers during the recovery phase.

WASH: 2.2 million people have limited access to safe water. In the most affected communities, such as Villa Clara, repairing water-pumping stations is a priority. More than 33,000 homes in Villa Clara do not have access to safe drinking water.

Shelter and NFIs: Shelter is among the most affected sectors. Of the 1.7 million people evacuated, 230,000 are in temporary shelters.

Education: 2,180 education institutions have been affected. The school year was resumed in most affected territories, except where school damage was significant.

Sources: Government 09/09/2017, OCHA 10/09/2017., Cuba UN Country Team 17/09/2017, OCHA 16/09/2017

Dominica

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

Irma spared Dominica of any major damage, but media reports on 18 September indicate that Hurricane Maria has made landfall on the island with devastating effects and caused severe damage to housing, but no immediate information on injuries or fatalities.

Some rains, gusty winds, and flash flooding in the south of the island.

Sources: CDEMA 07/09/2017, NY Times 19/09/2017

Dominican Republic

| | Not required | Low | Moderate | Significant | Major |
|---------------------|--------------|-----|----------|-------------|-------|
| Need for assistance | X | | | | |
| Expected impact | X | | | | |

Priority needs: WASH, Shelter

Damage to the islands was far less than expected, with no fatalities reported. 24,000 people, including 7,500 tourists, were evacuated, mostly in the north of the country. 10,700 are in collective centres, as many have now returned to their homes. Hurricane Maria is expected to affect the island and on 18 September placed 20 districts on alert for hurricane conditions.

Operational constraints: Airports have resumed normal operations.

Food: Damage to agriculture is still under assessment.

Health: Concerns over contamination and salinisation of clean water supplies in affected areas will present major health needs.

WASH: There is damage to infrastructure, including 28 aqueducts that remain non-functional, which affects 1.2 million people. Water quality and vector control is a key concern in order to avoid vector-borne diseases.

Shelter and NFIs: 2,600 houses were affected and only a small portion was completely destroyed.

Education: Classes restarted on 11 September.

Sources: WFP 08/09/2017, OCHA 10/09/2017. UNICEF 14/09/2017, ACT Alliance 16/09/2017, OCHA 18/09/2017

Haiti

| | Not required | Low | Moderate | Significant | Major |
|---------------------|--------------|-----|----------|-------------|-------|
| Need for assistance | | X | | | |
| Impact | | | X | | |

Priority needs: Shelter repair, Food Security, Agricultural Recovery

Although Haiti was not severely impacted by Irma, it did cause flooding, destruction to some infrastructure, and destroyed crops. The most affected areas are the Northern departments of Nord-Ouest, Ouest and Nord-Est. Centre and Artibonite are also affected, but to a lesser degree.

Food: Preliminary data collected in the northeast indicates the critical damage of agriculture and fisheries, with more than 18,000 farmer families severely affected.

Health: St Thomas Hospital suffered structural damage and is undergoing repair. While there are concerns about diarrhoeal diseases such as cholera, no increase in cases has been reported to date.

WASH: Repair to water supply is required in Sauval de Jean Rabel, Anse a Foleur and La Chappelle.

Shelter and NFIs: In the northeast, 1,600 families were housed in temporary shelters for 72 hours in 12 shelters. In the northwest, there are reports of a few houses destroyed.

Protection: Two children were reported missing in the Nord-Est.

Education: A small number of schools have been damaged.

Sources: OCHA 06/09/2017, OCHA 08/09/2017, ACTED 08/09/2017, MAF 08/09/2017, Act Alliance 10/09/2017, OCHA 10/09/2017. UNICEF 14/09/2017, OCHA 15/09/2017

Puerto Rico

| | Not required | Low | Moderate | Significant | Major |
|---------------------|--------------|-----|----------|-------------|-------|
| Need for assistance | X | | | | |
| Impact | X | | | | |

Priority needs: Shelter, WASH

Three fatalities have been reported and air traffic has resumed. Puerto Rico is considered to have avoided the worst with Hurricane Irma, but is expecting a direct hit from Hurricane Maria.

Infrastructure: 304,000 people still have no access to electricity.

Food: Limited stock of canned food is a concern. The government has imposed a rationing of basic supplies, including water, milk, and baby formula.

WASH: 43,000 people still do not have access to water.

Shelter and NFIs: Puerto Rico has taken in thousands of refugees from the US Virgin Islands. It has also opened 500 shelters in preparation for Hurricane Maria, to hold a maximum of 125,000 people.

Sources: OCHA 08/09/2017, OCHA 10/09/2017. PAHO 13/09/2017, Reuters 13/09/17, International News 18/09/2017

Saint Barthélemy

| | Not required | Low | Moderate | Significant | Major |
|----------------------------|--------------|-----|----------|-------------|-------|
| Need for assistance | X | | | | |
| | Very low | Low | Moderate | Significant | Major |
| Impact | X | | | | |

Priority needs: Water

The French government has confirmed widespread flooding and power outages. Saint Barthélemy is currently under a hurricane watch for Hurricane Maria.

Food: Urgent need for water and food was initially reported, yet recent updates have not included the severity of the situation.

Health: The hospital is partially operational and offering some medical services. Several skin infection and diarrhoea cases have been reported.

WASH: The desalinisation plant is not operational and only bottled water is available.

Shelter and NFIs: Homes have been damaged and roofs blown off.

Sources: OCHA 06/09/2017, OCHA 10/09/2017. PAHO 14/07/09, OCHA 15/09/2017, The Guardian 18/09/2017

Saint Kitts and Nevis

| | Not required | Low | Moderate | Significant | Major |
|----------------------------|--------------|-----|----------|-------------|-------|
| Need for assistance | X | | | | |
| | Very low | Low | Moderate | Significant | Major |
| Impact | X | | | | |

Priority needs: Infrastructure

St. Kitts and Nevis is planning to receive evacuees in the coming days, yet there is no clear response plan on how to deal with the influx of people. Needs for camp coordination and camp management, especially technical support for collective site management, have been highlighted.

Operational Constraints: The airport has reopened.

Infrastructure: Damage to healthcare facilities was reported. Disruption to electricity supply was reported on both islands.

Shelter and NFIs: 12 shelters were opened, with 33 people housed in Nevis. Several people had to be evacuated due to roofs being blown off houses. Damage to homes in Saint Kitts in areas such as Conaree, Molineaux, and St Paul's Keys.

Sources: CDEMA 06/09/2017, OCHA 08/09/2017. OCHA 15/09/2017

Saint Martin

| | Not required | Low | Moderate | Significant | Major |
|----------------------------|--------------|-----|----------|-------------|-------|
| Need for assistance | | | X | | |
| | Very low | Low | Moderate | Significant | Major |
| Impact | | | | | X |

Priority needs: WASH, Food and Shelter

Eleven fatalities were reported on the island. Police and French troops are on the ground to ensure security of residents. There is widespread damage to infrastructure, and access to water has been interrupted. Food distribution remains erratic. Hurricane Maria is expected to hit the island.

Operational constraints: Fuel stations have reopened.

Infrastructure: Reports indicate that 92% of buildings have been damaged. Electricity has been restored to about 50% of the population.

Food: Multiple small grocery stores have reopened recently, increasing household food access.

WASH: Access to safe drinking water remains a priority need. The desalinisation plant is severely damaged. As of 13 September, 1,000 residents in Sandy Ground community were receiving only 3L of water per person per day.

Shelter and NFIs: Only one shelter, PIMA, is officially open and a number of unofficial shelters are accommodating displaced populations. Needs for camp coordination and camp management, especially technical support for collective site management, have been highlighted.

Protection: A lack of communication with the communities has generated tensions among the general public. There are reports of widespread looting.

Education: All of the schools have been damaged or destroyed and education has been disrupted.

Sources: OCHA 06/09/2017, OCHA 10/09/2017. USAID 15/09/17, OCHA 15/09/2017, PAHO 14/07/09, International Media 12/09/2017

Sint Maarten

| | | | | | |
|----------------------------|--------------|-----|----------|-------------|-------|
| | Not required | Low | Moderate | Significant | Major |
| Need for assistance | | X | | | |
| | Very low | Low | Moderate | Significant | Major |
| Impact | | | | X | |

Priority needs: WASH, Protection, Infrastructure

Four fatalities have been reported and dozens of injuries. The island has been devastated, with all residents from Sint Maarten reportedly being affected. In preparation for Hurricane Maria, evacuation centres and shelters have been prepared.

Operational constraints: The airport remains closed except for the use of military planes. Fuel stations are closed. The general conditions of roads are good for transportation of relief items. 65% of vehicles on the island are estimated to be damaged.

Infrastructure: About 90% of houses have suffered some kind of damage. Power and water supplies have been destroyed.

Health: The Sint Maarten hospital is functioning again, although there are some issues with access to water. Other clinics and pharmacies have sustained substantial damage. Cases of acute diarrhoea have been reported, and surveillance of infectious diseases is ongoing.

Food: Markets are closed and food stocks are depleting quickly.

WASH: Water services are not functioning. All desalinisation installations are functional, but until the piping system is restored, alternative distribution is needed.

Shelter and NFIs: About 5,000 individuals need temporary shelter and 3,000 houses require immediate repair for occupation.

Protection: The security situation is critical. There has been looting in the streets and there are reports of men walking around with guns and machetes.

Sources: OCHA 06/09/2017, OCHA 10/09/2017. UNICEF 15/09/17, OCHA 15/09/2017

Turks and Caicos

| | | | | | |
|----------------------------|--------------|-----|----------|-------------|-------|
| | Not required | Low | Moderate | Significant | Major |
| Need for assistance | | X | | | |
| | Very low | Low | Moderate | Significant | Major |
| Impact | | | | X | |

Priority needs: Food, Water, Infrastructure (electricity and communication)

No fatalities were reported. Some islands remain without utilities and communication following severe damage to infrastructure. Shortage of food and water continues to be of concern. St. Lucia has agreed to host prisoners from the island, after the prison was damaged.

Operational constraints: Due to damage to the airport in Grand Turk, commercial flights are unavailable. Severely limited communications are hampering the coordination of relief supplies.

Infrastructure: Some islands remain without utilities or communication. Severe damage to major government buildings, schools, churches and community centres have been reported. 70% of houses on South Caicos, 70% of houses on Providenciales Island, and 50% on Grand Turk Island have been damaged. Local authorities are planning to evacuate 2,000 people from South Caicos due to the level of infrastructure damage. South Caicos has no electricity and lacks communication infrastructure, which is hampering needs assessments.

Health: 60% of health facilities have been damaged. The hospital in Grand Turk suffered roof damage and only primary services are being offered.

Food: Food supplies are urgently needed.

WASH: Lack of sanitation facilities continues to be of concern. There is no running water in South Caicos and Grand Turk. Some areas of the public water system have been restored and water has begun to reach the population, yet there is a concern regarding lack of potable water in the immediate short term, while water stations are repaired.

Shelter and NFIs: There is a lack of shelter facilities. 150 people are in shelters in Providenciales. Priority shelter needs include tarpaulins, generators, and restoration of shelter facilities.

Protection: 10,000 children were affected. According to the governor, 6,570 people are vulnerable and require protection support. There are also an estimated 20,000 undocumented and stranded migrants. In addition, in South Caicos there are a number of Haitian and Dominican Republic nationals. These families are vulnerable and reported having no access to cash.

Sources: OCHA 06/09/2017, OCHA 08/09/2017, UNICEF 09/09/2017, OCHA 10/09/2017. OCHA 15/09/2017, PAHO 14/07/09, UNICEF 15/09/17

United States Virgin Islands

| | Not required | Low | Moderate | Significant | Major |
|----------------------------|--------------|-----|----------|-------------|-------|
| Need for assistance | | X | | | |
| Impact | Very low | Low | Moderate | Significant | Major |
| | | | | X | |

Priority needs: Infrastructure

Four fatalities have been confirmed. There is currently a hurricane warning. The territory has now stopped all recovery efforts from Irma and shifted to preparedness efforts for Hurricane Maria.

Operational Constraints: Following the hurricane warning, all ports have been closed since September 17 in anticipation of Hurricane Maria. All delivery of aid has been held off until after Hurricane Maria has passed. Cell phone coverage is almost non-existent.

Infrastructure: 80% of houses have been affected.

Food: People are in need of canned food. Farmers have lost their crops.

Health: A public health emergency was declared when Irma hit, yet no updates are available as to the origin.

Shelter and NFIs: Islands are short of crucial supplies to rebuild.

Sources: OCHA 08/09/2017, OCHA 10/09/2017. OCHA 15/09/2017, NY Times 15/09/2017, Local Media 18/09/2017

Response capacity and Gaps

Regional 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, have mobilised resources. CDEMA

International response capacity

On 15 September, a three-month Regional Response Plan for the Caribbean Region was launched to cover the urgent needs of the most vulnerable populations affected by Hurricane Irma. The plan requires USD 15.1 million to cover the most urgent needs of 265,000 people affected through the establishment of health and education services, ensuring access to safe water and sanitation, outbreak prevention and control, providing shelter, and coordination services. An additional USD 11.9 million is required for complex logistics and communications support. The plan focuses on most impacted nations, territories and states of the Caribbean, yet a separate plan of

action has been created for Cuba. Additional humanitarian needs for Haiti will need to be covered through the current Humanitarian Response Plan for Haiti, for which funding is still needed. The three-month Response Plan priorities include emergency support to the most vulnerable people, logistics and communications, coordination and technical support, and early recovery. (OCHA 15/09/2017)

The Cuba Plan of Action seeks to mobilise USD 55.8 million to address the urgent needs of 2.5 million Cubans in the 33 most affected municipalities. The plan intends to complement the efforts of national authorities and provides additional capacities to respond to the emergency. (UN Country Office 15/09/2017)

UNOSAT will release a comprehensive building damage assessment across the Caribbean this week (OCHA 18/09/2017).

Information Gaps

- There are serious gaps in information relating to the total number of affected population per territory.
- Logistical and communication access to many islands has been problematic, causing delays to assessment, analysis, and development of response strategies.

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.

Assessment techniques

- Consult with other sectors and national authorities on the questions vital to assessment quality.
- Including return areas in assessments improves understanding of current and future needs both during displacement and after return.

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.

Coordination between responders

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

Health

- Delays in treatment for injuries heighten the risk of tetanus and infection.
- Overcrowding due to displacement facilitates the transmission of disease.
- Waterborne diseases can break out among the affected population, as the disruption of usual water supplies and contamination by damaged sewage infrastructure results in consumption of unsafe drinking water.
- Mosquito-borne disease incidence may fall in the first few weeks after the hurricane as high winds and flooding may destroy mosquito-breeding sites. However, approximately three weeks after the impact, when flooded waters subside and mosquitoes rebreed, transmission is likely to return to previous levels.

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.

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: Take from information gathered in previous ACAPS reports

