



# THE CARIBBEAN: HURRICANES IRMA, MARIA & JOSE RESPONSE

## INTERNATIONAL ORGANIZATION FOR MIGRATION

SITUATION REPORT • 26 September 2017



An estimated 98 per cent of roofs were partially or totally destroyed in Dominica.

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## Highlights

■ Initial reports from the Caribbean Disaster Emergency Management Agency (CDEMA) indicate that 15 people are confirmed to have died in Dominica during Hurricane Maria, and at least 16 people are missing. This figure may rise as contact is made with cut-off communities. There is no electricity, very limited communications and a widespread shortage of food and water. An estimated 98 per cent of roofs were partially or totally destroyed, and 50 per cent of housing frames damaged.

■ IOM has released USD 100,000 of its own funds to scale up the shelter response in Dominica. IOM's emergency coordinator has deployed to Dominica from Antigua multiple times since the impact of the hurricane (on 21 and 23 September), to map the displacement situation and assist with assessing priority needs. IOM's shelter specialist was deployed to Dominica on 23 September and was joined by the Head of Community Stabilization and a logistician on 24 September.

■ Initial activities on Dominica in the coming days will include: (i) systematic collection of information on collective centres using IOM's Displacement Tracking Matrix; (ii) mapping of priority areas for distributions by helicopter and by road; and (iii) development of shelter response options.

■ In the wake of Hurricane Maria and its impact particularly on Dominica, the UN-coordinated Regional Response Plan will be revised to incorporate these additional needs.

## Situation Overview

As of 24 September, IOM surge team members are present in the regional coordination hub in Panama, the coordination hub in Barbados, and the affected islands of Antigua, Sint Maarten and Dominica. IOM continues to collate and maintain updated information on displacement and human mobility figures in close coordination with CDEMA. The latest available data on displacement are available at IOM's geoportal: <http://displacement.iom.int/caribbean-emergency-2017>.

The locations of emergency shelters designated before the arrival of Maria on Dominica have been mapped and made available as a starting point for emergency assistance once access is possible, and can be found at: <https://www.humanitarianresponse.info/en/operations/hurricane-irma-response/document/dominica-emergency-shelters-overview-20170921>.

### Anguilla

<b>Total population*</b>	13,555
<b>Exposed population</b>	13,555 (100%)
<b>No. of fatalities</b>	1
<b>Humanitarian access</b>	Clayton J Lloyd Intl. Airport is open.
<b>Priority needs</b>	<b>Education, Food, Health, Infrastructure</b> (electricity), <b>Shelter/NFIs, and WASH</b>

After Hurricane Irma, Anguilla suffered from significant damages of core infrastructure and facilities. The arrival of hurricane Maria disrupted relief and recovery efforts but did not cause significant additional damage. The Government of Anguilla is working with local partners including the Anguilla Red Cross to respond to needs locally, and relief is anticipated from the British ship, HMS Ocean.

### Antigua and Barbuda

<b>Total population*</b>	81,799
<b>Exposed population</b>	81,799 (100%)
<b>Displaced population</b>	1,423 (evacuees from Barbuda to Antigua—of these, 420 IDPs in collective centres in Antigua)
<b>No. of fatalities</b>	1

<b>Humanitarian access</b>	<b>Antigua:</b> V.C. Bird Intl. is open and fully functioning. St. John's port is open <b>Barbuda:</b> Barbuda Codrington Airport is closed
<b>Priority needs</b>	Antigua: <b>Education, Protection, Health, CCCM, and Shelter</b> Barbuda: <b>Education, CCCM, Health, Shelter, and Infrastructure</b> (electricity).

The Antigua & Barbuda Red Cross has completed registration of the Barbudans displaced to Antigua and final review of the list of registered persons is underway. Protection concerns were reported from one of the collective centres in Antigua, particularly related to lack of control of entry into the centre. At least one shelter will close on 1 October 2017 and therefore planning is being undertaken to determine where the displaced people can be housed.

The displaced families wish to return to Barbuda as soon as possible, but damage estimates of 95 per cent of homes and buildings mean that significant support will be required to assist returns. IOM is receiving a consignment of emergency shelters from Shelterbox which will be used to house recovery teams while they commence reconstruction efforts on Barbuda. Training and guidelines for shelter managers has been identified as a significant need. IOM will be supporting the Antiguan government with shelter management training along with partners UNWOMEN and UNFPA between 27-28 September. The training will focus on overall shelter management for approximately 30-40 government representatives and volunteers who are currently supporting this activity, and will include topics such as roles and responsibilities, information management, gender based violence issues as well as referral mechanisms, coordinating and monitoring services, and community participation.

On 25 September, PAHO reported a significant arrival of Chinese and Nigerian nationals requiring assistance in Antigua (itself impacted by Hurricane Irma and hosting the majority of displaced residents from Barbuda).

A Post Disaster Needs Assessment led by the National Office for Disaster Services (NODS) and supported by the World Bank, relevant national ministries and other international partners is scheduled to begin on 27 September 2017.

## Bahamas

<b>Total population*</b>	343,735
<b>Exposed population</b>	20,015 (5.82%)
<b>Displaced population</b>	MICAL <sup>1</sup> : 1,500 Ragged Island: 1,200 Bimini Island: 365
<b>No. of fatalities</b>	4
<b>Humanitarian access</b>	All airports open. Nassau and Freeport open as of 24 Sept.
<b>Priority needs</b>	<b>Shelter, Infrastructure</b> (roads and electricity), <b>Return to Affected islands, and Resumption of basic services</b>

Hurricane Maria did not cause significant additional damage to the Bahamas, following damage by Hurricane Irma to islands in the south and northwest including Acklins, Crooked Island, Inagua and Mayaguana, Ragged Island and Bimini Island. Recovery efforts are underway to enable return to the islands.

## British Virgin Islands

<b>Total population*</b>	28,063
<b>Exposed population</b>	28,063 (100%)
<b>Displaced population</b>	279
<b>No. of fatalities</b>	7
<b>Humanitarian access</b>	Airport open for evacuations and aid supplies. On Tortola, the road is passable from the airport to the east end.
<b>Priority needs</b>	<b>Food, Health, Infrastructure</b> (electricity), <b>WASH, and Telecommunications</b>

After sustaining significant damage from Hurricane Irma, the British Virgin Islands were also impacted by Hurricane Maria, disrupting clean-up efforts and causing some additional property and road damage from high winds, some flooding and a storm surge. No additional casualties were reported. The governor reported different levels of damage in different areas: the island of Anegada did not

experience as much wind damage due to the population's position that is geographically shielded and low-lying, while Virgin Gorda and Jost Van Dyke were heavily impacted. A storm surge on western Tortola knocked out the road and flooded a significant number of houses. Eleven displacement sites have been identified by DTM through secondary data sources. An extra 650 military personnel were transported to the region, and were deployed to support search and rescue as well as clean-up efforts including road clearance and relief distribution. The British ship HMS Ocean arrived on 22 September carrying 60 tonnes of aid to be distributed in areas affected by the hurricane.

## Cuba

<b>Total population*</b>	11,247,925
<b>Exposed population</b>	11,247,925 (100%)
<b>Displaced population</b>	At least 4,000 remain in collective centres
<b>No. of fatalities</b>	10
<b>Humanitarian access</b>	Jose Marti Intl. Airport in Havana is open. Ports Havana, Cienfuegos and Santiago de Cuba are open
<b>Priority needs</b>	<b>Education, Health, Shelter Repair/NFIs, WASH, and Food Security/Agricultural Recovery</b>

As of 22 September 2017, hundreds of people in the central provinces remain without basic services such as electric power, water supply and telecommunications. 1,026 health facilities have been affected by the hurricanes. Hurricane Maria caused heavy rain and minor storm surges in Baracoa, Guantanamo Province but did not cause significant additional damage to that caused by Irma. Relief is being provided by the governments of Venezuela, Bolivia and Colombia as well as international actors. IOM has provided the Government of Cuba with USD 100,000 of its own funds to support the immediate response. IOM distributed 244 250-litre water tanks to populations affected by Hurricane Irma. IOM is also appealing for funds to support temporary facilities, NFI and toolkits for displaced people in Villa Clara.

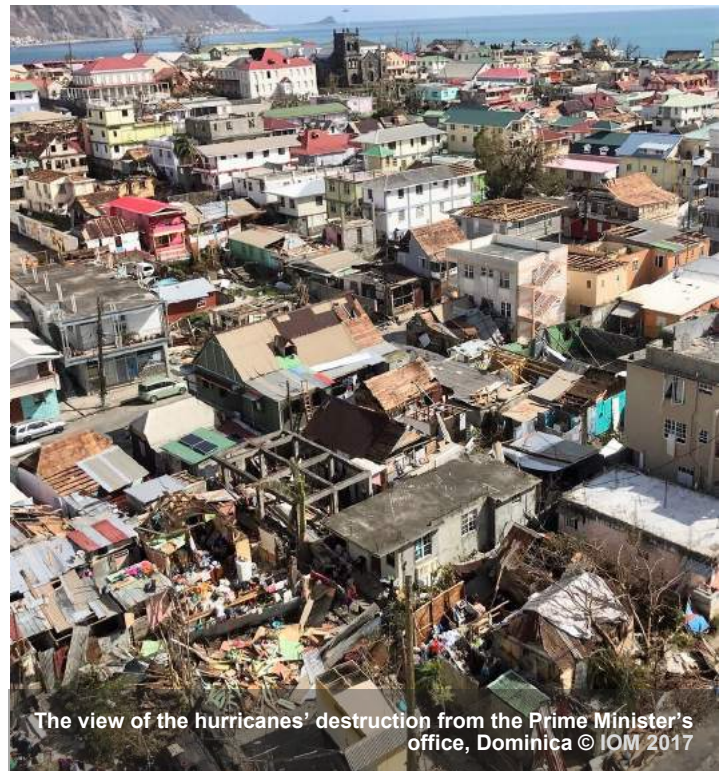
<sup>1</sup> Mayaguana, Inagua, Crooked Island, Acklins, and Long Cay

## Dominica

<b>Total population*</b>	71,293
<b>Exposed population</b>	71,293 (100%)
<b>Displaced population</b>	Unknown
<b>No. of fatalities</b>	15 confirmed; 16 reported missing
<b>Humanitarian access</b>	Melville Hall and Canefield airports are open for relief flights. Extensive road and bridge damage as well as landslides are preventing access along coastal roads and inland. Ferry service resumed on 22 Sept to Guadeloupe and St. Lucia
<b>Priority needs</b>	<b>Security, Search and Rescue, Evacuations, Access/Road Clearance, Food, Water, Communication, and Shelter</b>

Dominica was one of the worst-affected islands to be hit by Hurricane Maria, a category 5 storm. An estimated 98% of roofs are damaged or destroyed and an estimated 50% of building frames are damaged. Fifteen people are confirmed dead and a further 16 reported missing. This figure may rise once contact is re-established with cut off communities.

With food, water, telecommunications and access cut off since 18 September, the affected people are desperate for assistance and insecurity is beginning to rise. Lack of access into the interior and coastal communities beyond Roseau and Melville have hampered assessments and relief efforts to date. There is particular concern about Portsmouth, communities in the interior and on the eastern coast, as limited contact has been made to date. IOM staff identified 200 Nigerian, two Ghanaian and two Botswanan nationals requesting evacuation from Roseau. As of 24 September, it is confirmed that these individuals left Dominica for St Vincent on their own. CDEMA and the Government of Dominica report needs for 14,000 tarpaulins, 4,813 cases of water per day, road clearance, bridge reconstruction, shelter repair materials, water purification kits, NFI, generators, dignity and sanitation materials and medical supplies. On 23 and 24 September IOM met with relevant government authorities and shelter actors to support the planning and implementation of shelter response and further aid activities. DTM assessments commenced by boat and road on 25 September in Roseau and surrounding areas.



## Dominican Republic

<b>Total population*</b>	12,522,097
<b>Exposed population</b>	12,469,932 (99.6%)
<b>Displaced population</b>	As of 21 Sept, the COE informs that 3,713 persons are in collective centres, and a total of 9,900 are displaced by Maria
<b>No. of fatalities</b>	None reported
<b>Humanitarian access</b>	Las Americas Intl. Airport is open.
<b>Priority needs</b>	<b>WASH and Shelter</b>

Hurricane Maria was a category 3 storm as it passed along the eastern coast of the Dominican Republic, causing heavy rains, strong winds and storm surges along the eastern and north-eastern coasts. As of 21 September, 1,286 houses are affected and 15 communities are inaccessible. Damage and preventive measures mean that over 120,000 people are without water supply, and power supply was suspended to provinces on the eastern, north-eastern and northern coasts. IOM Dominican Republic has been involved in the response, providing support in the evacuation prior to the arrival of the hurricane. There are currently information gaps regarding support to irregular migrants.

## Guadeloupe

<b>Total population*</b>	400,186
<b>Exposed population</b>	400,186 (100%)
<b>Displaced population</b>	Estimated 300-1000
<b>No. of fatalities</b>	2
<b>Humanitarian access</b>	Airport in Pointe-a-Pitre closed as of 24 September
<b>Priority needs</b>	<b>Infrastructure</b> (electricity), <b>Telecommunications,</b> <b>Food Security/Agriculture,</b> and <b>WASH</b>

There is no official record of IDPs in Guadeloupe, but IFRC estimates that there are between 300 and 1,000. Major damages occurred to electricity (80,000 people affected), telecommunications (25% of fixed line users), agriculture, and water infrastructure. There are initial conflicting damage reports for Les Saintes, with some sources reporting major damages to the island, while others consider the extent of damage as not very significant.

## Haiti

<b>Total population*</b>	10,911,819
<b>Exposed population</b>	8,693,416 (79.7%)
<b>Displaced population</b>	Currently over 200
<b>No. of fatalities</b>	2
<b>No. of Individuals assisted by IOM</b>	<b>Total: 1,622</b> 1,550 (NFIs) 72 (Protection—evacuation)
<b>Humanitarian access</b>	No reported damage
<b>Priority needs</b>	<b>Shelter and Health Facility Repair, and Food Security/Agriculture Recovery</b>

Although the country was spared a direct hit by Hurricane Irma, 3,838 families were still reported affected. Hurricane Maria also moved north and avoided Haiti. The northern part of the country was affected by heavy rains, winds, flooding and agricultural losses. Flash floods occurred in the locality of Blue Hills in Nord on 23 September. One site hosted over 200 displaced persons. The DPC (Civil protection directorate) distributed food to beneficiaries. The IOM focal point in Nord remains on standby in case general coordination is needed. No other department reported a significant response.

## Puerto Rico

<b>Total population*</b>	3,583,073
<b>Exposed population</b>	3,583,073 (100%)
<b>Displaced population</b>	154
<b>No. of fatalities</b>	13
<b>Humanitarian access</b>	Conditions of Puerto Rico airports are unknown
<b>Priority needs</b>	<b>Infrastructure</b> (electricity), <b>Water, Shelter Repair, and Debris clearance</b>

Although downgraded to a category three, Maria made direct impact on Puerto Rico and caused widespread flooding and destruction from high winds. The Guajataca dam in northwestern Puerto Rico suffered structural damage on 21 September, leading to an order to evacuate 70,000 people from the municipalities of Isabela and Quebradillas due to fears that it would collapse. Power supply to an estimated 3.4 million people was knocked out by the storm and may be reportedly be down for several weeks.

## Saint Barthélemy

<b>Total population*</b>	9,427
<b>Exposed population</b>	9,427 (100%)
<b>Displaced population</b>	Unknown
<b>No. of fatalities</b>	Unknown
<b>Humanitarian access</b>	Conditions of Saint Barthélemy Airport are unknown
<b>Priority needs</b>	<b>Shelter, WASH, Food Security, and Telecommunications</b>

While only limited information is available for the hurricanes' impacts on Saint Barthélemy, some initial findings based on satellite imagery analysis suggest extensive house damages in the western, northern and eastern parts of the island. Most houses are moderately damaged, but high-level damages were spotted in some houses in the north including, Cayes, Grand Cul de Sac, Lorient, Mont Jean, Saint-Jean and Vitet.

## Saint Kitts and Nevis

<b>Total population*</b>	46,398
<b>Exposed population</b>	46,398 (100%)
<b>Displaced population</b>	Unknown
<b>No. of fatalities</b>	None reported
<b>Humanitarian access</b>	Robert L. Bradshaw Intl. Airport and Vance W. Amory Intl. Airport are open. Basseterre and Charlestown ports open
<b>Priority needs</b>	<b>Shelter, Electricity, Agriculture, Road Infrastructure, and Health Facility Rehabilitation</b>

On St Kitts, CDEMA reports damage to housing stock and agriculture and downed electricity poles. There is a need for 5,000 tarpaulins. On Nevis, there were electricity shortages and damage to agriculture, health facilities, main roads and jetties. Water was restored and schools reopened on 21 September. By 22 September, CDEMA reports that the electrical grid was 80 per cent restored. Minor damage to roofs is reported, but significant environmental damage including forest loss and damage to agriculture. An initial damage assessment of East Caribbean dollar 35.4 million (approximately USD 13.1 million) is reported.

## Saint Martin

<b>Total population*</b>	35,107
<b>Exposed population</b>	35,107 (100%)
<b>Displaced population</b>	Unknown
<b>No. of fatalities</b>	Unknown
<b>Humanitarian access</b>	Conditions of Grand-Case Esperance Airport are unknown
<b>Priority needs</b>	<b>Food, WASH, and Telecommunications</b>

According to CDEMA, satellite pictures indicate 28 per cent of building structures were damaged in Hurricane Irma. The French Government announced its intentions to fund and implement relief, rebuilding and evacuation in the territory.

## Sint Maarten

<b>Total population*</b>	42,083
<b>Exposed population</b>	42,083 (100%)
<b>Displaced population</b>	5,000 (as of 11 Sep 2017)

<b>No. of individuals assisted by IOM</b>	<b>Direct beneficiaries:</b> 50 (capacity building on collective centre management) <b>Indirect beneficiaries:</b> 219 evacuees
<b>Humanitarian access</b>	Princess Juliana Intl. Airport is open
<b>Priority needs</b>	<b>Food, Health, Shelter, WASH, and Early Recover</b>

Sint Maarten was heavily impacted by Hurricane Maria, where an estimated 40 per cent of buildings were damaged by Hurricane Irma. While repairing critical infrastructure, the Dutch Defence personnel continue to conduct engineering assessments of the new damage caused by Hurricane Maria. Early findings suggest that almost all houses and building structures were damaged in some areas, including Cay Bay, Cole Bay and Philipsburg. Of these, about 40 per cent are irreparably damaged and the rest requires extensive repair.

The population expressed their desire to stay in their houses even despite the damages, due to fear of losing their belongings. Most of them are in need of shelter materials and toolkits to repair their damaged homes while a more durable solution is being identified.

Among the affected populations, irregular migrants are particularly at risk in Sint Maarten as their access to state-driven assistance is unclear and there may be reluctance in approaching aid organisations. This includes schemes that were interrupted or activated after the state of emergency such as insurance claims, reconstruction schemes for land owners and proprietors, among others.

Relief assistance and emergency shelter support are being provided to all affected populations without distinction. The Dutch Red Cross are distributing emergency supplies including tarpaulins to the affected population in Dutch Quarter.

The National Institute for Professional Advancement (NIPA), an evacuation centre in in Cay Hill, is in the process of closure and evacuees will be assisted as per their needs. Return assistance will be provided for those who require minimal assistance to repair their homes; patients will be referred to health facilities; and people with no immediate shelter solution will be relocated to a temporary shelter – Festival Village – that can accommodate up to 300 persons. Additionally, the Ministry of Public Housing, Environment, Spatial Development and Infrastructure (VROMI) and

## Sint Maarten (continued)

Emergency Support Function (ESF) 7 are strategizing to identify a location to place container houses brought in from the Netherlands.

## Turks and Caicos Islands

<b>Total population*</b>	31,458
<b>Exposed population</b>	31,458 (100%)
<b>Displaced population</b>	60
<b>No. of fatalities</b>	None reported
<b>Humanitarian access</b>	Providenciales Airport and Seaport are open. Conditions of South Caicos Airport and Grand Turks Seaport are unknown
<b>Priority needs</b>	<b>WASH, Food, Shelter/NFIs, and Infrastructure</b> (electricity)

On 22 September Hurricane Maria was a category 3 storm passing by the east of the Turks and Caicos Islands. The eastern Grand Turk received significant rainfall and experienced high wave heights as well as a storm surge concentrated on the eastern coast, adding to the previous impact of Hurricane Irma and disrupting relief efforts.

## United States Virgin Islands

<b>Total population*</b>	106,405
<b>Exposed population</b>	106,405 (100%)
<b>Displaced population</b>	Unknown
<b>No. of fatalities</b>	1
<b>Humanitarian access</b>	Limited commercial flights at Cyril E. King Intl. Airport expected to resume by 27 Sept. St. Thomas Airport closed and rehabilitation work required at Henry E. Rohlsen Airport on St. Croix
<b>Priority needs</b>	<b>Shelter, Health, and Infrastructure</b>

Distribution centres have been set up on St Croix at five locations (schools and a fire station). Distribution centres have been set up at eight locations on St Thomas and two locations on St John. Temporary medical facilities are being established and food assistance and roof construction is in progress. A FEMA team is en route to the Territory to support relief and recovery efforts.

## IOM RESPONSE

### Assessments

DTM is collating figures on displacement caused by the hurricanes in the Caribbean on a regional portal: <http://displacement.iom.int/caribbean-emergency-2017>. The portal provides updates on the displacement situation at the country level for countries affected by the hurricanes. Additionally, there is information on numbers and locations of displacement populations for Antigua and Barbuda and Sint Maarten, plus evacuation centre locations. The portal displays information regarding hurricane paths and exposed areas. Furthermore, the platform provides the possibility for staff to provide real-time updates from the field.

IOM's surge team, including the Emergency Coordinator and shelter specialist, have been present in Roseau, Dominica since 23 September, conducting initial assessments of the situation and needs in coordination with other humanitarian and government actors. As of 25 September, IOM has performed DTM site assessments by boat and by road in close collaboration with the Pan American Health Organization (PAHO), including mapping of priority areas for relief distributions.

In Antigua, two formal displacement sites (with 268 IDPs) and five informal displacement sites (with 130 IDPs) remain. All displaced people have access to distributions and to most basic needs, with the exception of one site, the Barrymore Hotel. Informal sites will be progressively consolidated into the formal sites. There is an estimated over 1,000 additional IDPs in host communities.

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On 26 September, IOM's Shelter Expert completed an assessment visit to the small village of Colihaut, about 20 km north of Roseau, with PAHO/WHO and WFP. The village, with a population of approximately 500 residents, has become isolated due to infrastructure damage (electrical and telephone lines are mostly down, leaving no electricity) caused by the hurricanes. Roughly 60 to 70 per cent of homes are damaged (mostly roof destruction) and it's estimated that half of them should be repairable. According to the village's chairman, the evacuation centre was completely destroyed, forcing many people whose homes were damaged, to stay with relatives or in the public health centre. According to PAHO, sanitation conditions remain adequate as villagers are using water brought in from a river, as water pipelines have also been destroyed.

## IOM RESPONSE

### Camp Coordination and Camp Management and Displacement Tracking

**Dominica:** IOM's Displacement Tracking Matrix team mapped the locations of emergency shelters on Dominica, identified as such before the arrival of Hurricane Maria, and can be found on the following link: <https://www.humanitarianresponse.info/en/operations/hurricane-irma-response/document/dominica-emergency-shelters-overview-20170921>. To date, lack of access and telecommunications have prevented teams from assessing and verifying the current status of the shelters. As access improves, IOM teams will begin the systematic collection of information on collective centres using IOM's Displacement Tracking Matrix.

### Shelter / NFIs and Logistics

**Antigua and Barbuda:** 250 Shelterbox (tents and shelter materials) will be brought in by IOM from Haiti. These emergency shelter material will help the shelter teams working to support returns to Barbuda.



About 90 per cent of Barbuda's electricity infrastructure, including telephone lines, were damaged © IOM 2017

**Sint Maarten:** Prepositioned stocks of 1,000 ropes and tarpaulins to Sint Maarten are expected to arrive 26 September. These will be used to repair roofs of health facilities as requested by PAHO and to meet critical shelter needs identified by community councils. IOM continues to work closely with the UNDP Early Recovery advisor on the ground along with Local Government and the Dutch Housing Delegation from the Ministry of Interior and Kingdom Affairs to draft a shelter to housing strategy that includes also Social, Business and Governance aspects. Migration management aspects are considered as well

given the large segment of the population estimated to be in an irregular status.

**Dominica:** IOM has released USD 100,000 from its own funds to scale up the shelter response in Dominica. An IOM shelter expert arrived in Dominica on 23 September to support rapid assessment and development of shelter strategy in coordination with government actors. Initial coordination meetings were held on 23 and 24 September in Roseau. Initial shelter activities on Dominica in the coming days will include rapid shelter assessments and development of shelter response options.



Affected residents of Dominica in search of safe shelter © IOM 2017

### Protection

**Dominica:** On 21 September, IOM surge capacity was deployed to Dominica. The surge team conducted initial assessments on damages and needs with the support of the United Nations Humanitarian Air Service (UNHAS). Migrants requesting evacuation were identified including 200 Nigerians, two Botswanans and two Ghanaians. As of 24 September, all the identified caseload have departed Dominica for St Vincent by ferry.



Young man sitting outside of a hospital, observing the damage around him © IOM 2017



# Caribbean Hurricanes Response 2017 - Damage Assessment

Feedback: DTMsupport@iom.int



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IOM has also launched a geoportal that displays a compilation of latest available damage assessment data from Hurricanes Irma, Jose, and Maria as of 25 September 2017. Source data is a combination of satellite imagery analysis (Copernicus EMS and UNOSAT-UNITAR) and crowdsourced information (UNOCHA) and has not been validated in the field. The portal can be found at <http://displacement.iom.int//caribbean-emergency-2017/damage-assessment>. The above depicts an image of a heavily damaged area, along the coast of Sint Maarten.