



**TÉLÉCOMS  
SANS FRONTIÈRES**

Communications for life

# HURRICANE MARIA

## DOMINICA

### INTERIM REPORT

FOR PERIOD

*20 SEPTEMBER 2017 - 10 OCTOBER 2017*



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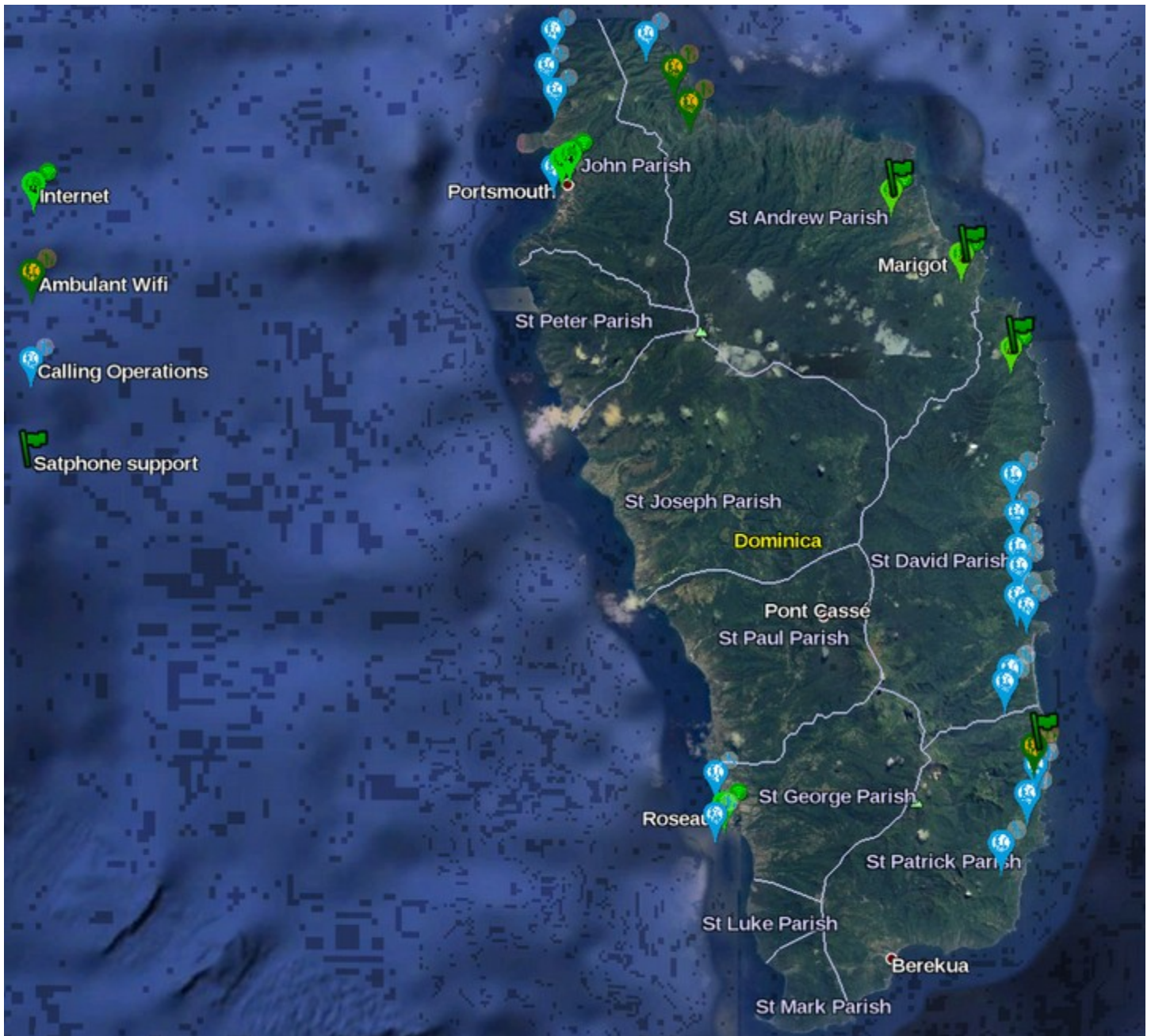
## KEY FIGURES

4 Wi-Fi hotspots for the population  
4,094 unique users  
240 GB of data used by the population  
—  
3 Ambulant Wi-Fi operations  
272 unique users  
13 GB of data used by the population  
—  
18 calling operations  
910 beneficiaries  
—  
5 satphones strategically positioned in out-of-coverage parishes

## CONTENTS

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- Ambulant Wi-Fi Service

# AREAS OF INTERVENTION



Date: 09/10/2017

## CONTEXT

*Dominica is famous for its 265 rivers running along the volcanoes, mountains and hills of the island. This exceptional geographic make-up also makes the island a highly vulnerable place, not least of all during a category 5 hurricane. Rivers burst their banks, causing floods, fallen trees whilst miles of roads were blocked and coastal buildings destroyed by waves.*

Télécoms Sans Frontières had been intervening in Saint-Martin since the 7th September in response to Hurricane Irma that hit the Caribbean region at the start of the month. On the 19th September, another category 5 hurricane - Maria - hit the island of Dominica.

TSF positioned its team in Pointe-à-Pitre (Guadeloupe) in the direct aftermath of Maria, with the aim of deploying to Dominica as quickly as possible. As Dominican airports were closed due to damages, airplanes were not able to land on the island. Commercial seafaring companies could not reach the island due to the maritime conditions and the lack of information available concerning the state of the country's ports.

TSF successfully deployed its first member by teaming up with a boat owner looking to take humanitarian provisions from Guadeloupe to Dominica, and thus was able to reach the island in the direct aftermath on 21st September.

TSF deployed with sufficient equipment to support coordination and offer calls to the Dominican population living in isolated areas where electricity and telecommunications networks were damaged by the Hurricane. Additional equipment was later used to set up Internet connections in targeted areas, allowing communities to overcome isolation and reconnect with their relatives, whilst ensuring that local and national information flow was improved thanks to the use of satellite communications technology.

## CHRONOLOGY OF EVENTS

- **9/21/2017**

Arrival of TSF in Dominica

- **9/22/2017**

Calling operation on the Ferry Docks in the capital, Roseau

Coordination meeting w/OCHA, CDEMA

Installation of an Internet connection at the French Fire Brigade HQ at the town Stadium

- **9/23/2017**

Reception of 2 additional VSAT kits

Calling operation in Goodwill

- **9/24/2017**

Reception of additional equipment from Saint Martin

- **9/25/2017**

Installation of TSF's local base in Portsmouth

- **9/26/2017**

Installation of a VSAT for community Wi-Fi access in Portsmouth

- **9/28/2017**

Preparation of the NGO Telecoms Centre at the Stadium, Roseau

- **9/29/2017**

Arrival of team member reinforcement

Calling operations in Portsmouth shelters

Satphone provision to Portsmouth Hospital

- **9/30/2017**

Opening of the TSF NGO Telecoms Centre at the Stadium

Dispatching of the TSF team to local base in Portsmouth for preparation of VSAT deployment in the Parish of St Andrews

- **10/1/2017**

Internet is set up at Portsmouth Hospital

Calling operations in Capuchin

- **10/2/2017**

VSAT installation in Wesley and Salybia

Wi-Fi bridge set up between Wesley and Marigot

Calling operations in Clifton, Cottage and Pensville

- **10/3/2017**

Calling operations in Pensville

- **10/4/2017**

Loan of satphones to Wesley, Marigot and Salybia

- **10/5/2017**

Calling operations in locations between Castle Bruce and Good Hope

Proof-of-concept: Ambulant Wi-Fi service for isolated villages

Loan of a satphone to La Plaine

- **10/6/2017**

Return of the Head of Mission to Roseau to prepare disengagement from the field

Calling operations in Petite Soufrière, Saint Sauveur and surrounding villages

- **10/7/2017:**

Ambulant Wi-Fi service in La Plaine

Calling operation in Rivière Cyrique, Morne Jaune, Delices, Boetica and Laronde

- **10/8/2017**

Loan of a satphone to Delices

- **10/9/2017**

Withdrawal of the team from Dominica



# TELECOMS ASSESSMENTS

The Mobile Network Operators (MNOs), Digicel and Flow, reported considerable damage to their infrastructure. Their cells are connected via optical fibre across the island. With fibre currently out-of-service, the impact on the network's ring typology was such that the majority of the MNOs' cell sites were down.

In order to restore the network, MNOs have to repair or replace damaged towers with new ones and set up radio links between them. From a technical point of view, this may require the relocation the tower in order to have a direct line of sight from one to the other. This is not required when using optical fibre.

Additionally, the national electricity grid was down across the entire island. Telecoms towers depend on this source of power, thus increasing the challenge of restoring the mobile network.

The first areas identified as a priority for restoring the mobile network were Roseau, the capital, and Portsmouth, the island's second largest town. Once these two locations are fully restored, MNOs can proceed to restore neighbouring cell sites.



## Telecommunications assessments

Location	GPS	Type of location	Date	Infrastructure				Comments
				Mobile Network Voice	Mobile Network Data	Internet access (landlines)	Electricity	
Roseau	15.299912, -61.386814	City	21/09/2017	Partial	No	No	No	Flow GSM is up but call to overseas are not possible
Roseau	15.299912, -61.386814	City	22/09/2017	Partial	Partial	No	No	Flow GSM is up, data over 2.5G possible but unstable
Roseau	15.299912, -61.386814	City	23/09/2017	Yes	Yes	No	No	Flow and Digicel cells are restored in Roseau, performance and capacity are not known.
Roseau	15.299912, -61.386814	City	24/09/2017	Yes	Yes	No	No	3G and 4G networks are up
Portsmouth	15.57704, -61.45623	Town	26/09/2017	No	No	No	No	No network
Portsmouth	15.57704, -61.45623	Town	28/09/2017	Yes	Yes	No	No	Flow network is up
Calibishie	15.592760, -61.351530	Town	01/10/2017	No	No	No	No	
Wesley	15.564361, -61.310599	Town	01/10/2017	No	No	No	No	
Douglas-Charles Airport	15.546666, -61.297896	Airport	01/10/2017	No	No	No	No	ETC provides Internet at the airport
Marigot	15.538273, -61.284399	Town	01/10/2017	No	No	No	No	
Atkinson	15.511737, -61.263124	Town	01/10/2017	No	No	No	No	
Salybia	15.496773, -61.257760	Town	01/10/2017	No	No	No	No	
Anse de Mai	15.593266, -61.377279	Village	04/10/2017	Yes (Digicel)	No	No	No	
Wesley	15.564361, -61.310599	Town	04/10/2017	No	No	No	No	ETC provides Internet at the health centre
Melville	15.546666, -61.297896	Airport	04/10/2017	No	No	No	No	ETC provides Internet at the airport



Castle Bruce	15.442222, -61.258199	Town	04/10/2017	No	No	No	No	
La Plaine	15.328896, -61.249616	Town	05/10/2017	No	No	No	No	
Good Hope	15.411402, -61.255506	Town	05/10/2017	No	No	No	No	

*DATE: 10/10/2017*

## COORDINATION SUPPORT

Immediately after the arrival of its teams, TSF set up an Internet connection at a strategic coordination location, the Windsor Park Stadium in Roseau. This position was the operational base of the international relief teams and it has also been converted in a heliport, allowing helicopters from international response teams to pick up food and water for delivery to isolated communities.

The relief teams listed below benefited from the Internet connection provided by TSF:

- French Fire Brigade from Martinique and French Guyana
- French Civil Protection
- French Ministry of Foreign Affairs
- Teams from the French emergency medical service (SAMU)
- European Civil Protection and Humanitarian Aid Operations (ECHO)
- UN Development Programme (UNDP)

A total of 86 GB of data have been transferred for logistics management, and information sharing.



*Windsor Park Stadium, Roseau – Global Xpress (GX) installation*

It is important for Télécoms Sans Frontières to support local actors by ensuring they have a number of different communication channels, whatever the situation. TSF has thus been supporting the towns of Wesley, Marigot, Salybia, La Plaine and Delices by making available satellite phones. This capacity, in addition to the Internet connection over satellite, is vital for communicating anytime, anywhere in case of emergency.



*Wesley – Training for using a satphone*

## Satphone profiles

Town	Location	Focal point	Type	Phone number	Initial credit	Beneficiaries	Activation date	Report frequency	Emergency calls
Wesley	Police station	Elton Edwards	Inmarsat Isatphone Pro	+87077 646-6098	100 min	Population, health centre, police station	04/10/2017	Weekly	3
Marigot	Police station	Terry Royer	Inmarsat Isatphone Pro	+87077 646-6097	100 min	Population, health centre, police station	04/10/2017	Weekly	8
Salybia	Police station	Caporal Bellot KA	Inmarsat Isatphone Pro	+87077 646-6092	100 min	Population, health centre, police station	04/10/2017	Weekly	5
La Plaine	Police station	Dion Moses	Inmarsat Isatphone Pro	+87077 646-6096	100 min	Population, health centre, police station	05/10/2017	Weekly	8
Delices	Police station	CR Williams	Inmarsat Isatphone Pro	+87077 646-6091	100 min	Population, health centre, police station	08/10/2017	Weekly	3

*Date: 10/10/2017*

Considering that power is not yet fully available, thus use of satellite phones should be optimised to maximise battery life. TSF advises that certain practices should be applied:

- Satphones should only be switched on when required for use
- Sending a text message to the interlocutor to agree on a calling time may help

# INTERNET HOTSPOTS

## Support to community coordination

Considering the lack of communication across the whole island, the Telecoms Working Group (TWG), led by the Director of Telecommunications of Dominica, requested support from humanitarian agencies and NGOs to deploy satphones in strategic locations in order that community leaders be able report information back to Roseau.

Despite of the availability of the requested satphones, the process used by communities to share information was still unknown and local focal points had not been identified. Considering these difficulties, TSF deployed a team to the North-East of the island - in the Parishes of Saint Andrew and Saint David - to assess the situation locally and directly offer means of communication to the local representative so they could process the information at a local level.

In Saint Andrews, roads were full of debris but vehicles were able to circulate. As the communication networks were down, communities organised themselves to spread information and to transmit messages by car, with police stations as the central hubs for collecting information. People report any information to the police team on duty, including medical issues, medical referrals, security issues, provision requests or evacuations, and then police will travel to the neighbourhoods in question to deal with issues raised. Supporting this information process is a key to improving the efficiency of the recovery phase.

## Service to the population

TSF's support includes access to Wi-Fi hotspots, powered by satellite internet connectivity, openly available to communities and key communal facilities such as healthcare centres, police stations, and distribution committees. The area covered is within the Parish Saint Andrew. The towns of Wesley, Marigot and Salybia directly benefit from the TSF services to improve their resilience and help commence restoration. The Internet connections allow them to share information between these three towns and also with Roseau and Portsmouth. As the Internet connection relies on generators, a satellite phone has been deployed in order to ensure a reliable means of communication for emergency situations.



*Portsmouth – TSF Internet hotspot*

The affected communities also benefit from the connection so they can contact their relatives and organise the assistance they need. Discussions held on-site revealed that most of the people living on the island communicate using cross-platform communications apps such as Whatsapp and Messenger. TSF thus optimised its connectivity to ensure that messages via such platforms could still be exchanged, even in the event where several devices were connected to the network simultaneously.





## Internet hotspots profile

Town	Location	Focal point	Type	Capacity	Beneficiaries	Max simultaneous users	Wi-Fi name	Usage priority	Activation date	Total unique users	Total data
Portsmouth	57 Rodney Street	Wayne Abraham	VSAT	2 Mb/s down, 0.5 Mb/s up	Population, Hospital	130	TSF-FREE-WIFI (no password)	Whatsapp, Facebook Messenger	27/09/2017	2,359	126 GB
Wesley	Police station	Elton Edwards	VSAT	2 Mb/s down, 0.5 Mb/s up	Population, health centre, police station	60	TSF-FREE-WIFI (no password)	Whatsapp, Facebook Messenger	02/09/2017	950	64 GB
Marigot	Police station	Terry Royer	VSAT	2 Mb/s down, 0.5 Mb/s up	Population, health centre, police station	130	TSF-FREE-WIFI (no password)	Whatsapp, Facebook Messenger	02/09/2017		
Salybia	Police station	Caporal Bellot KA	VSAT	2 Mb/s down, 0.5 Mb/s up	Population, health centre, police station	130	TSF-FREE-WIFI (no password)	Whatsapp, Facebook Messenger	02/09/2017	785	51 GB

Date: 10/10/2017

# HUMANITARIAN CALLING OPERATIONS

The lack of access to ATMs in post-disaster Dominica meant that many people were unable to access their funds and purchase top-up cards that would allow them to contact their families overseas. The high cost of international communication thus prevented families from being able to make calls to their relatives abroad.

Télécoms Sans Frontières has been working to provide calls to families who have not had the chance to contact their relatives, reaching a total of 910 beneficiaries. These calls represent psychological relief and a bridge towards the world from which they have been cut off.



*Saint-Andrews Parish - TSF Calling Operations*

<b>Total direct beneficiaries</b>	910
<b>Total calls</b>	213
<b>Total duration (in minutes)</b>	804
<b>Number of communities</b>	18

*Date: 10/10/2017*



## Humanitarian Caling operations

Date	Location Name	GPS coordinates	Total direct beneficiaries	Total Calls	Total Duration (in minutes)
22-Sep-17	Roseau	15.298464, -61.389539	58	12	23
23-Sep-17	Goodwill	15.316073, -61.386768	22	8	22
29-Sep-17	Portsmouth	15.57587, -61.45442	38	9	41
1-Oct-17	Capuchin	15.63415, -61.45949	118	24	98
2-Oct-17	Clifton / Cottage / Pensville	15.62445, -61.46245 / 15.61674, -61.46029 / 15.62440, -6141291	85	28	108
3-Oct-17	Pensville	15.62440, -6141291	199	48	210
5-Oct-17	Vieille Case	15.615825, -61.408811	41	9	40
5-Oct-17	Thibaud	15.599509, -61.397899	15		11
6-Oct-17	Petite Soufriere / Fond Bleu / Saint Sauveur / Morpo	15.390242, -61.256227	59	11	29
7-Oct-17	Morne Jaune	15.353765, -61.262870	70	14	52
7-Oct-17	Riviere Ciryique	15.358110, -61.256089	62	16	89
7-Oct-17	La Plaine	15.328105, -61.249598	35	9	35
7-Oct-17	Delices	15.286681, -61.266024	82	20	35
7-Oct-17	Boetica / Laronde	15.308424, -61.251680	26	5	11

DATE: 10/10/2017

## AMBULANT WI-FI SERVICE

Faced with the scale of the disaster, TSF initiated a new service piloted for the first time on the 05 October 2017 which allows people in remote villages to benefit from high speed Wi-Fi access. Equipped with a 4x4 and a mobile satellite internet dish, TSF traveled from village to village to provide inhabitants with access to social media, messaging apps and news sites; an opportunity for many to contact their relatives and loved ones abroad and inform them of their situation. In parallel, our team also provided calls for those who had not been able to charge their own telephones, and offered a portable charging solution to help them restore battery life.

On the first day of operations, the team covered the villages of Vieille Case and Thibaud. TSF then went on to cover the town of La Plaine in the Saint-Patrick Parish, seeing a total of 272 unique devices connected to the Wi-Fi network.



*Thibaud Village – TSF providing Ambulant Wi-Fi Service*



## Ambulant Wi-Fi operations

Date	GPS	Location Name	Services	Total Consumption (MB)	Total Users	Beneficiaries
05/10/2017	15.613973, -61.405948	Police station, Vieille Case	internet, WhatsApp, Facebook	8120	138	Population
	15.600454, -61.396189	Bus Station, Thibaud				
07/10/2017	15.328105, -61.249598	Police station, La Plaine	internet, WhatsApp, Facebook	4870	134	Population

Date: 10/10/2017