



TÉLÉCOMS  
SANS FRONTIÈRES

Communications for life

# ANNUAL REPORT 2017





# EXECUTIVE SUMMARY

“ The year 2017 was poignantly marked by numerous humanitarian dramas around the world. From devastating natural disasters to deadly conflicts, Télécoms Sans Frontières has remained mobilised and adapted its response to the specific needs of the affected populations, introducing new and innovative means of providing communications aid.

The powerful hurricanes that devastated the West Indies in September reminded us of the fragility of human infrastructure in the face of natural elements, with levels of destruction reaching 90% in certain countries. Amongst the first international NGOs in the field, TSF allowed local authorities and hundreds of emergency actors to coordinate relief for the hundreds of thousands of people affected. Given the scale of the disaster and the difficulties in getting around, TSF launched a brand new service to

bring technologies closer to populations. For the first time ever, the most remote areas benefited from high-speed Wi-Fi access thanks to an ambulant Wi-Fi service, allowing TSF to cover a broader beneficiary base.

For the sixth consecutive year, TSF maintained its unwavering support to the medical and educational sectors in Syria, regardless of increasingly difficult circumstances. The role of TSF has become increasingly important in Syria as the years have gone on. Despite the countless changes in territorial control, TSF has constantly adapted its response to provide technical means to people who risk their lives trying to save those of others. Our satellite connections have been strategically repositioned to optimise the provision of vital medical care, whilst our educational activities have also been relocated to support displaced Syrian children and refugees.

Beyond its emergency deployments, TSF maintained its goal of transmitting expertise and know-how to the benefit of projects and longer-term programmes in

areas ranging from protection & assistance to bridging the digital divide.

As we enter into our 20th anniversary year, thanks to our partners' unwavering fidelity, TSF remains the leading NGO in new technologies and telecommunications in crisis situations, striving to constantly develop innovative solutions adapted to specific contexts of each of our missions. ”

Jean-François Cazenave  
**President & Co-founder**



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# DISASTER RESPONSE

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## Disaster response

Syria | Syria Crisis  
Iraq | Battle of Mosul  
Madagascar | Cyclone Enawo  
St. Martin & St. Barthélemy | Hurricane Irma  
Dominica | Hurricane Maria  
Mexico | Earthquake

## On-site assessments

Uganda | Refugee Crisis  
Bangladesh | Rohingya Crisis





# SYRIA

Support to the medical sector

March 2012 - Ongoing

Syria Crisis



## KEY FIGURES

**808,236**

consultations in TSF-connected centres in 2017

**618,042**

patients treated in health facilities with TSF connectivity



Territorial control in Syria has changed many times since the country's uprising began more than six years ago. The evolution of the powers at play has a direct impact on the work of humanitarian actors.

Regardless of the challenging circumstances, TSF has been providing unwavering support to the medical sector, enabling the operations of the people who risk their lives attempting to save those of others.

TSF has dispatched emergency satellite connectivity to partner organisations on the ground in Idlib and Aleppo areas. A total of 14 primary health centres (PHC), hospitals and clinics, warehouses and offices are equipped with satellite communication devices.

Stable internet connectivity is essential to coordinate activities between the different players to optimize life-saving treatment:

- Information handover between field workers and hospital-based doctors;
- Patients' arrival between ambulances and hospitals;
- Patients' transfers between hospitals;
- Supply of medications with warehouses and pharmacies.

In Syria's most volatile areas, medical evacuations have become near impossible due to the intensity of the airstrikes and coordination is key to ensuring that the injured are taken care of in the most efficient manner possible.

In order to assist medical staff in the coordination of their operations, Télécoms Sans Frontières supplied satellite lines to the medical teams that risk their lives to assist the war-wounded.

Satellite lines have been provided to medics from the Union of Syrian Medical Care and Relief Organisations (UOSSM) to galvanise the management between the following services:

- Mobile clinics
- Ambulances
- Needs assessments
- Security coordination

The ten mobile clinics concerned are all in contact with the central coordination centre. It is vital for the security of the paramedics working in the disaster zones to have a permanent link with the Mobile Clinic Coordinator and Security Coordinator at all times and share situational information, report incidents and manage risk.

# IRAQ

Support to camp coordination  
& trauma facility

01 Nov. 2016 - 10 July 2017

## Battle of Mosul



## KEY FIGURES

**16,145**

indirect beneficiaries across  
3 IDP camps

**660 GB**

of data exchanged for  
camp coordination

Since 2014, the north of Iraq has been under the grasp of the so-called Islamic State, with the city of Mosul as the group's bastion in the country. Following offensives to reclaim the area, the humanitarian community worked to set up IDP (Internally Displaced Persons) camps in the liberated zones surrounding Mosul in order to house the 700,000 people fleeing the city. But the state of the telecommunications caused several coordination problems.

TSF deployed a team to Iraq in November 2016 in order to bridge the gap in communications whilst the repair of the terrestrial infrastructure was underway, ensuring that the humanitarian community had the necessary communications means to provide essential aid to families fleeing Mosul.

### CAMP COORDINATION

The high demand in terms of humanitarian needs meant that effective coordination was vital. The

communication of the needs could take several hours or days according to security conditions or travel authorisations.

In order to help catalyse conveyance of aid, TSF set up Wi-Fi alongside the Emergency Telecommunications Cluster (ETC) in the town of Qayyarah. A satellite internet connection was installed at a central point, with Wi-Fi redistributed across several kilometres so as to reach the camps of Qayyarah Airstrip, Jad'ah and Haj Ali to the benefit of the humanitarian organisations working in this high-risk zone, notably the UN Camp Coordination and Camp Management Cluster (CCCM).

The Wi-Fi allowed for enhanced coordination between Qayyarah, Erbil and Baghdad, help anticipate the arrival of families in the camps, and communicate securely via various online cross-communication apps, whilst reducing movement outside of camp confines and improving the security of humanitarian workers.

In total, the 20 beneficiary NGOs clocked up an average data transfer rate of 22GB per month to the benefit of the 16,145 families sheltered in Qayyarah Airstrip, Jad'ah and Haj Ali.

### TELECOM SUPPORT TO THE MEDICAL SECTOR

TSF brought its support of the medical sector in April 2017, and set up a new connection in the town of Hammam al-Alil to support medical staff working in the Médecins Sans Frontières Belgium emergency trauma hospital.

Since its set-up, the trauma facility has saved over 3,100 lives, 56% of which were women and young children. With an average data transfer rate of 180 GB per month, the connection galvanises coordination between the numerous field hospitals of the region and facilitates the communication between logisticians and doctors working to save the lives of the injured.



# MADAGASCAR

UNDAC Support  
07 March - 23 March 2017

## Cyclone Enawo



Katia Rakotobe/CARE

Category 4 Cyclone Enawo formed in the Indian Ocean, and hit the Antalaha region on northeast coast of Madagascar on 7th March 2017 with wind speeds of up to 290 kmh.

Damage linked to the high wind speeds was reported in the northeast of the country in the district of Antalaha (Sava region), where the cyclone made landfall. Flooding was recorded across the northeast of the country, causing heavy local damage in several towns and villages. Following its primary evaluations, TSF identified Sambava (Sava region) and Maroantsetra (Analanjirifo) as the areas most in need of assistance.

Deployed as part of the United Nations' Disaster Assessment and Coordination body (UNDAC), as of 8th March, TSF brought its support to the National Office for Risk and Disaster Management (BNGRC) and other humanitarian partners, providing assistance in information management, assessment and coordination in the aftermath of Enawo.

TSF supported the installation of the first regional coordination centre in Antalaha. Situated in Care International Madagascar's regional bureau, the

centre served as the hub for the humanitarian coordination of the entire district, housing the BNGRC and a number of other organisations working in this zone.

Alongside UNDAC, TSF brought its technical expertise to the installation of the second coordination centre in the town of Maroantsetra. Connected by TSF, these centres allowed the BNGRC, UNDAC and all other humanitarian workers in the districts to optimise the coordination of their operations.

In collaboration with the Telma Foundation (government telecoms cluster lead), Télécoms Sans Frontières worked alongside local mobile network operators in order to provide an overview of the condition of the terrestrial communications networks in the affected zones. These assessments were shared with the UN Emergency Telecommunications Cluster (ETC) to whom TSF also provided technical support.



# ST. MARTIN ST. BARTHÉLEMY

Support to coordination  
Communications for populations

07 Sept. - 27 Sept. 2017

Hurricane Irma



## KEY FIGURES

**423 GB**

of data exchanged between the 9 key  
relief bodies across Saint Martin

**451**

beneficiaries of calling operations

Hurricane Irma formed on 30th August 2017 off the coast of Cape Verde. It rapidly gained in force before reaching the West Indies, and continued its progress towards the south of the United States. Irma is the most powerful storm ever recorded in the Caribbean since Hurricane Hugo in 1989.

On Wednesday September 6th 2017, Irma hit the islands of Saint Martin and Saint Barthélemy with category 5 sustained winds of up to 300 km/h. The two islands were in the direct trajectory of the eye of the hurricane and were severely impacted. TSF identified these two islands for the focus of its response.

As soon as the alert was received, Télécoms Sans Frontières deployed a team to Pointe-à-Pitre (Guadeloupe) on 7th September in order to deploy to Saint Martin as rapidly as possible. With airports and seaways closed due to the extreme conditions, Télécoms Sans Frontières was able to deploy on 11th September alongside the other international organisations ready to provision aid.

### SUPPORT TO COORDINATION

In Saint Martin, TSF's principal objective was to connect the Departmental Operational Centre (COD – Centre Opérationnel Départemental) in order to assist the response both for the actors mobilised in relief operations, and for the affected populations.

The COD, governed by the prefecture, coordinates and organises the response to the aftermath of Hurricane Irma. It is from this centre that all information is transmitted and orders are given to the other Operations Centres (COs) on the island. The COD is responsible for the Civil Security unit, which is made up of the civil defence body and the fire brigade. This cell is in charge of logistics on the island, ranging from evacuations to the arrival of humanitarian freight at the port or at the airport.

Two further connections were set up for the coordination of emergency services in Saint Martin:

- The first at the Hope Estate shopping center requisitioned by the authorities to create a further Operations Centre. This CO is commissioned by the COD to carry out missions such as road clearing, water production and distribution, roofing and accommodation for victims.
- The second connection, located at the airport, is dedicated to the Airport Operations Centre situated in Grand-Case Espérance Airport. Its two core missions are the functioning of the airport (essential for the authorisation of air traffic) and the logistical management of freight items.

# ST. MARTIN ST. BARTHÉLEMY

Hurricane Irma



TSF assessments showed that Saint Barthélemy's principal coordination centres were covered by fibre connectivity. TSF thus concentrated its support to coordination efforts solely in Saint Martin.

## COMMUNICATIONS FOR POPULATIONS

### *Saint Martin*

In parallel to the management of its telecoms centres, Télécoms Sans Frontières provides the means for the affected population to communicate with their relatives. In Saint Martin, teams have been intervening directly to provide telephone calls via satellite to families. These calls prove vital for the inhabitants, with the majority of people not having had contact with their relatives since the disaster. Given the diversity of the population living on Saint Martin, most calls are made to foreign countries such as Haiti, the USA and the Dominican Republic.

418 minutes of communication were offered to the inhabitants of Saint Martin.

### *Saint Barthélemy*

An Internet connection to provide Wi-Fi access to the population was installed on the island of Saint Barthélemy in the district of Anse des Cayes, one of the most affected districts that remained without any means of communication at that time. The purpose of this connection is to offer the community the possibility to reconnect with their loved ones through VoIP, via social networks or instant messaging, but also to provide a means to obtain essential information about their situation.

30 GB of data were transferred via TSF's connection in Anse des Cayes to the benefit of the local community.





# DOMINICA

Support to coordination  
Communication for populations

20 Sept. 2017- 06 Jan. 2018

Hurricane Maria



## KEY FIGURES

**7,447**  
unique mobile devices  
connected to TSF's 6 Wi-Fi hotspots

**3.2 TB**  
of data used over TSF hotspots

Whilst several islands in the West Indies were recovering from Hurricane Irma that blew through the Caribbean from 7th until 12th September, a second Hurricane of category 5 force was making its way in the same direction just over one week later. With sustained wind speeds reaching 260 km/h, Hurricane Maria hit the island of Dominica with unforgiving strength and torrential rains.

In less than 24 hours, an estimated 90% of the country's infrastructure had been destroyed, including the electricity and telecommunications networks, leaving 73,000 Dominicans cut off from the rest of the world. The majority of roads were entirely or partially blocked making the circulation of information to relief centres near impossible.

TSF, already deployed in response to Hurricane Irma in Saint Martin and Saint Barthélemy, prepositioned a team in Guadeloupe, and was amongst the very first organisations to reach the island on 21st September.

### SUPPORT TO COORDINATION

Upon arrival, TSF set up an Internet connection at a strategic coordination location, the Windsor Park Stadium in the capital Roseau. This position was the operational base of the international relief teams and UN agencies; 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.

A total of 86 GB of data were transferred by 80 actors for logistics management, and information sharing.

The Telecommunications Working Group (TWG) led by the Director of Telecommunications of the Ministry of Information, Science, Telecommunications and Technology requested the support of international agencies and organisations in providing satellite lines to improve the circulation of information across the country. TSF thus provided satellite phones to the towns of Wesley, Marigot, Salybia, La Plaine and Delices.

TSF teams installed Wi-Fi zones openly available to communities and key communal facilities such as healthcare centres, police stations, and distribution committees in the towns of Wesley, Marigot and Salybia. The Internet connections allowed them to share information between these three towns and also with Roseau and Portsmouth.

Portsmouth Hospital was equally considered as a priority site for connectivity as electricity was unstable. TSF dedicated resources to ensuring that the best-adapted solution was put in place to make sure hospital receive its medical and pharmaceutical provisions from the capital.

The Dominican Government went on to officially request the extension of TSF's services in the more isolated areas of the island during the reconstruction phase. Thus, satellite connectivity was installed in the towns of Saint Sauveur and Mero.





## COMMUNICATIONS FOR POPULATIONS

### *Wi-Fi hotspots*

On 25th September, TSF deployed a team to Portsmouth where a satellite internet connection was put in place to allow the town's inhabitants to contact their relatives and organise assistance via social networks, VoIP voice and video calls and messenger applications. In the first 24 hours following the installation of the connection, one third of the town's population had registered on the network. TSF optimised its connectivity to guarantee that the numerous users connected simultaneously to the network could benefit from the best possible service. Similarly, Wi-Fi zone services were also installed in Wesley, Marigot and Salybia. In order to continue to cover populations in need, in December two connections were relocated to Saint Sauveur and Mero.

### *Calling operations*

The lack of access to ATMs 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 worked to provide calls to families who have not had the chance to contact their relatives, reaching a total of 910 beneficiaries calling families in the USA, Guadeloupe, the UK and Antigua.

### *Ambulant Wi-Fi service*

Faced with the scale of the disaster, TSF piloted for the first time, on 5th October, a new service which allowed people in remote villages to benefit from high speed Wi-Fi access. Equipped with a 4x4 and a mobile satellite internet dish, TSF travelled from village to village to provide inhabitants with access to social media, messaging apps and news sites. In parallel, our team also provided calls for those who had not been able to charge their own telephones, and offered charging solution to help individuals 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.

## DISASTER PREPAREDNESS

TSF constantly seeks to limit the impact of future hazards in disaster-prone countries where it can. In Dominica, TSF explored capacity building initiatives with the Dominican Government and donated emergency satellite connectivity kits, and provided appropriate training workshops, to the Ministry of Information, Science, Telecommunications and Technology to increase their autonomy in the event of another devastating crisis.

# MEXICO

Assessment

20 Sept. – 25 Sept. 2017

## Earthquake



The 2017 earthquake in the state of Puebla, Mexico occurred on 19 September at 13:14 local time. Its magnitude of 7.1 was lower than that of the previous earthquake that had hit Mexico 12 days earlier, but the death toll was heavier, seeing at least 369 people dead. This is one of the environmental disasters of summer 2017.

The earthquake occurred 32 years to the day after the earthquake of 1985 in Mexico City that killed over 40,000 people. The first vibrations were triggered two hours after the end of the commemorations of the 1985 earthquake and took place a few hours after the national earthquake drill.

Télécoms Sans Frontières sent its response team for the Americas to the heart of the zone. Situated in Guadalajara, TSF's team was on the ground less than 24 hours after the earthquake hit the region.

As the search for survivors under the rubble continued, TSF scaled the states of Morelos and Puebla to gain a clearer idea of the telecoms situation.

It soon became apparent that the telecommunications infrastructure had withstood the impact of the earthquake, and the localised needs were covered by Mexico's mobile network operators.

Télécoms Sans Frontières' assessments showed the population had sufficient access to communications services and information sources. Similarly, the relief community was also covered by the national telecommunications infrastructure.

TSF thus withdrew from zone on 25th September 2017.



# ON-SITE ASSESSMENTS

Uganda - Refugee Crisis  
27 July - Ongoing

Bangladesh - Rohingya Crisis  
30 Oct. - 11 Nov. 2017



The year 2017 saw a peak in refugee crises across the globe. Uganda faced Africa's largest migration crisis, with families from both South Sudan and the Democratic Republic of the Congo fleeing violence in their home countries to seek refuge in one of Uganda's several border-region camps.

Hundreds of Rohingya Muslims have been arriving daily in the south-east to flee the violence in the Rakhine State, western Myanmar. They come in addition to the hundreds of thousands of refugees already living in camps or hosted by local communities. By the end of October 2017, Bangladesh was hosting more than 800,000 refugees.

## UGANDA

TSF deployed a team in July 2017 to put its expertise to the service of assessments and to ensure that the refugee community and the humanitarian actors had the means to communicate at the heart of this crisis.

Most refugee camps have been built in areas at the edge of GSM commercial network coverage and have either no, or sporadic access to mobile networks. In addition, many refugees were forced to flee in haste and thus left their phones behind. Many also have limited financial resources. The accumulation of these factors limits their possibilities to

communicate with their loved ones. On site, UNHCR had already ensured that NGOs working in the camps had access to the Internet and had begun to replace their VSAT network with land lines.

Although TSF identified a need for family reunification and access to information, an intervention would only be possible through collaboration with organisations registered in Uganda. Potential partners are identified; nevertheless the discussions are still in the negotiation stage.

## BANGLADESH

Following discussions with the International Organization for Migration (IOM), TSF deployed a team to assess the telecom needs in the camps, both for refugee families and for humanitarian organisations.

TSF conducted assessments directly in the Kutupalong, Balukhali, Akhim Para, Leda and Nayapara camps to assess access to mobile and internet communications, electricity and information.

Most refugee families had a phone and a local SIM card. In addition, the MNO Robi had set up free calling stations available to the population, with a usage rate of about 40 calls per day.





# CAPACITY BUILDING

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## UN & ASEAN Workshops

Malaysia  
South Korea  
Thailand

## Pre-/Post-disaster reinforcement

Dominican Republic  
Dominica

# UN & ASEAN WORKSHOPS

Malaysia  
South Korea  
Thailand

Capacity Building



Over the past twenty years, we have grown into the leading specialists in a domain upon which humanitarian aid is heavily reliant. Télécoms Sans Frontières insists on going beyond provisioning ICT services. We share our know-how and expertise in order to allow the humanitarian community as a whole to benefit from our specialty.

This approach is materialised in several ways, but first of all, by means of our close relationship with partner companies and the broader tech community. The unique way in which TSF uses ICT often sees equipment subject to conditions that have otherwise remained unexplored by manufacturers in the design phase.

Several businesses rely on TSF to provide feedback on the performance of their material in this new environment, and it is also the opportunity for TSF to experiment new services that have never before been tested in the operational environment.

TSF is one of United Nations OCHA's Emergency Service Branch's key Operational Support Partners. Our teams work with OCHA's Disaster Assessment and Coordination mechanism (UNDAC), playing a vital part in providing training in the use of telecommunications to ensure the self-sufficiency of teams in the event of humanitarian crises. In 2017, TSF also signed a new partnership collaboration with the Association of South-East Asian Nations (ASEAN) seeing our ICT specialists train emergency response teams across the region.

TSF led the following workshops in 2017:

- Malaysia – ASEAN Induction Course – April
- South Korea – UNDAC Refresher Course – August
- Thailand – ASEAN Induction Course – November



# PRE & POST-DISASTER REINFORCEMENT

Dominican Republic  
Dominica

Capacity Building



## DOMINICAN REPUBLIC

With maximum sustained wind speeds of up to 259 km/h, Maria wreaked havoc in the wake of Hurricane Irma, making landfall in the Caribbean on 18th September at 18:00 UTC.

The Dominican Republic was one of the countries threatened by Maria's trajectory. Télécoms Sans Frontières was already deployed in the region, responding to the wake of Hurricane Irma in Saint Martin and Saint Barthélemy. In light of the expected force of Hurricane Maria, TSF demobilised a portion of its team to prepare for a response.

In the Dominican Republic, TSF liaised with the national Emergency Operations Centre to identify the areas for reinforcement in its response mechanism. In coordination with the Centre, TSF dispatched eight satellite phones across the most exposed regions in order to ensure that the regional offices had the capacity to communicate and coordinate in the wake of the disaster.

## DOMINICA

TSF emphasizes the importance of using ICT to reduce the impact of natural disasters in high-risk areas such as Dominica.

Our experience in humanitarian crises shows that not all local authorities and relief organisations have the personnel, technical expertise or equipment to establish communications at the heart of the crisis zone to support post-disaster coordination and relief efforts, thus slowing down their operations, hindering their ability to react and compromising their security.

TSF donated satellite equipment to the government of Dominica, allowing two emergency Internet connections to be established. In addition, training was provided to officials of the Ministry of Information, Telecommunications Sciences and Technology to strengthen their autonomy in the event of a new crisis.





# EDUCATION

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SYRIA

TURKEY

# SYRIA & TURKEY

mLearning

March 2013 - Ongoing

Education



## KEY FIGURES

1,726

IDP and refugee children supported  
in 2017

8

schools and Child-friendly Spaces  
provided with mLearning capabilities



In March 2011, Syria was won by the "Arab Spring" movement that shook the Maghreb and Middle East regimes for several months. The government's armed response, followed by the militarisation of the revolution, degenerated into a savage conflict for which no solution has been found so far. The direct intervention of foreign powers and various militias has considerably complicated the situation.

Living conditions have become increasingly inhumane for civilians over the past seven years, generating the mass displacement of populations. More than half of the refugees having fled Syria are children, mostly under the age of 11.

In the areas of Syria where TSF intervenes, these figures translate into many children either lacking access to education or an education system facing war. TSF has chosen to help these children by using digital technology to expand the educational resources available as well as the activities practiced.

The TSF mLearning project provides access to digital educational resources that children can access via tablets. These resources consist mainly of mobile applications, digitised courses and exercises, and videos.

To make them available offline, TSF has created a specific kit to offer resources in Arabic, even in the event of internet and electricity interruptions.

In Syria, the 2016/2017 school year saw the culmination of collaboration with local schools, as joint courses were set up, as well as several teacher training sessions on the use of resources and digital tools in class.

In the course of 2017, the Turkish government led a restructuring of the education system in the Azaz district, which led TSF to review the form of its activities from October onwards.

Currently, mLearning activities take place in Syria in three Child Friendly Spaces (CFS) in partnership with World Vision. The CFS are located in the Bab Alsalama, Bab-Alnour and Sejjo IDP camps, and represent more than 650 beneficiary children. Self-learning activities are being launched for 50 children in the Sejjo, Alrayan and Azaz camps.

In Turkey, the mLearning project supports more than 100 children at the Alanwar #1 Centre, in partnership with local organisation, Balkis.





## A NEW LEARNING APPROACH

Whether in relation to schools or on its own programmes, TSF focuses its activities on 3 basic subjects: mathematics, Arabic (literacy), and English.

For each subject, progress referentials are created for the topics identified as priority. The referential marks the path on which each child can move at their own pace, guided by TSF's facilitators. Different approaches are available for each subject, so that children can learn from different channels by manipulating, listening and seeing.

To move forward step by step on each topic and consolidate achievements, a three-step process is applied:

- 1) Discovery
- 2) Practice
- 3) Validation

The activities also address other themes such as history, geography and science, as well as awareness on social issues - adolescence, the role of women, the importance of education, and prevention against child marriage.

TSF's approach aims to offer children enjoyable activities while drawing on their natural curiosity and thirst for knowledge. By practising the proposed learning method, they also progress independently, and can in some cases discover particular interests and memory techniques, for example, while learning to work with others. All of these elements support children in coping with the harsh conditions in which they live and the trauma of an endless war.







## PROTECTION & ASSISTANCE

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### **MEXICO**

Migration Crisis

### **GUATEMALA**

Reinforcing food security

### **NIGER & BURKINA FASO**

Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED)

### **NICARAGUA**

Mobile alert system for victims of domestic violence

# MEXICO

Information diffusion  
1st Oct. 2017 – Ongoing

Protection & Assistance



## KEY FIGURES

**5**  
migration shelters covered  
across Mexico

**5,000**  
people gain access to vital  
information each month



In recent years, the nature of South-North migration in the Americas has considerably evolved. A growing number of families and unaccompanied minors are fleeing violence, high rates of crime and natural disasters, turning what was previously considered as principally economic migration into a full-scale humanitarian crisis.

Since Mexico - the main transit country to the North - has introduced humanitarian visas for victims of violence and has eased public policies for asylum seekers. In 2017, 14,596 people applied for asylum in Mexico, an increase of 66% compared to the previous year. There is also a diversification of migrants' regions of origin, which today include the Caribbean, South America and Africa. These people are particularly exposed and often lack access to crucial information that is vital to strengthen their security and make their rights accessible.

Through its involvement in several projects, TSF has demonstrated that environmental factors such as location, context are a central element for an appropriate response to the needs of exposed populations.

For this specific context, TSF has developed a connected information diffusion solution designed around three criteria:

- Universality (compatibility with conventional TV screens regardless of the country of implementation);
- Low bandwidth consumption which can be optimised for satellite, 2G, 3G;
- Deployable on a large scale through a unified online information management platform.

In Mexico, Télécoms Sans Frontières has been working alongside its partner FM4 Paso Libre, coordinating organisation of the REDODEM - Red de Organizaciones Defensoras de Migrantes (Network of Migrant Defence Organisations) to set up this information dissemination system. It has been installed in five strategically identified centres covering the North and South of Mexico as well as the western transit route.



# GUATEMALA

Reinforcing food security  
May 2015 - Ongoing

Protection & Assistance



## KEY FIGURES

**136**  
communities reached

**1,037**  
families provided with  
emergency food aid in 2017



As the years have gone on, the Dry Corridor in Guatemala is still facing a major food security crisis. The impact of climate instability has been exacerbated by low agricultural yields - hence poor livelihoods, inequalities and shortcomings in social protection programmes. This national context has plunged the country into a long-term humanitarian crisis. In 2017, only 10% of the basic consumption of dry corridor households came from self-production, and by September their stocks were almost out.

TSF has pursued its support to the European Commission Humanitarian Aid and Civil Protection (ECHO)-funded consortium project led by Acción contra el Hambre (Action Against Hunger) established in 2015 to contribute to strengthening nutritional security in Guatemala.

The role of TSF has been to determine the most appropriate equipment for the field, to configure collection, administration and visualization means, to train collectors and administrators, and to provide technical support throughout the action.

TSF has developed an ODK-based mobile tool for tablets, based on open source systems, used by Consortium mem-

bers for the management and monitoring of programme information. The purpose of this form is to collect the information in identified areas needed to:

- The selection of beneficiaries in a transparent manner vis-à-vis the beneficiaries themselves, the communities, the government and the donors;
- The establishment of a reference baseline;
- The monitoring of beneficiaries' food security conditions through the calculation of measurement indicators as defined by the World Food Program (WFP).

This ODK form has evolved since 2015 based on field feedback, and it is regularly adapted to stay closer to the activities and the evolution of the situation, and therefore needs.

The data collected among households are centralised on a digital platform gathering several types of information to allow a global visualisation of the evolution of the indicators since the beginning of the programme (complex interactive maps, graphs, statistics and communication materials).

In 2017, a total of 1,037 households (representing 4,955 people) received food and nutritional aid.



# BURKINA FASO & NIGER

Building Resilience and Adaptation to  
Climate Extremes and Disasters (BRACED)

Jan. 2015 - Dec. 2017

Protection & Assistance



## KEY FIGURES

**6480**  
digital forms collected

**395,000**  
farmers across  
Burkina Faso & Niger



In early 2015, TSF joined of the Programme for Building Resilience and Adaptation to Extreme Climate Episodes and Disasters (BRACED) set up by a consortium of local organisations and partners led by Acting for Life (AFL). Funded by the UK Department for International Development (DfID), the main goal is to preserve the diverse activities of pastoralists and agro-pastors (men, women and children) and to secure strategic cross-border trails by providing basic services.

Within the consortium, TSF has contributed its expertise in mobile technologies by developing an information system dedicated to farmers. The involvement of TSF has focused on two areas: (1) Development of a Transhumant Information System and (2) popularisation of ICT and awareness among transhumants.

Based on these traditional methods, the TIS system aggregates and relays precise information in order to facilitate the decision-making of the beneficiaries (pastures, water points, etc.) but also to serve as an early warning system.

TSF focused on digital data collection by developing an innovative solution to address the problem of lack of mobile data coverage (ODK2SMS). This tool allowed turning digital forms into SMS, a technology that is much more democratised than mobile data. Therefore SMS can be sent from any areas irrespective of coverage, enabling faster feedback.

Data collected by the livestock farmers is based on four main themes: (1) markets: the price of produce, local exchange rates; (2) the condition of local pasturages: information on water sources, bush fires, weather conditions; (3) animal health: information on contamination, illnesses, epidemics and animal mortality, and (4) security: conflict, theft, crime and the blockage of border tracks.

Thanks to this system, farmers can now send their information forms in GSM-covered zones without having to travel several miles to access the data network. The transfer of information is thus more fluid and can be more easily and widely diffused for example via local community radio stations or information panels.



# NICARAGUA

Mobile alert system for victims  
of domestic violence  
Jan. 2012 - Ongoing

Protection & Assistance



## KEY FIGURES

**114**  
cases of violence treated  
in 2017



In 2012, TSF started collaborating with Nicaraguan organisation MMCH (the Chinandega Women's Movement) to help prevent violence against women within the region of Chinandega. This region is home to over 420,000 inhabitants, 49% of which are women. It is reported that 48% of Nicaraguan wives have fallen victim to physical or sexual abuse.

In light of this, TSF has been contributing to reducing domestic violence and femicide via a mobile SMS system. Each woman who experiences or witnesses violence can send a pre-defined keyword alert by SMS to a group of social workers from MMCH. The team can then intervene directly according to each individual case and mobilise medical aid and police forces. According to each case, women can also request legal assistance or psychological aid via their mobile phone.

This mobile system generates an online map, allowing social workers to trace cases of violence according to their location. Over the past year, 114 cases of violence, sexual abuse, kidnapping and human trafficking were treated with the support of TSF's mobile system.

In 2016 TSF carried out a broad assessment of the project. Irish NGO Trócaire and local NGO APADEIM joined the project, seeing a further 13 municipalities integrated into the protection system. The result of the evaluation helped define the future of support to MMCH and guided the consortium in new orientations for the project to help protect vulnerable women in Nicaragua.

**“** *Three years ago, I suffered a lot of violence from my spouse. I went to the MMCH organisation where they explained to me how I should contact them if I needed their help.*

*The day I had to use the alert system, I was very afraid that no one would come to help me. The social workers called me back immediately and guided me through the procedure to follow.*

*Today, I can say that I am a survivor of violence against women, and I try to help others in the same way that I was helped.* **”**

**Maria**  
39 years old



## BRIDGING THE DIGITAL DIVIDE

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### **MADAGASCAR**

Community Development Centre  
Extracurricular activities

### **BURKINA FASO**

Community Centre

### **NICARAGUA**

Technologies to bridge the digital divide





# MADAGASCAR

Community Development Centre  
Extracurricular activities

Feb. 2012 - Ongoing

Bridging the Digital Divide



## KEY FIGURES

**700**  
users each month

**8,400**  
users in 2017

**500**  
children benefit from  
extracurricular activities



Miarinarivo is the capital of the Itasy region, Madagascar. The region is predominantly rural; it has many assets to promote sustainable and profitable development for the population. The city of Miarinarivo centralises all the administrative bodies of the region - it is also home to many schools, where children from the surrounding countryside come to study.

### COMMUNITY DEVELOPMENT CENTRE

In 2011, the city had no access to public internet. TSF set up an internet access point, with the aim of participating in the development of the region through the introduction of technology and connectivity at the IT Cup Community Centre. This project and its various aspects are carried out in close collaboration with the local actors. It includes activities related to various sectors including education, health and agriculture. The IT Cup Centre is a dynamic and important actor of the city of Miarinarivo, placing digital technology at the heart of local issues.

TSF's project pays particular attention to providing a better understanding of ICT tools for teenagers.

Classes are provided on the risks of ICT and in particular, internet: false information, scams, security, etc. For this, the IT Cup Centre partners with local schools (Miarinarivo High School, Mimosa High School and CEG Reference). According to their age, students in these institutions receive an introduction to computers (word processing, spreadsheet, internet, e-mails). Students are divided into two groups of up to 10 pupils. Personalised assessment system allows each student to become aware of their skills and progress.

### EXTRACURRICULAR ACTIVITIES

In cooperation with local organisation Ny Hary, 500 children from the region benefit from extracurricular activities in support of their formal education. This support takes several forms, with tablets helping to drive individual support and group learning as part of the programme organised by Télécoms Sans Frontières.

In 2017, TSF developed sessions in partnership with Miarinarivo's institutions to help the community deal with local issues. Sessions are regularly held to tackle matters pertaining to health, agriculture, and society.



## AWARENESS SESSIONS ON LOCAL ISSUES

### Agriculture

One of the main activities of the inhabitants of Itasy is agriculture. The IT Cup project therefore studied the ways in which digital tools could bring sustain to this sector. A partnership with the NGO Agrisud has been initiated for this purpose to better support farmers in the region.

To date, members have received training on the use of spreadsheets, enabling them to improve the management of their inventories.

### Health

The IT Cup Centre has initiated a cycle of interventions on public health themes in partnership with the hospital of Miarinarivo.

At each intervention, a hospital doctor introduces the topic to the participants. Digital media are used to provide additional information (articles etc), or to check the understanding of the theme using tablet quizzes.

The topics covered in 2017 include food poisoning, plague, bilhaziosis, malaria and safe drinking water.

## ACCESS TO WATER

### Data collection to improve access to drinking water

The town of Soavinandriana, the newly created institute for Higher Education (IESSI) initiated a study on the existing water structures in the area. Whilst there are several structures in place, there is currently no formal register listing them all. The IESSI initiated a project in collaboration with the University of Bordeaux aiming at indexing and analysing information relating to local water sources.

The IT Cup Centre was called upon for the data collection phase of the project, and trained IESSI students in the use of tablets for data collection.

The tablets enabled students to efficiently carry out a thorough inventory of the local water sources, notably sanitary facilities. Students were also able to take geo-tagged photos of the water points for better referencing.

These data were then centralised on a map provided in alliance with Open Street Map Madagascar. The map of the commune of Soavinandriana has also been updated thanks to this survey project.





# BURKINA FASO

Community Centre - Guiè  
March 2010 - Ongoing

Bridging the Digital Divide



## KEY FIGURES

**1,488**

beneficiaries from Guiè and  
the surrounding area in 2017



Télécoms Sans Frontières and the organisation IT CUP, inaugurated their collaboration project with the Association Zoramb Naagtaaba (AZN) in Burkina Faso in 2010, opening their joint community centre in Guiè, located some 60 km from the capital, Ouagadougou.

The economy of the region is mainly based on agriculture, crafts and farming. Desertification, population pressure and the proximity of the capital city are causing an active population emigration towards bigger cities, the south of the country and towards the Ivory Coast, whilst the lack of water is also an issue for the growth of the region.

Developing Guiè's community is a key priority for TSF's partner organisation, the AZN. This inter-village organisation was created in 1989, and today groups together 10 villages, with actions focusing on 5 principal themes: agro environment; education; early childhood; health and the involvement of the population in the management of the AZN. The organisation uses the community centre to coordinate its programmes more efficiently and optimise the collaboration with its partners.

Until 2010, internet was only accessible from the capital, meaning that the inhabitants of Guiè had to travel over half a day to consult emails and gather information for the villages' various development project.

The TSF/IT Cup community centre benefits the AZN but also all the neighbouring villages in a 30km radius. It provides Internet connections, phone lines, computer and office equipment such as printers and scanners, as well as regular training sessions on the use of IT equipment and internet.

These different services allow the students to carry out research for their studies and to deepen their knowledge and understanding of the local context whilst the community keeps up-to-date on the news in the country, the continent and in the world, with the ability to communicate via email and telephone.

# NICARAGUA

Technologies to bridge the digital divide

Jan. 2015 - Ongoing

Bridging the Digital Divide



## KEY FIGURES

**4,044**  
beneficiaries reached

**7**  
remote Nicaraguan  
communities



The Autonomous Region of the North Caribbean Coast (RACCN), Nicaragua's largest region, remains distinctly isolated from the rest of the country due to a historical backlog resulting in a significant lack of basic infrastructure and services as well as limited access to drinking water, electricity, sanitation and communications, but also low investment, public insecurity and a weak institutional framework.

The average poverty rate for the region is 68.8%, 10 percentage points higher than the national average. The illiteracy rate among the population aged 10 and over is 43%, up to 55% in rural areas, and even higher among the female population, whereas the average for the country is only 24.5%.

The NGO Plan International Nicaragua has been implementing projects in the RACCN since 2012 for the indigenous Miskito communities with a community development approach focused on early childhood. To this end, one of their objectives is to set up a programme using ICT to improve living conditions by providing support in education.

In 2015, a pilot project was launched in Tasba Pain, a village of 603 inhabitants on the northern edge of RACCN. In 2016, the programme was extended to two other RACCN communities and three communities in the Madriz department.

TSF equipped educational rooms with tablets, computer equipment and a satellite connection and made available shared resources hosted on a local network, including a virtual library and the Wikipedia online encyclopaedia.

The contents of the library, created by Plan are educational collections on the themes such as sexual and reproductive health, child protection, education and early childhood and social services.

The centres benefit the entire community from local school children and students to teachers and educators from the villages and the surrounding areas.





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OUR ACTIONS MADE  
POSSIBLE THANKS TO

