HAITI EARTHQUAKE

END OF MISSION REPORT

13/01/10 to 24/02/10

ACKNOWLEGEMENTS

First of all, we would like to deeply thank **all our partners, as well as to every donor who contributed to our efforts in Haiti**. On behalf of everyone at TSF, thank you for allowing us to provide relief support to the Haitian populations during this dramatic time. This mission was possible thanks to your faithful trust.

We would like to thank also the **MINUSTAH** for their precious support to our teams on the ground. The fact they have been providing shared tools, experimented staff and equipment at their logistic base in Port-au-Prince has been an inestimable support to our mission.

All organizations providing updated satellite imagery, in particular **UNOSAT** and **Google Earth,** helped us identifying major shelters in affected areas. This support was critical during the first month of response when no consolidated information about the camps figures were available.

CONTENTS

LIST OF FIGURES

PART I: SITUATION OVERVIEW

A 7.0 magnitude earthquake on the Richter scale hit Haiti, 17km southwest of the capital city of Port au Prince on 12 January, followed by more of smaller hundred replicas, affecting an estimated 3 million people in the departments of Ouest, Sud-est and Nippes. The most affected areas include the Port au Prince (PaP) metropolitan area, as well as cities of Carrefour, Gressier, Leogane, Petit Goave, Grand Goave and Jacmel. As of February 13th, the Haitian government estimates that 222,500 people died and 300,000 were injured as a result of the earthquake. The government further estimates that 1.2 million have gathered in spontaneous settlements sites while 467,701 have moved from PaP to other departments, residing by their family mainly outside of the affected areas (Artibonite, Centre, Grande Anse). Situation is alarming along the Dominican boarder where a considerable number of IDPs (170,000) is increasing the vulnerability of local communities and reducing their limited coping mechanism.

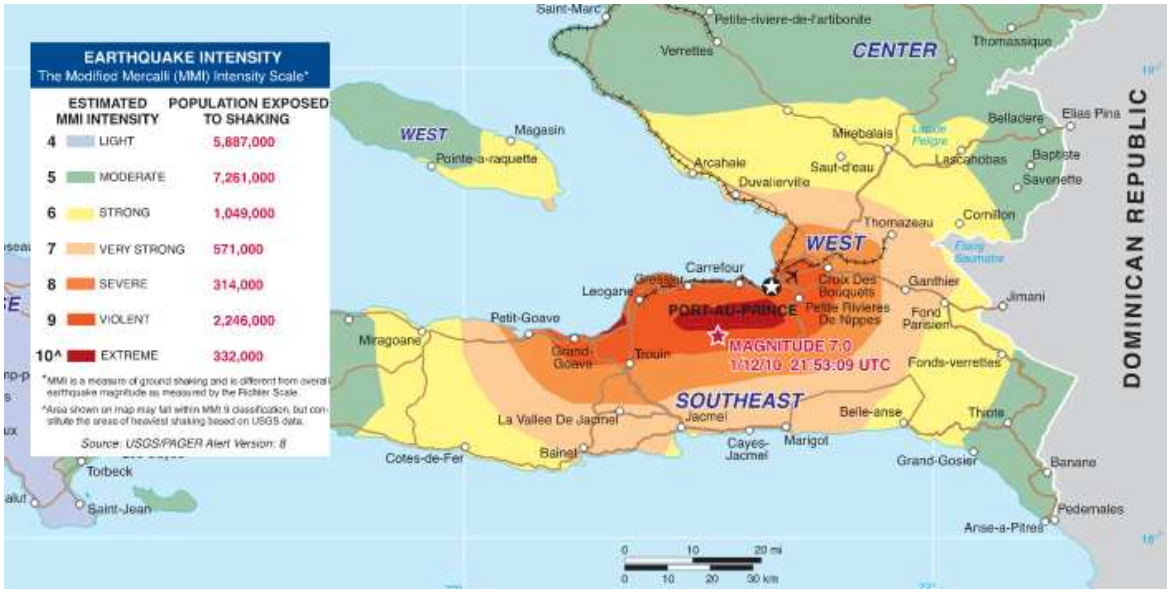


Figure 1 - Earthquake Intensity and number of population exposed

The Haiti earthquake had several characteristics that challenged the response capacity of all actors. The earthquake hit the capital city and seriously decimated the Government response capacity by destroying government buildings, like the collapse of the Presidential Palace which killed dozens of civil servants, though President Preval and Prime Minister Bellerive escaped injury.


Figure 2a - damaged cell tower in PaP

In a similar vein, the United Nations agencies and more particularly the UN Mission for Haiti Stabilization (MINUSTAH) was badly affected by the collapse of its Head Quarters in Port au Prince, killing more than 150 members including the Head of Mission Hedi Annabi and his second. In terms of lost of lives, this represents the worst catastrophe for the Humanitarian organizations which has lost their key leadership in the earthquake. Amongst the widespread devastation and damage throughout Port-au-Prince and elsewhere, vital infrastructure necessary to respond to the disaster was severely damaged or destroyed. These included hospitals, schools, transport facilities (air, sea, and land), telecommunications, supply chains... At the first two weeks of the response the lack of transportation and gasoline, the road congestions at airport and other main axes as well as security instability were the primary

constraints to aid delivery. More thorough damage assessment of the capital and outskirts, as access was improving, revealed considerable damage to the telecommunication and electricity infrastructure. The public telephone system was not available, Haiti's largest cellular telephone providers (Digicel and Comcel), reported that their services had been severely affected by the earthquake. As a result, the last available provider (Voila) suffered from heavy network congestion. Most of the GSM towers were installed on top of buildings but construction standards being low in Haiti (no building codes), most of them collapsed. Some buildings were built on slopes with insufficient foundations or steel works.

The cable system which provided Haiti with its only direct fibre-optic data connectivity to the outside world was disrupted, hampering local ISP's capacity. Most of the radio stations went off the air and only 20 of the 50 stations in Port-au-Prince were back on air a week after the earthquake.

Figure 2b - Damaged cell tower in PaP

Despite all these structural problems, the initial response phase was unprecedented with regard to the pace of mobilization of national and international actors and the provision of funds for the relief efforts. Within the first hour following the earthquake, TSF Regional Office in Nicaragua was alerted, the first TSF team touching ground the day after the disaster. The second team was in the field on January 15th. Within the 48 days of TSF's mission, 12 trained staff and volunteers with highly sophisticated telecommunication equipments were deployed from France, US and Nicaragua. Including local staff, 38 people have contributed to the provision of TSF's relief on the field (see Annex AI). TSF organised its relief operations which were divided in two distinct activities: providing ICT support to relief or rescue workers and conducted humanitarian calling operations for the affected populations. In total, TSF's installations allowed populations and emergency workers to communicate for **765 hours**.

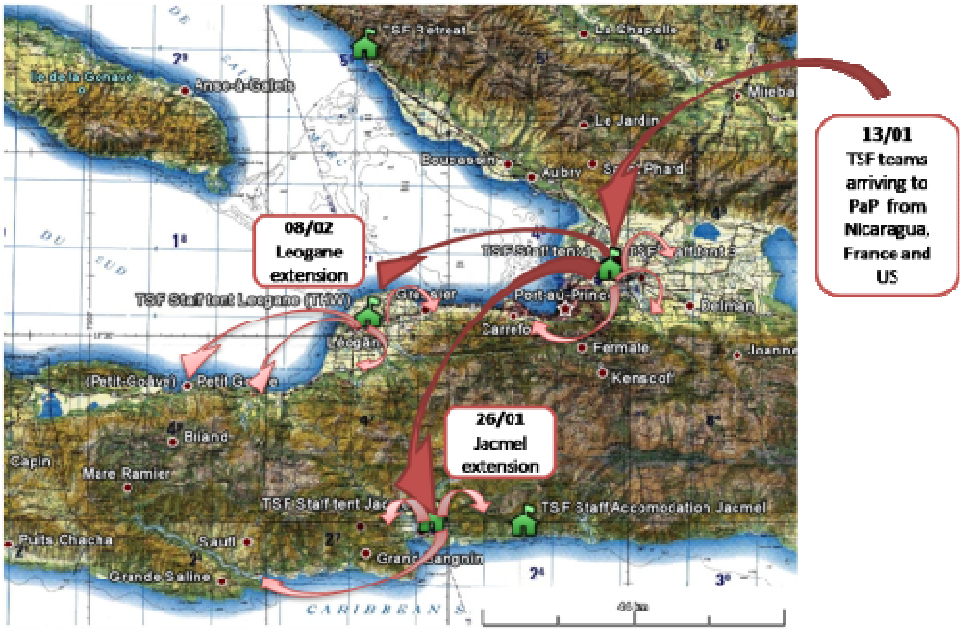
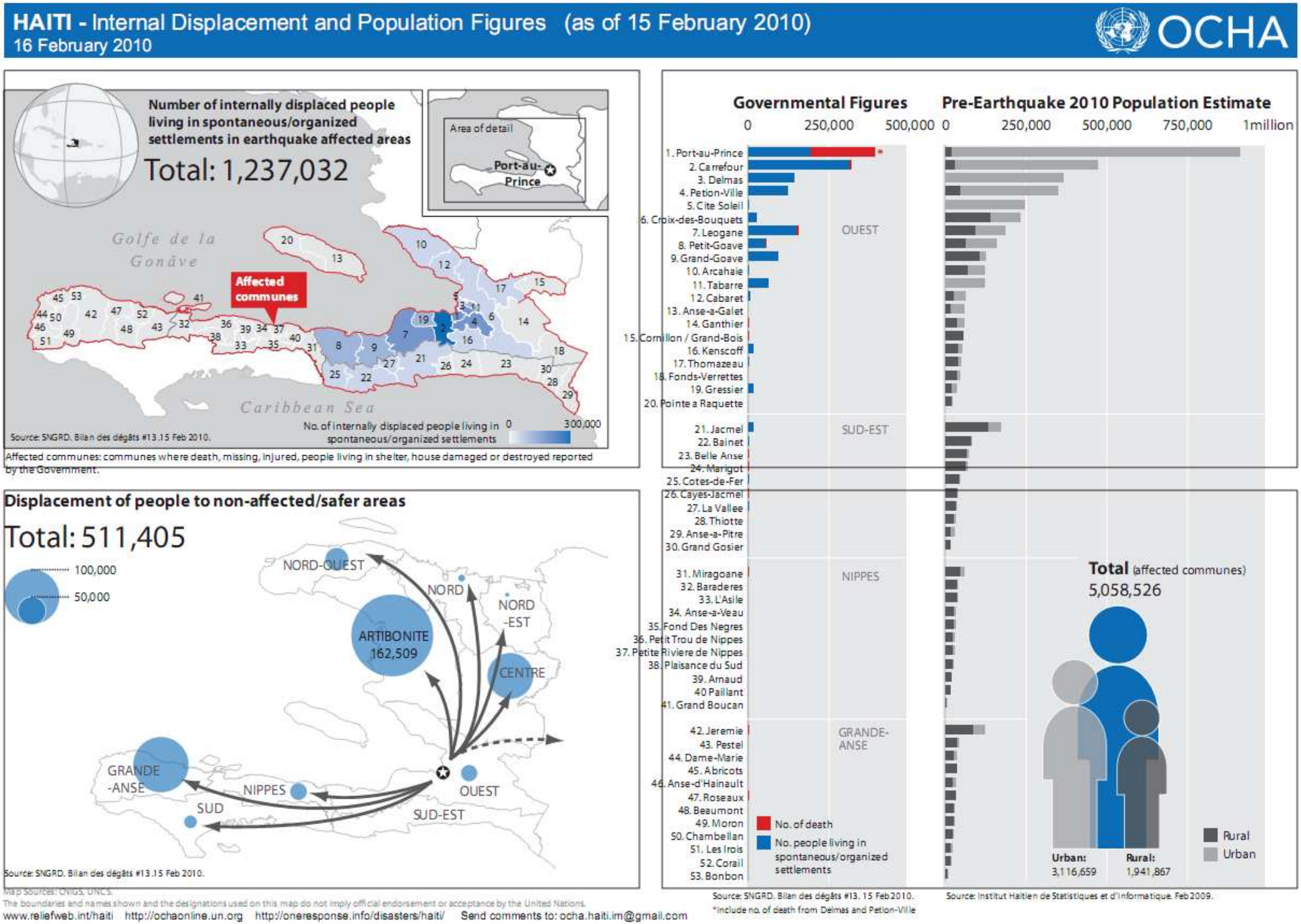


Figure 3 - TSF response map to Haiti EQ

Figure 4 - Haiti EQ figures



Chronogram - TSF Mission Haiti 2010

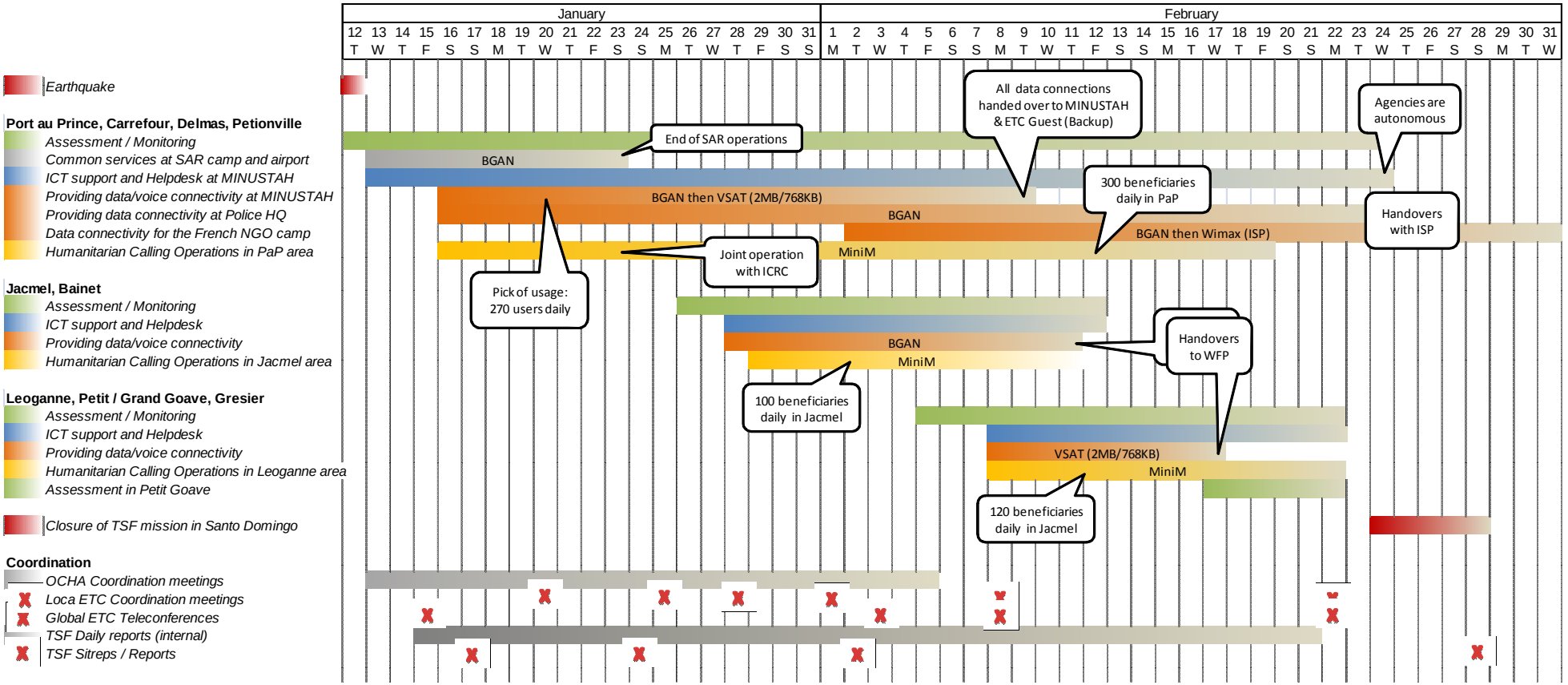
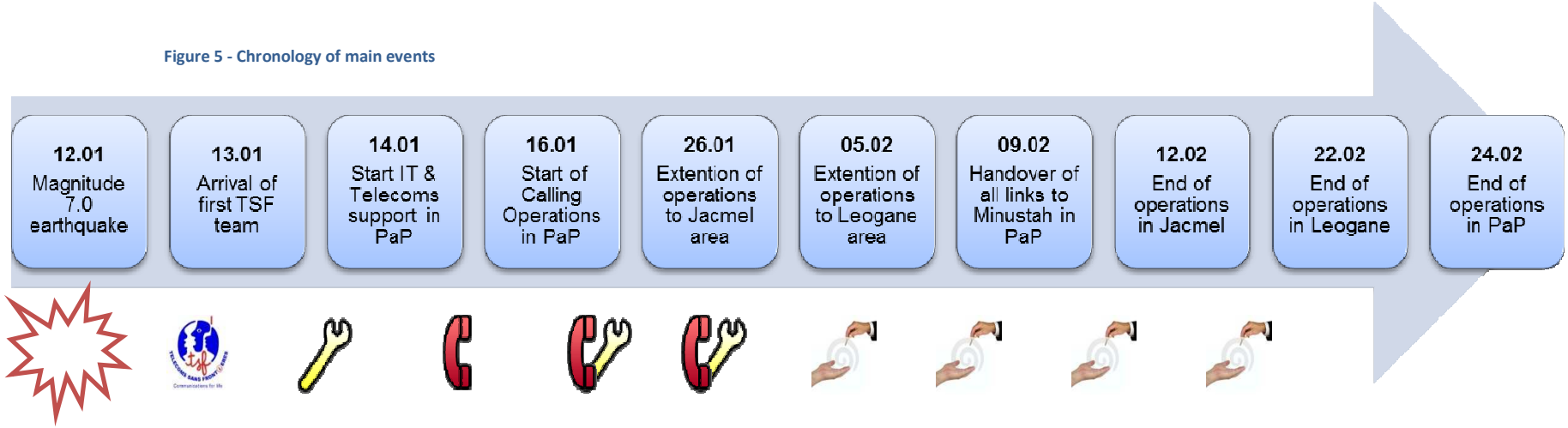


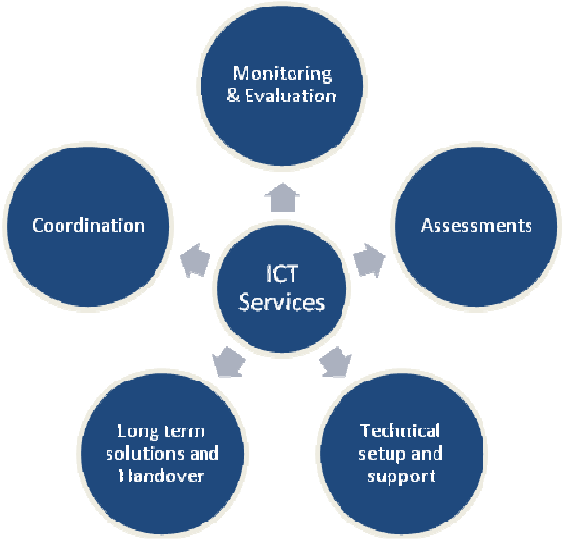
Figure 5 - Chronology of main events



PART II : IT & TELECOMUNICATIONS SUPPORT

Introduction

Since the first day of the response, coordination and rescue centres have had a ceaseless activity and aid workers' mobilization had been very strong. TSF adapted its efforts and support according to the requests and needs of the humanitarian community. Beyond high-speed satellite equipment, TSF was providing a vital ICT support via a helpdesk to the whole humanitarian community and went along with their operations, ready to deploy any further technical assistance. As an example, TSF teams have been continuously supporting organizations based at the MINUSTAH logistic base in Port au Prince (main humanitarian hub), in Jacmel and Leogane (secondary hub). Those communications facilities were all the more crucial to aid workers since, in emergencies, ICT is a field often under-estimated or even neglected. By January 13th, TSF's HQ received official requests from OCHA and UNICEF to support both agencies' staff in the field.



Standard TSF telecommunications facilities available to relief and rescue workers in TSF centers:

-Internet access (BGAN, VSAT, ISP...),

- Secured WIFI network

- Proxy server (authentication, cache and monitoring),

- Satellite phone (BGAN, Iridium, MiniM)

- Laptops,

- Printer, scanner, fax.

Figure 6 – Considering ICT services during emergencies

In total, more than **100 humanitarian organizations** (NGOs, United Nations agencies and local authorities) benefitted from TSF's services. Thus, **1,360 relief workers** worked with TSF's installations, with an average of **180 users a day** (peak of 320 users during the first two weeks of the emergency).

High speed data transmission consumption: 218 GO.

Figure 7- Chronology of events - TSF providing ICT services in Haiti

TSF supporting Agencies in Port au Prince

- ***Supporting the Search and Rescue (SAR) operations***

First site to be assessed on January 13th due to its proximity to the airport, the UNDAC (United Nations Disaster Assessment and Coordination team) Reception Center was connected to the airport link which wasn't affected by the earthquake. A basic office setup was created to the two UNDAC staff posted.

The 14th of January, TSF installed ICT facilities in UNDAC's Operation Center located in the Search and Rescue workers camp, 700 meters further the airport entrance. Among the services available were a voice/fax (mini m), data and WIFI connection (via BGAN), a printer/copier and end user IT support. Connectivity remained available meanwhile the amount of professionals in the camp went up to 1,800 people, making it the biggest search and rescue operation ever. The center closed when SAR operations ended by the 23rd of January.

Figure 8 - TSF supporting relief workers at the OSOCC center

Total of users: **25 users/ day**
Data transmission consumption: **495 MB/day**
Number of organizations: **14**
Number of calls: **654**
List of agencies registered: UNDAC, USAR UK, USAR Nederland, Bomberos Espana, Espain AID, USAR Peru, MapAction, ICE USAR, Mexico USAR, Topos Mexico, Defensa civil Espanola, rapid LA Peru, Defensa civil Nicaragua, ISAR Germany

- ***Supporting the relief operations at the MINUSTAH Logistic base***

As most of the UN Agencies and NGOs operating in Haiti prior the disaster suffered heavy damages to their offices and logistics, the UN Secretary General sent a letter to its MINUSTAH Peacekeeping mission requesting them to mobilize all available means to support the humanitarian response. As a result numerous organizations moved their offices to the Area 5 of the MINUSTAH logistic base, located close to the airport. The camp hosted most of the United Nations agencies (UNICEF, IOM, WFP, OCHA, FAO…) and some NGOs (Acted, Handicap International). The location quickly became the main coordination hub of relief operations meanwhile the cluster system was agreed upon and set up with the agreement of the Haitian Government.

As MINUSTAH's Internet infrastructure was fully functional and available, TSF simply opened a BGAN (voice) and a wireless access point ("UNDAC-TSF") connected to the MINUSTAH and covering the Inter-Agency room (OPS Room) and surroundings on the 14th of January. Due to

the continuous growth of number of relief workers, technicians eventually set up a dedicated VSAT connection to OCHA and its support teams, which was also used by other international humanitarian organizations, including ECHO or UNICEF (for four days prior setting up their own VSAT). As of the peak of activity (average of 70 users daily from the 20th to 25th of January) the VSAT came to saturation despite a dedicated 2MB down and 768KB up access, imposing frequent use of UNICEF's VSAT as backup (and occasionally saturating it as well). Further investigations leaded to the conclusion that applications imposing heavy synchronizations like the One Response portal or Microsoft Groove and the multiplication of mobile devises (Blackberries, iPhones...) were a possible cause of the saturation, due to an incomprehensible amount of uploaded data (upload capacity saturated).

Figure 9 - Relief workers in the OPS Room

For all the mission duration, at least three IT technicians were permanently based in the camp providing a continuous ICT support to the humanitarian community, from basic operations (setting up end-users wireless connections or printers, troubleshooting hardware or software issues, fixing viruses…) to advanced operations (setting up VSATs, Wireless links, full office set up…). Due to size of the camp, a helpdesk starting from 7 AM to 10 PM was created to provide immediate support to users. The helpdesk was eventually saturated during the first two weeks of operations imposing a high stress level on TSF's staff and hampering coordination and assessment capacities in Port-au-Prince and other locations (see Annexes AIII, AIV and AV).

Activities started to decrease by beginning of February when more ICT staff arrived. As of TSF's departure on the 24th of February, all biggest organizations had their own ICT staff and were autonomous. All organizations being supported by TSF had been using MINUSTAH's link or TSF VSAT as main Internet access and the WFP mesh network ("ETC Guest") – when available - as backup. WIFI access points have been donated to OCHA (in the OPS Room) and ECHO to avoid discontinuity of services and re-configuration of clients.

Total number of users: **200 users/day**
Number of organizations: **+64**
Data transmission consumption: **3170 MB/day**
(Partial) list of agencies supported: ACF, ACDI, ACHA Aid, Acted, Action Aid, ADRA, Alertnet, Align Ministries, Ambassade de France, Ambassade du Canada, Ambassade de Mexico, AMI, AMURT, ARCHE NOVA, Architecte de l'urgence, Care, Caritas, Christian Aid, CNSA, Concern, DFID, Doctors Inc, ECHO, European Civil Protection Team, Food For the Hungry, Global Aid Network, Handicap International, Département de la Protection Civile (DPC), Habitat for Humanity, Hands On Disaster, IMC, iNSTEDD, IRC, INTERSOS, IOM, Islamic Relief, Konpay Beyond Border, Life for Relief and Development, US Army, Malteser International, MapAction, Médecins du Monde, Mercy Corps, MSB, Gouvernement Haitien, Mutual Aid Disaster Relief, OCHA, OMS, PAM, PNUD, Relief International, Save The Children, Solidarité, The Salvation Army, UNDAC, UNFPA, UNICEF, UNOPS.

- ***Supporting the setup of French Inter-Agencies camp***

Following a request from the French Ministry of Foreign Affairs, which was supporting the French NGOs response to the earthquake, TSF assessed and set up an Internet connection at the Inter-Agency camp (Première Urgence, Aide Médicale Internationale and Pharmaciens Humanitaires) located at Sainte Rose de Lima's school. The initial connection was provided via a BGAN on the 2nd of February. The connection was provided by TSF until the 1st of April, when this Inter-Agencies camp closed as the school was reopen.

Total number of users: **15 users/day**
Number of organizations: **3**
Average consumption/day: **680 MB/day**

Extension of operations to secondary humanitarian hubs

Within the second week of the emergency, humanitarian organizations started establishing sub-offices in Leogane and Jacmel which were two centers in the worst affected areas. OCHA established sub-OSOCCs (On Site Operations and Coordination Centers) to enable coordination of response activities by UN Agencies, local authorities, NGOs and military actors. TSF has been setting up communications facilities in OCHA's OSSOC as most strategic location for a common service (so it would reach the maximum number of users). Initial OSSOC setup had been ensured with BGANs by OCHA's standby partners: the International Humanitarian Partnership (IHP).Therefore TSF handed over from IHP but opening facilities to all the International community.

- ***Jacmel On Site Operation Coordination Centre (OSOCC)***

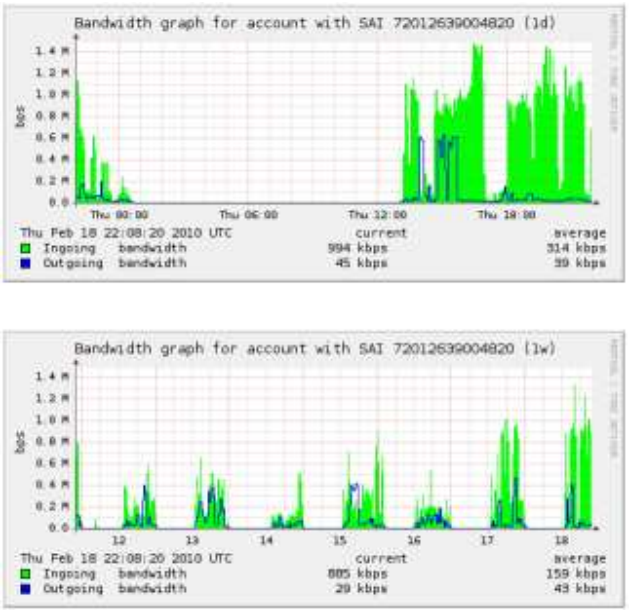
Following an initial needs assessment leaded on the 26th of January, TSF setup a full telecommunication center in Jacmel. The assessment revealed few needs for satellite communication as local operators had the capacity to quickly provide Internet access, therefore only OCHA has been using the link. TSF handed over its connection to WFP's VSAT on the 11th of February.

Services available: data (BGAN), wifi AP
Total of users: appr. **5 users/days** (only OCHA)
Average consumption/day: **100 MB/day**

- ***Leogane On Site Operation Coordination Centre (OSOCC)***

In Leogane, OCHA had set up a coordination platform hosting more than 21 organizations organized in seven clusters (Food Assistance, Shelter & NFIs, WASH, Protection & Education, Logistics, Early Recovery and Health). Like in Port au Prince, TSF supported the International community by installing a high speed connection (VSAT) for UN agencies and NGOs by the 8thof February. The VSAT remained operational until services had been handed over to WFP on the 17thof February.

Services available: data, wifi AP, ICT support.
Total of users: average of **30 users/ day**
Number of organizations : **13**
Average consumption: **4 GB/day**
List of agencies registered: WFP, Unicef, OCHA, Minustah, ACF, SOS, ECHO, Caritas, Care, Malteser, THW, ACTED, INTERSOS.



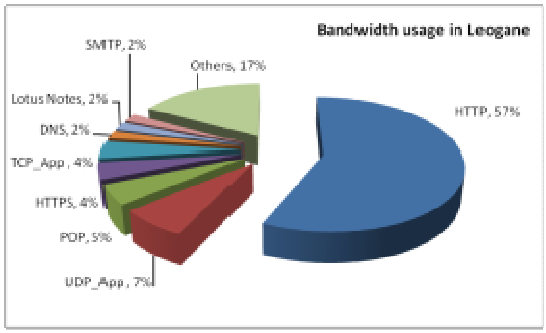


Figure 10 - Monitoring VSAT Bandwidth in Leogane

TSF supporting Haitian authorities

As the capacity of the government was seriously hampered by the destruction of major ministries, TSF spent an important amount of time providing resources to the government staff working on the disaster. Whenever requested, TSF coordinated its activities with the government and obtained the authorization to operate satellite equipments by February, the 11th (see annex AII).

- ***Support to the relocated Government***

Following a request from the Haitian Prime Minister, Mr. Bellerive, TSF provided him with a satellite phone on the 14th of January, as even the Haitian President didn't have any phone working after the earthquake. With this satellite phone the government was able to communicate with the international community. On the 15th, TSF installed a data connection (BGAN) in the building hosting the President, the Prime Minister, and the relocated ministries (DCPJ). TSF also donated to the Prime Minister a satellite phone (Iridium) and included fees for six months.

On January the 18th, TSF handed over the internet connection to MultiLink (local ISP). However, TSF remained as a backup solution until the 2ndof February.

- ***Support to the National Police***

As many other governmental entities, the National Haitian Police had no Internet access since the earthquake. The role of the police was essential in the crisis as the force was in charge of securing relief distributions along with the MINUSTAH. As a consequence, TSF provided a BGAN on the 25th of January. TSF handed over the connection to a local ISP by the 23rd of February.

Figure 11 – Training done by TSF to a Police officer

- ***Support to the Civil protection***

Following the request of the Civil Protection's Director (DPC) on the 20th of January, TSF conducted two connectivity assessments in the two buildings where the DPC was planning to relocate. It appeared that data connectivity was already available in one of the building, and being installed in the second one. Therefore no additional need for support was identified.

- ***Support to the Cartographic Agency***

The 25th of January, an assessment was underdone at the cartographic agency of Haiti. They had basic connectivity through Digicel GPRS and an Access Haiti mobile modem. As for the Civil Protection, no particular support from TSF was needed.

Testimonies from beneficiaries collected on February the 15th

How can telecommunications save lives? Testimony collected from Ms. Emece Csete, Head of MapAction, working at the coordination center in the Search and Rescue camp.

"During the first days of operations, it was impossible to make a phone call but still a huge amount of SMS was released from people being blocked under the rubbles. I don't know how but some of those messages ended up to us. For instance, this mother sending to her son in the US "help us, your two years old sister is trapped under our house in Rue Saint Jacques". But we were thinking where that could be, none of the data we had for the street naming was comprehensive... We unsuccessfully tried with paper maps and eventually end up trying to get the information from the Web, using mapping databases or Google Earth. We had no idea if the girl was still alive and if anyone had been there. We eventually managed to find something, locate it on the map, get the coordinates and send a SAR team out there. We found out later on that the girl had been pulled out of the building alive and on the next day the parents turned up at the camp and bring her alone to thank the SAR team. It's been an absolutely incredible feeling to feel that you've been part of that. Without the SAR, without the mapping and obviously without the Internet connection, none of that would have happened. [...] TSF guys worked so hard to keep our Internet up and running, trying to make it run faster and facilitating IT support. We've had a really positive working relation with them in all our deployments, I do really respect the work they are doing and the way they are doing it."

Why is TSF role critical in emergencies? Testimony collected from Eva Vognild, information manager for OCHA, working at the MINUSTAH logbase.

"TSF are very important in this kind of settings, they are very early on the emergency, putting all IT setup, installing Internet access and satellite dishes. [...] It is very important in terms of coordination, when there are so many people coming in a very short period of time, it is also very important for us to have a functioning system, so we can share the information, disseminate the products (reports, assessments, maps, meeting schedules...) by Internet, help people stay connected with their Head Quarters and with all the other players here in the country. [...] I have spoken to people working in operations in the past; they were using telex and faxes... It was working but now we are getting to the stage where things are moving faster and also coordination get smoother and smoother with the help of new technologies. [...] It's good to have a specialized organization like that, it's very helpful."

Hector Riveira, Team Leader for AST – American Support Unit – part of USAID

"TSF is the first one to get on the scene to provide telecommunications. Communication is vital to anything, if you want to get some aid, some relief efforts coming in, you need to communicate as fast as possible and as efficiently as possible."

Mickael Sullivan, ICT Officer for OCHA, speaking about TSF deployments and handovers.

" TSF, as standby partner, have done an incredible job here [...], they arrived very quickly and provided appropriate services, initially setting a BGAN and two days later a VSAT, which means that connectivity was very good in the very initial part of the response. [...] The key response by the beginning was done by TSF and at the same time, we found that in this environment it was very difficult from the telecoms perspective but TSF stayed around to assist helping the collectivity and this, despite lots of obstacles and technical difficulties which are not seen in advance. Additionally we have sub-offices (in Jacmel and Leogane), TSF went very early in the place to provide telecommunications coverage. The key is getting data transmitted, get Internet access, send email and basically tell the world what is happening in the ground. [...] I know WFP took over one of the sub-offices (Jacmel) and in the coming days WFP will setup a bigger installation in Leogane also. So there was an incredible gap which was covered by TSF and still they would stay a few weeks more to make sure everything works. If there are technical difficulties, they would remain available as a backup which is very re-ensuring,it makes a big difference."

PART III : HUMANITARIAN CALLING OPERATIONS

Context

As of the 20th of January 2010, local authorities were reporting more than a million homeless. Most of the populations have been relocated to open spaces: public areas, parks, football fields, schools. Living conditions for the survivors remained very precarious, most of them staying under basic tents made of plastic sheeting, lacking of food and water, sanitary conditions being deplorable.

The telecommunication and electric infrastructure was badly damaged, leaving thousands of people in Haiti and abroad without news of their loved ones.Moreover, without electricity, people could not charge their mobile phones. An important need for communication was identified, people willing to inform their relatives they were alive, to receive personalized assistance (mainly financial), to obtain mental support or to share important information about the situation. Haiti's population being very much dispatched around the world (mainly in North America and Europe), families living abroad are considered as an essential support because of their financial resources.

Figure 12 - Shelters in Petionville Golf club (left) and in Sainte Therese Stadium (right)

Starting on January the 16th, TSF aimed for 37 additional days to answer this need for communication by offering a free call to anyone in the world, calls that were often considered to as hope regained. On a daily basis, mobile teams have been sent to a total of 77 different centers dispatched all over the affected areas, a free call via satellite phone services to any family willing to contact a relative or friend. TSF teams witnessed situations with crowd movements being extremely difficult to manage (food or NFI distributions) and as a consequence each location was carefully assessed prior operations by identifying secured areas so crowd would remain manageable. Those calling operations always received a very warm welcome.

Catchment Strategy

Four teams composed of at least five staff each were moving on a daily basis to shelters. Site's identification was partly ensured by local staff knowledge, using satellite imagery (Google Earth, Unosat) or by sharing information with other organizations involved in shelter activities. Whenever possible each team would assess a potential site one day prior installation. Once the set up was achieved (thirty minutes to two hours depending on the complexity), a local staff was walking in the neighbourhood with a megaphone so people could be informed of the service.

TSF regularly used FM radios (RFI, Radio FM, Radio Tropic) to transmit next day's sites and has been coordinating activities with ICRC (same capacity as TSF) to avoid gaps or overlaps.

Figure 13 - Google Earth, here displaying the Petionville Golf club, has been a key tool to identify shelters.

Figure 14 - Informing the population about services

Operations

10,586 families dispatched in 77 camps benefited from TSF humanitarian calling service. One call lasts around 4 minutes per family. Considering an average of six persons per family (middle in Haiti), 60,000 to 70,000 people have been reached, which represents a catchment of around 8% of the affected population.

More than 600 hundred camps had been identified but TSF focussed on the major ones (at least 300 families). The biggest camps like, Champ de mars in Port au Prince or Adventistes in Carrefour, required two to three days presence to fully cover the needs. (See Annex AVI).

The following draw shows the management process of such operations. The amount of satellite phone in use and the duration of the operation was depending on the size of the queue. As an extreme, people had to queue for two hours before being able to call. The call centers were usually open from 10AM to 5PM.

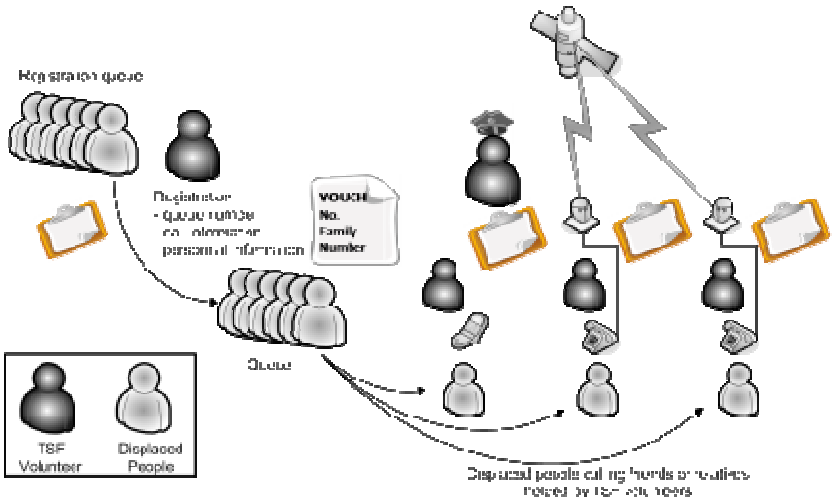


Figure 15 - Humanitarian Calling Operations – Process and queue management

Figure 16 – Humanitarian calling operations in Place Saint Pierre (Petionville).

Eventually, a pilot joint operation was conducted with an ICRC team in the Champ de Mars. Beside sharing the coverage (two teams operating at the opposite extremity of the camp), a Red Cross volunteer joined the TSF team to register the beneficiaries so they would lately included in ICRC's database. The database was used for ICRC's family link reunification programme *(www.familylinks.icrc.org). Although the operation was considered as successful, it couldn't be renewed due essentially to a lack of logistic capacity for both organizations (distance separating TSF and ICRC offices, lack of space in TSF's cars…).*

Most of the highly affected districts in Port au Prince, Delmas, Petion-ville, Jacmel, Leogane, Petit and Grand Goave have been covered as shown in the following map:

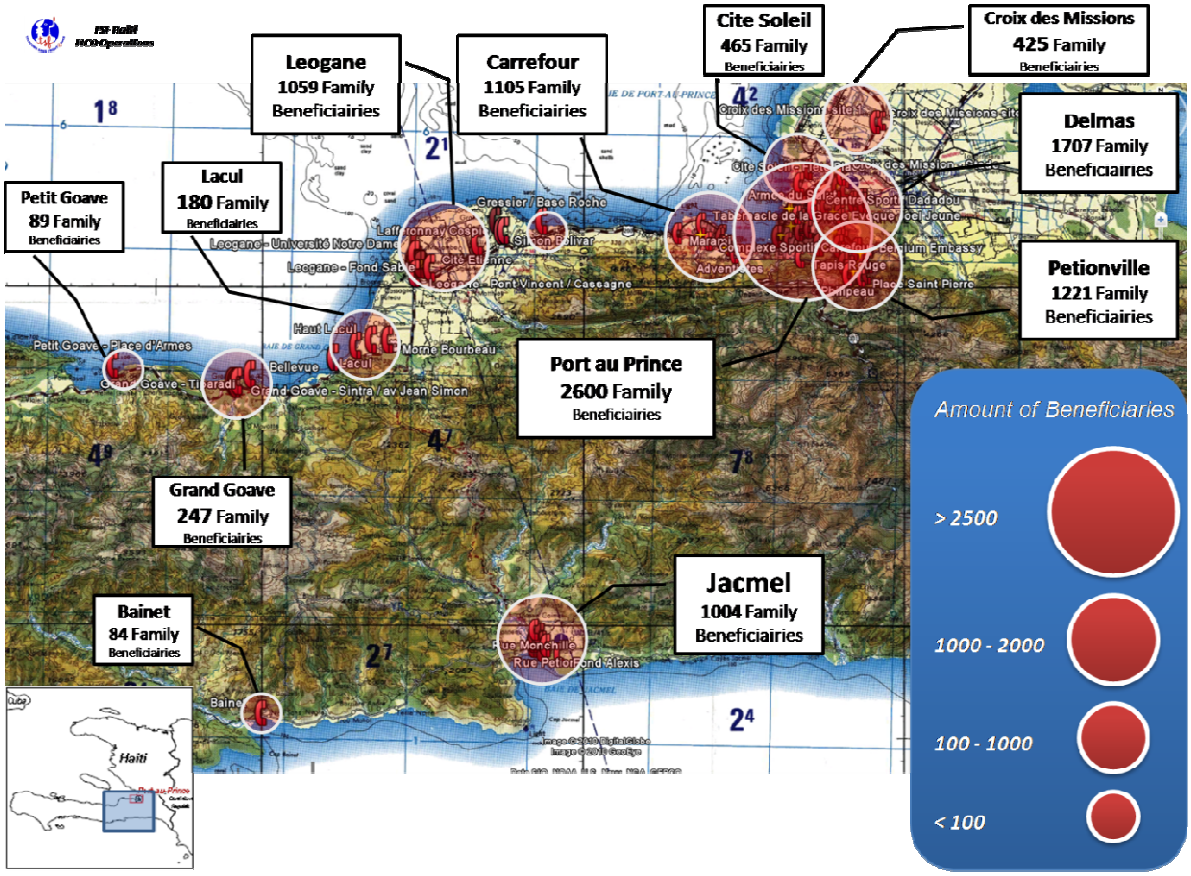


Figure 17– Number of beneficiaries by area

Three weeks after the start of operations, TSF members observed an evolution in the contents of the conversations, going from “I am alive” to “send me money”. Local telecommunications being improved or fully re-established, by mid-February 80% of the affected had already contacted a loved one. As a result TSF decided to stop the phoning operations by the 22 of February.

Statistics

- *Total number of beneficiaries* : 10,586 families (~60,000 to 65,000 people)

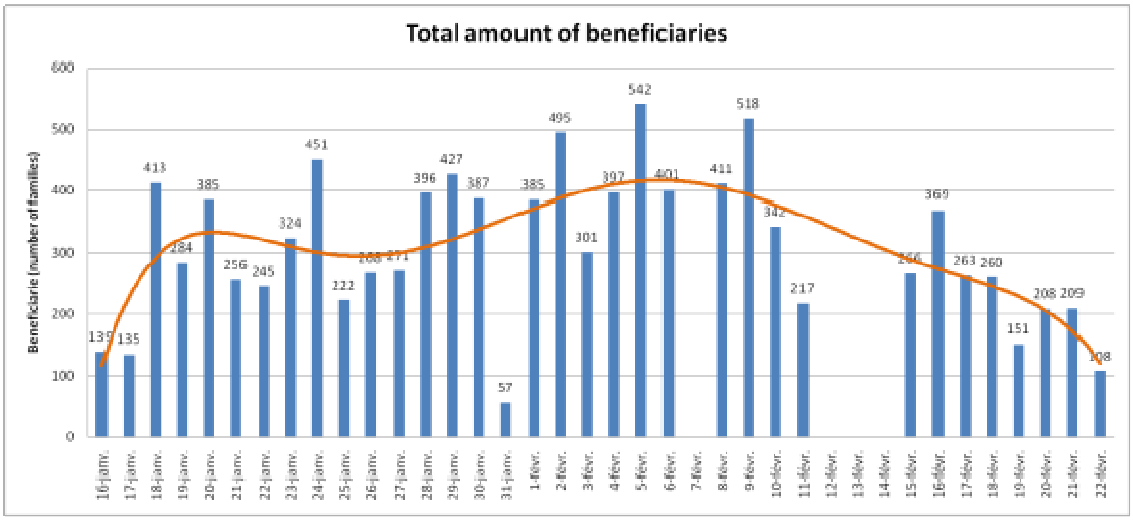


Figure 18 - Chart displaying the amount of beneficiaries

- *Catchment*: Catchment is approximately 8%. 77 sites covered.

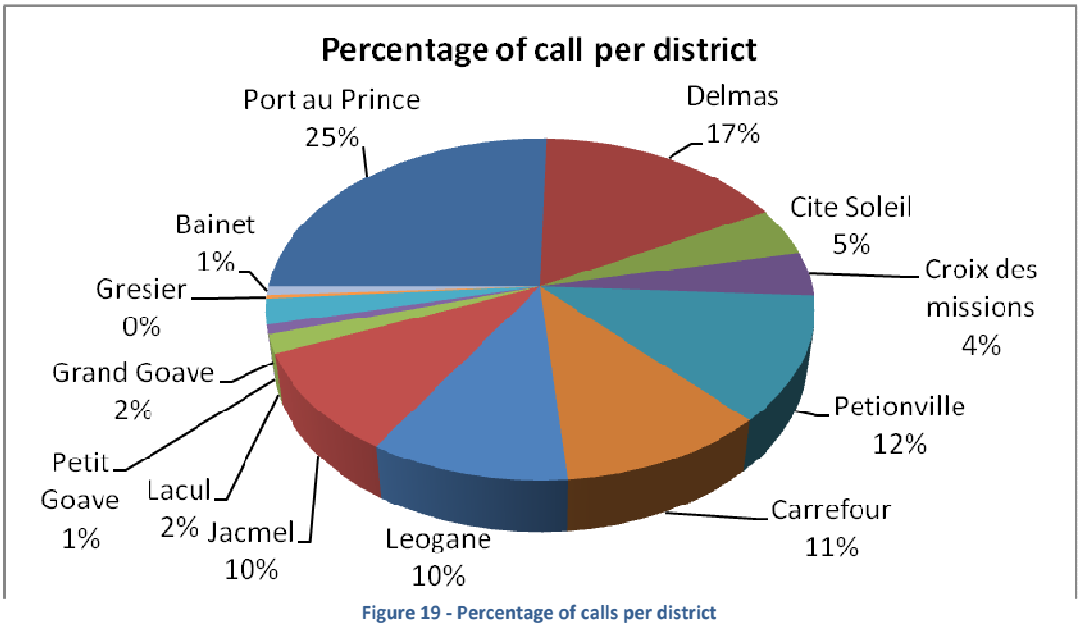


Figure 19 - Percentage of calls per district

- Call's destination: 100% of international calls – mainly USA (1,000,000 Haitians reported living in the US).

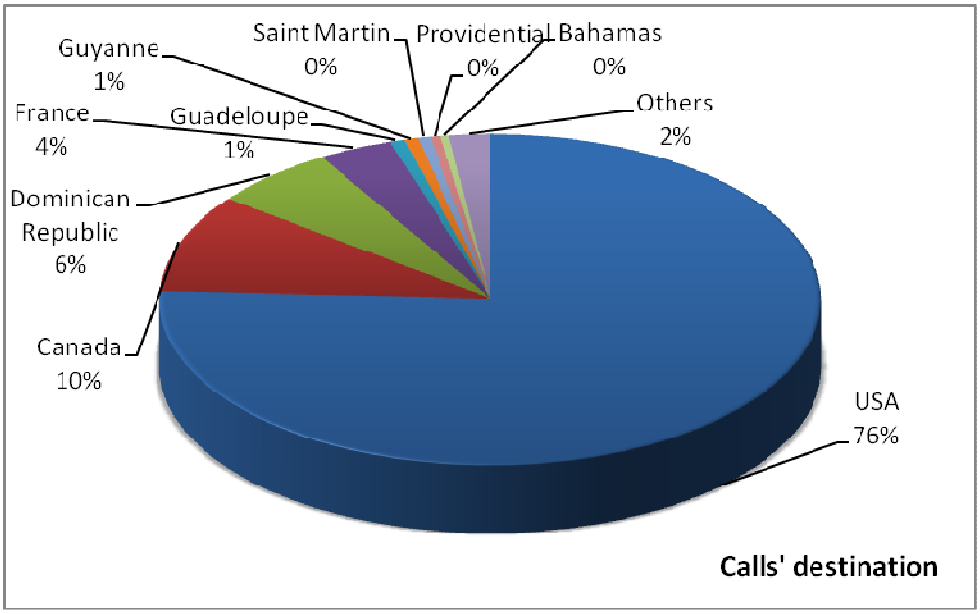


Figure 20 - Main Call's destination

Stories from beneficiaries

Suzanne Esteval, a 78 year-old woman, is homeless, as 1 million Haitian people. She can barely obtain food during food distribution. Thanks to TSF, Suzanne could call her son who lives in the United States. With this first call since January 12th, she could ask him for financial assistance.

Esther Merveille, 37 years old, is 8 months pregnant. When the earthquake struck Haiti, she was at home. She could run away despite the hurt in her back. Today, she is being sheltered with her 15 year-old daughter and her mother in the Verena school playground, where the Salvation Army operates. The free call offered by TSF allowed her to call her sister in the United States for two things she said: "to tell her about the events, to say that they are all alive and also to ask her for money".

Letter from Haiti by Juan Carlos Rincón-Domínguez, ECHO Regional Information Officer for Latin America and the Caribbean. *Port au Prince, 2 February 2010.*

"Hello. We're all safe, but we need money to carry on. Can you send us a little from Paris?" she asks her relatives at the other end of the line. The person holding the receiver is Adeline, a middle-aged Haitian with two sons. She is calling France on the free service provided by Télécoms Sans Frontières. TSF, an ECHO partner, has helped thousands of people in the quake zone to communicate with their families abroad.

Adeline learned about the free call system through a volunteer in the Delmas 40B camp, who had toured the area with a megaphone the previous day. "The local authorities gave us a spot to set up our equipment and the volunteers to work with us. They also provided security", explains Lester Flores, one of the TSF technical coordinators in the camp. "And the response is incredible." He tells us that more than 70% of callers are adult women, usually the head of family.

The camp, located on a golf course, is a temporary home to more than 10,000 people. Marie José is a volunteer who acts as receptionist. She writes out vouchers with the destination of the call, the name of the relative and the phone number. The caller then presents this to the operators who dial out on the satellite phones.

Beltran, a young Haitian who speaks English, Spanish and Creole and is a translator for a Spanish NGO, applauds the work of TSF. "They are doing a great job helping the people. If the line is busy or a wrong number is dialed, people are allowed to call again."

In Haiti, an international phone call costs about the same as a meal for a whole family (300 gourdes). This is why the TSF service is so important. When so much else has been lost, the chance to speak to loved ones far away is a precious opportunity.

Challenges faced

- Communications with field teams was a major challenge. The fact mobile phone network being saturated and the VHF radio coverage (NGO channel) was not available in most of the affected areas could have been a security threat to the staff. Luckily no major incident was reported.
- Logistics: roads blocked, traffic jams, access to gasoline, technical and electricity issues.
- Lack of information concerning sites locations, lack of organizations in the camps, no official numbers of families in the camps.
- Working conditions. Insecurity if operations are held at the same time as a food/water/NFI distribution. Queue management.

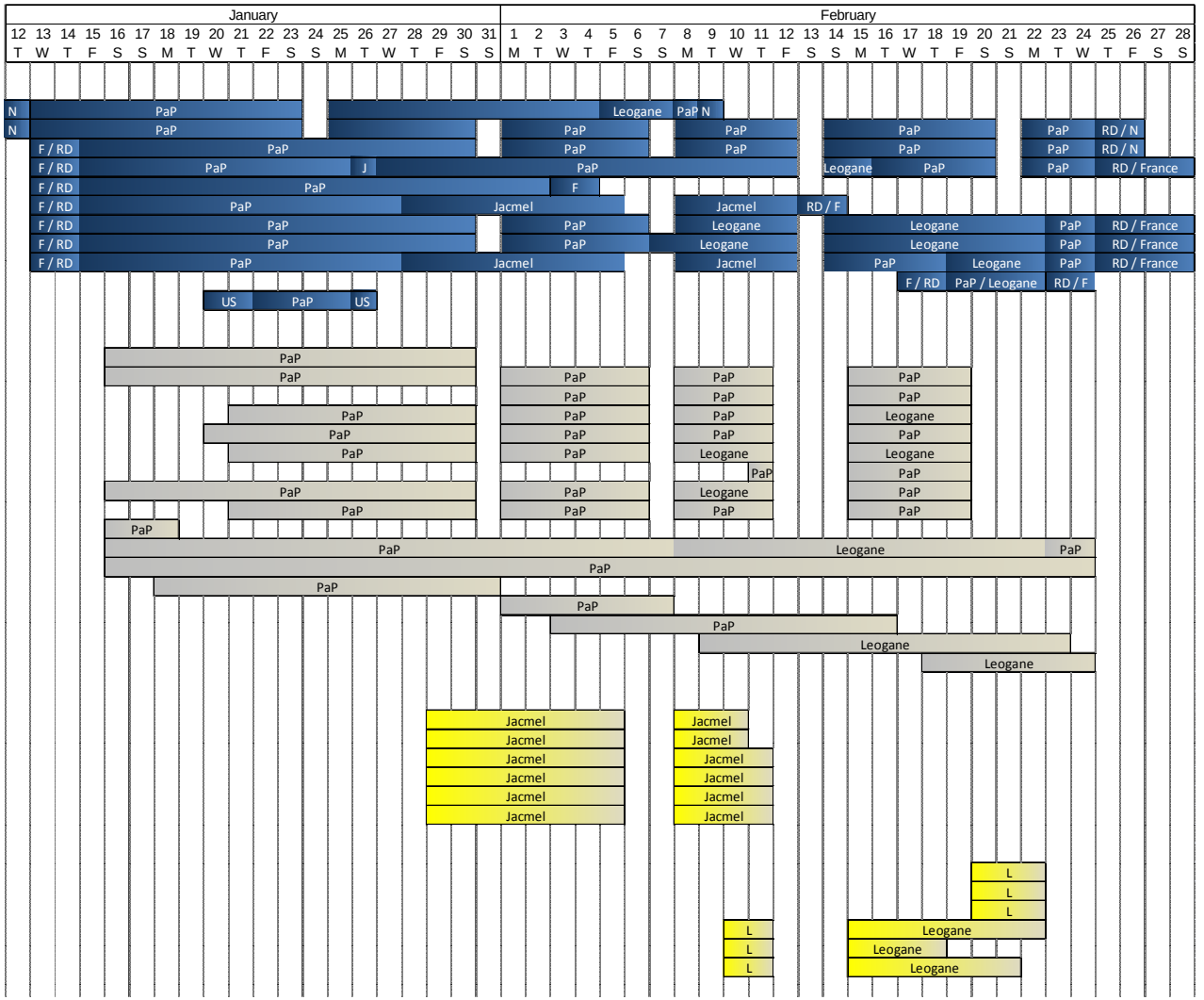
---------- END ----------

ANNEXES

ANNEX AI: DETAIL OF HUMAN RESOURCES DEPLOYED

Human Ressources deployment - TSF Mission Haiti 2010

Name	Function	Contract	Duration	Base
Expatriates				
Benoit Chabrier	Head of Regional Office	Staff	29	Nicaragua
Lester Flores	ICT Technician	Staff	46	Nicaragua
Juan Gomes	ICT Technician	Volunteer	45	Nicaragua
Simon Genin	Head of Mission	Volunteer	47	France
Myriam Annette	Head of Communication	Staff	23	France
Anthony Lhoro	ICT Technician	Volunteer	33	France
Sebastien Latouille	ICT Technician	Staff	47	France
Sebastien Lannes	ICT Engineer	Staff	47	France
Pascal Villeneuve	Logistician	Volunteer	47	France
Monique Lanne-Petit	Operations Director	Staff	8	France
Paul Margie	US Representative	Volunteer	7	US
Local Staff recruited in Port au Prince				
Jennifer Dorlus	Operator	Staff	15	Haiti
Jo-Anne Beaubrun	Operator	Staff	30	Haiti
Ricardi Etienne	Operator	Staff	15	Haiti
Fritz Gourdet	Informator	Staff	25	Haiti
Ricardo Etienne	Operator	Staff	26	Haiti
Filus Caneste	Operator / Informator	Staff	25	Haiti
Nicola Cramer	Operator	Staff	6	Haiti
Jean Saint Clair	Informator	Staff	30	Haiti
Rigueur Darson Philippe	Operator	Staff	25	Haiti
Sainttilus Kesnel	Driver - Terios 01558	Seconded	3	Haiti
Jean Patrick Pierre	Driver - Terios 24221	Seconded	40	Haiti
Joli Hagard	Driver - Terios 01826	Seconded	40	Haiti
Abriel Fedelyn	Driver - Ford 01650	Seconded	14	Haiti
Hugues Chante	Driver - Mazda 00328	Seconded	7	Haiti
Thelesna Fedelyn	Driver - Terios 00385	Seconded	14	Haiti
Cadestyn Bazeti	Driver - Terios 01562	Seconded	15	Haiti
Bien Aime Mezizier	Driver - Ford 01582	Seconded	7	Haiti
Local Staff recruited in Jacmel				
Germain Peterson	Operator	Staff	10	Haiti
Irwin Margaron	Operator	Staff	10	Haiti
Elly Rochare	Operator	Staff	11	Haiti
Jean Baptiste Oriol	Operator	Staff	11	Haiti
Pascal Peterson	Operator	Staff	11	Haiti
Alfred de Riviere	Driver	Seconded	11	Haiti
Local Staff recruited in Leogane				
James Gervais	Operator	Staff	3	Haiti
Emerson Chirac	Operator	Staff	3	Haiti
Celestin Leriche	Operator	Staff	3	Haiti
Ivener Medor	Operator	Staff	10	Haiti
Colby Pierre	Operator	Staff	6	Haiti
Botes Benbelswelder	Operator	Staff	9	Haiti



ANNEX AII: GOVERNMENT AUTHORIZATIONS TO EXPLOIT EMERGENCY TELECOMMUNICATIONS FREQUENCIES

MINISTERE
DES TRAVAUX PUBLICS
TRANSPORTS ET COMMUNICATIONS

REPUBLIQUE D'HAITI

CONSEIL NATIONAL DES TELECOMMUNICATIONS

www.conatel.gouv.ht

Port-au-Prince, le 11-02-2010

Réf.: No. CNT-121/09/10

TELECOMS SANS FRONTIERES
Monsieur Simon Genin
Représentant
En ses bureaux.-

Monsieur le Représentant,

Faisant suite au formulaire de demande d'autorisation dûment rempli et signé le 10 février 2010 par la TELECOMS SANS FRONTIERES, le CONATEL autorise la TELECOMS SANS FRONTIERES à mettre en place et à exploiter, suivant les obligations contenues dans le dit formulaire, durant la période d'urgence décrétée par le Gouvernement de la République d'Haïti, le réseau de communication d'urgence avec les caractéristiques techniques contenues dans la fiche annexée.

La **Telecoms Sans Frontières** n'est pas autorisée à raccorder ses installations au réseau public téléphonique commuté Haïtien et ne doit pas en aucune façon gener ou causer d'interferences avec les autres réseaux de communications existants. Toute dérogation ou violation aux termes de cette autorisation entrainera son annulation.

La Direction Générale vous présente, Monsieur le Représentant, ses salutations distinguées.

Montaigne MARCELIN, Ing.
Directeur Général

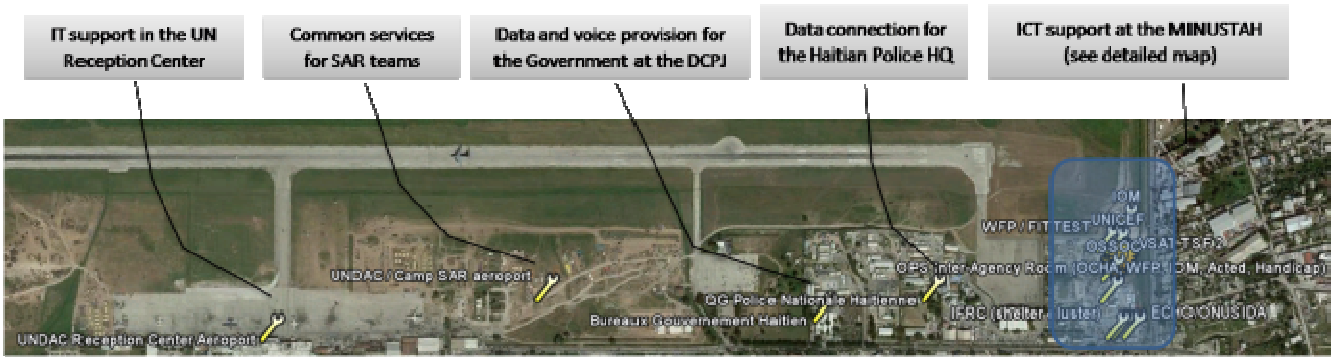
16, Cité de l'Exposition, B. P. 2002, Port-au-Prince, HAITI
Tél.: (509) 222-0300 / 221-8337 / 221-8305 / 223-0720 - Fax: (509) 223-9229 - email : info@conatel.gouv.ht

CONATEL's authorization to operate emergency telecommunications hardware

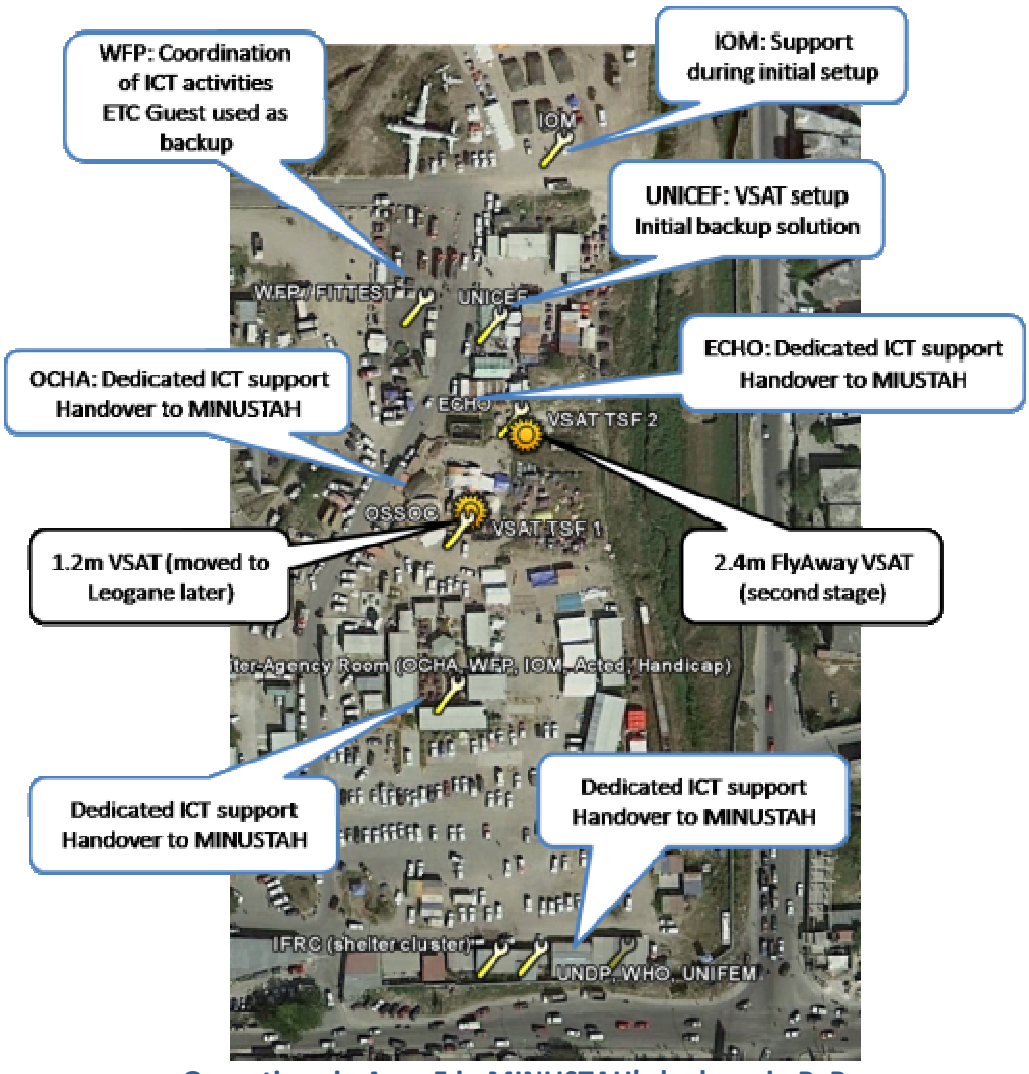
FICHE TECHNIQUE DES EQUIPEMENTS AUTORISES

Type équipement	BGAN (terminaux satellitaires)	MiniM/ Irridium (terminaux satellitaires)	VSAT
Marque	Thrane & Thrane	Thrane & Thrane	Dstar
Modèle	Explorer 500		
Fréquences	1626.5 – 1660.5 MHz	1626.5 – 1660.5 MHz	1382 MHz
Largeur de bande			
Puissance (dbm)			
Type Antenne	Remote Integrated	Remote Integrated	Dish
Marque			
Modèle			
Hauteur			
Azimuth			
Cable			
Adresse d'installation/ Coordonnées géographiques	Minustah Logbase PaP – OCHA office Jacmel & Léogane	PaP, Jacmel, Léogane	Minustah Logbase OCHA Léogane

ANNEX AIII: MAPPING OF IT & TELECOMS SERVICES AROUND AND MINUSTAH LOGBASE AIRPORT IN PORT AU PRINCE



Satellite view of TSF's activities around airport in PaP

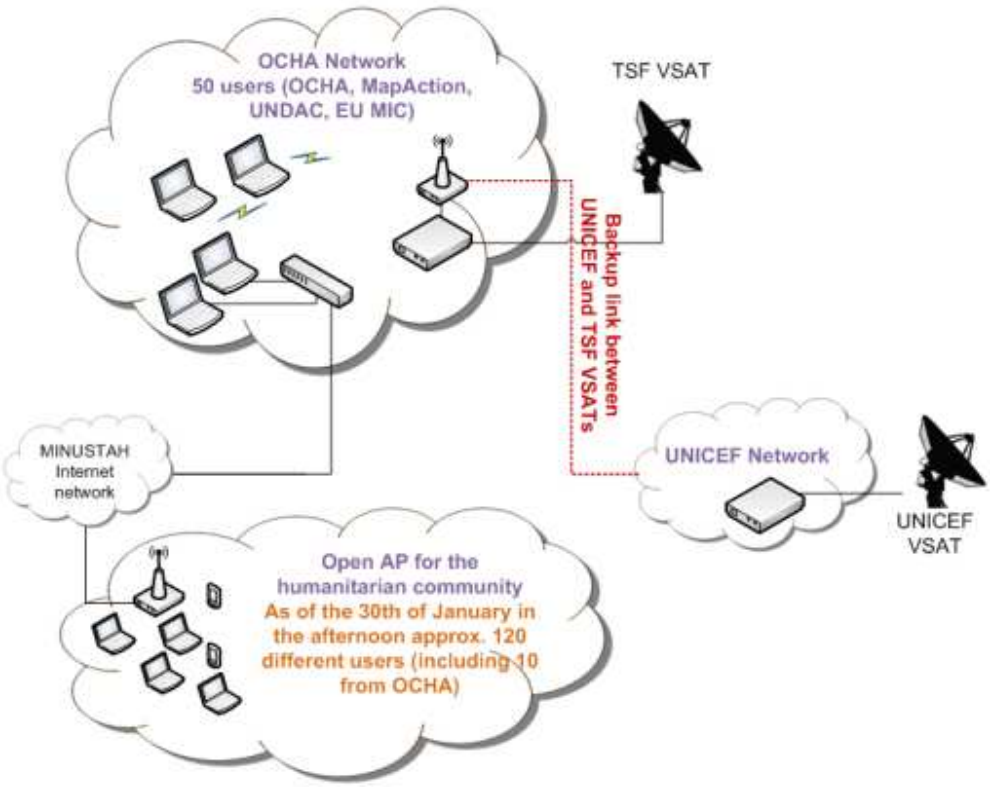


Operations in Area 5 in MINUSTAH's logbase in PaP

ANNEX AIV: TELECOMMUNICATIONS SITUATION AT MINUSTAH LOGBASE IN PORT AU PRINCEBY THE 06/02/2010

Telecommunication situation at MINUSTAH logbase on the 06/02/2010

ANNEX AV: NETWORK DIAGRAM AT MINUSTAH LOGBASE IN PORT AU PRINCE BY THE 06/02/2010



Network diagram at the MINUSTAH Logbase by the 06/02/2010

ANNEX AVI: LIST OF 77 SHELTERS COVERED

Covered from Port-au-Prince	Date of coverage	Number of days	Number of Beneficiairies	Duration of communications
Place Saint Pierre	16-17/01	2	274	14:47:12
Place Boyer	18-19/01	2	216	10:53:48
Stade Silvio Cator	18-20/01	3	684	31:14:26
Bristout	20/01	1	77	4:09:49
Premature	20/01	1	105	4:36:03
Henfrasa	21/01	1	198	9:52:12
Sainte Therese	21/01	1	58	2:22:18
Juvernat	22/01	1	66	3:26:26
Freres	22/01	1	45	2:21:20
Delmas 89	22/01	1	134	6:01:39
Canape Vert	23/01	1	52	3:27:53
Champs de Mars	23-24/01	2	413	17:16:34
Ambassade Belgique	23/01	1	78	3:56:13
Philippeau	24/01	1	79	3:49:19
Place Sony	24-25/01	2	331	15:34:35
Girardeau	25/01	1	44	1:43:30
Delmas 2	26-27/01	2	159	7:11:47
Delmas 18	26-27/01	2	217	9:26:05
Place de l'Aeroport	26-27/01	2	163	7:28:29
Croix des Missions S1&S2	28/01	1	113	4:29:23
Kay Felix	28-29/01	2	244	12:13:24
Saint Louis de Gonzague	28-29/01	2	326	13:29:00
Croix des Missions Stade	29/01	1	140	5:43:08
Petionville Golf Club	30/01-02/02	3	411	20:13:00
Carrefour Aviation	30/01-01/02	2	177	8:26:26
Saint Martin - Daniel Fiole	01-02/02	2	250	12:19:13
Fort National - Rue Estimee	02/02	1	103	5:07:34
Cite Soleil	03/02	1	102	4:50:45
Saint Antoine - Zone Icare	03/02	1	107	5:42:58
Cite Militaire - Maurice Bonnefil	03/02	1	69	2:46:05
Cite Soleil - Projet Douard	04/02	1	159	6:56:08
Carrefour - Adventistes	04-05/02	2	319	14:36:05
Union School	05/02	1	183	8:11:47
Carrefour Hopital	05/02	1	92	3:41:05
Centre Dadadou	06-08/02	2	224	9:32:19
Delmas - Terrain Acra	06/02	1	46	2:01:21
Delmas - Mais Gate 23	06-08/02	2	126	5:42:18
Carrefour - Centre Sportif	06/02	1	104	5:38:28
Delmas - Camp Islamic Relief	08/02	1	77	3:46:36
Carrefour - Tabernacle	08-09/02	2	369	16:34:07
Carrefour - Marami	10/02	1	133	5:00:00
Carrefour - Don Bosco	15-17/02	3	471	23:19:57
Piste Aviation	18/02	1	117	5:49:49
Mais Gate	16/02	1	42	2:25:24
Tapis Rouge	17/02	1	35	1:35:25
Savanne Pistache	18/02	1	143	6:59:13

List of shelters covered from Port au Prince

Covered from Jacmel	Date of coverage	Number of days	Number of Beneficiairies	Duration of communications
Stade Pinchinat	29-30/01	2	180	8:42:34
Siloe	31/01-01/02	2	146	6:50:23
K-Wolf	02/02	1	140	6:35:35
Fond Alexis	03/02	1	23	1:18:35
Rue Petion – Impasse Louis Pierre	04/02	1	69	3:15:11
Rue Charlotin Marcadieu (Bloc Raquette)	05/02	1	117	3:15:11
Rue Beauvais	08/02	1	135	6:26:09
Portail Leogane	09/02	1	120	2:51:10
Rue Monchille	10/02	1	74	4:14:30
Bainet	11/02	1	84	4:33:24

List of shelters covered from Jacmel

Covered from Leogane				
Louis Borno – école des frères	09/02	1	129	5:47:05
Parc Gérard Christophe (stade)	10/02	1	135	6:26:28
Université Notre Dame de Leogane	11/02	1	133	6:17:57
Rue la Croix – Eglise St rose de Lima	15/02	1	156	6:11:19
Route nationale Cité Etienne	16/02	1	32	1:33:04
Route nationale Lafferonnay Cospie	16/02	1	51	1:04:36
Route nationale – Communauté Simon Bolivar	17/02	1	111	4:32:14
Haut Lacul	20/02	1	45	1:53:34
Lacul	20/02	1	48	2:01:48
Bellevue – grande route	21/02	1	38	2:08:04
Pont Vincent – Cassagne (CSC)	21/02	1	38	1:53:47
Morne Bourbeau – Grande route	21/02	1	35	1:19:06
Petion – Simon Bolivar 2	21/02	1	34	1:34:46
K. Pity – petite rivière	22/02	1	27	0:44:10
Fond Sable	22/02	1	47	1:19:06
Gressier – Base Roche	22/02	1	34	1:50:28
Grand Goave - Servant pour tous	19/02	1	68	1:37:09
Grand Goave - Sintra – Av Jean Simon	20/02	1	86	2:02:13
Grand Goave - Tiparadi	20/02	1	29	1:35:29
Grand Goave - Candelo et Sable	21/02	1	64	2:41:38
Petit Goave - D'armes – centre ville	19/02	1	83	3:02:43

List of shelters covered from Leogane

---------- END OF ANNEXES ----------