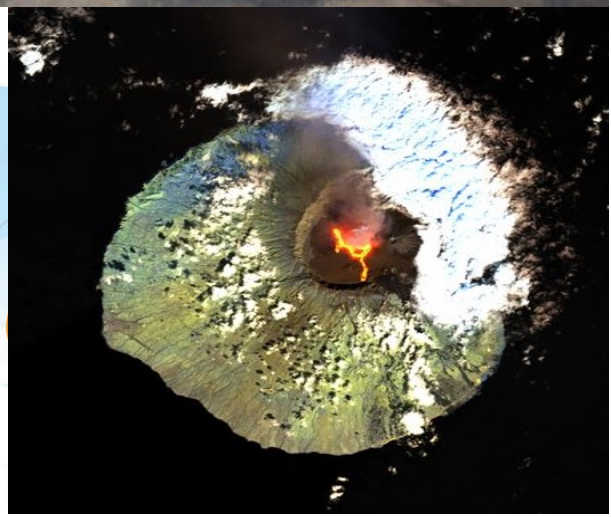
Volcanic Eruption at Fogo Island in 2014

How ICT made the difference



ANAC
Agência Nacional das Comunicações
National Communications Authority
Mais e Melhores Comunicações

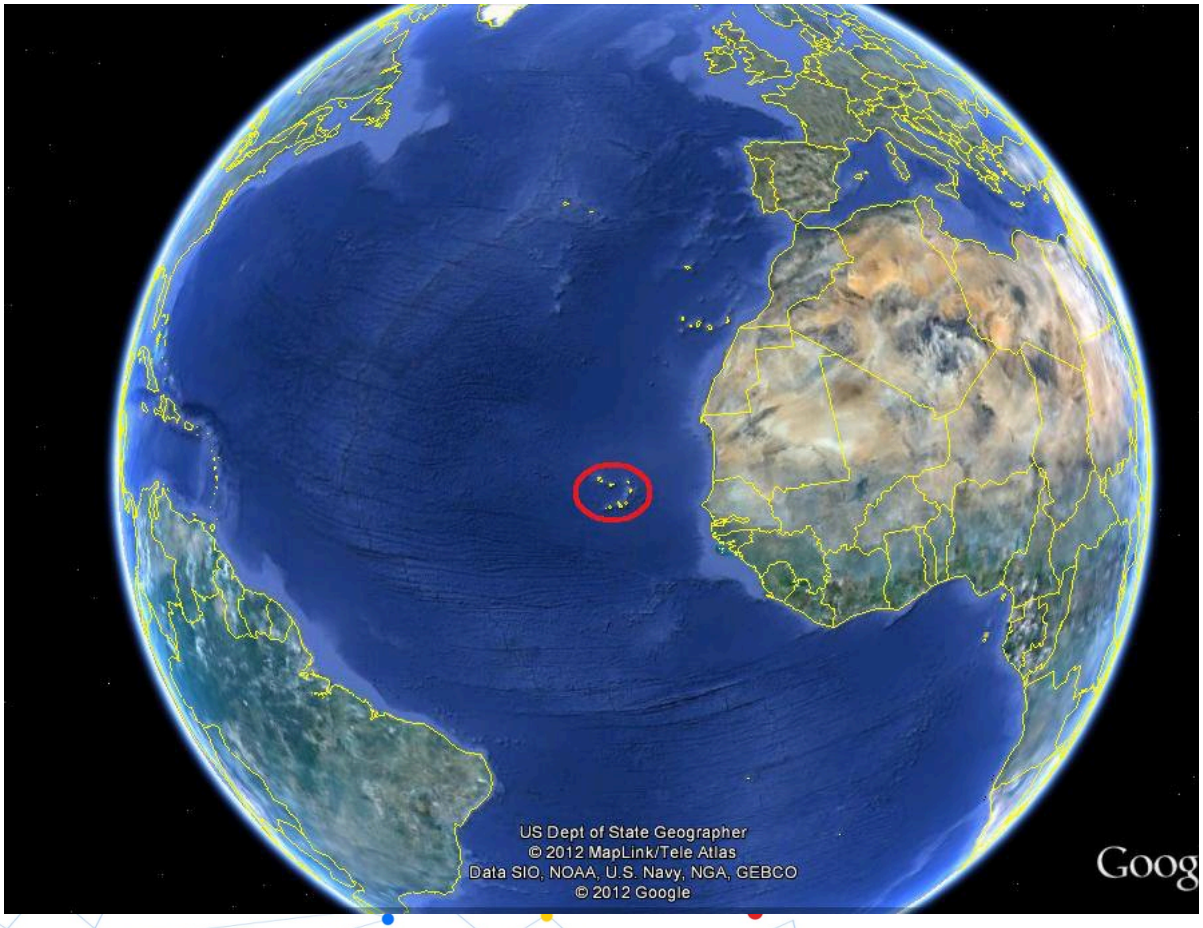
2ND GLOBAL FORUM ON EMERGENCY TELECOMMUNICATIONS
(GET-2016): SAVING LIVES

Agenda

1. Introduction
2. Fogo Island 2014 Volcanic Eruption
   i. How ICT helped
   ii. How ICT can help in the future
3. How is Cape Verde preparing for the future on emergency communications

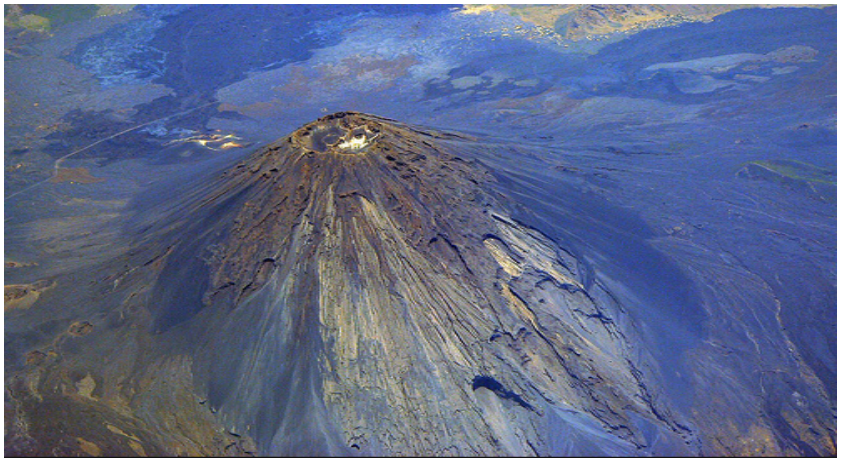
INTRODUTCTION(1/3)

The Cape Verde Islands are located in the mid-Atlantic Ocean some 570 km (354 mi) off the west coast of Africa.



INTRODUTCTION(2/3)

The landscape varies from dry plains to high active volcanoes with cliffs rising steeply from the ocean. The climate is dry tropical but the country is vulnerable to the effects of climate changes and it is often stricken by tropical storms.



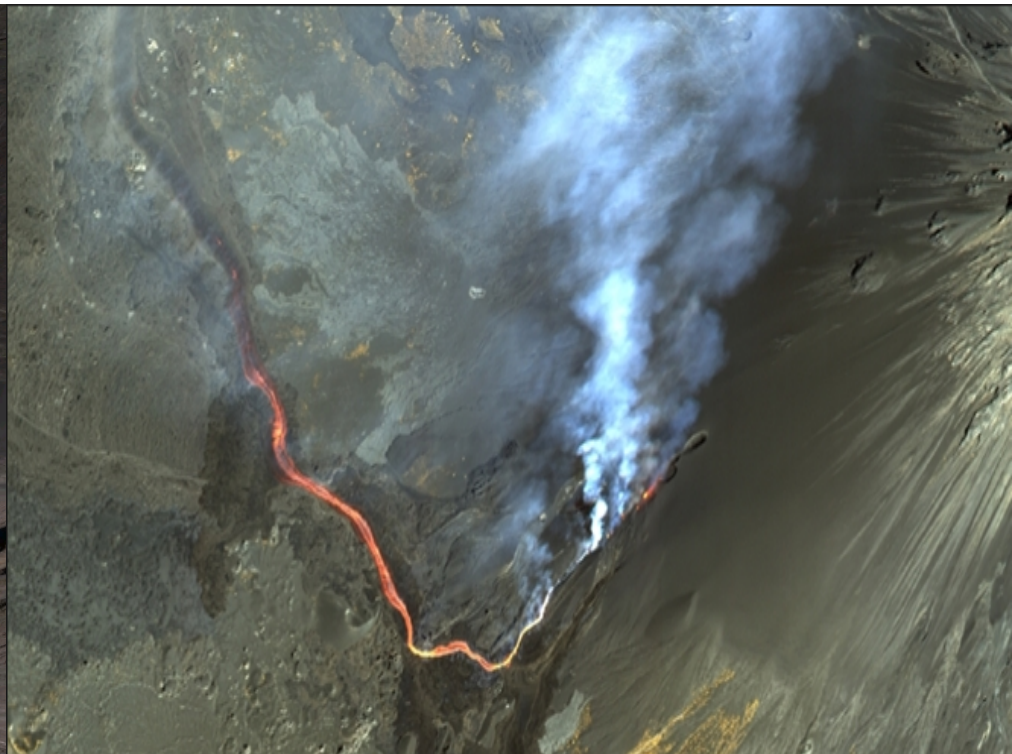
INTRODUTCTION(3/3)

- The island of Fogo (*fire*) consists of a single massive volcano that is the most prominent of the Cape Verde Islands. Fogo is the most active volcano in the Cape Verde.

The roughly circular 25-km-wide island is truncated by a large 9-km-wide caldera that is breached to the east and has a headwall 1 km high.

THE ERUPTION OF 2014

- The caldera where the eruption happened is located asymmetrically NE of the center of the island. A central cone, Pico, rises more than 1 km above the caldera floor to about 100 m above the caldera rim, forming the 2829 m high point of the island.
- There were 2 villages inside the caldera



ΓHE ERUPTION OF 2014

- For 77 days the volcano expelled huge amount of lava destroying several houses and leaving hundreds of displaced people.

HOW ICT HELPED?

- Two villages and many agriculture fields were totally destroyed by lava

HOW ICT HELPED?

1. By creating an "emergency mobile network

Current emergency communications in Cape Verde are inefficient and obsolete, so, coordinated by ANAC, mobile operators came together and had a very important role, allowing:

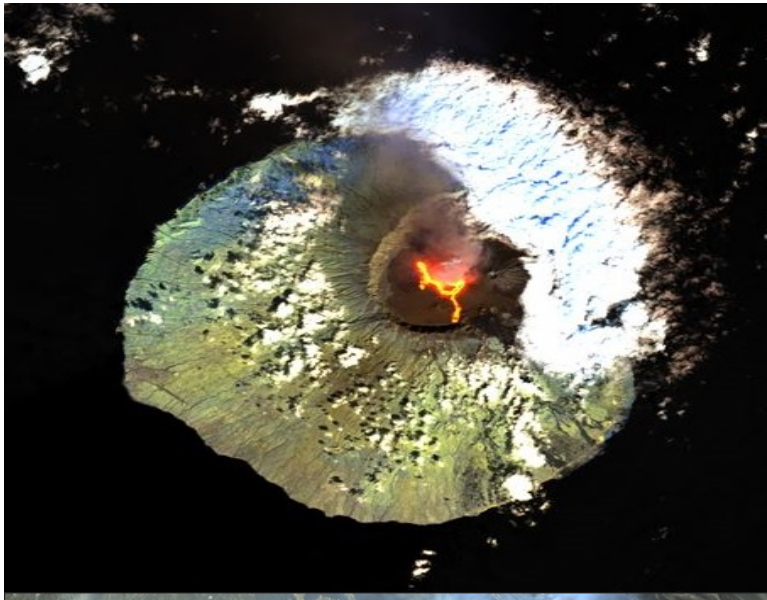
- Free communication among authorities agents including traffic priority from their mobile phones. This allowed fast evacuation of people and a good coordination;
- Access to mobile Internet in the affected area. This allowed quick information dissemination about the progress of the lava over the villages, including live broadcasting over the Internet;
- Coordination of the management of the goods donated to the displaced people from all over the world.

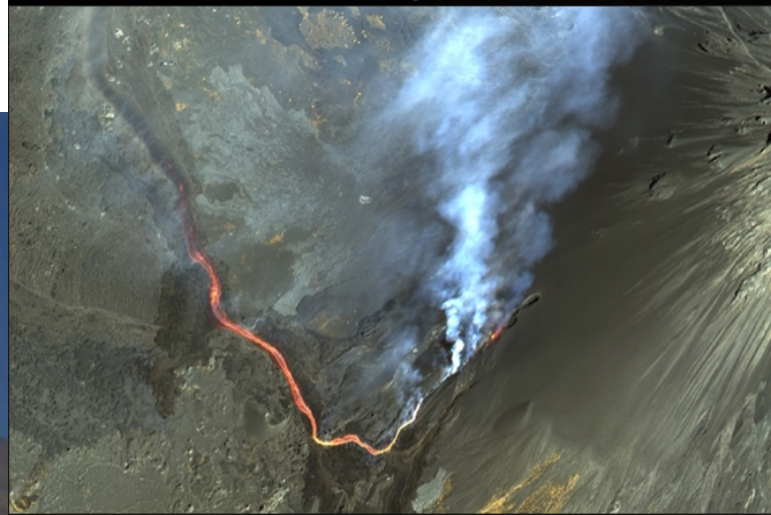
HOW ICT HELPED?

2. Allowing data collection

With the support of some international partners it was possible to collect data using satellite and drones that allowed to:

- Get the big picture;
- Follow the lava evolution;
- Predict lava path and speed;
- Measure lava temperature and consistence and other volcanic activity data for scientific use.





HOW ICT HELPED?

3. By boosting effort of people from all over the world
   - The eruption was all over the internet which helped to get assistance from many entities and people. So it was possible to:
     - Gather and manage money and goods for displaced from all over;
     - Get assistance from many international organizations, including the ITU that provided satellite phones;
     - Get attention of volcanic scientists from all over the world

HOW ICT CAN HELP IN THE FUTURE?

- Cape Verde faces a considerable level of risk, so we need to implement technological solutions to prepare us to adequately respond to disaster.
- ICT can play a huge role in this process both on prevention and on response.
- For Prevention:
  - Monitor water temperature, the weather, and volcanic activity to prevent people of imminent hazards;
  - Create an Information System that can allow authorities to manage evacuations efficiently;
  - Use smartphones, for registering in the emergency Information System so people can be prevented in a faster way;

HOW ICT CAN HELP IN THE FUTURE?

- For Response:
  - Provide tools to provide real time data for rescue and evacuations;
  - Efficient management of means and resources;
  - Remote Medical and psychological assistance for people while waiting for recue teams;
  - International cooperation in terms of emergency communications (Cape Verde has recently approved its accession to the Tampere Convention)

HOW IS CAPE VERDE PREPARING ON EMERGENCY COMMUNICATIONS?

- The Government created a Task Force to organize the emergency communications in Cape Verde with three main roles:
  - Implement the Emergency Coordination Center that operates the single emergency number- 112;
  - Develop a brand new national emergency communication plan that includes ICT based procedures;
  - Implement a new national emergency communication Network.
- This is an ambitious but feasible plan and we are counting on International Cooperation to help us achieve these goals.

Final notes

- We congratulate ITU for developing these works on this matter and we suggest that:
  - Special attention is given to small island countries vulnerable to climate changes in order to assist them with capacity building to face the challenges on emergency communication;
  - Special measures are taken in order to allow member states to share ICT infrastructures (Specially satellite) for emergency situations

Obrigado

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