



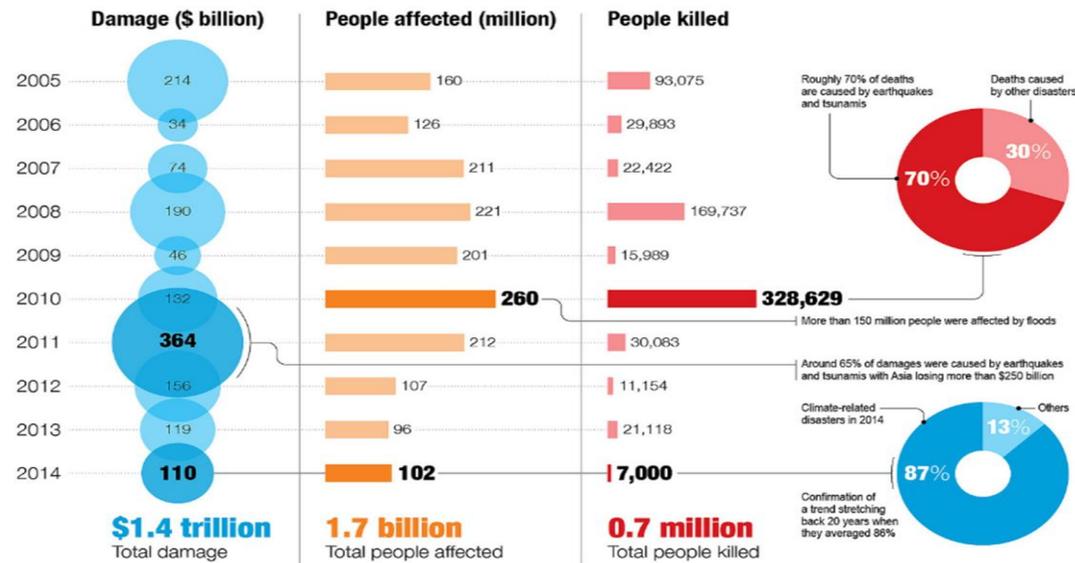
Satellite Communications Critical Infrastructure for Disaster Response

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24 July 2018

Natural Disasters Challenge Existing Communications Infrastructures

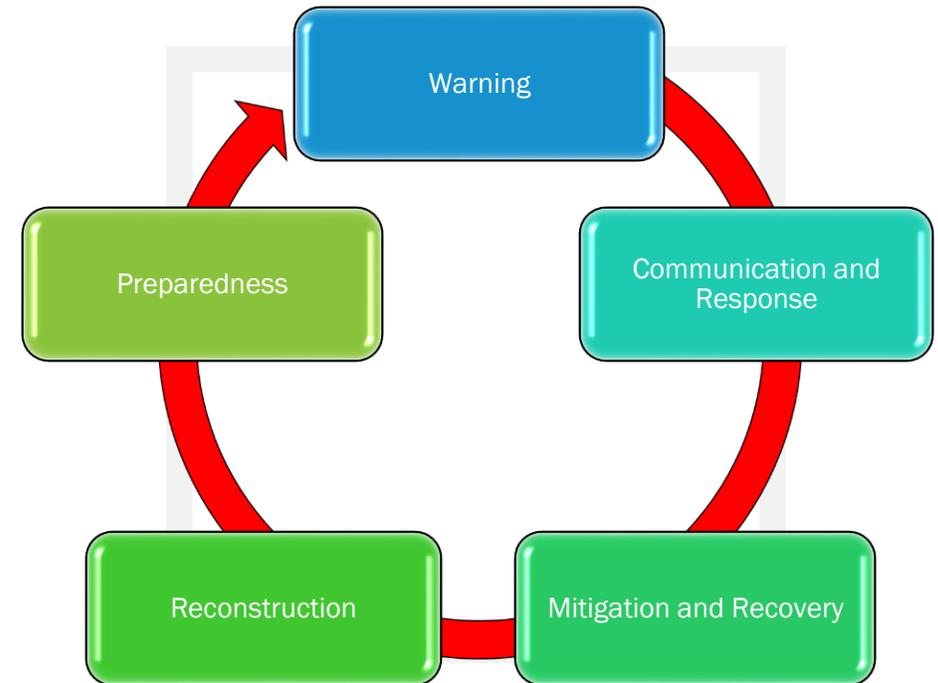
- Natural disasters are on the rise around the world
- Natural disasters present a significant challenge to existing communications infrastructure
- Natural disasters leave severe structural, social and economic damage in their wake



Communications Infrastructure Is Essential for Disaster Response and Relief

Top 10 communication methods in a disaster setting:

1. Social media
2. Mobile applications (Apps)
3. Cellular telephone
4. Landline telephone
5. Satellite telephone
6. Two-way radio
7. Citizens band radio
8. Amateur radio
9. Police scanner
10. Word-of-mouth



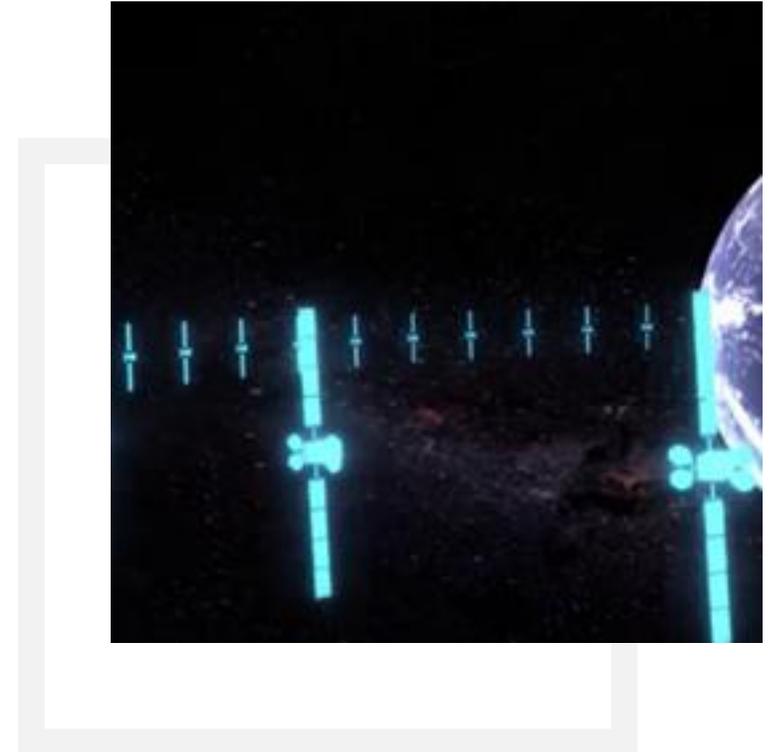
All of these are great, if power, Internet, and access to the electronic devices are still available. But what happens when they are not?

Satellites to the Rescue

- Truly ubiquitous coverage
- Instant infrastructure
- Secure infrastructure
- Backup infrastructure
- Temporary network solutions
- Rapid provisioning of services
- Load sharing and surge capacity solutions for larger sites
- Greater redundancy
- Resiliency during a time of crisis



FIRST RESPONDER'S GUIDE TO SATELLITE COMMUNICATIONS



Banding Together through the Smart Sustainable Development Model (SSDM)

- Supplements ongoing efforts by the ITU's Development Bureau
- Links the use of ICTs to help reduce disaster risk and to support management efforts during a natural disaster
- Composed of 3 Working Groups:
 - Volunteers for Emergency Telecommunications (VET)
 - Global Emergency Fund for Rapid Response (GEF)
 - Regulatory Toolkit and Guidelines



**SMART
SUSTAINABLE DEVELOPMENT
MODEL INITIATIVE**



UN Crisis Connectivity Charter

- In 2016 the satellite industry, in coordination with the UN Office for the Coordination of Humanitarian Affairs (OCHA) and the Emergency Telecommunications Cluster (ETC), led by the World Food Programme (WFP), agreed a charter to provide emergency communications in disasters world wide
- This is the first such agreement between a private sector and the UN, and is being used by the UN as a template for further collaborations
 - Donate equipment that is stored in humanitarian depots around the world
 - Pre-allocate satellite bandwidth to cover all regions of the globe for humanitarian purposes
 - Provide training and capacity building for WFP and ETC partners' field-staff on the installation and use of satellite equipment



Satellite Technology in Action

Bringing critical connectivity to communities affected by disasters



Community Testimonials

The Uniendo a Puerto Rico Fund and the Connect USVI Fund, Connect America Fund, ETC Annual Reports and Certification, WC Docket Nos. 18-143, 10-90, and 14-58

- *“Satellite broadband was the only reliable communications system in the aftermath of the hurricanes and must be fully implemented across the island to build a truly resilient and connected Puerto Rico.”* – Rafael Beltrán Peña, President Board of Directors, Liga de Cooperativas de Puerto Rico (July 2, 2018)
- *“Broadband satellite and microwaves should be considered a normal part of the telecommunications infrastructure as they can be restored quickly without much delay.”* Rodigo Masses y Artze, President, Industriales Puerto Rico (July 3, 2018)
- *“It is imperative that the FCC understands that any long-term investment in the communications infrastructure of Puerto Rico **must** include satellite technology. Not only must satellite technology be included, it must be **a priority** in any restoration funding efforts. Satellite broadband was the only reliable communications system in the aftermath of the hurricanes and must be fully implemented across the island in order to build a truly resilient and connected Puerto Rico.”* Arturo Massol, Ph.D., Co-Director, Casa Pueblo (July 5, 2018) (emphasis in original)



An Ounce of Prevention Is Worth a Pound of Cure

- Proper preparation can help mitigate financial and communication service impacts due to planned or unplanned disruptions
- As countries develop national emergency and disaster communications plans, satellite solutions should be part of those plans
- Don't wait until it's too late

