


# The Role of ICTs for Disaster Management and Risk Reduction

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# ITU Membership

- Specialized United Nations (UN) Agency for Telecommunications/Information and Communication Technologies (ICTs).

193  
MEMBER STATES 

700  
SECTOR MEMBERS 

140  
ACADEMIA MEMBERS 

3  
SECTORS →



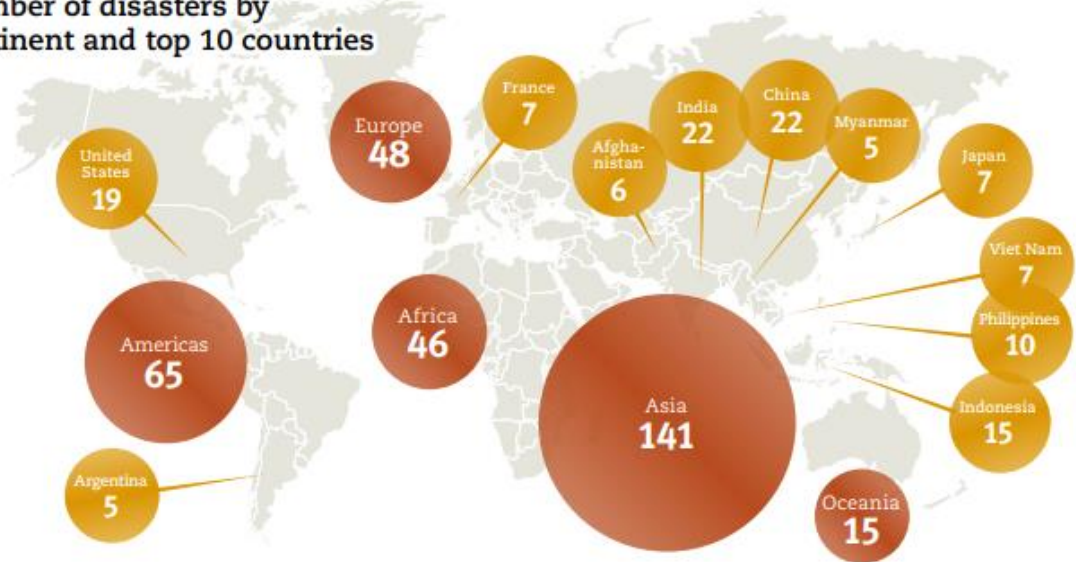
Each sector has separate mandate, but all work cohesively towards connecting the world

# Every year millions of people

## are affected by natural hazards...

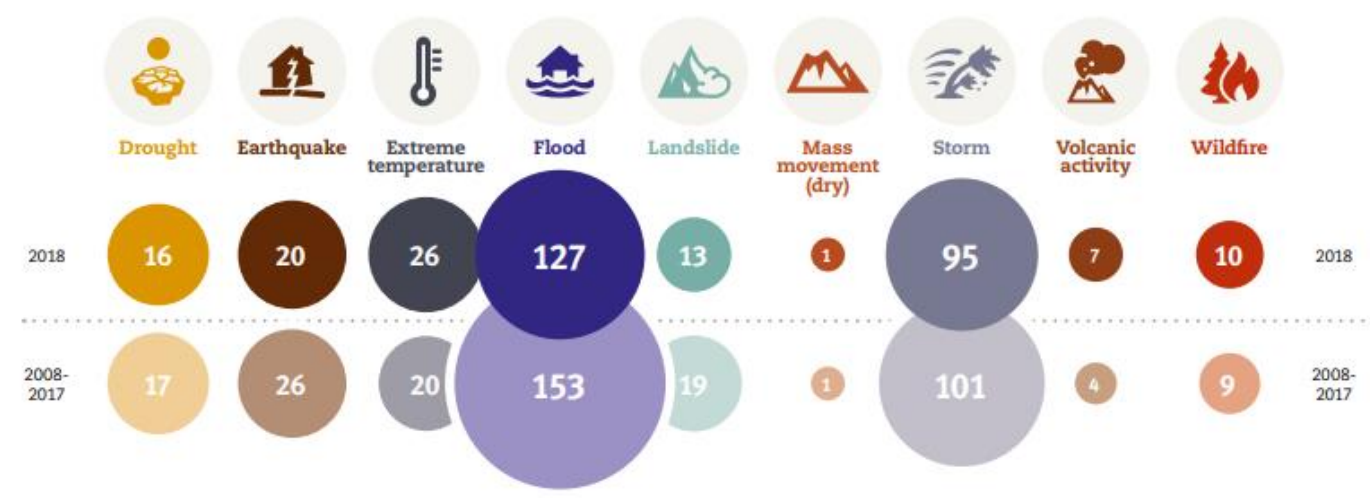


Number of disasters by continent and top 10 countries



Occurrence by disaster type: 2018 compared to 2008-2017 annual average

348 2008 to 2017 > 315 in 2018



# When disasters strike, ICTs play a critical role...

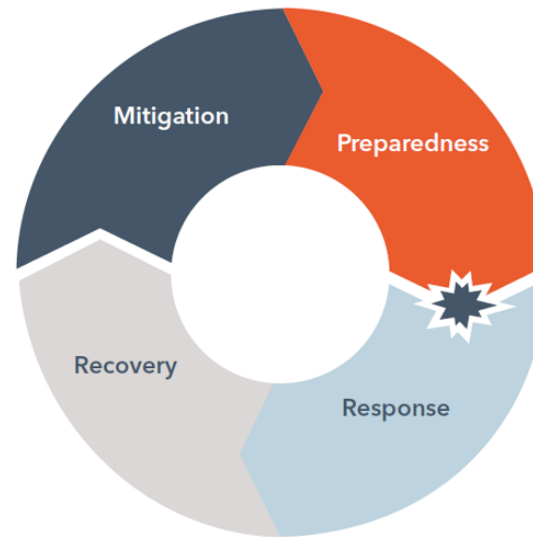
*ICTs are a critical enabler for disaster management and risk reduction activities as they help to monitor hazards and delivering vital information to all parties involved in disaster management, including the most vulnerable populations and communities at risk.*

## 1 Mitigation

- Hazard and vulnerability assessment and mapping
- Data collection, recording and analysis
- Awareness raising and education campaigns
- Development of policies and legislation
- Development of regulatory frameworks
- Allocation of financial resources
- Establishment of public-private partnerships

## 4 Recovery

- Build resilient ICT infrastructure
- Restore telecommunication infrastructure and services
- Restore public sector operations
- Identify best practices and lessons learned



## 2 Preparedness

- Development and implementation of National Emergency Telecommunication Plans
- Development of Standard Operating Procedures
- Implementation of Early Warning Systems
- Capacity building and training exercises
- Information and knowledge sharing
- Implementation and use of new technologies
- Preparation of back up energy systems
- Use of satellite imagery

## 3 Response

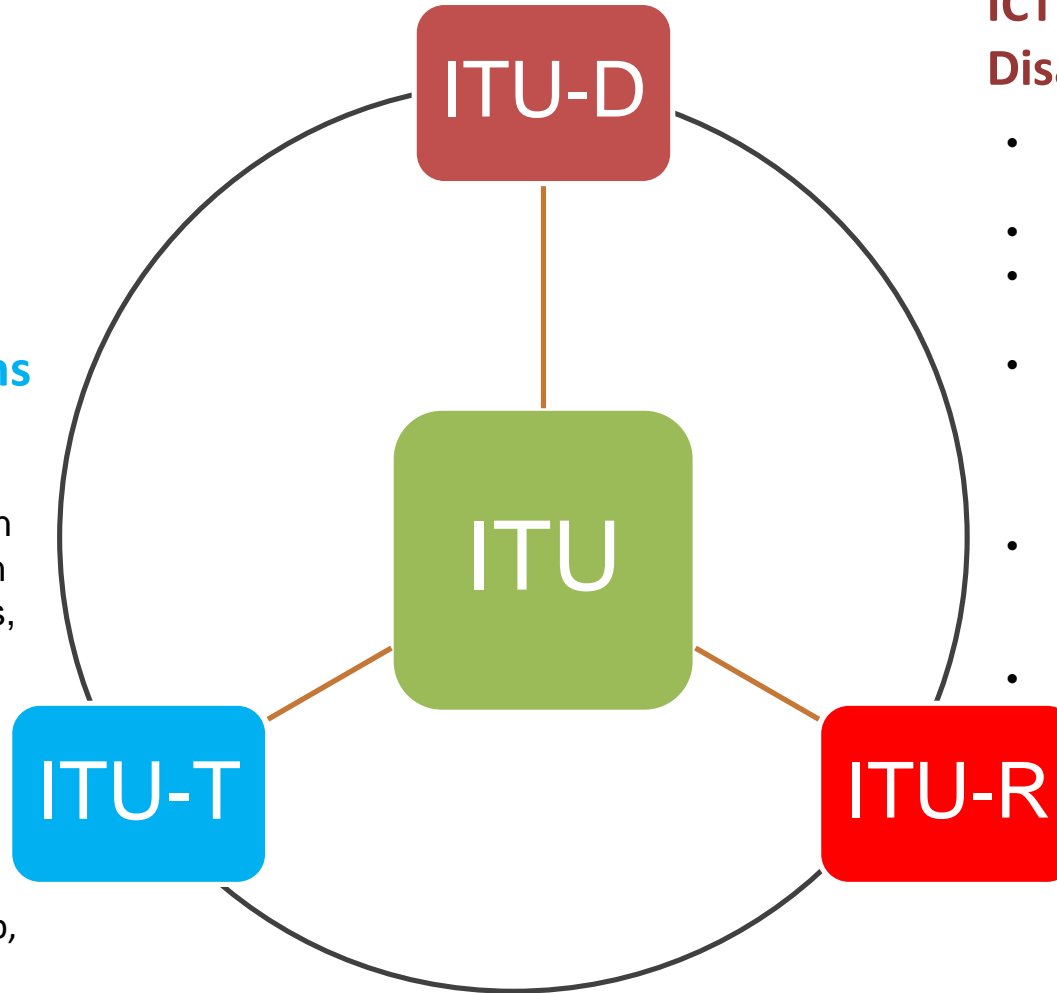
- Establishment of ICT solutions and links for first responders
- Provision of ICT solutions for inter-agency coordination
- Damage and needs assessment
- Provision of telecommunication facilities to affected population
- Importation of equipment



# ITU's role

## Disaster management, network resiliency and recovery recommendations and best practices

- Collects and documents information and concepts helpful to the work on disaster relief systems/ applications, network resilience and recovery from a telecommunication network perspective
- Critical information infrastructure protection
- Standards development and adoption such as common alerting protocol (cap, x.1303)
- Energy efficient devices standards, etc.
- Smart Cities, villages, etc.



## ICT Needs of Developing Countries for Disaster Management

- Captures the unique needs of developing countries
- Promulgates and promotes DRR solutions
- **Implements projects on disaster warning and alerting systems**
- Development and review of policies and regulations on emergency telecommunications and climate change adaptation
- Promotes international cooperation and implementation of standards – Tampere Convention, Common Alerting Protocol (CAP)
- Provides direct assistance during emergencies on telecommunications

## Radiocommunications in DRR

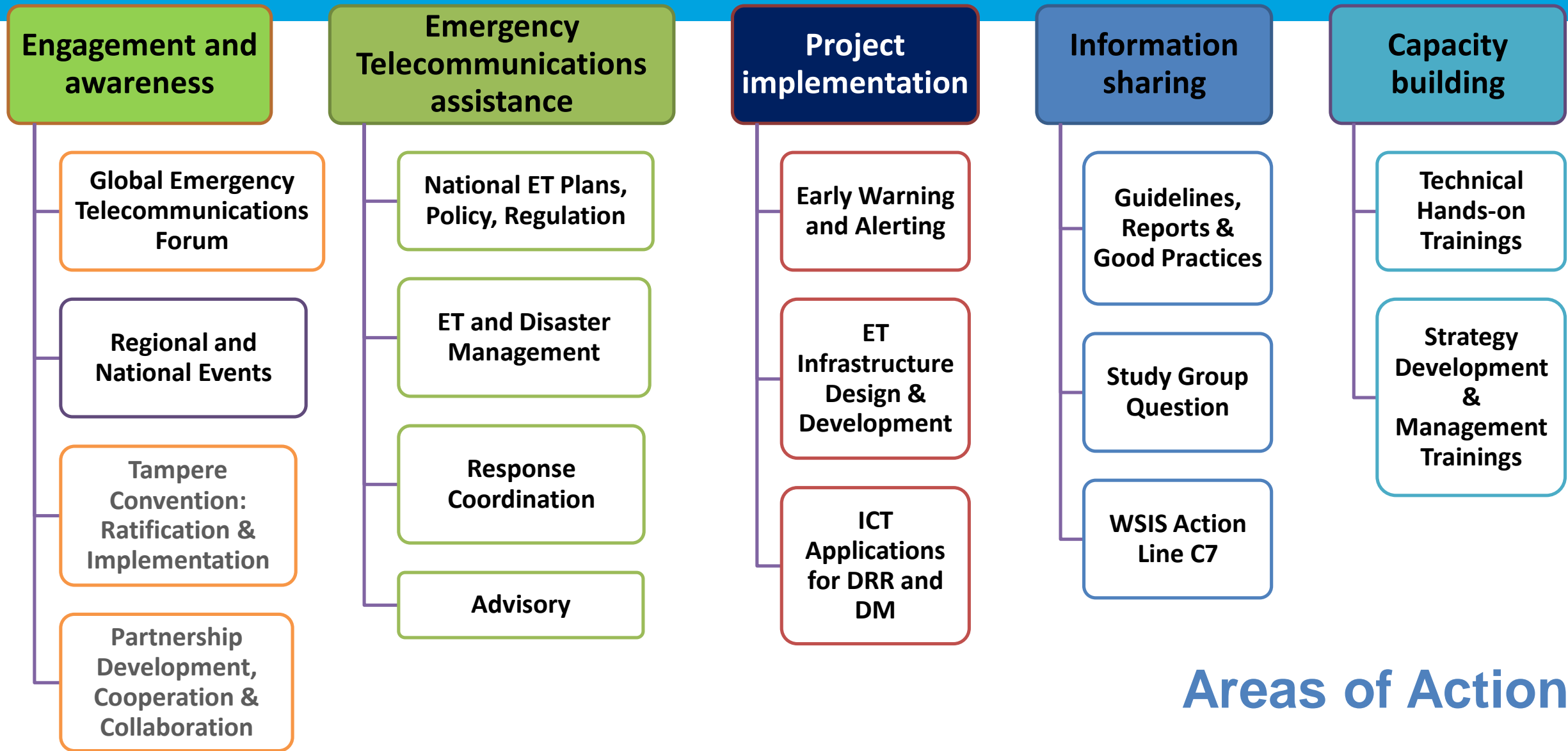
- Satellite services regulation – meteo services, earth observation, etc.
- Develop recommendations and reports on radiocommunications for disaster management
- Emergency frequency allocation best practices

# ITU's Work in Emergency telecommunications

## EWS in Zambia

- **Resolution 136** (Rev. Dubai, 2018) of the Plenipotenciary Conference (PP-18), on the use of telecommunications/information and communication technologies for humanitarian assistance and for monitoring and management in emergency and disaster situations, including health-related emergencies, **for early warning**, prevention, mitigation and relief.
- **Resolution 34** (Rev. Buenos Aires, 2017) of the World Telecommunication Development Conference (WTDC-17), on the role of telecommunications/ICT in disaster preparedness, **early warning**, rescue, mitigation relief and response.
- **WTDC-17** also includes several regional initiatives focusing on emergency telecommunications:
  - **Asia-Pacific (ASP5):** *on Contributing to a secure and resilient environment;*
  - **Arab States (ARB1):** *on Environment, Climate Change and emergency telecommunications;*
  - **Americas (AMS1):** *on Disaster risk reduction and management communications;*
- **Resolution 646** (Rev. WRC-15) of the World Radiocommunication Conference (WRC), on public protection and disaster relief
- **Resolution 647** (Rev. WRC-15) of the World Radiocommunication Conference, on Radiocommunication aspects, including spectrum management guidelines, **for early warning**, disaster prediction, detection, mitigation and relief operations relating to emergencies and disasters.





## Areas of Action

# Preparedness



## Emergency Telecommunication



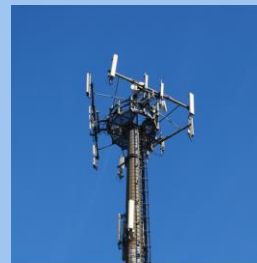
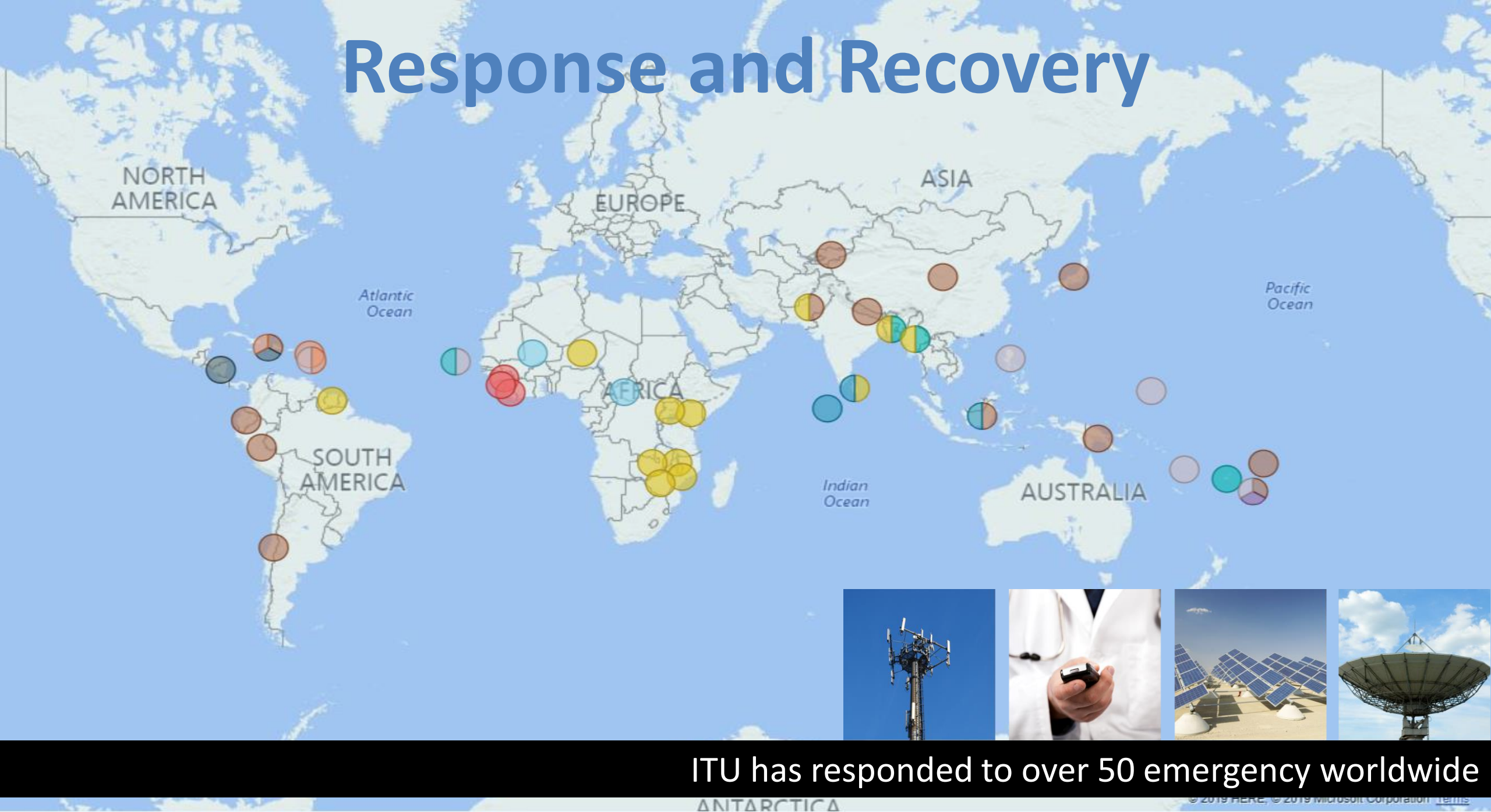


# Preparedness



ITU organized and was part of over 100 emergency preparedness workshops and actions

# Response and Recovery



ITU has responded to over 50 emergency worldwide



# ETC Cluster Partners



Action contre la Faim (ACF)



Ericsson Response



Food & Agriculture Organization (FAO)



Global VSAT Forum



Government of Luxembourg, Ministry for Development Cooperation & Humanitarian Affairs



International Committee of the Red Cross (ICRC)



International Federation of Red Cross and Red Crescent Societies (IFRC)



International Organization for Migration (IOM)



International Telecommunications Union (ITU)



NetHope



Oxfam



Plan International



UN Children's Fund (UNICEF)



UN Department of Field Support (UNDFS)



UN Department of Safety & Security (UNDSS)



UN Office for the Coordination of Humanitarian Affairs (OCHA)



Save the Children



Swedish Civil Contingencies Agency (MSB)



Télécoms Sans Frontières (TSF)



U.S. Department of State



United Nation's Refugee Agency (UNHCR)



United Nations Development Programme (UNDP)



World Food Programme (WFP)



World Health Organization (WHO)

# Crisis Connectivity Charter





# ITU's Key Partners



# Thank you