Building an Enabling Regulatory Environment for ICT4DM

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Natural Disasters

- The number of climate-related (hydro-meteorological) disasters has greatly increased.
- Since 1990, natural disasters have affected around 217 million people every single year.
- The amount of economic damage due to these natural disasters has increased steadily.

ICT4DM

- ICTs play a pivotal role in mitigating against increasingly prevalent natural disasters triggered by anthropogenic climate change and humanitarian emergencies.
- ICT communications are vital for early warning systems, the immediate aftermath and the recovery process of disasters.
- Agencies responsible for international disaster and humanitarian response must incorporate telecommunications/ICTs as a critical infrastructure for international disaster preparedness, response and recovery planning.
- There is a wide range of available and emergent technologies that can be utilized for ICT4DM
  - Fiber and submarine cable access
  - Terrestrial microwave system
  - Satellite

So, why satellites?

Satellite technology offers many advantages when it comes to emergency communications

Before, during and after a disaster occurs

During times of disaster, when other communications systems are either destroyed or overloaded, satellite communications equipment can be used immediately to support relief efforts.

Natural Disasters and Satellite Technology

Ground infrastructure is often damaged and rendered useless during natural disasters and conflicts.

- Satellites have almost complete immunity from catastrophic events such as hurricanes, floods, and earthquakes and are therefore deployed during most if not all disasters to enable immediate vital communications for relief efforts, which otherwise would have taken days or weeks to set up.

- Satellite communications offer a range of solutions to meet the immediate needs of emergency response, help civil protection as well as the on-going needs of humanitarian aid.

Natural Disasters and Satellite Technology (Continued)

Before

- Satellite technology should be included in early planning for any disaster response, so as to facilitate efficient damage assessments and communicate to emergency responders.
  - Satellites monitor the Earth for extreme weather and disasters.

During and after

- After a catastrophe, permanent infrastructure could be affected in such a way that connectivity is destroyed, making it impossible for government agencies and humanitarian organizations to deploy their relief efforts – **thus satellite technology is a much needed resource in such circumstances.**

- Satellites are physically invulnerable to disaster and the durability of satellites makes them the most reliable option in the event of a natural or humanitarian disaster.

- Satellite infrastructure is also used for public warning, disaster mitigation and relief efforts.

- They can also transmit phone calls and Internet access to victims and rescuers on the ground.

Establishing ICT4DM:
Steps to Establish Communications in Disaster Mitigation

- **STEP 1:** Risk identification
  - In order to reduce the impact of a future disaster, it is important to identify and assess the risks a country is likely to face.
- **STEP 2:** Reducing underlying risks
  - This can include reinforcing critical facilities and developing land use zones.
- **STEP 3:** Preparedness and early warning systems
  - It is critical that communities can be able to quickly and efficient respond in the event of a disaster.
- **STEP 4:** Knowledge management and education
  - The promotion of risk awareness in vulnerable communities is an integral step in mitigating disaster risk and implementing risk reduction techniques.

An enabling regulatory environment is key!

Regulatory Challenges

- Delays in licensing can render access to critical technologies useless in times of disaster
- Excessive taxation or other financial penalties
- Scarce Resources

Creating an Enabling Environment

- Incorporate disaster risk reduction and disaster communications considerations into ICT development plans
- Adopt simple, transparent and non-discriminatory authorization procedures and licensing conditions for ICT services
- Facilitate testing and type approval requirements by recognizing foreign type approvals
- Develop procedures to efficiently address interference considerations and coordination requirements when allocating spectrum
- Ease requirements for land rights or restrictions on use of specific ICT resources to maximize the number and kind of networks available
- Facilitate the trans-border flow of end-user equipment
- Collaborate with stakeholders in the development of policies and regulations

Overview of best practices

- Recognizing Telecommunications as integral to disaster management
- Enabling regulatory framework
- Multi-stakeholder response
- National disaster plan
- Preparedness/pre-deployment
- Satellite connectivity
- Enabling public communication
- Public warning and alerts
- Regional emergency communication plans and systems
- Interoperability

Establishing ICT4DM : Key Stakeholders

Initiatives for ICT4DM involve many different stakeholders from several sectors and levels. Each stakeholder has a specific role in defining policies and regulation and also in advocacy

- International organizations
- Policy and decision makers at the national government level
- Public representatives and parliamentarians
- Civil society organizations and NGOs
- End-user beneficiaries
- National and global private sector
- Academics, researchers, and civil servants

About ITSO

- The International Telecommunications Satellite Organization (ITSO) is an intergovernmental organization based in Washington, D.C., with 149 member States.

ITSO'S MISSION

- Ensure, through a Public Service Agreement (PSA), that Intelsat provides, on a commercial basis, affordable international public telecommunication services, and guarantees the performance of ITSO's Core Principles:
  - Maintain global connectivity and coverage;
  - Serve its lifeline connectivity customers; and
  - Provide non-discriminatory access to the Intelsat system.

- Protect the Parties' Common Heritage, i.e. orbital slots existing at time of restructuring

ITSO's activities related to ICT4DM

- Supervisory role over Intelsat
  - Intelsat is one of the world's leading providers of satellite telecommunications services, with a footprint covering over 200 countries
  - ITSO/Intelsat/ITU agreement to strengthen emergency telecommunication resources
- Active participation in relevant initiatives
  - Smart Sustainable Development Model Initiative
- Partnerships for ICT4DM Projects
  - Pacific Island Project
  - Similar project for Caribbean under consideration
- ITSO's Capacity Building Initiative
  - Satellite communications courses for operators and regulators

SMART SUSTAINABLE DEVELOPMENT MODEL

INTELSAT. Envision. Connect. Transform.

ITSO

Recommendations

- Decrease compliance requirements and custom tariffs regarding the import and export of equipment used for disaster response is a must
- Ensure efficient spectrum allocation through promoting transparency by adopting non-discriminatory spectrum management policies is highly recommended.
- Encourage the ratification and use of the Tampere Convention
- Harmonize international regulatory standards and practices to ensure the harmonization of spectrum for broadband wireless access as well as the interoperability between network terminals used by vendors.

Recommendations (Continued…)

- Regular policy revision
- Encourage stakeholder commitment to disaster mitigation efforts
- Promote the importance of the lessons learned approach, sharing the experiences and solutions of countries who have faced natural disasters or an emergency situation
- Promote education and knowledge
- Empower individuals to be advocating agents

Thank you

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