

# Buenos Aires Action Plan

## STUDY GROUP 2

### QUESTION 5/2

#### **Utilizing telecommunications/information and communication technologies for disaster risk reduction and management**

#### **1 Statement of the situation or problem**

##### **1.1 Context**

- a) Recent natural and man-made disasters, which remain of critical concern to Member States.
- b) The importance of telecommunications/information and communication technologies (ICTs) to support disaster mitigation, relief and response is well established.
- c) The longstanding role of ITU in supporting the use of telecommunications/ICTs for the purpose of disaster preparedness, mitigation, response and recovery
- d) The value of collaborating and sharing experiences, both regionally and globally, in order to support national and regional preparedness
- e) The excellent results of the work under ITU Telecommunication Development Sector (ITU-D) Questions 22-1/2 and 5/2 in past study periods, including the compilation of numerous case studies, the development of an online toolkit and Handbook on Emergency Telecommunications, and development the report on ICT experiences and best practices in disaster mitigation and relief and the checklist for emergency telecommunications.
- f) Over the last study period 2014–2017, ITU-D study Question 5/2 examined multiple aspects of disaster communications planning, management and response, including country case studies in disaster early warning, prediction and response, with examples of new and evolving technologies, applications, checklists and tools to support disaster management, resilience and redundancy, and disaster communications plans and frameworks that consider and prepare for all potential hazards.
- g) The evolution of new technologies for disaster early warning and prediction of disasters.

##### **1.2 Background texts**

- a) The WSIS action lines and United Nations Sustainable Development Goals (SDGs) further recognize the need to reduce the risk of disasters and build sustainable and resilient infrastructure.
- b) Resolution 34 (Rev. Buenos Aires, 2017) of the World Telecommunication Development Conference (WTDC), on the role of telecommunications/ICT in disaster preparedness, early warning, rescue, mitigation, relief and response, as well as to support humanitarian assistance.

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- c) Resolution 646 (Rev. WRC-15) of the World Radiocommunication Conference (WRC), on the radiocommunication aspects of public protection and disaster relief.
- d) Resolution 136 (Rev. Busan, 2014) of the Plenipotentiary Conference, on the use of telecommunications/ICTs for monitoring and management in emergency and disaster situations, and for early warning, prevention, mitigation and relief.
- e) WRC Resolution 647 (Rev. WRC-15), on spectrum-management guidelines for emergency and disaster relief radiocommunications.
- f) The United Nations International Strategy for Disaster Reduction (UNISDR) Sendai Framework for Disaster Risk Reduction 2015-2030.

## 1.3 Further provisions

- a) Recommendation ITU-D 13.1, which recommends that administrations include the amateur services in their national disaster plans, reduce barriers to effective use of the amateur services for disaster communications, and develop memoranda of understanding (MoU) with amateur and disaster-relief organizations.
- b) Recommendation ITU-R M.1637, which offers guidance to facilitate the global circulation of radiocommunication equipment in emergency and disaster-relief situations.
- c) Report ITU-R M.2033, which contains information on some bands or parts thereof which have been designated for disaster-relief operations.
- d) Recommendations ITU-T E.106 (International Emergency Preference Scheme for Disaster Relief Operations) and ITU-T E.107 (Emergency Telecommunications Service (ETS) and Interconnect Framework for National Implementations of ETS Numbering), which relate to use of public telecommunications by national authorities in emergency and disaster-relief operations.
- e) Recommendation ITU-T L.392 (Disaster management for improving network resilience and recovery with movable and deployable information and communication technology (ICT) resource units), which contains an approach to improve network resilience against disasters.
- f) Recommendation ITU-T E.108 (Requirement for disaster relief mobile message service), which specifies requirements for a disaster relief mobile message service to save a victim's life.

## 1.4 Aspects to be considered

- a) The complementary work being undertaken by the Telecommunication Development Bureau (BDT) programme(s) and regional offices to provide assistance on disaster communications/emergency telecommunications to ITU Member States.
- b) The activities of the Intersectoral Emergency Telecommunications Team, an internal ITU secretariat mechanism to ensure coordination across all the secretariat's activities for emergency telecommunications.
- c) The role of ITU Sector Members and relevant international, regional and non-governmental organizations in providing telecommunication/ICT equipment and

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services, expertise and capacity-building assistance to support disaster-relief and recovery activities throughout the world, particularly through the ITU Framework for International Cooperation in Emergencies (ICE).

- d) The ongoing work of the United Nations Emergency Telecommunications Cluster and the Working Group on Emergency Telecommunications (WGET), in which ITU participates, to facilitate the use of telecommunications/ICTs in the service of humanitarian assistance.
- e) The ongoing work of the International Maritime Organization (IMO), the International Civil Aviation Organization (ICAO) and ITU related to search and rescue and distress alerting that may be applicable to disaster communications management frameworks.
- f) Publications, workshops and forums facilitated by ITU's work on the utilization of telecommunications/ICTs for disaster preparedness, mitigation, response and recovery, including emergency communications, provide information to enhance the preparedness, mitigation and relief capacities of ITU Member States.
- g) Developing countries<sup>1</sup> continue to require support in developing disaster communications management expertise.
- h) ITU-D Objective 2, in coordination with the regional offices and ITU-D Study Group 2, can continue to assist and guide developing countries in building comprehensive disaster-management plans, setting up early-warning centres, addressing climate-change adaptation, and promoting regional and international cooperation at the time of disasters through coordinated efforts.
- i) Ongoing or planned telecommunication/ICT development projects can often be leveraged to address emergency communications requirements and to support relief and recovery operations.
- j) There is a need for additional information on the effective use of telecommunications/ICTs for disaster preparedness, mitigation, response and recovery, including consideration of how existing systems and infrastructures can be integrated into disaster-management frameworks, how to facilitate rapid deployment of systems and services following a disaster, and how to help ensure redundancies and resiliency of networks and infrastructures from the effects of natural disasters.

## 2 Question or issue for study

2.1 Continue examination of terrestrial, space-based and integrated telecommunications/ICTs to assist affected countries in utilizing relevant applications for disaster prediction, detection, monitoring, early warning, response and relief, including consideration of best practices/guidelines for implementation, and in ensuring a favourable regulatory environment to enable rapid deployment and implementation.

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<sup>1</sup> These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

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- 2.2 Continue gathering national experiences and case studies in disaster preparedness, mitigation and response, and in the development of national disaster communications plans, and examine common themes between them.
- 2.3 Examine the role that administrations and Sector Members and other expert organizations and stakeholders share in collaboratively addressing disaster management and the effective use of telecommunications/ICTs.
- 2.4 Examine the implementation of early-warning systems, and related disaster risk reduction and response actions, including safety confirmations in the event of a disaster.
- 2.5 Examine emergency communications planning, implementation and analysis of disaster communications exercises and drills.
- 2.6 Examine the enabling environment for more resilient communications networks and for the deployment of emergency communications systems, which includes, but is not limited to, emergency response, preparedness and recovery.
- 2.7 Develop best practices for the elaboration of national and regional disaster-management plans or frameworks for the use of telecommunications/ICTs in natural and man-made disaster and/or emergency situations, working in coordination with the relevant BDT programmes, regional offices and other partners.
- 2.8 Continue updating the online toolkit with relevant information and materials collected during the study period.

## 3 Expected output

The expected output will be a report or reports on the results of the work conducted for each step above, together with one or more Recommendations, as appropriate. Outputs may also include regular updates to the online toolkit, and the development of any additional tools or guidelines to support the implementation of telecommunications/ICTs for use in disaster preparedness, mitigation, response and recovery.

In order to facilitate discussion and to provide more timely outputs for the benefit of Member States, consideration may be given, when developing the work plan, to focusing on certain topics each year of the study period, while maintaining flexibility based on contributions received.

Succinct outputs summarizing case studies and capturing lessons learned, best practices and tools/templates will be prepared and presented to the study Question for approval annually, on an agreed theme. Examples could include, but are not limited to:

- Best practices and country experiences in planning, exercising and deploying early-warning systems for disaster risk reduction, including safety confirmation. The output will consider developed- and developing-country experiences in deploying early-warning systems and offer good practices and implementation guidance on establishing early-warning systems.
- Guidelines for preparing and conducting disaster communications exercises and drills and for assessing and updating plans, policies, and procedures based on lessons learned.

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- Best practices regarding the enabling policy environment for the deployment of emergency communications systems. The discussion will address regulatory and policy barriers that exist for the implementation of resilient emergency communications systems, and identify best practices that enable early warning, continuity of communications and more effective response and recovery.
- Seminars and workshops to share knowledge, information and best practices, featuring subject-matter experts, administrations and Sector Members who are able to share expertise and experiences related to the theme from a national and/or regional/global perspective, and collection of case studies related to the theme.
- A summary of contributions received describing new technologies, systems and applications for emergency communications and considerations to support their implementation. The focus will be on both technology examples and also deployment case studies of new and emerging systems and applications for emergency communications and response.

## 4 Timing

- 4.1 Annual progress reports should be submitted to ITU-D Study Group 2.
- 4.2 Succinct outputs/annual reports summarizing case studies and capturing lessons learned, best practices and tools/templates on the agreed themes discussed.
- 4.3 Draft final reports and any proposed draft Recommendations/guidelines should be submitted to ITU-D Study Group 2 within four years.
- 4.4 The rapporteur group will work in close collaboration with relevant BDT programme(s), regional offices, regional initiatives and relevant ITU-D Questions, and ensure proper liaison with the ITU Radiocommunication (ITU-R) and Telecommunication Standardization (ITU-T) Sectors.
- 4.5 The activities of the rapporteur's group will come to an end within four years.

## 5 Proposers/sponsors

The new text for this revised Question stems from the final report of ITU-D Study Group 2 for 2014-2017.

## 6 Sources of input

Contributions are expected from Member States, Sector Members and Associates, as well as inputs from relevant BDT programme(s) and relevant ITU-R and ITU-T study groups, and any relevant ITU-D Question. International and regional organizations responsible for the utilization of telecommunications/ICTs for disaster management are encouraged to provide contributions related to experiences and best practices. The intensive use of correspondence and online exchange of information is encouraged for additional sources of inputs.

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## 7 Target audience

### a) Target audience

Depending on the nature of the output, middle- to upper-level managers in operators and regulators in developed and developing countries will be the predominant users of the outputs.

Target audience	Developed countries	Developing countries
Telecom policy-makers	Yes	Yes
Telecom regulators	Yes	Yes
Service providers/operators	Yes	Yes
Manufacturers	Yes	Yes

### b) Proposed methods for implementation of the results

The results of the Question are to be distributed through ITU-D reports, or as agreed during the study period in order to address the Question for study.

## 8 Proposed methods of handling the Question

The Question will be addressed within a study group over a four-year study period (with submission of interim results), and will be managed by a rapporteur and vice-rapporteurs. This will enable Member States and Sector Members to contribute their experiences and lessons learned with respect to emergency communications.

## 9 Coordination

The ITU-D study group dealing with this Question will need to coordinate with:

- Relevant ITU-D Question(s)
- Relevant BDT programme(s)
- Regional offices
- Relevant ITU-R and ITU-T study groups
- Working Group on Emergency Telecommunications (WGET)
- Relevant international, regional and scientific organizations with mandates relevant to this Question.

## 10 BDT programme link

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## 11 Other relevant information

As may become apparent within the life of the Question.