**Survey Questionnaire**

**“Model Policy and Regulatory Frameworks on use of Telecom/ICTs in Emergency and Disaster Management”**

1. **Background:**

The magnitude, complexity, frequency and impact of disasters have been increasing and results in severe consequences in unprepared countries.

In order to manage effectively a disaster and emergency, you should have emergency telecommunication continuity, emergency telecommunication business continuity plans, guidelines, framework and technological support.

Coping with a disaster and emergency includes national, regional, and international coordination, increasing the preparedness capacity, rapid response, supporting relief and rescue teams’ essential and vital tasks while uncontrolled situations continue to develop in the affected area. In addition, citizens, inside and outside the country, want to reach their loved ones.

The telecommunication can be a matter of life-and-death during or immediate aftermath of a disaster and emergency. The absolute priority is life-saving or reducing loss-of-life in emergency telecommunications during a disaster and emergency. As a result, the continuity of telecommunication is among the most critical issues in all disaster phases.

Establishment of an enabling policy and regulatory environment is an important component of disaster communications management. The enabling policy environment includes both general telecommunications regulatory and policy frameworks affecting overall deployment and use of ICTs, but also the establishment of frameworks and policies specific to disaster events. General policy considerations include reduction of regulatory barriers to the deployment of ICTs, promotion of robust and resilient ICT infrastructure development, streamlining of licensing procedures, and spectrum management. Disaster communications frameworks and policies help guide activities, roles and responsibilities throughout a disaster event and help ensure continuity of ICT operations following a disaster. Specific ICT policy and regulatory considerations for disaster response frameworks may include development of special, expedited licensing procedures for use during a disaster, addressing possible customs barriers to entry of emergency communications equipment, or considering implementation of the Tampere Convention.

This survey questionnaire is being carried out as part of the implementation of the expected results of the ITU Arab Regional Initiative on Environment, climate change and emergency telecommunications as well as to meet the overall objective of the ITU-D (2018-2021) on Inclusive digital society: Foster the development and use of telecommunications/ICTs and applications to empower people and societies for sustainable development.

1. **Objective**

The objective is to prepare a **Policy and Regulatory Framework** that will guide the ITU Member States, National ICTs Regulators, ITU sector members including Mobile/Satellite Network Operators and ITU Stakeholders to prepare their detailed policy and regulatory framework, plans, establish their business continuity management system complying with the framework and utilize ICTs to help to manage the disaster and emergency.

1. **Expected Outcomes**

The results of the questionnaire will be analysed and utilized to prepare the report “**Model Policy and Regulatory Frameworks on use of Telecom/ICTs in Emergency and Disaster Management**” which will be finalized by end of 2018.

1. **Methodology**

The questionnaire below contains generic and specific questions including simple fact-checks, box-checking, multiple-choice questions, scale assessment and open-ended questions. The survey includes 7 parts following the Contact Details as follows:

Part 1 General Questions

Part 2 Questions Related to Country Emergency Warning

Part 3 Policy and Regulatory Environment

Part 4 Market Environment

Part 5 Structured Approach to Emergency Telecommunication

Part 6 Universal Service Obligations

Part 7 Service Specific Applications

Your responses will be confidential. Any reports of the results from this survey will not identify individuals, nor will any individual responses to the survey be made public. However, the information collected from the survey will provide valuable information that will assist the ITU and each of its members in compiling the report. Please submit the completed responses to the Survey Questionnaire and return via email to **Ms Elysa Jones** (elysajones@yahoo.com) copying **Eng. Mustafa ALMAHDI** ([mustafa-ahmed.al-mahdi@itu.int](mailto:mustafa-ahmed.al-mahdi@itu.int) ) by **17:00 pm, 5th Dec 2018**.

**Contact Details**

1. Please provide the contact details of the official responsible for coordinating the responses and to whom we may direct queries or further correspondence in relation to your responses to this questionnaire.

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| **Mr/Ms/** | **Family Name** | | **First Name** |
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| **Country** |  | | |
| **Name of Administration/Organization** | |  | |
| **Position in the Organization** | |  | |
| **Type of Organization** | | Regulator  Government (department / agency)  Telecommunication Operator (Mobile)  Telecommunication Operator (Fixed)  Telecommunication Operator (Satellite)  Other (please specify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
| **Address** |  | | |
| **Telephone** |  | | |
| **Fax** |  | | |
| **Email** |  | | |

1. How long have you been working at your organization?       years

How long have you been working in the field of telecommunications?       years

How long have you been working in government services/regulation?       years

1. What is your main role?

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Part 1: General Questions

**1.1.** What does “National Emergency Telecommunication Policy and Regulatory Framework” mean to you?

A set of guidelines issued by the authority which should be implemented by the telecommunication operators before, during and after a disaster and emergency for the continuity of telecommunication services like call, messaging, internet and societal security services.

A set of basic plans which the telecommunication operators should align with and prepare their detailed business continuity plans

A set of rules that will guide the telecommunication operators to establish, implement, monitor, audit, and improve their business continuity management system.

A set of information technology examples that are designed to support a disaster and emergency management

A set of recommendations for the emergency telecommunication operators for a disaster and emergency

All of the above

**1.2.** In fixed and mobile telecommunication operator licenses/contracts, is there any statement that operators must comply related with operators’ responsibilities before, during and after a disaster and emergency?

No

Yes (please write those paragraphs in the below table)

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| coordinating the establishment of a National Emergency Telecommunication Continuity Plan (“ensure communication systems are in order”) in your Country? |

1.3. Which organization, authority, ministry or agency in your country, is taking the overall responsibility for Disaster and Emergency Management? Where is it reporting to?

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**1.4.** Which **organization, authority, ministry or agency** in your country, is responsible to coordinating the establishment of a National Emergency Telecommunication Continuity Plan (“ensure communication systems are in order”) in your Country?

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**1.5.** Is there a “National Emergency Telecommunication Continuity Plan” in your Country?

No

Yes (please write the web link of the plan in the below table)

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1.6. Is there any law, act or regulatory statements related with telecommunication operators’ responsibilities before, during and after a disaster and emergency?

No

Yes (please write those paragraphs in the below table)

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**1.7.** Please state below, at most **three** changes which will make **positive impact** on the resilience capacity of the Country’s telecommunication sector and services, for a disaster and emergency.

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**1.8.** Please state below at most **three** issues which made **slow or no progress** related with the resilience of the Country’s telecommunication sector and services in a disaster and emergency

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**1.9.** In your Country, is there an Amateur Radio Society which is a member of International Amateur Radio Union? If yes, please specify its name?

No

Yes. Name of the society:

**1.10.** In your view, select one or more of the below items that should be needed to establish emergency telecommunication during a disaster and emergency area.

Mobile network operators

Satellite operators

Amateur radio operators

Energy supplying organizations

Organizations that provide transportation

Set of plans to recover the telecommunication service disruption

**1.11.** Please provide any comments on the telecommunication continuity and resiliency during a disaster and emergency that are **unique to your country** (e.g. risks, challenges or advantages, disadvantages compared to other neighboring countries).

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**1.12.** Please indicate **three** specific issues in the order of priority which might require further **technical assistance of ITU** in establishing national emergency telecommunication policy and regulatory framework in coming years.

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**1.13.** According to your Country’s point of view, please select the risks that is applicable to your country and rank them from the worst impact (1) to the least impact (13) on the continuity of key emergency telecommunication services; Call, Messaging, Internet and Societal Security Services?

\_\_      Earthquake

\_\_      Flash Flood

\_\_      Tsunami

\_\_      Drought

\_\_      Heavy Rain

\_\_      Extreme temperature decrease/increase

\_\_      Cyber security breach in telecommunication operators

\_\_      Extreme weather condition

\_\_      Technological failure during a software upgrade

\_\_      Configuration mistake on the backbone routers

\_\_      Pandemic illness which effects operators’ employees

\_\_      Cyclone

\_\_      War

\_\_      Mass movement of people

\_\_      Nuclear fallout

\_\_      Other, please specify -------------------------------------------------------

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**1.14.** According to your point of view, please rank the below 4 locations from the most prioritized (1) to the least prioritized (4) on the needs for telecommunication during a disaster and emergency

\_\_      Emergency Operation Center (EOC)

\_\_      Hospitals with surgery services

\_\_      Gathering/Tent Locations

\_\_      Prime Minister, Ministries and Authorities

\_\_      Relief and rescue teams working in the affected area

**1.15.** According to your point of view, please rank the usage of below telecommunication services that you will chose 1st, 2nd, 3rd and 4th during a disaster and emergency for telecommunication*?*

\_\_      Voice (Call)

\_\_      Messaging (SMS)

\_\_      Internet

\_\_      Satellite

**1.16.** What is the usage of social media services like Facebook, Twitter, WhatsApp in your Country?

\_\_      None

\_\_      Low

\_\_      Medium

\_\_      High

\_\_      Very High

**1.17.** Which social media service usage is higher in your Country? If the usage is low, what are the reasons for that?

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**1.18.** What is the percentage of smart phones in the Country?

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**1.19.** Is Mobile Finance (Mobile Money) services available in your Country? If yes, could you please share usage statistics?

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**1.20.** Is there any policy and regulatory requirement on location-based services in your Country?

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**Part 2: Questions Related to Country Emergency Warning**

**2.1** Do you have an emergency warning plan at your country level?

No

Yes (please write the web link of the plan in the below table)

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If yes, list below the threats or hazards for which warning plans are available

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**2.2** Do you have early warning centers?

Yes  No

**2.3** Do you think that the threats mentioned above are considered common factors among the Arab countries?

Yes  No

If yes, is it possible to share early warning information with Arab countries?

Yes  No

**2.4** Do you think that the plans for confronting wars, refugees and epidemics are priorities that should be shared among the Arab countries?

Yes  No

**2.5** Do you have a plan or regulation to use emergency communications?

Yes  No

If yes, was it formulated by the regulatory body or with the participation of companies?

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If yes, what are the main axes of it?

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**2.6** Has the plan entered into the force of implantation whether it has been tested by a real or inventive emergency?

Yes  No

If yes, what are the lessons learned

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**2.7** Did the lessons learned contribute to a re-review of the plan's Items?

Yes  No

Was the plan evaluated by a consultant?

Yes  No

**2.8** What infrastructure and appropriate technologies do you think are important for emergency situations?

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**2.9** Do you think that infrastructure resources can be shared among Arab countries?

Yes  No

**2.10** Do you think that early warning centers in Arab countries can be linked to each other?

Yes  No

**2.11** Do you think that a regional center for early warning could be established with the participation of all the Arab countries?

**2.12** Is your country a signatory to the Tampere Convention, ([Click here](https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXV-4&chapter=25&clang=_en))?

Yes  No

If yes, are you a country that has ratified the Tampere Agreement?

Yes  No

**2.13** Do you think that drafting an agreement similar to the Tampere Agreement for Arab countries only is one of the important issues that may contribute to the rapid access of aid to Arab countries in case of emergency?

Yes  No

**2.14** Are you familiar with the Common Alerting Protocol (CAP) also known as ITU Recommendation X.1303 ([Click here](https://www.itu.int/rec/T-REC-X.1303))?

     Yes                              No

**2.15**    If yes, how is CAP used; for example:  operational, prototype, training class, minimum knowledge but no training?

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**Part 3: Policy and Regulatory Environment**

**3.1** In your Country, is there an agreed definition of “emergency telecommunication” from the perspective of policy, law and/or regulation?

Yes  No

If yes, give reference to the policy, law and/or regulation

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**3.2.** In your Country, is there an agreed definition of “emergency telecommunication services” from the perspective of policy, law and/or regulation?

Yes  No

If yes, please explain and give reference to the policy, law and/or regulation

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**3.3** In your Country, what are the telephone numbers of the emergency numbers for Ambulance, Police, Fire etc.?

* Ambulance:
* Police:
* Fire:
* Others:

3.4 In your Country, when an emergency number is called, does approximate location of the caller sent to emergency operator?

No

Yes. If yes, is it regulatory requirement? When was the requirement published?

**3.5**  In your Country, is there any regulation which specifies a duration (*e.g.: recover in X hours*) over the operators for the continuity of telecommunication services?

Yes  No

If yes, give reference to the policy, law and/or regulation?

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**3.6** In your Country, is there any work or regulation that prioritized the locations according to telecommunication needs during a disaster and emergency?

Yes  No

If yes, give reference to and write down the prioritized locations types?

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* 1. In your Country, is there any licensing procedures for use of ICTs equipment’s during emergency and disaster management

Yes  No

If yes, please specify?

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* 1. In your Country, is there any spectrum management policy and regulation related issues for use of ICTs equipment’s during emergency and disaster management

Yes  No

If yes, please specify?

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**Part 4: Market Environment**

**4.1** Please provide the **market share** (by the number of subscribers) of the fixed/mobile telecommunication operators in your Country?

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| Fixed or Mobile | Operator Name | Licensed Technologies | 2015 Total Revenue | Latest Total Subscribers |
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**4.2** In your Country, is there any financial regulatory statement mentioning that telecommunication operators should reserve some percentage (%) of their revenue for Research & Development (R&D)?

No

Yes, the percentage or amount is:

**4.3** In your Country, is there any financial regulatory statement mentioning that telecommunication operators should reserve some percentage (%) of their revenue for Emergency Telecommunication during a disaster and emergency?

No

Yes, the percentage or amount is:

**4.4** Please provide any examples or explanations on your Country’s effort to enhance resilience of telecommunication systems and to provide continuity of telecommunication services?

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**Part 5: Structured Approach to Emergency Telecommunication**

**5.1** Do telecommunication operators have Business Continuity Management (BCM) teams and Business Continuity Management System (BCMS) inside their organizations? Write below the ones who has and details?

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| Operator Name | Have BCM Team?  (Yes/No) | Have BCMS established? | How many 100% dedicated employee(s) inside the BCM team | In which department does BCM team reporting to? | In which function (at Chief level) does BCM team exist? |
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**5.2** Which certifications does telecom operators have and willing to have?

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| Operator Name | Have Certificates of | Willing to have these certificates in 2 years: |
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**5.3** What are the **main barriers** for regulating the operators to establish emergency telecommunication (business) continuity management system in their organizations? (Select the ***most significant ones***)

Geography

Funding

Lack of knowledge/experience

Lack of interest among the government organizations

Lack of interest of the private sector

Lack of high-level management (CEO, CTO…) support

Others (Please specify):

**Part 6: Universal Service Obligations**

**6.1** What is the current status of the Universal Service Obligation (USO) in your country?

We do not have one

Under review, in preparation

Established, in progress

**6.2** Does your country have a specific Universal Service Obligation Fund (USOF)?

Yes  No

**6.2a** If yes, how is the USOF collected? In other words, what are the main funding sources? Is there any web reference?

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**6.2.b.** If exists, please indicate the three examples of USOF usage for the emergency telecommunication preparedness.

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**Part 7: Sector-Specific Applications**

**7.1.** Is Cell Broadcast (CB) being used in your Country? Do operators have any regulation on Cell Broadcast? If yes for what purposes? Please explain?

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**7.2.** Do telecommunication operators being used for disaster and emergency Information Dissemination purposes, in your Country? Please give us **some examples**?

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**7.3.** In your country, in the past; were telecommunication operators unable to provide call, SMS, Internet or Societal Security services due to human, nature or technological reasons?

Never

Yes, please write the examples

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| Duration of Disruption | Service Disruption  (Call, SMS, Internet) | Give some details please? | Was it also mentioned on the media/news? If yes, provide link |
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**7.4** Please provide us mobile telecommunication operators’ technical capabilities, in the below table?

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| Operator Name | How many MSCs are there?  In which cities?  Is “MSC in Pool” implemented? | How many SMSCs are there?  In which cities? Transaction per second capacity? | Is there a Disaster Recovery Center?  In which city |
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| Operator Name | Average number of SMS sent (MO) per month? | Average number of SMS received (MT) per month? | Maximum number of SMS sent and received for the last 1 years? |
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| Operator Name | Average number of Calls successfully established per month? | What is the average call drop ratio on 2017-2018? | What is the average call block ratio on 2017-2018? |
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| Operator Name | What is the monthly average total Internet download (GB) traffic? | What is the monthly average total Internet upload (GB) traffic? |
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| Operator Name | How many satellite based Cell-on-Wheels (Mobile Base Stations) are there? | How many total Cell-on-Wheels (Mobile Base Stations) are there? | Is there other mobile base station solutions like Carriable/Portable Base Station? |
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| Operator Name | Total number of sites? | How many base stations are on ground based towers?  What is the average battery life time stored for them? | Total number of base stations?  What is the average battery life time stored for base stations which are not on ground based towers? |
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| Operator Name | How many base stations are there for 2G/3G? | How many base stations are there for 3G/4G? | How many base stations are there for other technologies? | How many sites are there?  What percentage of site are shared locations? |
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| Operator Name | How many distinct 2G/3G base stations were became down, on 2018? | How many distinct 2G/3G base stations were became down between 2016 -2018 (2 year period) |
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| Operator Name | How many distinct 3G/4G base stations were became down, on 2018? | How many distinct 3G/4G base stations were became down between 2016 -2018 (2 year period) |
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| Operator Name | Write the name of your business continuity plans?  Write the name of your disaster recovery plans? | When was the last time the plans tested?  When was the last time the plans exercised? |
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| Operator Name | How many Satellite Phones are there? | Which titles has satellite phones? |
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| Operator Name | How many amateur radio (ham) operators in your organization? | In which departments? |
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| Operator Name | Total number of emergency number calls on 2018 for Ambulance from mobile phones? | Total number of emergency number calls on 2018 for Police from mobile phones? | Total number of emergency number calls on 2018 for Fire from mobile phones? |
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**7.5** Please provide us mobile telecommunication operators’ fixed network dependencies, in the below table?

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| Mobile Operator Name | Which Fixed Operators do they depend on? | What percentage of traffic is carried on this fixed operator? | Is there any alternative fixed operator to this fixed operator? If yes give the name of the fixed operator? | Backbone Topology?  Max. Capacity in the Backbone? |
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