



Disaster Management Regulations for the Electronic Communications Sector in The Bahamas

Public Consultation Document (Second Round) **ECS 12/2020**

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1. INTRODUCTION

On 6 April 2020, URCA published a consultation document under the caption Disaster Management Regulations for the Electronic Communications Sector in The Bahamas, which is referred to as ECS 03/2020 (the “First Consultation on Disaster Management Regulations”). The full text of ECS 03/2020 is available on URCA’s website. The purpose of the First Consultation on Disaster Management Regulations was to propose regulations for disaster management in the Electronic Communications Sector (ECS) in The Bahamas.

This document may be cited as the Second Consultation Document on Disaster Management Regulations for the Electronic Communications Sector in The Bahamas (ECS 12/2020) (the “Second Consultation on Disaster Management Regulations”).

1.1 Background

In the First Consultation on Disaster Management Regulations, the Utilities Regulation and Competition Authority ("URCA") identified Critical Electronic Communications Infrastructure (CECI) in the ECS in The Bahamas and proposed regulations designed to improve the resilience and restorative ability of the CECI and improve the probability that the CECI will be available before, during, and after a disaster emergency.^[1] URCA received substantive comments on its proposals. URCA has reviewed the comments, took into consideration the concerns and recommendations of Respondents, and amended the Proposed Disaster Management Regulations. Now, URCA issues this Second Consultation Document on Disaster Management Regulations for further consideration of the Respondents and other interested parties.

1.2 Objectives

The purpose of this Second Consultation on Disaster Management Regulations is to:

- Address the responses to the Proposed Regulation set out in the First Consultation on Disaster Management Regulations; and
- Build consensus around the Revised Proposed Regulations set out in Annex 2 of this Second Consultation on Disaster Management Regulations, which now takes into consideration the recommendations of the Respondents.

In this document, URCA provides the results of the First Consultation on Disaster Management Regulations and presents revisions to the Proposed Regulations consequential to the responses submitted by Respondents thereto. The lack of response to a comment or any issue raised by a

respondent does not signify URCA's agreement in whole or in part with the comment, nor should it be taken to mean that URCA has not considered the comment or that URCA considered the comment to be unimportant or without merit. In furtherance of section 11 of the Comms Act, URCA now solicits additional public and industry comments on the matters and issues set out in this Second Consultation Document.

1.3 How to Respond to this Consultation Document

Respondents should submit written responses to this document to URCA by 5:00 p.m. on 30 September 2020. Persons may send their written responses or comments to URCA's Chief Executive Officer, either:

- by hand to URCA's office at Frederick House, Frederick Street, Nassau, or
- by mail to PO Box N-4860, Nassau, Bahamas,
- by fax to (242) 393-0153, or
- by email to info@urcabahamas.bs.

URCA reserves the right to make all responses available to the public by posting responses on its website at www.urcabahamas.bs. If a response is marked confidential, reasons should be given to facilitate URCA evaluating the request for confidentiality. URCA may publish or refrain from publishing any document or submission at its sole discretion. URCA will review the responses received on or before 30 September 2020 and issue a Statement of Results and Final Decision of the Consultation simultaneously with the Regulations within thirty (30) calendar days after the close of this public consultation period.

1.4 Structure of the Remainder of This Document

The rest of this Consultation Document is structured as follows:

- In Section 2, URCA identifies the regulatory framework for this consultation process.
- In Section 3, URCA reviews the issues raised in the first round of the consultation.
- In Section 4, URCA presents the revised Draft Disaster Management Regulations.
- In Section 5, URCA informs the public of the next steps in the consultation process.

2. REGULATORY FRAMEWORK

URCA outlined the legal framework for issuing the Proposed Regulations in Sections 2 of the First Consultation on Disaster Management Regulations on Disaster management. This Second Consultation Document on Disaster Management relies on that framework.

3. REVIEW OF THE FIRST ROUND OF THE CONSULTATION

In the First Consultation on Disaster Management Regulations, URCA provided the background for the proposed Regulations and asked corresponding consultation questions. URCA received responses from three Respondents, including:

1. The Bahamas Telecommunication Company (BTC) on 19 May 2020;
2. Cable Bahamas Limited and Be Aliv Limited (CBL/ALIV) on 19 May 2020; and
3. 5G America on 19 May 2020.

URCA thanks the Respondents for participating in the public consultation. In this section, URCA will:

- Explain the relationship of each consultation question to the Proposed Regulations;
- Summarise the responses to each consultation question;
- Analyze the responses to the consultation questions;
- Revise the regulations proposed by URCA in the First Consultation on Disaster Management Regulations; and
- Pose a follow-up consultation question.

3.1. Review of Consultation Question 1

In Section 3.1.1 of the First Consultation on Disaster Management Regulations, URCA recognised that the International Telecommunications Union (ITU) published the Tampere Convention on Emergency Electronic Communications (Tampere Convention) on 7 January 2005.¹ The Tampere

¹ The countries that signed the Tampere Convention include Argentina, Barbados, Benin, Brazil, Bulgaria, Burundi, Canada, Chad, Chile, Congo, Costa Rica, Cyprus, Czech Republic, Denmark, Dominica, El Salvador, Estonia, Finland, Gabon, Germany, Ghana, Guinea, Haiti, Honduras, Hungary, Iceland, India, Italy, Kenya, Kuwait, Lebanon, Lichtenstein, Lithuania, Madagascar, Mali, Malta, Marshall Islands, Mauritania, Mongolia, Morocco, Nepal, Netherlands, Nicaragua, Niger, Oman, Panama, Peru, Poland, Portugal, Romania, Russian Federation, Saint Lucia,

Convention is a framework which addresses the use of ICT for disaster management and reduction of regulatory barriers that impede the use of ICT resources during disaster and disaster emergencies. URCA stated that the regulatory barriers include, among other things, regulations restricting the use of electronic communications equipment or the radio-frequency spectrum.² URCA stated that it could consider revising specific existing rules to permit:

- Exemption of electronic communications resources for use in disaster mitigation and relief, in compliance with those regulations; and
- Acceleration of processing of electronic communications applications for use in disaster and disaster emergencies, in accordance with existing regulations³.

Following the background in section 3.1.1 of the First Consultation on Disaster Management Regulations, URCA posed Consultation Question 1: Do you agree that URCA should aim to remove regulatory barriers during a disaster emergency?

3.1.1 Relationship of Consultation Question 1 to the Proposed Regulations

Consultation Question 1 relates to Part 5(2) of the Proposed Regulations, which URCA stated as follows:

- 5.2 Provided that authorisation is obtained from URCA prior to establishing, operating, and maintaining an electronic communications system during a disaster or disaster emergency, URCA may:
- i. exempt specified electronic communications resources from specific regulatory measures if the resources are used for disaster mitigation and relief;
 - ii. pre-clear electronic communications resources for use in disaster mitigation and relief, in compliance with the regulations;
 - iii. expedite the review of electronic communications resources for use in disaster and disaster emergencies, in accordance with extant regulations; and
 - iv. temporarily waive regulations for the use of electronic communications

Saint Vincent and the Grenadines, Senegal, Slovakia, Sri Lanka, Sudan, Sweden, Switzerland, Tajikistan, The Former Yugoslav, Republic of Macedonia, Tonga, Uganda, United Kingdom of Great Britain, and Northern Ireland,

² Regulatory Aspects of ICT in Disaster Mitigation, https://www.itu.int/en/ITU-D/Emergency-Telecommunications/Documents/Guatemala_20 (accessed June 20, 2017).

³ 9824645E, <https://treaties.un.org/doc/source/RecentTexts/25-4eng.htm> (accessed June 20, 2017).

resources for disaster mitigation and relief.

3.1.2 Summary of Responses to Consultation Question 1

BTC, CBL/ALIV and 5G Americas responded to Consultation Question 1. URCA has set out a summary of the responses below:

BTC's Response to Question 1

BTC did not object to the removal of regulatory barriers. However, BTC expressed concern that URCA was too restrictive in its interpretation of the Tampere Convention. BTC also offered recommendations regarding Part 5.2 of the Proposed Regulations, and URCA has addressed that part of BTC's response in Section 3.10 of this document.

CBL/ALIV's Response to Question 1

CBL/ALIV did not object to the removal of regulatory barriers. However, CBL/ALIV suggested that URCA should identify the specific regulations mentioned in Part 5.2 (iv) of the Proposed Regulations and set them out in an Annex to the Regulations for ease of reference. Additionally, CBL/ALIV suggested that URCA should refer to the ITU's checklist of regulations when considering which regulations URCA should waive under Part 5.2 (iv).

5G Americas' Response to Question 1

5G Americas agreed that URCA should aim to remove regulatory barriers during a disaster emergency provided that the removal of the regulatory obstacles is part of the operator's disaster management plan. 5G Americas suggested that URCA should also consider the removal of regulatory barriers that hinder network expansion during non-emergency periods.

3.1.3 Analysis of Responses to Consultation Question 1

URCA did not receive any objections to the removal of regulatory barriers during a disaster emergency. However, each Respondent offered comments for URCA's consideration. Regarding BTC's response to Consultation Question 1, URCA reminds BTC that the Comms Act restricts URCA's duties and power to the regulation of the ECS. Therefore, in respect of its functions and powers, URCA intentionally confined its treatment of the issues raised in the Tampere Convention to matters related to disaster management in the ECS and more specifically to the critical electronic communications infrastructure.

Regarding CBL/ALIV's response to Consultation Question 1, URCA believes that there is merit in CBL/ALIV's suggestion to refer to the ITU's checklist of regulations when considering which

regulations URCA should waive under Part 5.2 (iv). However, identifying the specific rules to waive under Part 5.2 (iv) will be a comprehensive undertaking that will impact multiple stakeholders. Therefore, URCA must do so carefully having regard for the impact on all stakeholders and the electronic communications ecosystem. URCA agrees to identify the regulations that URCA should waive in Consultation with the ECS Disaster Management Task Force recommended by CBL.

Regarding 5G America's response to Consultation Question 1, URCA notes 5G America's suggestion also to consider the removal of regulatory barriers that hinder network expansion during non-emergency periods. URCA, however, advises 5G Americas that one of URCA's critical objectives under the Electronic Communications Sector Policy is to encourage investment in the electronic communication sector. For this reason, any Licensee, at any time, may expand its ECS network without seeking permission from URCA, except where the Licensee requires the use of state assets such as spectrum and/or public land.

URCA noted that the Respondents did not object to the insertion of Part 5.2. However, CBL/ALIV suggested a course that URCA took under consideration.

3.1.4 Revisions Subsequent Analysis of the Responses to Consultation Question 1

URCA did not revise Part 5.2 (iv) in the Revised Proposed Regulations. Instead, in consultation with the ECS Disaster Management Task Force, URCA will identify the regulations that could be relaxed during disasters and disaster emergencies.

3.2 Review of Consultation Question 2

In Section 3.1.2 of the First Consultation on Disaster Management Regulations, URCA referenced the Humanitarianism in the Network Age Report (the HINA Report). In the HINA Report, the UN stated that access to ICTs is as vital as access to food, water, shelter, and sanitation in times of disaster emergencies. The HINA Report was associated with an ITU ICT for disaster management initiative that had as a primary outcome the Smart Sustainable Development Model (SSDM). In the SSDM, the ITU indicates that:

1. Governments and sector regulators could minimise disaster-related damage by creating an agile licensing regime for execution during times of emergency.
2. Operators could improve resilience and recoverability by establishing a funding mechanism for infrastructure development and disaster management, which

facilitate partnerships between the Government, the private sector, and civil society.

3. Infrastructure development promotes the availability of ICT that improve disaster management.

Following the contextual setting in section 3.1.2 of the First Consultation on Disaster Management Regulations, URCA posed Consultation Question 2: Do you agree that public-private partnerships could ensure the availability of the communications infrastructure, the relaxation of communication congestion, early recovery of communication, and the use of satellite communications systems in times of disaster?

3.2.1 Relationship of the Consultation Question 2 to the Proposed Regulations

Consultation Question 2 relates to Part 4 (Governance) of the Proposed Regulations. The specific proposal in Part 4 was as stated below:

- 4.1 URCA shall have responsibility for the governance of these Regulations.
- 4.2 URCA will establish a multi-stakeholder group, which will be referred to as the Electronic Communications Sector Disaster Management Task Force (the "ECS Disaster Task Force") whose purpose will be to assist URCA with determining approaches for the regulation of CECI with an aim to:
 - i. reduce disaster and disaster emergency mortality in The Bahamas;
 - ii. lessen the number of people affected by disaster and disaster emergencies in The Bahamas;
 - iii. reduce direct disaster economic loss in relation to the global gross domestic product (GDP);
 - iv. reduce disaster damage to critical infrastructure and disruption of basic services, among them financial, health and educational facilities;
 - v. improve the number of islands for which electronic communications service providers have a local business continuity and disaster recovery plan;
 - vi. develop a framework and prepare Guidelines for Voluntary ECS Critical Infrastructure Resiliency which shall include assessing resiliency gaps and proposing appropriate remedies to improve the network resiliency of CECIs;
 - vii. increase the availability of multi-hazard early warning systems, and the public's access to disaster-related information; and

viii. enhance international cooperation regarding disaster preparedness and management.⁴

4.3 The ECS Disaster Task Force may consist of representatives from URCA, representatives from each Licensee designated as Critical Electronic Communications Infrastructure Providers (CECIP) and representatives from the Ministry of Disaster Preparedness, Management and Reconstruction, National Emergency Management Agency, Department of Meteorology, Data Protection Commission, Royal Bahamas Police Force, Royal Bahamas Defense Force and other relevant government agencies and departments, as determined by the ECS Disaster Task Force.

4.4 The ECS Disaster Task Force shall meet at least three (3) times annually/.

4.5 All Licensees designated as CEI or CECIP shall provide one or more representatives of Licensees at each meeting of the ECS Disaster Task Force.

The responses concerning Consultation Question 2 in the First Consultation on Disaster Management Regulations are set out in the next section.

3.2.2 Summary of Responses to Consultation Question 2

BTC and CBL/ALIV responded to Consultation Question 2. URCA has set out a summary of the responses below.

BTC's Response to Question 2

Regarding BTC response to Consultation Question 2, BTC agreed in principle that public-private partnerships could ensure better availability and resiliency of communications infrastructure for critical services during a disaster. However, BTC stated that they were confused by the question because they were not able to link the issue with any specific provisions in the Proposed Regulations.

CBL/ALIV's Response to Question 2

⁴ Sendai Framework for Disaster Risk Reduction - Wikipedia, https://en.wikipedia.org/wiki/Sendai_Framework_for_Disaster_Risk_Reduction (accessed June 20, 2017).

Regarding CBL/ALIV's response to Consultation Question 2, CBL/ALIV did not agree with the proposal because they had doubts about what URCA envisaged concerning public-private partnerships. CBL/Aliv asserted that public sector involvement could bring delay and bureaucracy and may not provide any finances or other supporting resources within the required timescales.

5G Americas Response to Question 2

5G Americas did not give a specific response to Consultation Question 2.

3.2.3 Analysis of Responses to Consultation Question 2

URCA advises the Respondents that Consultation Question 2 relates to Part 4 of the Proposed Regulations. In Part 4, URCA proposed to establish an ECS Disaster Management Stakeholder Group that would consist of representatives from a broad cross-section of private and public stakeholders. This ECS Disaster Management Stakeholder Group is the Public-Private partnership envisioned by URCA. Their purpose would be to work towards ensuring the availability of the communications infrastructure, the relaxation of communication congestion, early recovery of communication, and the use of satellite communications systems in times of disaster, amongst other things. URCA intends that, through this Public-Private partnership, Licensees and Public Agencies can collaborate to find mutually beneficial solutions to disaster-related problems.

3.2.4 Revisions Subsequent Analysis of the Responses to Consultation Question 2

Having regard to the foregoing, URCA has revised Part 4 (Governance) in the Revised Proposed Regulations of the Proposed Regulations as follows:

- 4.1 URCA shall have responsibility for the governance of these Regulations.
- 4.2 URCA may establish a multi-stakeholder industry group, which will be referred to as the Electronic Communications Sector Disaster Management Stakeholder Group (the "Disaster Management Stakeholder Group") whose purpose will be to assist URCA with determining approaches for the regulation of CECI with the following goals:
 - i. reduce disaster and disaster emergency mortality in The Bahamas;
 - ii. lessen the number of people affected by disaster and disaster emergencies in The Bahamas;
 - iii. reduce direct disaster economic loss in relation to the global gross domestic product (GDP);

- iv. reduce disaster damage to critical infrastructure and disruption of basic services, among them financial, health and educational facilities;
 - v. improve the number of islands for which electronic communications service providers have a local business continuity and disaster recovery plan; and
 - vi. increase the availability of multi-hazard early warning systems, and the public's access to disaster-related information; and vii. enhance international cooperation regarding disaster preparedness and management.
- 4.3 The ECS Disaster Management Stakeholder Group shall consist of representatives from URCA, at least one representative from Licensees designated as Critical Electronic Communications Infrastructure Providers (CECIP) and at least one representative from the Ministry of Disaster Preparedness, Management and Reconstruction, National Emergency Management Agency, Department of Meteorology, Data Protection Commission, Royal Bahamas Police Force, Royal Bahamas Defense Force and other relevant government offices and departments, as determined by the ECS Disaster Management Stakeholder Group.
- 4.4 ECS Disaster Management Stakeholder Group shall meet a minimum of three (3) times a year and may meet more regularly if determined by the ECS Disaster Management Stakeholder Group.

3.3 Review of Consultation Question 3

In Section 3.1.1 of the First Consultation on Disaster Management Regulations, URCA reference the Sendai Framework for Disaster Risk Reduction 2015-2030 (Sendai Framework). The Sendai Framework is a 15-year voluntary, non-binding agreement that aims for the substantial reduction of disaster risk and losses for economic and social assets of persons, businesses, communities, and countries.⁵ The Sendai Framework identified seven global targets for disaster risk reduction policy:

1. Substantially reduce global disaster mortality.
2. Significantly reduce the number of affected people globally.

⁵ Sendai Framework for Disaster Risk Reduction 2015 - 2030. (n.d.). Retrieved from http://www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdf

3. Reduce direct disaster economic loss that adversely impacts the global gross domestic product (GDP).
4. Significantly reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities.
5. Substantially increase the number of countries with national and local disaster risk reduction strategies.
6. Considerably enhance international cooperation in developing countries through adequate and sustainable support to complement their governmental actions for implementation of the Sendai Framework.
7. Significantly increase the availability of, and access to, multi-hazard early warning systems and disaster risk information and assessments to the people.⁶

URCA theorised that aiming for the seven global targets outlined in the Sendai Framework can reduce losses of economic and social assets of the citizens in The Bahamas during natural disasters and national emergencies. Following the background setting in section 3.1.3 of the First Consultation on Disaster Management Regulations, URCA posed Consultation Question 3: Do you believe that URCA should seek to implement the seven global targets of disaster risk reduction identified in the Sendai Framework?

3.3.1 Relationship of the Consultation Question 3 to the Proposed Regulations

Consultation Question 3 relates to Part 4.2 of Part 4 of the Proposed Regulations, which URCA drafted as follows:

- 4.2 URCA may establish a multi-stakeholder industry group, which will be referred to as the Electronic Communications Sector Disaster Management Stakeholder Group (the "Disaster Management Stakeholder Group") whose purpose will be to assist URCA with determining approaches for the regulation of CECI that:
 - i. reduce disaster and disaster emergency mortality in The Bahamas;
 - ii. lessen the number of people affected by disaster and disaster emergencies in The Bahamas;
 - iii. reduce direct disaster economic loss in relation to the global gross domestic product (GDP);

⁶ Sendai Framework for Disaster Risk Reduction - Wikipedia, https://en.wikipedia.org/wiki/Sendai_Framework_for_Disaster_Risk_Reduction (accessed June 20, 2017).

- iv. reduce disaster damage to critical infrastructure and disruption of basic services, among them financial, health and educational facilities;
- v. improve the number of islands for which electronic communications service providers have a local business continuity and disaster recovery plan;
- vi. increases the availability of multi-hazard early warning systems, and the public's access to disaster-related information; and
- vii. enhance international cooperation regarding disaster preparedness and management.

URCA has set out the responses to Consultation Question 3 below.

3.3.2 Summary of Responses to Consultation Question 3

Only BTC and CBL/ALIV responded to Consultation Question 3. URCA has set out a summary of the responses below.

BTC's Response to Question 3

BTC agreed in principle that the seven global targets of disaster risk reduction identified in the Sendai Framework might be worthy of implementation. However, BTC argued that the Sendai Framework is broad in scope and involves far more than just the ECS sector. BTC suggested that a national cross-sector government agency would better implement the objectives of the Sendai Framework.

CBL/ALIV's Response to Question 3

CBL/Aliv do not agree that URCA should seek to implement the targets set out in the Sendai Framework. They believe that is the proposed targets are the responsibility of the elected Government of The Bahamas and are outside the functions of URCA as set out in Section 7 of the Communications Act.

5G Americas Response to Question 3

5G Americas did not give a specific response to Consultation Question 3.

3.3.3 Analysis of Responses to Consultation Question 3

URCA notes BTC's assertion that the Sendai Framework would be best managed and implemented by a national cross-sector government ministry rather than by a sector regulator. BTC's view is similar to CBL's assertion that pursuing the targets set out in the Sendai Framework

is the responsibility of the elected Government of The Bahamas. In URCA's view, the Sendai Framework would be best implemented by a URCA and its Licensees in consultation with cross-sector government agencies for timely, effective and efficient outcomes. Therefore, in Part 4.2 of the Proposed Disaster Management Regulation, URCA proposed to establish the ECS Disaster Management Stakeholder Group that would consist of the mentioned necessary stakeholders. The Group could support URCA with implementing the aspects of the Sendai Framework that are related to ECSP objectives.

3.3.4 Revisions Subsequent Analysis of the Responses to Consultation Question 3

After URCA analysed the response to Consultation Question 4, Part 4.2 of Part 4 the Proposed Regulations in the First Consultation on Disaster Management Regulations, URCA has revised the proposal in Part 4.2 as follows:

- 4.2 URCA will establish a multi-stakeholder group, which will be referred to as the Electronic Communications Sector Disaster Management Task Force (the "ECS Disaster Task Force") whose purpose will be to assist URCA with determining approaches for the regulation of CECI with an aim to:
 - i. reduce disaster damage to critical infrastructure and disruption of essential services, among them financial, health and educational facilities;
 - ii. improve the number of islands for which electronic communications service providers have a local business continuity and disaster recovery plan;
 - iii. develop a framework and prepare Guidelines for Voluntary ECS Critical Infrastructure Resiliency which shall include assessing resiliency gaps and proposing appropriate remedies to improve the network resiliency of CECIs; and
 - iv. contribute to increasing the availability of multi-hazard early warning systems, and the public's access to disaster-related information.⁷

⁷ Sendai Framework for Disaster Risk Reduction - Wikipedia, https://en.wikipedia.org/wiki/Sendai_Framework_for_Disaster_Risk_Reduction (accessed June 20, 2017).

3.4 Review of Consultation Question 4

In Section 3.1.4 of the First Consultation on Disaster Management Regulations, URCA referenced the 2nd Global Forum on Emergency Telecommunications (GET-2016), which recognised that:

Disasters disrupt national economies, severely weaken the poor and vulnerable and are recognised as major impediments to sustainable development and reduction of poverty especially in the least developed countries and small island developing states [such as The Bahamas]. The impact is even worse for those living in remote and isolated areas [like the southern Family Islands and Cays] with no access to basic information and communications facilities that are essential to providing vital alerting information.⁸

URCA recognises that ICTs play an integral role in disaster prediction, detection, and alerting. Therefore, URCA proposes to introduce regulatory measures that would ensure the unimpeded flow of vital information through CEI and essential services before, during, and after a disaster emergency.⁹

After providing a background in section 3.1.4 of the First Consultation on Disaster Management Regulations, URCA posed Consultation Question 4: Do you agree that URCA should introduce regulatory measures that would ensure the unimpeded flow of vital information to critical infrastructure and essential services before, during, and after the occurrence of a disaster emergency?

3.4.1 Relationship of the Consultation Question 4 to the Proposed Regulations

Consultation Question 4 relates to Part 4.2(iv) and 4.2(vi) of Part 4 and Part 9.1 of Part 9 of the Proposed Regulations. Part 4.2(iv) and 4.2(vi) of Part 4 stated that:

4.2 URCA may establish a multi-stakeholder industry group, which will be referred to as the Electronic Communications Sector Disaster Management Stakeholder Group (the "Disaster Management Stakeholder Group") whose purpose will be to assist URCA with determining approaches for the regulation of CEI with the following goals:

⁸ Emergency Telecommunications - ITU, <http://www.itu.int/en/action/emergency/Pages/default.aspx> (accessed June 20, 2017).

⁹ Emergency Telecommunications - ITU, <http://www.itu.int/en/action/emergency/Pages/default.aspx> (accessed June 20, 2017)

- iv reduce disaster damage to critical infrastructure and disruption of essential services, among them financial, health and educational facilities; and
- vi increase the availability of multi-hazard early warning systems, and the public's access to disaster-related information.

Part 9.1 of Part 9 of the Proposed Regulations further provided that:

- 9.1 A CECIP shall not bill Government Agencies for provision of carriage services specifically related to the dissemination of messages from its early warning and disaster relief systems.

Again, URCA has set out the responses to Consultation Question 4 below.

3.4.2 Summary of Responses to Consultation Question 4

BTC's Response to Question 4

BTC opposed URCA introducing mandatory regulatory measures concerning the flow of information if it was neither cost-beneficial nor consistent with the company's investment plan. BTC suggested that public investment or increases in some or all regulated prices could help to cover the cost of additional investment. They requested that URCA clarify the terms "critical infrastructure", "essential services" and "essential communications services."

CBL/ALIV's Response to Question 4

CBL/Aliv did not agree with URCA introducing regulatory measures concerning the flow of information to critical infrastructure and essential services. Also, CBL was unclear what information flows or regulatory measures URCA intends to implement. CBL suggested that Disaster Management Task Force would need to collaborate to ensure the flow of information to critical infrastructure and essential services during a disaster.

5G Americas' Response to Question 4

5G Americas stated that communications infrastructure is critical to allow the flow of information, including public warnings, to the general population during disasters. 5G Americas argued that the flow of information is an essential service like water, food, shelter, and public safety. They advised that disaster management plans should consider measures to ensure the maintenance and continuous operations of network infrastructure, during contingencies, including maintenance and expansion.

3.4.3 Analysis of Responses to Consultation Question 4

BTC agreed, in principle, that public-private partnerships could potentially serve to ensure better availability and resiliency of communications infrastructure for critical services during a disaster. URCA considers that a Disaster Management Stakeholder Group consisting of public and private stakeholders could collaborate to find mutually beneficial solutions to disaster-related problems. This collaboration could help URCA to introduce regulatory measures that the Disaster Management Stakeholder Group consider to be fit for purpose and of mutual benefit to all stakeholders.

BTC requested that URCA clarify the term "critical infrastructure", "essential services" and "essential communications services." In Section 1 of the Consultation document, URCA stated that:

In this Consultation, Critical Electronic Communications Infrastructure refers to carriage services, content services, electronic communications networks, and related facilities, supply chains, and information communications technology (ICT), which if destroyed, degraded or rendered inoperable for an extended period, would significantly impact the social and economic well-being of the nation, or affect The Bahamas' ability to provide national security.

URCA has revised the Interpretations in Part 2 of the Regulations to include this definition. Vital information is any information that the general public and providers of essential services must transmit using the electronic communication services of a CECIP that play an integral role in disaster prediction, detection, and alerting general public before, during and after a disaster and disaster emergencies or after the Prime Minister would have declared a state of emergency.

Also, CBL suggested that stakeholders could benefit from a discussion about how information should flow at various stages of a disaster. Table 1 of Section 3.2.2 of the Consultation Document addressed that issue. However, noting CBL's concerns, URCA will expand on its discussion in that section.

3.4.4 Revisions Subsequent Analysis of the Responses to Consultation Question 4

URCA revise Part 4.2(iv) and 4.2(vi) of Part 4 in the Revised Proposed Regulations of the Proposed Regulation. The effect of the revision is that URCA will establish a multi-stakeholder group, which will be referred to as the Electronic Communications Sector Disaster Management Task Force (the "ECS Disaster Task Force") whose purpose will be to assist URCA with determining approaches for the regulation of CEI with the following goals:

Part 4.2(iv) increase the availability of multi-hazard early warning systems, and the public's access to disaster-related information; and

Part 4.2(vi) increase the availability of multi-hazard early warning systems, and the public's access to disaster-related information.

Also, URCA proposes to redraft Part 9.1 in the First Consultation on Disaster Management Regulations to read:

9.1 Every CECIP shall publish on its website the schedule of any incremental fees/charges related to a customer's request for additional levels of network resilience service offerings or features . Such fees or charges should be fair, reasonable and reflect the actual incremental cost incurred in providing the additional feature or service.

9.2 If a CECIP's service is disrupted during a disaster or national emergency, the CECIP shall not bill a customer until the CECIP's service to the customer is fully restored.

The effect of the change is that the CECIPs can charge a fee for providing customers additional services to improve the customers network resiliency.

3.5 Review of Consultation Question 5

In Section 3.2 of the First Consultation on Disaster Management Regulations, URCA stated that ICTs play essential roles in all phases of disaster management. ICTs have enabled government agencies, private organisations, and non-profit organisations to mobilise agile and flexible disaster response and recovery operations in disaster situations.¹⁰ For example, Table 1 in Section 3.2.2 shows the tabulated results of a gap analysis conducted by the ITU-T Focus Group on Disaster Relief Systems, Network Resilience, and Recovery (ITU FG-DR&NRR). ITU FG-DR&NRR illustrates that early warning systems and disaster relief systems play a critical role in ensuring the delivery of warning notifications at various stages of a disaster. Table 1 also identified the essential directions that information must flow to coordinate, and support actions needed to reduce and suppress severe disruptions to the functioning of society. URCA proposed regulatory measures to encourage service providers to strengthen the resilience of the communications infrastructure after considering the ITU recommendations. Then, to obtain the option of interested parties, URCA posed Consultation Question 5: Do you agree that URCA

¹⁰ Akemi Takeoka Chatfield, Jose J. Gonzalez and Tina Comes Introduction to ICT-enabled Crisis, Disaster & Catastrophe Management Minitrack. Retrieved from <http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=6758844>.

should implement regulatory measures to encourage service providers to strengthen the resilience of the communications infrastructure to mitigate damage and facilitate rapid recovery of essential communication services provided to the Government and other organisations involved in disaster response?

3.5.1 Relationship of Consultation Question 5 to the Proposed Regulations

Consultation Question 5 also relates to Part 4.2(iv) and 4.2 (vi) of Part 4 and Part 9.1 of Part 9 of the Proposed Regulations. URCA cited those clauses in the preceding section of this document. The purpose of the additional context was to support the Part 4.2(iv) and 4.2 (vi) of Part 4 and Part 9.1 of Part 9 of the Proposed Regulations with the ITU's technical guidelines and recommendations.

3.5.2 Summary of Responses to Consultation Question 5

BTC, CBL/ALIV and 5G Americas responded to Consultation Question 5. URCA has set out a summary of the responses below.

BTC's Response to Question 5

In Section 2.5 of BTC's response, BTC stated that it is unclear whether URCA is proposing or contemplating different or separate obligations for Critical Government Communications and General Communications. Notwithstanding that, BTC argued that around the world, it is common practice for telecommunications operators to offer different levels of redundancy in access services provided to various segments of the market. BTC is prepared to provide different levels of redundancy to the Government and other organisations involved in disaster response. However, BTC stated that the costs and tariffs would differ depending on the level of required redundancy. However, BTC did not agree that URCA should implement regulatory measures that would encourage service providers to strengthen the resilience of the communications infrastructure to mitigate damage and facilitate rapid recovery of essential communication services provided to the Government and other organisations involved in disaster response. Instead of regulations, BTC recommended that the Government and other organisations involved in disaster response create standard operating policies that make provisions for redundant connectivity for all critical locations.

CBL/ALIV's Response to Question 5

CBL/Aliv stated that this is a complicated issue that does not deserve a straight "yes" or "no" response. CBL/Aliv indicated that network resilience is a vital issue for network operators. They

stated that operators make a commercial decision in providing network resilience, with the additional cost set against the lost revenue and reputation that would result from a network failure. CBL/Aliv further stated that providing extra network resilience, will have a substantial cost that will exceed the benefits for the operators, and raised the issue of whether URCA expects the operators to foot the bill. CBL/Aliv highlighted any additional cost that exceeds the benefit of operators, and the consumer would most likely pay through higher prices.

5G Americas' Response to Question 5

5G Americas agreed the disaster regulations are essential to network/service restoration efforts during natural disasters. 5G Americas also suggested that regulations should not limit the capacity of the network operators to plan their investments in network expansion or evolution outside periods of emergency. Additionally, 5G Americas made recommendations that URCA provides guidelines that can be adopted to foster a more robust network ecosystem with an integrated public policy approach.

3.5.3 Analysis of Responses to Consultation Question 5

Section 5(b)(ii) of the Comms Act stipulates that regulatory and other measures shall be introduced having due regard to the costs and implications of those regulatory and other measures on affected parties. URCA recognises that, as proposed, Part 9 would have imposed a direct cost on CECIP that could adversely impact the revenue of CECIPs. Therefore, URCA, having due regard to the costs and implications, believes that there is merit in the concerns raised by the Respondents concerning allowing CECIPs to offer different levels of redundancy in access services at a cost. Therefore, URCA agreed to amend the proposed Part 9 only to require CECIPS to make their schedule of fees for various levels of network resilience publicly available. URCA believes the revised Part is a reasonable compromise.

3.5.4 Revisions Subsequent Analysis of the Responses to Consultation Question 5

URCA agreed to amend Part 9 of the Proposed Regulations only to require CECIPS to make their schedule of fees for various levels of network resilience publicly available. URCA believes the revised Part is a reasonable compromise. URCA has shown the revised Part 9 in the preceding section.

3.6 Review of Consultation Question 6

In Section 3.2.3 of the First Consultation on Disaster Management Regulations, URCA stated that to maximise the effectiveness of The Bahamas' early warning and relief infrastructure its regulatory framework should aim to ensure the availability of the early warning systems and relief systems services identified in Table 1. Therefore, URCA proposes to designate specific key networks and service providers as Critical Electronic Communications Infrastructure Providers (CECIP) and to implement regulatory measures to ensure or maximise the availability of that infrastructure in the event of a disaster. URCA proposed to designate the following network and services providers as CECIP:

- i. a provider of a public electronic communications network ¹¹;
- ii. a provider of a public electronic communications service ¹²;
- iii. a public service broadcaster including radio and television broadcaster;
- iv. a person or entity who makes available facilities that are associated facilities by reference to a public electronic communications network or a public electronic communications service; and
- v. a person or entity that is considered to form part of the CECEI.

After providing context, URCA posed Consultation Question 6: Do you agree that URCA should identify the critical electronic communications infrastructure in The Bahamas and propose regulations designed to increase the probability that the critical electronic communication networks and services will be available before, during and after a disaster emergency in The Bahamas?

3.6.1 Relationship of the Consultation Question 6 to the Proposed Regulations

¹¹ A provider of a public network includes satellite system dedicated to disaster management, fixed radio communications networks dedicated to disaster management, satellite dedicated to disaster management, meteorological systems, cellular mobile networks, and fixed or landline telephone networks, safety confirmation and message broadcast systems, disaster relief guidance to disaster management, disaster message boards and disaster voice delivery.

¹² A provider of a public electronic communications network, includes satellite system dedicated to disaster management, fixed radio communications networks dedicated to disaster management, satellite dedicated to disaster management, meteorological systems, cellular mobile networks, and fixed or landline telephone networks, safety confirmation and message broadcast systems, disaster relief guidance to disaster management, disaster message boards and disaster voice delivery.

Consultation Question 6 relates to Part 3 (Application) of the Proposed Regulations, which URCA drafted as follows:

- 3.1 These Regulations shall apply to licensees that have been issued an Individual Licence or Class Licence by URCA and whose public network, and electronic communications services or system are designated critical electronic communications infrastructure (CECI) in accordance with section 3.2 of this Part.
- 3.2 Subject to section 3.1, the public networks, electronic communications services, and systems listed below are designated as CECI:
 - i. a provider of a public electronic communications network;
 - ii. a provider of a public electronic communications service;
 - iii. a public service broadcaster including radio and television broadcaster;
 - iv. a person or entity who makes available facilities that are associated facilities by reference to a public electronic communications network or a public electronic communications service; and
 - v. a person or entity that is considered to form part of the CECI.
- 3.3 The holder of an Individual Licence, or Class Licence by URCA and whose public networks, and electronic communications services or system are designated as critical electronic communications infrastructure (CECI) in accordance with section 3.2 of this Part shall be referred to as a critical electronic communications infrastructure provider (CECIP).

The responses of the Respondents concerning Consultation Question 6 are set out below.

3.6.2 Summary of Responses to Consultation Question 6

BTC, CBL/ALIV and 5G Americas responded to Consultation Question 6. URCA has set out an overview of the responses below.

BTC's Response to Question 6

BTC opposed URCA introducing any type of mandatory regulatory measure concerning disaster management, including the identification and designation of CEI for the reasons mentioned in Section 2 of BTC's response. BTC recommended that URCA consider developing a framework and prepare Guidelines for Voluntary ECS Critical Infrastructure Resiliency (Section 2.6 of BTC's response) rather than the Proposed Regulations. BTC stated that only under BTC's suggested approach that BTC deem it necessary to identify and designate CEI.

CBL/ALIV's Response to Question 6

CBL/Aliv agree that URCA should identify the critical electronic communications infrastructure so that its resilience can be reviewed and where necessary improved. However, CBL/ALIV recommended that URCA set up a task force with the operators, which can identify any gaps in resilience and develop a plan to remedy those gaps.

5G Americas' Response to Question 6

5G Americas also agreed that URCA should identify critical electronic communications infrastructure in The Bahamas. This Respondent added that critical infrastructure could benefit from having less regulatory barriers and better practices for network evolution and not just for select periods of emergency.

3.6.3 Analysis of Responses to Consultation Question 6

URCA notes BTC's recommendation to develop a framework and prepare Guidelines for Voluntary ECS Critical Infrastructure Resiliency rather than the Proposed Regulations. URCA thanks CBL/Aliv for supporting this proposal and URCA has taken into consideration CBL's suggestion to set up a task force with the operators. URCA also thanks 5G Americas for backing this proposal. URCA also agreed that the public in The Bahamas could benefit from the extensive removal of regulatory barriers during all periods of the regulatory cycle. URCA is continuously working to reduce regulatory barriers to create a level playing field in all the sectors that URCA regulates. However, URCA must balance the interests of all stakeholders as it seeks to strategically identify and remove barriers to increase the availability of the critical electronic communications infrastructure. URCA has consolidated the recommendations of the

Respondents and therefore agrees to establish a task force to develop a framework and prepare Guidelines for Voluntary ECS Critical Infrastructure Resiliency.

3.6.4 Revisions Subsequent Analysis of the Responses to Consultation Question 6

After considerations of the responses, URCA has replaced Clauses 3.2 (iv) and 3.2(v) with a revised Part3.2(iv) as follows:

- 3.1 Subject to section 3.1, the public networks, electronic communications services, and systems listed below are designated as CECI:
- i. a provider of a public network¹³;
 - ii. a provider of an electronic communications service¹⁴; or
 - iii. a public service broadcaster, including radio and television broadcasters; and
 - iv. any electronic communications service that is an essential part of the public network, or electronic communications service.

Critical Electronic Communications Infrastructure Providers (CECIP)" refers to a Licensee whose network, service or system, or any part of it, has been designated under these Regulations as CECI.

3.7 Review of Consultation Question 7

Consultation Question 7 is an extension of Consultation Question 6. In Consultation Question 6 URCA explore whether it should identify the CECI in The Bahamas and propose Regulations designed to increase the probability that the CECI and services will be available before, during and after a disaster emergency in The Bahamas. In Consultation Question 7, the public and interested parties was asked: Do you agree that the providers and licensees listed in Section 3.2.3 of this document should form the critical electronic communications infrastructure?

¹³ A provider of a public network includes satellite system dedicated to disaster management, fixed radio communications networks dedicated to disaster management, satellite dedicated to disaster management, meteorological systems, cellular mobile networks, and fixed or landline telephone networks, safety confirmation and message broadcast systems, disaster relief guidance to disaster management, disaster message boards and disaster voice delivery.

¹⁴ A provider of a public electronic communications network, includes satellite system dedicated to disaster management, fixed radio communications networks dedicated to disaster management, satellite dedicated to disaster management, meteorological systems, cellular mobile networks, and fixed or landline telephone networks, safety confirmation and message broadcast systems, disaster relief guidance to disaster management, disaster message boards and disaster voice delivery.

3.7.1 Relationship of the Consultation Question 7 to the Proposed Regulations

Consultation Question 7 supports Consultation Question 6 and relates to Part 3 (Application) of the Proposed Regulations. The responses of the Respondents concerning Consultation Question 7 and the Proposed Regulations in the First Consultation on Disaster Management Regulations are set out below.

3.7.2 Summary of Responses to Consultation Question 7

BTC, CBL/ALIV and 5G Americas responded to Consultation Question 1. URCA has set out a summary of the responses below.

BTC's Response to Question 7

BTC indicated that only under a Voluntary Resiliency Guidelines approach would BTC consider it appropriate to identify and designate CECl.

CBL/ALIV's Response to Question 7

CBL/Aliv agree that the networks listed in paragraph 3.2.3 (i) and (iii) are CECl. Also, CBL/Aliv suggested URCA name the networks defined as Critical Infrastructure. CBL/Aliv suggested that URCA include systems operated by the police and emergency services to the list.

5G Americas' Response to Question 7

5G Americas agreed that the providers and licensees listed in Section 3.2.3 of this document form the CECl. However, 5G Americas recommended that designations of critical infrastructure should also include installations, services and infrastructure that provide support to different network types and elements during or outside periods of emergencies.

3.7.3 Analysis of Responses to Consultation Question 7

URCA thanks CBL/Aliv for supporting this proposal and takes into consideration the suggestion of naming the networks and essential services as part of the CECl group. However, Respondents should note that the Proposed Regulations are intended to be future proof and apply to both existing and future Licensees. Therefore, it is not practical to include the name of any specific Licensee because URCA would be required to revise the Regulations repeatedly for it to apply to future Licensees. Instead, URCA commits to notifying Licensees in writing if URCA determines that the Licensee meets the criteria to be designated as a CECIP and will subsequently publish an updated list of the CECIP on URCA's website.

URCA thanks 5G Americas for supporting this proposal. URCA notes 5G Americas suggestions that critical infrastructure should include installations, services and infrastructure that provide support to different network types and elements during or outside periods of emergencies. URCA considers that 5G America's concerns were addressed by the inclusion of Part iv and Part v in Section 3.2.3. However, URCA will revise and combine Part iv and v to state that any electronic communications services that are an essential component of the CECI.

3.7.4 Revisions Subsequent Analysis of the Responses to Consultation Question 7

URCA has revised Part 3, as shown in the Revised Proposed Regulations for Consultation Question 6.

3.8 Review of Consultation Question 8

In Section 3.2.4 of the First Consultation on Disaster Management Regulations, referenced Gap Analysis of Disaster Relief Systems, Network Resilience and Recovery: a study developed by the ITU-T Focus Group on Disaster Relief Systems, Network Resilience and Recovery. URCA summarised the findings and recommendations in the study in Table 2 of the First Consultation on Disaster Management Regulations. Consistent with the results, URCA posited that disaster management regulation of electronic communication networks and providers should aim to improve network resilience, promote rapid recoverability and ensure the transmission of critical information between essential resources including public and private organisations, the public, and the mass media. Consequently, URCA proposes to bridge the gaps by introducing regulatory measures that will encourage network redundancy, limit traffic congestion, and facilitate network recovery.

Following the contextual setting in section 3.2.4 of the First Consultation on Disaster Management Regulations, URCA posed Consultation Question 8: Do you agree that URCA should introduce regulatory measures that will encourage network redundancy, limit traffic congestion, and facilitate network recovery?

3.8.1 Relationship of the Consultation Question 8 to the Proposed Regulations

Consultation Question 8 relates to Part 6 of the Proposed Regulations, which URCA drafted as follows:

A CECIP shall ensure the security and resilience of its network and services against potential disaster emergencies by implementing the following:

- i. Business Continuity Plan: CECIPs shall create a strategic plan for improving business resilience and service sustainability during disasters and disaster emergencies;
- ii. Telecommunications Asset Management: CECIPs shall maintain appropriate protection of CEI;
- iii. Physical Security: CECIPs shall prevent unauthorised physical access, damage, and interference to CEI;
- iv. Communications and Operations Management: CECIPs shall ensure the correct and secure operation of CEI; and
- v. Information Security: CECIPs shall ensure the safeguarding of information in networks and the secure operation of information processing facilities

In addition to Part 6.2, Part 6.3 through Part 6.5 of the Proposed Regulations, required existing CECIPs meet a set of technical standards.

3.8.2 Summary of Responses to Consultation Question 8

BTC, CBL/ALIV and 5G Americas responded to Consultation Question 1. URCA has set out a summary of the responses below.

BTC's Response to Question 8

BTC does not agree that URCA should introduce any type of mandatory regulatory measure concerning disaster management, including those related to network redundancy, traffic congestion, and network recovery. Instead, for the reasons discussed in Section 2, BTC considers that a Voluntary Resiliency Guidelines approach (Section 2.6) could be implemented rather than the Proposed Regulations.

CBL/ALIV's Response to Question 8

CBL/Aliv do not agree that URCA should introduce such regulatory measures. CBL/Aliv argued that URCA does not have the technical expertise to specify the criteria set out in Part 6 of the Proposed Regulations. CBL/Aliv reiterated its proposal for URCA set up a task force to, among other matters, assess any gaps and appropriate remedies in network resilience. However, CBL/Aliv stated that if URCA was minded to introduce regulatory measures after the proposed task force has identified the gaps, the regulatory measures should be in the form of guidelines, not regulations, so that they can be amended in the light of changing technologies and other environmental factors.

5G Americas' Response to Question 8

5G Americas argued that measures designed for periods of emergency require flexibility and regulations should not limit the operators' capacity to continue to expand and modernise their networks. It is essential to develop measures and protocols with degrees of flexibility considering different scenarios and the adoption of best practices to reduce regulatory barriers for network deployments.

3.8.3 Analysis of Responses to Consultation Question 8

URCA has considered the following:

- BTC recommended that a Voluntary Resiliency Guidelines approach should be implemented rather than the Proposed Regulations;
- CBL/ALIV recommended that URCA set up a task force to, among other matters, assess any gaps and appropriate remedies in network resilience; and
- 5G Americas recommended that measures designed for periods of emergency require flexibility and regulations should not limit the operators' capacity to continue to expand and modernise their networks.

Having considered the recommendations of the Respondents, URCA is persuaded to revise the current proposal in the Proposed Regulations. Instead, in line with such recommendations, URCA will set up an Electronic Communication Sector Disaster Management Task Force with the mandate under the Proposed Regulations to, *inter alia*, develop Voluntary Resiliency Guidelines, assess resiliency gaps and propose appropriate remedies to improve the network resiliency of CECIs.

3.8.4 Revisions Subsequent Analysis of the Responses to Consultation Question 8

URCA has considered the alignment of the Respondent perspectives in response to Consultation Question 8 and has removed Part 6 from the Revised Proposed Regulations. Instead, URCA has revised Part 4.2 as follows:

- 4.2 URCA will establish a multi-stakeholder group, which will be referred to as the Electronic Communications Sector Disaster Management Task Force (the "ECS Disaster Task Force") whose purpose will be to assist URCA with determining approaches for the regulation of CECI with an aim to:
 - i. reduce disaster and disaster emergency mortality in The Bahamas;
 - ii. lessen the number of people affected by disaster and disaster emergencies in The Bahamas;

- iii. reduce direct disaster economic loss in relation to the global gross domestic product (GDP);
- iv. reduce disaster damage to critical infrastructure and disruption of essential services, among them financial, health and educational facilities;
- v. improve the number of islands for which electronic communications service providers have a local business continuity and disaster recovery plan;
- vi. develop a framework and prepare Guidelines for Voluntary ECS Critical Infrastructure Resiliency which shall include assessing resiliency gaps and proposing appropriate remedies to improve the network resiliency of CECIs;
- vii. increase the availability of multi-hazard early warning systems, and the public's access to disaster-related information; and
- viii. enhance international cooperation regarding disaster preparedness and management.¹⁵

3.9 Review of Consultation Question 9

In Section 3.2.5 of the First Consultation on Disaster Management Regulations, URCA stated that CECIPs must create and maintain a Business Continuity Plan (BCP), which would be subject to URCA's review and approval to ensure that it achieves the objectives of URCA's disaster preparedness and management regulatory framework. This BCP should be a living document that should set out the CECIP's strategic approach to improving the resilience of the electronic communications network and ensure service sustainability by continually assessing, planning, building, simulating and reviewing the BCP. At a minimum, the BCP should include an ICT Disaster Recovery Plan (ICT DRP), a Business Impact Analysis (BIA), and a Risk Assessment. URCA considered that collectively the elements of the BCP should include:

- i. a strategy, inclusive of a business impact analysis, aimed at reducing risks to information and ICT assets;
- ii. a BCP which is upheld and tested to ensure information and ICT assets are consistent with the CECIP service level agreement;
- iii. an ICT DRP that is upheld and tested to ensure information and ICT assets are

¹⁵ Sendai Framework for Disaster Risk Reduction - Wikipedia,
https://en.wikipedia.org/wiki/Sendai_Framework_for_Disaster_Risk_Reduction (accessed June 20, 2017).

- iv. available and consistent with agency business and service level requirements; and plans and processes to assess the risk and impact of the loss of information and ICT assets in the event of a security failure or disaster to enable information and ICT assets to be quickly restored and/or recovered.

Following the contextual setting in section 3.2.5 of the First Consultation on Disaster Management Regulations, URCA posed Consultation Question 9: Do you agree that URCA should require CECIP to submit a Business Continuity Plan (BCP) for URCA's approval?

3.9.1 Relationship of the Consultation Question 9 to the Proposed Regulations

Consultation Question 9 relates to Part 7 of the Proposed Regulations, which URCA drafted as follows:

- 7.1 Every CECIP shall, within three months from the publication of these Regulations submit, for URCA's approval, a Business Continuity Plan that makes best efforts to ensure the continuous provision of electronic communications services during all phases of a disaster or disaster emergency and shall include:
 - i. a Disaster Recovery Plan (DRP);
 - ii. a Stakeholder Notification Plan (SNP); and
 - iii. a Business Impact Analysis (BIA).

URCA may require the CECIP to make necessary amendments to any DRP or SNP and re-submit any report or part thereof as a consequence of such amendments before granting approval.

- 7.2 The CECIP shall:
 - i. identify one representative from senior management that shall have overall responsibility for implementation of its DRP; and
 - ii. take necessary actions to ensure the safety of its employees and agents on active duty during a disaster or disaster emergency.
- 7.3 The CECIP shall test its DR Plan at least once every two years.
- 7.4 The CECIP shall invite URCA to attend the full-scale testing of its DR Plan once every two years after the publication of these Regulations.

The responses of the Respondents concerning Consultation Question 9 and the Proposed Regulations in the First Consultation on Disaster Management Regulations are set out below.

3.9.2 Summary of Responses to Consultation Question 9

Only BTC and CBL/ALIV responded to Consultation Question 9. Find a summary of the responses below.

BTC's Response to Question 9

BTC did not agree to the introduction of mandatory regulatory measures that require submission of its BCP to URCA for approval. Instead of requiring the submission of its BCP to URCA for approval, BTC suggested that URCA only review CECIP's existing BCP and offer feedback on the content.

CBL/ALIV's Response to Question 9

Aliv and CBL agreed that operators of critical infrastructure should produce BCPs. Notwithstanding that, CBL argued that URCA does not have the competence or detailed knowledge of the operators' businesses to specify the detailed content of their BCPs or to insist on comprehensive amendments. CBL further argued that URCA should not impose a structure on these plans or add extra work until it has reviewed the Disaster Recovery Plans of the operators and found them to be inadequate.

5G Americas Response to Question 9

5G Americas did not give a specific response to Consultation Question 9.

3.9.3 Analysis of Responses to Consultation Question 9

URCA thanks the Respondents for their comprehensive responses to Consultation Question 9. URCA notes that the Respondents were not opposed to URCA requiring CECIP to submit a Business Continuity Plan (BCP) to URCA. However, both Respondents objected to the imposition of regulations that would require a CECIPs to submit its BCP to URCA for approval. URCA considers the approach suggested by the Respondents to be acceptable and is sympathetic to the views expressed. Therefore, URCA will adjust the Proposed Regulations only to require CECIPs to submit to URCA a comprehensive Business Continuity Plan without URCA prescribing any specific content or format for the BCP. Instead, URCA will ensure that each CECIP develops a BCP.

3.9.4 Revised Proposed Regulations

URCA has revised Part 7 as follows:

- 7.1 Beginning three (3) months after the publication of these Regulations, CECIPs shall submit a Business Continuity Plan to URCA every three (3) years. The BCP shall

demonstrate that the CECIP has made best efforts to ensure the continuous provision of electronic communications services during all phases of a disaster or disaster emergency.

3.10 Review of Consultation Question 10

In Section 3.2.6 of the First Consultation on Disaster Management Regulations, URCA considered that the infrastructure of a telecommunications network operator often sustains damage during disasters and disaster emergencies. The damage caused by disasters and disaster emergencies can create significant business continuity issues if the damage results in network failure because network failure can hamper the network operator's ability to deliver services to and from customers in the impacted areas. Moreover, telecommunication network failure can worsen the impact of the disaster and frustrate the relief and recovery efforts.

URCA considers that national roaming can mitigate disaster relief and recovery challenges that are consequential to any network failures caused by disasters and emergencies. The European Union Agency for Network and Information Security (ENISA) confirmed that the implementation of a national roaming policy could enable users of mobile services to send and receive calls and text messages if a disaster disrupts access to the primary network during a disaster¹⁶. URCA considers that national roaming could mitigate the impact of service outages on the operator's critical stakeholders by improving the probability that impacted individuals will have access to essential electronic communication services despite the operator's inability to deliver services to and from its customers in the affected areas. After setting the background in section 3.2.6 of the First Consultation on Disaster Management Regulations, URCA posed Consultation Question 10: Do you agree with the Special Provisions set out in Part 5 of the Proposed Regulations?

3.10.1 Relationship of the Consultation Question 10 to the Proposed Regulations

Consultation Question 10 relates to Part 5 of the Proposed Regulations, which URCA drafted as follows:

- 5.1 A critical electronic communications infrastructure provider (CECIP) shall enable national roaming on its network in the impacted area immediately after the relevant government agency issues a warning that a national emergency or

¹⁶ European Union Agency for Network and Information Security. (2013). National roaming for resilience. Retrieved from https://www.enisa.europa.eu/publications/national-roaming-for-resilience/at_download/...

national disaster will occur within twenty-four hours, and national roaming shall continue until URCA directs the CECIP in writing to discontinue national roaming in the affected area.

- 5.2 Provided that authorisation is obtained from URCA prior to establishing, operating, and maintaining an electronic communications system during a disaster or disaster emergency, URCA may:
- i. exempt specified electronic communications resources from certain regulatory measures if the resources are used for disaster mitigation and relief;
 - ii. pre-clear electronic communications resources for use in disaster mitigation and relief, in compliance with the regulations;
 - iii. expedite the review of electronic communications resources for use in disaster and disaster emergencies, in accordance with existing regulations; and
 - iv. temporarily waive regulations for the use of electronic communications resources for disaster mitigation and relief.

The responses of the Respondents concerning Consultation Question 10 and the Proposed Regulations in the First Consultation on Disaster Management Regulations are set out below.

3.10.2 Summary of Responses to Consultation Question 10

BTC, CBL/ALIV and 5G Americas responded to Consultation Question 1. URCA has set out a summary of the responses below.

BTC's Response to Question 10

BTC did not agree that URCA should introduce mandatory regulatory measures concerning national roaming as contemplated in Part 5.1 of the Proposed Regulations. BTC was not opposed to providing or being provided with national roaming voluntarily in the aftermath of a disaster where necessary to keep its subscribers connected. The Respondent informed URCA that BTC and Aliv entered discussions to negotiate a National Roaming Agreement on their own volition. In BTC's Response to Question 1, BTC recommended that URCA add a new "catch-all" item (v) to Part 5.2 stated as follows:

- v. exempts any action, process, or person from compliance with any rule, regulation, process, or other norm administered by URCA.

CBL/ALIV's Response to Question 10

CBL/ALIV asserted that the proper role for URCA in national roaming is to mandate the negotiation of a National Roaming Agreement within a set timeframe and approve the final agreement. CBL suggested that Part 7 should be suitably amended. Aliv/CBL agreed that frequent and up-to-date communications with customers during a disaster is important. However, CBL contended that the operators are better able to understand the needs of their customers and how to communicate with them better than URCA.

5G Americas' Response to Question 10

5G Americas agreed that regulatory measures and protocols could help to restore service during natural disasters and are essential to supplement other mitigation efforts.

3.10.3 Analysis of Responses to Consultation Question 10

URCA considers BTC's suggestion to add an item (v) to Part 5.2, which would require URCA to "exempt any action, process, or person from compliance with any rule, regulation, process, or other norm administered by URCA" to be inconsistent with URCA's duties and functions under the Comms Act and untenable during times of emergency and disasters.

URCA does not agree that the proper role for URCA regarding national roaming during times of emergency and disasters is simply to mandate the negotiation of a National Roaming Agreement within a set timeframe and approve the final agreement. URCA considers that national roaming is an important objective of the Proposed Regulations and is consistent with the policy objective of the ECSP to further the interests of persons in The Bahamas concerning the electronic communications sector by maintaining public safety and security. Section 83(1) of the Comms Act also allows URCA to establish technical rules and standards applicable to facilities to ensure against damage to networks or carriage services or public health, safety or the environment. URCA believes that consumers should benefit from an ECS disaster management framework that ensures that Licensees execute a National Roaming Agreement. URCA further believes that national roaming can increase the chances that a person in distress will be able to place potentially life-saving calls during and after a disaster and therefore should be able to seamlessly transition to national roaming if their carrier network is damaged during a disaster or disaster emergency. In the event of National Disaster, URCA considers that national roaming should take immediate effect. Therefore, URCA proposes to maintain the provision in the Proposed Regulations which require National Roaming to take immediate impact on the occurrence of an emergency or disaster emergency. However, URCA agrees to amend the Proposed Regulations to consider CBL's recommendation.

3.10.4 Revisions Subsequent Analysis of the Responses to Consultation Question 10

URCA will amend Part 5 as follows:

- 5.1 A critical electronic communications infrastructure provider (CECIP) shall enable national roaming on its network in the impacted area immediately after the relevant Government Agency issues a warning that a national emergency or national disaster will occur within twenty-four hours, and national roaming shall continue until URCA directs the CECIP in writing to discontinue national roaming in the affected area.
- 5.2 All CECIPs whose networks are interconnected shall commence negotiation of a National Roaming Agreement within ninety (90) calendar days following the publication of these Regulations. The CECIPs shall submit the National Roaming Agreement to URCA for approval within ninety (90) calendar days following the commencement date of said negotiations. The National Roaming Agreement must include a provision for National Roaming to take immediate effect on the occurrence of a disaster or disaster emergency.
- 5.3 A Operating Licensee that provide fixed and mobile telecommunications services who receives a license after the publication of these Regulations (New CECIP) shall complete negotiation of a National Roaming Agreement with existing CECIPs within ninety (90) calendar days following the commencement date of the Licence. Following the completion of the National Roaming Agreement, the New CECIP shall within thirty (30) calendar days submit the National Roaming Agreement to URCA for approval. The National Roaming Agreement must include a provision for National Roaming to take immediate effect on the occurrence of a disaster or disaster emergency.
- 5.4 If a CECIP's network is impacted by a disaster or disaster emergency and that CECIP does not have a valid National Roaming Agreement with an interconnected CECIPs whose network was not affected by that disaster or disaster emergency, the impacted CECIP shall request National Roaming from the interconnected CECIP whose network was not impacted by that disaster or disaster emergency. Upon request, the unimpacted CECIP shall enable National Roaming immediately and

shall continue to provide National Roaming at a cost until written consent to cease providing National Roaming is obtained from URCA.

- 5.5 Provided that authorisation is obtained from URCA prior to establishing, operating, and maintaining an electronic communications system during a disaster or disaster emergency, URCA may:
- i. exempt specified electronic communications resources from specific regulatory measures if the resources are used for disaster mitigation and relief;
 - ii. pre-clear electronic communications resources for use in disaster mitigation and relief, in compliance with the regulations;
 - iii. expedite the review of electronic communications resources for use in disaster and disaster emergencies, in accordance with extant regulations; and
 - iv. temporarily waive regulations for the use of electronic communications resources for disaster mitigation and relief.¹⁷

3.11 Review of Consultation Question 11

In Section 3.2.5 of the First Consultation on Disaster Management Regulations, URCA stated that CECIPs must create and maintain a Business Continuity Plan (BCP). Regarding the BCP, URCA posed Consultation Question 11: Question 11: Do you agree with the timeframe set out in Part 6.1 of the Proposed Regulations? If not, propose an achievable timeframe.

3.11.1 Relationship of the Consultation Question 11 to the Proposed Regulations

Consultation Question 11 relates to Part 6.1 of Part 6 of the Proposed Regulations, which URCA drafted as follows:

- 6.1 A CECIP shall, within three (3) months after the publication of these Regulations:
- i. implement procedures to improve Disaster Preparedness to enhance the resilience of its networks against potential threats. The processes performed by the CECIP shall be detailed in the DR Report to be submitted to URCA for consideration and shall comply with the requirements under Part 9 of these Regulations.

¹⁷ 9824645E, <https://treaties.un.org/doc/source/RecentTexts/25-4eng.htm> (accessed June 20, 2017).

- ii. liaise with the Bahamas Power and Light Company Ltd. (BPL) to coordinate priority notification of potential power outages; and
- iii. establish repair teams that can be quickly deployed in the aftermath of a disaster for rapid restoration and repair of any damaged electronic communication facilities.

The responses of the Respondents concerning Consultation Question 11 and the Proposed Regulations in the First Consultation on Disaster Management Regulations are set out below.

3.11.2 Summary of Responses to Consultation Question 11

BTC and CBL/ALIV responded to Consultation Question 11. A summary of the responses is set out below.

BTC's Response to Question 11

BTC did not agree that URCA should introduce any type of mandatory regulatory measure concerning disaster management, including Part 6.1 of the Proposed Regulations. Further, BTC stated that Part 6.1, as currently drafted, is confusing, inoperative, and unnecessary.

CBL/ALIV's Response to Question 11

Aliv and CBL agreed with the proposal in Part 6.1 of the Proposed Regulations. CBL stated that a period of three months is sufficient to draw up disaster recovery procedures for submission to URCA. However, Aliv and CBL considered sub-Part iii to be unnecessary.

5G Americas Response to Question 11

5G Americas did not give a specific response to Consultation Question 11.

3.11.3 Analysis of Responses to Consultation Question 11

URCA reminds Respondents that the Proposed Regulations would not apply solely to existing CECIPs but also future CECIPs. Therefore, if a CECIP considers that they have already met the requirements, no further action is required. Although BTC did not address the issue relating to the achievability of the timeframe proposed by URCA in Part 6.1, URCA notes that CBL considers the timescale to be achievable. URCA also notes that BTC considers the proposal in part 6.1 to be confusing, inoperative, and unnecessary; and that CBL/Aliv considers sub-Part(iii) to be unnecessary. URCA is sympathetic to the comments submitted by the Respondents in this regard and agrees to withdraw sub-Part(ii) and sub-Part(iii) from the Proposed Regulations.

3.11.4 Revisions Subsequent Analysis of the Responses to Consultation Question 11

URCA has revised Part 6.1 such that it now states the following:

- 6.1 A CECIP shall, within three months after the publication of these Regulations, develop and implement procedures to improve Disaster Preparedness to enhance the resilience of its networks against potential threats. The processes performed by the CECIP shall be detailed in the BCP submitted to URCA following the requirements under Part 7.1 of these Regulations.

3.12 Review of Consultation Question 12

Following the contextual setting in section 3.1.1 of the First Consultation on Disaster Management Regulations, URCA posed Consultation Question 12: Do you agree with the timeframe set out in Part 7.1 of the Proposed Regulations? If not, propose an achievable timeframe.

3.12.1 Relationship of the Consultation Question 12 to the Proposed Regulations

Consultation Question 12 relates to Part 7.1 of the Proposed Regulations, which URCA drafted as follows:

- 7.1 Every CECIP shall, within three months from the publication of these Regulations submit, for URCA's approval, a Business Continuity Plan that makes best efforts to ensure the continuous provision of electronic communications services during all phases of a disaster or disaster emergency and shall include:
 - i. a Disaster Recovery Plan (DRP);
 - ii. a Stakeholder Notification Plan (SNP); and
 - iii. a Business Impact Analysis (BIA).

URCA may require the CECIP to make necessary amendments to any DRP or SNP and re-submit any report or part thereof as a consequence of such amendment before granting approval. The responses of the Respondents concerning Consultation Question 12 in the First Consultation on Disaster Management Regulations are set out below.

3.12.2 Summary of Responses to Consultation Question 12

BTC and CBL/ALIV responded to Consultation Question 12. URCA has set out a summary of the responses below.

BTC's Response to Question 12

BTC does not agree that URCA should introduce any type of mandatory regulatory measure concerning disaster management, including Part 7.1 of the Proposed Regulations. BTC stated that it may be able to update the BCP within the specified three-month timeframe if that format differs significantly from BTC's current BCP. BTC suggested allowing the CECI providers to file their existing BCPs, and over time the composition of those documents could be harmonised. BTC is however not in agreement to a "cookie-cutter" approach to BCPs.

CBL/ALIV's Response to Question 12

CBL and Aliv agreed that a timescale of three months is sufficient for the preparation of a Business Continuity Plan but proposed an amendment to the last three lines of Part 7.1. CBL suggested that Part 7.1 should read: Every CECIP shall, within three months from the publication of these Regulations submit, for URCA's approval, a Business Continuity Plan that makes best efforts to ensure the continuous provision of electronic communications services during all phases of a disaster or disaster emergency.

5G Americas Response to Question 12

5G Americas did not give a specific response to Consultation Question 12.

3.12.3 Analysis of Responses to Consultation Question 12

URCA agrees with the proposals set forth by BTC and CBL/Aliv. Therefore, URCA will adjust the Proposed Regulations only to require CECIPs to send to URCA a comprehensive Business Continuity Plan once every two years. URCA will not prescribe any specific content or format for the BCP.

3.12.4 Revisions Subsequent Analysis of the Responses to Consultation Question 12

URCA will revise Part 7.1 as follows:

- 7.1 Once every three years, beginning three months after the publication of these Regulations, every CECIP shall submit a Business Continuity Plan that makes best efforts to ensure the continuous provision of electronic communications services during all phases of a disaster or disaster emergency.

3.13 Review of Consultation Question 13

At the end of the First Consultation on Disaster Management Regulations, URCA posed Consultation Question 13: Please provide comments to any of the Proposed Regulations? Are there additional rules that URCA should include in the Proposed Regulations?

3.13.1 Relationship of the Consultation Question 13 to the Proposed Regulations

Consultation Question 13 was a broad-ranging question that did not relate any specific Clause in the Proposed Regulations.

3.13.2 Summary of Responses to Consultation Question 13

BTC and CBL/ALIV responded to Consultation Question 12. URCA has set out a summary of the responses below.

BTC Response to Question 13

BTC raised concerns about the Proposed Regulations. In summary, BTC suggested the following:

- URCA should not introduce any type of mandatory regulatory measure concerning disaster management, including about the submission for approval of its BCP.
- The proposed ECS multi-stakeholder industry group is unnecessary and would be counter-productive.
- There should only be one such multi-stakeholder industry group and, in BTC's view, it should be set up by the MoPD and NEMA, not URCA.
- The proposed list of reporting requirements is excessive and impractical.
- The reporting requirements could be separated into wireless and wireline services, divided into four broad Regional Reporting Areas ("RRAs"), reduced to a frequency of once per week and modified to include clear definitions of all terms.

CBL/ALIV's Response to Question 13

CBL/Aliv also raised several concerns about the Proposed Regulations. In summary, CBL/ALIV stated that the following activities would promote the development of an effective and efficient disaster management regulatory framework for the ECS:

- Set up a task force with the operators to aid URCA in drawing up the final regulations;
- URCA and the operators would then agree to a way forward through the task force proposed;
- Ask NEMA to convene a group of the operators and other stakeholders to learn the lessons on disaster recovery from Hurricane Dorian, and to plan and coordinate action between the operators and emergency services for the next disaster;

- Specify the regulations that will be suspended automatically during a disaster;
- Review its policy, processes and regulations for infrastructure sharing in the light of the priority given to network resilience;
- Clearly define the role of URCA in disaster management and the information requirements needed to support this role; and
- Outline what information is proportionate for operators to provide during an emergency, bearing in mind the opportunity cost of such provision during a disaster.

CBL/ALIV stated that in outlining what information is proportionate for operators to provide during an emergency, URCA would be able to propose a reasonable regulation for the provision of information from the operators. CBL/ALIV suggested that:

- Part 9.1 should include in Part 2.1, Definitions.
- URCA should clarify that the term "message" means an SMS related to the disaster and disaster relief, to avoid uncertainty as to whether for example, this Clause should cover calls.
- The availability of free SMS should be time-limited.

5G Americas Response to Question 13

5G Americas did not give a specific response to Consultation Question 13.

3.13.3 Analysis of Responses to Consultation Question 13

In response to Question 13, URCA surmised that the Respondent general issues related to the requirement to submit a Business Continuity Plan, the formation of a multi-stakeholder industry group, obligation to report network status and suspension of the existing Regulations. URCA summarizes its response to those issues as follows:

- The requirement to submit a Business Continuity Plan: URCA committed to adjusting the Proposed Regulations to only require CECIPs to provide to URCA a comprehensive Business Continuity Plan without URCA prescribing any specific content or a format of the BCP.
- Formation of a multi-stakeholder industry group: URCA merged the recommendations of the Respondents and agreed to establish a task force to develop a framework and prepare Guidelines for Voluntary ECS Critical Infrastructure Resiliency. Therefore, URCA will set up the Task Force and list the entities that may participate under the Proposed Regulations.

- The requirement to report network status: Regarding BTC's comments 4 and 5 above, URCA will review BTC's concerns related to the reporting requirements and make any necessary changes that URCA sees as being acceptable and make the required changes to the Proposed Regulations.
- Suspension of the existing regulations: Regarding CBL/ALIV's response to Consultation Question 1, URCA indicated that finding the specific rules to waive under Part 5.2 (iv) will be a comprehensive undertaking that will impact multiple stakeholders. URCA agree to undertake that task in Consultation with the ECS Disaster Management Task Force.

3.13. 4 Summary of Revisions Subsequent Analysis of all Responses

Table A.1 of Annex 1 to this consultation document provides a listing of all the revisions URCA made to the regulation proposed in the First Consultation on Disaster Management Regulations Subsequent Analysis of the Responses to Consultation Question 12.

Consultation Question 1: Do you have comments regarding any of the rules set out in Part 1 through Part 11 of the Revised Proposed Regulation in Annex 2?

4. CONCLUSION AND NEXT STEPS

URCA invites responses to this Consultation Document from interested parties. After receiving responses on or before 5 p.m. on 30 September 2020, URCA will:

- issue a Statement of Results responding to all comments and representations received to this Consultation Document; and
- issue the standalone Disaster Management Regulations.

ANNEX 1: Table of Changes in Revised Draft Regulations

Table A1. Changes to Proposed Regulations after Round 1 of the Public Consultation Process.

	First Round of Consultation	Second Round of Consultation
PART 1	INTRODUCTION	
1.1	In exercise of the powers and duties conferred upon it by section 8(1)(d) of the Communications Act, 2009 (Comms Act), the Utilities Regulation and Competition Authority (“URCA”) hereby issues the following Regulations. These Regulations may be cited as the <i>“Disaster Management Regulations for the Electronic Communications Sector in The Bahamas.”</i>	No change
1.2	The purpose of these Regulations is to ensure network resilience and encourage the rapid restoration of Critical Electronic Communications Infrastructure and services after a disaster or national emergency, thereby furthering the interests of persons in The Bahamas in relation to the ECS.	No change
1.3	These Regulations designate certain electronic communications networks, systems, and services as critical electronic communications infrastructure in The Bahamas, and mandate specific regulatory requirements which must be complied with by critical electronic communications infrastructure providers, to ensure adequate network resilience and service recoverability of the Critical Electronic Communications Infrastructure, particularly in the event of a natural disaster.	No change
PART 2	INTERPRETATION	
2.1 REVISED	In these Regulations, unless the context requires otherwise, the following terms shall have the meaning ascribed below:	No change
	<p>“Critical Electronic Communications Infrastructure (CECI)” refers to the following network and services providers:</p> <ul style="list-style-type: none"> of an electronic communications service; or a provider of a public network ; 	<p><i>Critical Electronic Communications Infrastructure (CECI)</i> refers to carriage services, content services, electronic communications networks, and related facilities, supply chains, and information communications technology (ICT), which if destroyed, degraded or rendered inoperable for an extended period, would significantly impact the social and economic well-being of the nation, or affect The Bahamas' ability to provide national security. CECI shall include the following network and services providers:</p> <ul style="list-style-type: none"> i. a provider of a public network; ii. a provider of an electronic communications service; or

		<ul style="list-style-type: none"> iii. a public service broadcaster, including radio and television broadcasters; and iv. any electronic communications service that is an essential part of the public network, or electronic communications service.
	Critical Electronic Communications Infrastructure Providers (CECIP) refers to a Licensee whose network, service or system, or any part of it, has been designated under these Regulations as CECI;	No change
	“Disaster” shall have the meaning attributed to it in Schedule Two of the Disaster Preparedness and Response Act;	No change
	“Disaster emergency” shall have the meaning attributed to it in section 27(a) of the Disaster Preparedness and Response Act;	No change
	<p>“First Level Responders” shall include the National Emergency Management Agency (NEMA) and communications centers and shelters established by MoDP, NEMA, Local Government Administration Offices, The Royal Bahamas Police Force, The Royal Bahamas Defence Force, Port Department, Fire and Ambulance Services, The Public Hospital Authority, The Department of Meteorology, Bahamas Civil Aviation Authority, The Broadcasting Corporation of The Bahamas and such other persons or organizations required by law to perform functions related to the mitigation of and response to emergencies and disasters in The Bahamas.</p> <p>“ICT” means Information and Communication Technology;</p>	No change
	“Resilience” means the ability of an organization to maintain business or service continuity to the end-user before during and after a disaster emergency.	No change
REVISED	<p>“Reporting Areas” shall, unless modified by URCA in accordance with these Regulations, be as follows: i. Reporting Area 1: New Providence subdivided into the constituencies and boundaries defined by The Parliamentary Registration Department of The Government of the Bahamas; ii. Reporting Area 2: Grand Bahama subdivided into the constituencies and boundaries defined by The Parliamentary Registration Department of The Government of the Bahamas; iii. Reporting Area 3: Abaco, Eleuthera, Exuma, and Andros subdivided into the constituencies and boundaries defined by The Parliamentary Registration Department of The Government of the Bahamas; and iv. Reporting Area 4: All other islands subdivided into the constituencies and boundaries defined by The Parliamentary Registration Department of The Government of the Bahamas.</p>	<p>Reporting Areas shall unless modified by URCA, be as follows:</p> <ul style="list-style-type: none"> i. Reporting Area 1: New Providence and Grand Bahama, ii. Reporting Area 2: Abaco, Eleuthera, Exuma, and Andros, and iii. Reporting Area 3: All other islands.
2.2	Other terms used shall, unless otherwise expressly defined herein, have the meanings ascribed in section 2 of the Comms Act.	No Change

PART 3	APPLICATION	
3.1	These Regulations shall apply to licensees that have been issued an Individual Licence or Class Licence by URCA and whose public network, and electronic communications services or system are designated critical electronic communications infrastructure (CECI) in accordance with section 3.2 of this Part.	No change
3.2	Subject to section 3.1, the public networks, electronic communications services, and systems listed below are designated as CECI:	No change
3.2 (i)	a provider of a public electronic communications network;	No change
3.2 (ii)	a provider of a public electronic communications service;	No change
3.2 (iii)	a public service broadcaster including radio and television broadcaster;	No change
3.2 (iv) REVISED	a person or entity who makes available facilities that are associated facilities by reference to a public electronic communications network or a public electronic communications service; and	any electronic communications service that is an essential part of the public network, or electronic communications service.
3.2 (v) DELETED	a person or entity that is considered to form part of the CECI.	OMITTED
3.3	The holder of an Individual Licence, or Class Licence by URCA and whose public networks, and electronic communications services or system are designated as critical electronic communications infrastructure (CECI) in accordance with section 3.2 of this Part shall be referred to as a critical electronic communications infrastructure provider (CECIP).	No change
PART 4	GOVERNANCE	
4.1	URCA shall have responsibility for the governance of these Regulations.	No change
4.2 REVISED	URCA may establish a multi-stakeholder industry group, which will be referred to as the Electronic Communications Sector Disaster Management Stakeholder Group (the "Disaster Management	URCA will establish a multi-stakeholder group, which will be referred to as the Electronic Communications Sector Disaster Management Task Force (the "ECS Disaster Task Force") whose

	Stakeholder Group”) whose purpose will be to assist URCA with determining approaches for the regulation of CECl with an aim to:	purpose will be to assist URCA with determining approaches for the regulation of CECl with an aim to:
4.2 (i) REPLACED	reduce disaster and disaster emergency mortality in The Bahamas	Develop a framework and prepare Guidelines for Voluntary ECS Critical Infrastructure Resiliency which shall include assessing resiliency gaps and proposing appropriate remedies to improve the network resiliency of CECl.
4.2 (ii) DELETED	lessen the number of people affected by disaster and disaster emergencies in The Bahamas;	OMITTED
4.2 (iii) DELETED	reduce direct disaster economic loss in relation to the global gross domestic product (GDP);	OMITTED
4.2 (iv)	reduce disaster damage to critical infrastructure and disruption of basic services, among them financial, health and educational facilities;	NO CHANGE: Now 4.2 (ii)
4.2 (v)	improves the number of islands for which electronic communications service providers have a local business continuity and disaster recovery plan;	NO CHANGE: Now 4.2 (iii)
4.2 (vi)	increase the availability of multi-hazard early warning systems, and the public’s access to disaster-related information.	NO CHANGE: NO CHANGE: Now 4.2 (v)
4.2 (vii) DELETED	enhance international co-operation regarding disaster preparedness and management.	OMITTED
4.3 REVISED	The ECS Disaster Management Stakeholder Group shall consist of representatives from URCA, at least one representative from Licensees designated as Critical Electronic Communications Infrastructure Providers (CEClP) and at least one representative from the Ministry of Disaster Preparedness, Management and Reconstruction, National Emergency Management Agency, Department of Meteorology, Data Protection Commission, Royal Bahamas Police Force, Royal Bahamas Defense Force and other relevant government offices and departments, as determined by the ECS Disaster Management Stakeholder Group.	The ECS Disaster Task Force may consist of representatives from URCA, representatives from each Licensee designated as Critical Electronic Communications Infrastructure Providers (CEClP) and representatives from the Ministry of Disaster Preparedness, Management and Reconstruction, National Emergency Management Agency, Department of Meteorology, Data Protection Commission, Royal Bahamas Police Force, Royal Bahamas Defense Force and other relevant government offices and departments, as determined by the ECS Disaster Task Force.
4.4 ADDED	The ECS Disaster Management Stakeholder Group shall meet a minimum of three (3) times a year and may meet more regularly if determined by the ECS Disaster Management Stakeholder Group.	The ECS Disaster Task Force shall meet at least three (3) times annually.
5	SPECIAL PROVISION	

5.1	A critical electronic communications infrastructure provider (CECIP) shall enable national roaming on its network in the impacted area immediately after the appropriate government agency issues a warning that a national emergency or national disaster will occur within twenty-four hours, and national roaming shall continue until URCA directs the CECIP in writing to discontinue national roaming in the affected area.	No change
5.2	Provided that authorization is obtained from URCA prior to establishing, operating, and maintaining an electronic communications system during a disaster or disaster emergency, URCA may:	All CECIPs whose networks are interconnected shall commence negotiation of a National Roaming Agreement within 90 calendar days following the publication of these Regulations. The CECIPs shall submit the National Roaming Agreement to URCA for approval within 90 calendar days following the commencement date of said negotiations. The National Roaming Agreement must include a provision for National Roaming to take immediate effect on the occurrence of a disaster or disaster emergency.
5.2 (i)	exempt specified electronic communications resources from certain regulatory measures if the resources are used for disaster mitigation and relief;	
5.2 (ii)	pre-clear electronic communications resources for use in disaster mitigation and relief, in compliance with the regulations;	
5.2 (iii)	expedite the review of electronic	
5.2 (iv)	temporarily waive regulations for the use of electronic communications resources for disaster mitigation and relief.	
5.3 ADDED		A Operating Licensee that provide fixed and mobile telecommunications services who receive a license after the publication of these Regulations (New CECIP) shall complete negotiation of a National Roaming Agreement with existing CECIPs within ninety (90) calendar days following the commencement date of the Licence. Following the completion of the National Roaming Agreement, the New CECIP shall within thirty (30) calendar days submit the National Roaming Agreement to URCA for approval. The National Roaming Agreement must include a provision for National Roaming to take immediate effect on the occurrence of a disaster or disaster emergency.

5.4 ADDED		If a CECIP's network is impacted by a disaster or disaster emergency and that CECIP does not have a valid National Roaming Agreement with an interconnected CECIPs whose network was not affected by that disaster or disaster emergency, the impacted CECIP shall request National Roaming from the interconnected CECIP whose network was not impacted by that disaster or disaster emergency. Upon request, the unimpacted CECIP shall enable National Roaming immediately and shall continue to provide National Roaming at a cost until written consent to cease providing National Roaming is obtained from URCA.
5.5 ADDED		<p>Provided that authorisation is obtained from URCA prior to establishing, operating, and maintaining an electronic communications system during a disaster or disaster emergency, URCA may:</p> <ul style="list-style-type: none"> i. exempt specified electronic communications resources from certain regulatory measures if the resources are used for disaster mitigation and relief, ii. pre-clear electronic communications resources for use in disaster mitigation and relief, in compliance with the regulations, iii. expedite the review of electronic communications resources for use in disaster and disaster emergencies, in accordance with extant regulations, and iv. temporarily waive regulations for the use of electronic communications resources for disaster mitigation and relief.
6	DISASTER PREPAREDNESS	
6.1	A CECIP shall, within three months after the publication of these Regulations:	A CECIP shall, within three months after the publication of these Regulations, develop and implement procedures to improve Disaster Preparedness to enhance the resilience of its networks against potential threats. The procedures of the CECIP shall be detailed in the BCP submitted to URCA following the requirements of Part 7.1
6.1 (i) DELETED	Develop and implement procedures to improve Disaster Preparedness to improve the resilience of its networks against	OMITTED

	potential threats. The procedures implemented by the CECIP shall be detailed in the DR report to be submitted to URCA in accordance with the requirements of Part 9 for consideration;	
6.1 (ii) DELETED	liaise with the Bahamas Power and Light Company Ltd. (BPL) to coordinate priority notification of potential power outages; and	OMITTED
6.1 (iii) DELETED	establish repair teams that can be quickly deployed in the aftermath of a disaster for rapid restoration and repair of any damaged electronic communication facilities.	OMITTED
DELETED 6.2	<p>A CECIP shall ensure the security and resilience of its network and services against potential disaster emergencies by implementing the following:</p> <ul style="list-style-type: none"> i. Business Continuity Plan: CECIPs shall create a strategic plan for improving business resilience and service sustainability during disasters and disaster emergencies. ii. Telecommunications Asset Management: CECIPs shall maintain appropriate protection of CECI. iii. Physical Security: CECIPs shall prevent unauthorized physical access, damage, and interference to CECI. iv. Communications and Operations Management: CECIPs shall ensure the correct and secure operation of CECI. v. Information Security: CECIPs shall ensure the safeguarding of information in networks and the secure operation of information processing facilities 	OMITTED
6.3 DELETED	<p>In addition to the Section 6.2 requirements listed above, an existing CECIP whose CECI include a fixed-line network shall, within eighteen months of the issuance of these Regulations demonstrate to URCA that it has improved the resilience of that network by incorporating at a minimum the:</p> <ul style="list-style-type: none"> i. Use of diverse routing and dynamic re-routing on failure. The fixed-line CECIP should ensure that there are no common ducts or switches and that ideally, except for very few points (usually close to termination), the routes are several miles apart (to ensure that they are not Simultaneously taken out by a disaster); ii. Use of network physical layer technologies based on self-healing rings like SDH (Synchronous Digital Hierarchy); iii. Use of high availability equipment. All switches and critical exchange equipment should be high availability with automated failover/fallback; and iv. where there is not a diversely routed backup submarine cable, the CECIP should arrange for backup land routes to redirect traffic if the submarine cable is cut. 	OMITTED

<p>6.4 DELETED</p>	<p>Licenseses that establish CECI after the publication of these regulations must comply with the condition set out in 6.3(i) through 6.3(iv) from the date such Licensee commences service delivery in The Bahamas.</p>	<p>OMITTED</p>
<p>6.5 DELETED</p>	<p>In addition to the Section 6.2 requirements listed above, all mobile CECIPs shall further improve the resilience of their networks by considering the following:</p> <ul style="list-style-type: none"> i. For higher resilience of Mobile Switching Centers (MSCs): a. have duplicate MSCs in critical areas; and b. in non-critical areas, have overlaps in the geographic coverage between MSCs, and keep spare capacity in all MSCs to allow switching of traffic between the MSCs within the network. ii. Establish a backup Home Location Register (HLR) for each production HLR and locate it at a different site. All updates to the primary HLR should be mirrored at the backup unit. iii. Deploy a hot standby unit containing a backup Visitor Location Register (VLR) at each MSC. iv. Deploy transportable (mobile) base stations (BSs) to cover for failing fixed BSs in locations within the networks, where duplicate or overlapping BSs don't exist. 	<p>OMITTED</p>
<p>7</p>	<p>DISASTER RECOVERY</p>	
<p>7.1 REVISED</p>	<p>Every CECIP shall, within three months from the publication of these Regulations submit, for URCA's approval, a Business Continuity Plan that makes best efforts to ensure the continuous provision of electronic communications services during all phases of a disaster or disaster emergency and shall include:</p> <ul style="list-style-type: none"> i. a Disaster Recovery (DR) Plan; ii. a Stakeholder Notification (SN) Plan; and iii. a Business Impact Analysis. <p>URCA may require the CECIP to make necessary amendments to any DR or SN Plan and re-submit any report or part thereof as a consequence of such amendment before granting approval.</p>	<p>Once every three years, beginning three months after the publication of these Regulations, every CECIP shall submit a Business Continuity Plan to make best efforts to ensure the continuous provision of electronic communications services during all phases of a disaster or disaster emergency.</p>
<p>7.2 DELETED</p>	<p>The CECIP shall:</p> <ul style="list-style-type: none"> i. identify one representative from senior management that shall have overall responsibility for implementation of its DR Plan; and take necessary actions to ensure the safety of its employees and agents on active duty during a disaster or disaster emergency. 	<p>OMITTED</p>
<p>7.3 DELETED</p>	<p>The CECIP shall test its DR Plan at least once every two years.</p>	<p>OMITTED</p>
<p>7.4 DELETED</p>	<p>The CECIP shall invite URCA to attend the full-scale testing of its DR Plan once every two years after the publication of these Regulations.</p>	<p>OMITTED</p>

8	REPORTING	
8.1	<p>Following any Disaster or Disaster Emergency, every CECIP shall submit a Report to URCA setting out:</p> <ul style="list-style-type: none"> i. all network and services outages caused by a disaster or disaster emergency and the impact on its domestic and international services; ii. the estimated time to repair and restore outages; and iii. any outage that affects First Level Responders communication centres for 30 minutes or more. 	No change
8.2 REVISED	<p>The CECIP shall begin submitting the Report to URCA beginning on the sixth working day following the all-clear notification issued by the relevant Government agency. After that, the CECIP shall submit a Report daily by noon. The Reports shall provide information current as at 4 pm on the previous day (or later). The CECIP shall continue the submission of Reports until the CECIP’s service(s) has been fully restored.</p>	<p>The CECIP shall begin submitting the Report to URCA beginning on the sixth working day following the all-clear notification issued by the relevant Government agency. After that, the CECIP shall submit a Report every two days by the close of the working day. The Reports shall provide information current as at 4 p.m. on the previous day (or later). The CECIP shall continue the submission of Reports until the CECIP’s service(s) has been fully restored.</p>
8.3 REVISED	<p>URCA may by the publication of a notice on its website, and by direct written notification to affected Licensees, extend or reduce the six working days or vary Reporting Areas defined in section 2 of these Regulations after considering the impact of the disaster or disaster emergency.</p>	<p>URCA may by the publication of a notice on its website, and by direct written notification to affected Licensees, vary the reporting requirement is set out in these Regulations after considering the impact of the disaster or disaster emergency.</p>
8.4 REVISED	<p>URCA may, at the request of a CECIP or on its own volition, permit a CECIP to combine two or more Reporting Areas in its reports. In considering whether to do so, URCA shall take into account, without limitation to URCA’s discretion, the following factors:</p> <ul style="list-style-type: none"> i. the value of information about variations in the quality of service between separate Reporting Areas; ii. the relationship between the network structure and corporate organization of the relevant Licensee, and the physical boundaries of the Reporting Areas; iii. The number of customers using the relevant services in the Reporting Areas; and/or iv. The difference in costs to the relevant Licensee that can result from taking measurements for separate Reporting Areas and taking measurements for combined Reporting Areas. 	<p>URCA may, at the request of a CECIP or on its own volition, permit a CECIP to combine two or more Reporting Areas in its reports.</p>
8.5 DELETED	<p>The CECIP shall advise the general public by publishing, by noon, on the homepage of its website and/or in another appropriate media, a daily report on recovery efforts to restore services.</p>	OMITTED

8.6 DELETED	The daily report must be in the format set out in the attached Schedule 1, and shall include, at a minimum, the following information: <ul style="list-style-type: none"> a. The name of each area impacted (each area shall be delineated based on the Licensee’s network comprising groups of customers expected to be impacted and restored at or near the same time); b. The number of customers impacted; c. The nature of the interruption (e.g., poles/lines damaged, power supply interruption, tower destruction, etc.); d. The date/time when services were interrupted in that area; e. The date/time when which the licensee commenced or expected to commence work to restore services in that area; f. The nature of the work being undertaken (e.g., restoration of lines, restoration of electronic communications systems and towers, restoration of power supplies, repair of nodes/transformers, etc.); g. The expected date on which services will be restored; and, h. Any other information which the licensee wishes to provide about service availability or restoration work. 	OMITTED
8.7 REVISED	URCA may publish in its Annual Report, on its website and/or in other appropriate media updates regarding the CECIPs service availability in areas affected by a disaster or disaster emergency.	Not included in the second round of consultation
9	BILLING	
9.1 REVISED	A CECIP shall not bill Government Agencies for provision of carriage services specifically related to the dissemination of messages from its early warning and disaster relief systems.	Every CECIP shall publish on its website the schedule of any incremental fees/charges related to a customer’s request for additional levels of network resilience service offerings or features . Such fees or charges should be fair, reasonable and reflect the actual incremental cost incurred in providing the additional feature or service.
9.2 REVISED		If a CECIP's service is disrupted during a disaster or national emergency, the CECIP shall not bill a customer until the CECIP's service to the customer is fully restored.
10	INVESTIGATION	
10.1	URCA may investigate the veracity of a CECIP’s disaster management report under these Regulations in accordance with its powers under	No change

	section 9(1) of the Comms Act and may exercise its powers of information gathering under section 9(2) of the Comms Act, and the Conditions of the relevant license.	
11	PENALTIES	
11.1	Any Licensee that contravenes or fails to comply fully with any provision of these Regulations shall be liable to a fine, other penalty or enforcement action to be determined by URCA in accordance with the provisions of the Comms Act	No change

ANNEX 2: Revised Proposed Disaster Management Regulations

In this section, URCA sets out the revised Draft Disaster Management Regulations for the Electronic Communications Sector (ECS) in The Bahamas.

Part 1 Introduction

1.1 In exercise of the powers and duties conferred upon it by section 8(1)(d) of the Communications Act, 2009 (Comms Act), the Utilities Regulation and Competition Authority ("URCA") hereby issues the following Regulations. These Regulations may be cited as the "*Disaster Management Regulations for the Electronic Communications Sector in The Bahamas.*"

1.2 The purpose of these Regulations is to ensure network resilience and encourage the rapid restoration of Critical Electronic Communications Infrastructure and services after a disaster or national emergency, thereby furthering the interests of persons in The Bahamas in relation to the ECS.

1.3 These Regulations designate specific electronic communications networks, systems, and services as critical electronic communications infrastructure in The Bahamas, and mandate actions that promote improved network resilience and service recoverability of the Critical Electronic Communications Infrastructure, particularly in the event of a natural disaster.

Part 2 Interpretation

2.1 In these Regulations, unless the context requires otherwise, the following terms shall have the meaning ascribed below:

Critical Electronic Communications Infrastructure (CECI) refers to carriage services, content services, electronic communications networks, and related facilities, supply chains, and information communications technology (ICT), which if destroyed, degraded or rendered inoperable for an extended period, would significantly impact the social and economic well-being of the nation, or affect The Bahamas' ability to provide national security. CECI shall include the following network and services providers:

- i. a provider of a public network¹⁸;
- ii. a provider of an electronic communications service¹⁹; or
- iii. a public service broadcaster, including radio and television broadcasters; and
- iv. any electronic communications service that is an essential part of the public network, or electronic communications service.

Critical Electronic Communications Infrastructure Providers (CECIP) refers to a Licensee whose network, service or system, or any part of it, has been designated under these Regulations as CECl.

Disaster shall have the meaning attributed to it in Schedule Two of the Disaster Preparedness and Response Act²⁰.

Disaster emergency shall have the meaning attributed to it in section 27(a) of the Disaster Preparedness and Response Act.

First Level Responders shall include the National Emergency Management Agency (NEMA) and communications centers and shelters established by MoDP, NEMA, Local Government Administration Offices, The Royal Bahamas Police Force, The Royal Bahamas Defense Force, Port Department, Fire and Ambulance Services, The Public Hospital Authority, The Department of Meteorology, Bahamas Civil Aviation Authority, The Broadcasting Corporation of The Bahamas and such other persons or organisations required by law to perform functions related to the mitigation of and response to emergencies and disasters in The Bahamas.

ICT means Information and Communication Technology.

¹⁸ A provider of a public network includes satellite system dedicated to disaster management, fixed radio communications networks dedicated to disaster management, satellite dedicated to disaster management, meteorological systems, cellular mobile networks, and fixed or landline telephone networks, safety confirmation and message broadcast systems, disaster relief guidance to disaster management, disaster message boards and disaster voice delivery.

¹⁹ A provider of a public electronic communications network, includes satellite system dedicated to disaster management, fixed radio communications networks dedicated to disaster management, satellite dedicated to disaster management, meteorological systems, cellular mobile networks, and fixed or landline telephone networks, safety confirmation and message broadcast systems, disaster relief guidance to disaster management, disaster message boards and disaster voice delivery.

²⁰ Chapter 34A, Statute Laws of The Bahamas.

Resilience means the ability of an organisation to maintain business or service continuity to the end-user before, during and after a disaster emergency.

Reporting Areas shall unless modified by URCA, be as follows:

- i. Reporting Area 1: New Providence and Grand Bahama,
- ii. Reporting Area 2: Abaco, Eleuthera, Exuma, and Andros, and
- iii. Reporting Area 3: All other islands.

2.2 Other terms used shall, unless otherwise expressly defined herein, have the meanings ascribed in section 2 of the Comms Act.

Part 3 Application

3.1 These Regulations shall apply to licensees that have been issued an Individual Licence or Class Licence by URCA and whose public network, and electronic communications services or system are designated critical electronic communications infrastructure (CECI) in accordance with section 3.2 of this Part.

3.2 Subject to section 3.1, the public networks, electronic communications services, and systems listed below are designated as CECI:

- i. a provider of a public electronic communications network;
- ii. a provider of a public electronic communications service;
- iii. a public service broadcaster including radio and television broadcaster.
- iv. any electronic communications service that is an essential part of the public network, or electronic communications service.

3.3 The holder of an Individual Licence, or Class Licence by URCA and whose public networks, and electronic communications services or system are designated as critical electronic communications infrastructure (CECI) in accordance with section 3.2 of this Part shall be referred to as a critical electronic communications infrastructure provider (CECIP).

Part 4 Governance

4.1 URCA shall have responsibility for the governance of these Regulations.

4.2 URCA will establish a multi-stakeholder group, which will be referred to as the Electronic Communications Sector Disaster Management Task Force (the "ECS Disaster Task Force") whose purpose will be to assist URCA with determining approaches for the regulation of CEI with an aim to:

- i. develop a framework and prepare Guidelines for Voluntary ECS Critical Infrastructure Resiliency which shall include assessing resiliency gaps and proposing appropriate remedies to improve the network resiliency of CEIs;
- ii. reduce disaster damage to critical infrastructure and disruption of basic services, among them financial, health and educational facilities;
- iii. improve the number of islands for which electronic communications service providers have a local business continuity and disaster recovery plan; and
- iv. increase the availability of multi-hazard early warning systems, and the public's access to disaster-related information, and management.

4.3 The ECS Disaster Task Force may consist of representatives from URCA, representatives from each Licensee designated as Critical Electronic Communications Infrastructure Providers (CECIP) and representatives from the Ministry of Disaster Preparedness, Management and Reconstruction, National Emergency Management Agency, Department of Meteorology, Data Protection Commission, Royal Bahamas Police Force, Royal Bahamas Defense Force and other relevant government offices and departments, as determined by the ECS Disaster Task Force.

4.4 The ECS Disaster Task Force shall meet at least three (3) times annually.

Part 5 Special Provisions

5.1 A critical electronic communications infrastructure provider (CECIP) shall enable national roaming on its network in the impacted area immediately after the relevant government agency issues a warning that a national emergency or national disaster will occur within twenty-four hours, and national roaming shall

continue until URCA directs the CECIP in writing to discontinue national roaming in the affected area.

- 5.2 All CECIPs whose networks are interconnected shall commence negotiation of a National Roaming Agreement within ninety (90) calendar days following the publication of these Regulations. The CECIPs shall submit the National Roaming Agreement to URCA for approval within ninety (90) calendar days following the commencement date of said negotiations. The National Roaming Agreement must include a provision for National Roaming to take immediate effect on the occurrence of a disaster or disaster emergency.
- 5.3 A Operating Licensee that provide fixed and mobile telecommunications services who receive a license after the publication of these Regulations (New CECIP) shall complete negotiation of a National Roaming Agreement with existing CECIPs within ninety (90) calendar days following the commencement date of the Licence. Following the completion of the National Roaming Agreement, the New CECIP shall within thirty (30) calendar days submit the National Roaming Agreement to URCA for approval. The National Roaming Agreement must include a provision for National Roaming to take immediate effect on the occurrence of a disaster or disaster emergency.
- 5.4 If a CECIP's network is impacted by a disaster or disaster emergency and that CECIP does not have a valid National Roaming Agreement with an interconnected CECIPs whose network was not affected by that disaster or disaster emergency, the impacted CECIP shall request National Roaming from the interconnected CECIP whose network was not impacted by that disaster or disaster emergency. Upon request, the unimpacted CECIP shall enable National Roaming immediately and shall continue to provide National Roaming at a cost until written consent to cease providing National Roaming is obtained from URCA.
- 5.5 Provided that authorisation is obtained from URCA prior to establishing, operating, and maintaining an electronic communications system during a disaster or disaster emergency, URCA may:
- i. exempt specified electronic communications resources from certain

regulatory measures if the resources are used for disaster mitigation and relief;

- ii. pre-clear electronic communications resources for use in disaster mitigation and relief, in compliance with the regulations;
- iii. expedite the review of electronic communications resources for use in disaster and disaster emergencies, in accordance with extant regulations; or
- iv. temporarily waive regulations for the use of electronic communications resources for disaster mitigation and relief. ²¹

Part 6 Disaster Preparedness

6.1 A CECIP shall, within three (3) months after the publication of these Regulations, develop and implement procedures to improve Disaster Preparedness to enhance the resilience of its networks against potential threats. The procedures of the CECIP shall be detailed in the BCP submitted to URCA in accordance with the requirements under Part 7.1 of these Regulations.

Part 7 Disaster Recovery

7.1 Once every three (3) years, beginning three months after the publication of these Regulations, every CECIP shall submit a Business Continuity Plan that makes best efforts to ensure the continuous provision of electronic communications services during all phases of a disaster or disaster emergency.

Part 8 Reporting

8.1 Following any Disaster or Disaster Emergency, every CECIP shall submit a Report on Schedule 1 of these Regulation (see Annex 3).

8.2 The CECIP shall begin submitting the Report to URCA beginning on the sixth working day following the all-clear notification issued by the relevant Government agency. After that, the CECIP shall submit a Report every two days by the close of the working day. The Reports shall provide information current as at 4 p.m. on the previous day (or later). The CECIP shall continue the submission of Reports until the CECIP's service(s) has been fully restored.

²¹ 9824645E, <https://treaties.un.org/doc/source/RecentTexts/25-4eng.htm> (accessed June 20, 2017).

8.3 URCA may by the publication of a notice on its website, and by direct written notification to affected Licensees, vary the reporting requirement is set out in these Regulations after considering the impact of the disaster or disaster emergency.

8.4 URCA may, at the request of a CECIP or on its own volition, permit a CECIP to combine two or more Reporting Areas in its reports.

PART 9 Billing

9.1 Every CECIP shall publish on its website the schedule of any incremental fees/charges related to a customer's request for additional levels of network resilience service offerings or features . Such fees or charges should be fair, reasonable and reflect the actual incremental cost incurred in providing the additional feature or service.

9.2 If a CECIP's service is disrupted during a disaster or national emergency, the CECIP

Part 10 Investigation

10.1 URCA may investigate the veracity of a CECIP's disaster management report under these Regulations in accordance with its powers under section 9(1) of the Comms Act and may exercise its powers of information gathering under section 9(2) of the Comms Act, and the Conditions of the relevant license.

Part 11 Penalties

11.1 Any Licensee that contravenes or fails to comply fully with any provision of these Regulations shall be liable to a fine, other penalty or enforcement action to be determined by URCA in accordance with the provisions of the Comms Act.

ANNEX 3: Schedule 1

Subject to the requirement set out in Part 8 of these Regulations, following any Disaster or Disaster Emergency, every CECIP shall submit a Report on Form A below.

Form A

OPERATOR NAME								
SERVICE RESTORATION UPDATE NUMBER								
DATE:								
Service Area/Location Impacted	Total Number of Customers in Service Area	Date/Time of Service Interruption	Number of Customers Impacted	Description of Service and Interruption (e.g., Fixed/Mobile/ Pay-TV/ Electricity Service - Cabling Cut, Tower Damage, Transformer, etc.)	Date/Time Restoration Work Commenced	Number of Customers Restored to Date	% Restored	Estimated Date for a complete restoration.