

Buenos Aires Action Plan

STUDY GROUP 2

QUESTION 6/2

Information and communication technologies and the environment

1 Statement of the situation or problem

1.1 ICT and climate change

The issue of climate change has emerged as a global concern and requires global collaboration by all concerned, in particular the developing countries¹ (which are the most vulnerable group of countries with respect to climate change). International initiatives in this domain are seeking to achieve sustainable development and identify ways and means in which information and communication technologies (ICTs) can monitor climate change and reduce overall global greenhouse gas (GHG) emissions.

Study Group 5 of the ITU Telecommunication Standardization Sector (ITU-T) is the lead study group for study of ICT environmental aspects of electromagnetic phenomena and climate change, including design methodologies to reduce environmental effects, such as recycling related to ICT facilities and equipment; and Study Group 7 (Science services) of the ITU Radiocommunication Sector (ITU-R) is the lead study group for studies related to the use of radio technologies, systems and applications, including satellite systems, for environment and climate-change monitoring and climate-change prediction.

In this respect, the outcomes of ITU-T and ITU-R resolutions and Recommendations, and in particular Resolution 73 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly (WTSA) and Resolution 673 (Rev. WRC-12) of the World Radiocommunication Conference, should serve as a basis for the study of this Question.

1.2 Telecommunication/ICT waste material

The growth of telecommunications/ICTs, especially in developing countries, has been exponential in recent years. For instance, between 2002 and 2007, mobile-phone penetration in the Americas region grew from 19 to 70 terminals per 100 inhabitants. Globally, the share of mobile-phone subscriptions in developing countries increased by 20 percentage points, from 44 per cent to 64 per cent over the same period of time.

The growth of electrical and electronic equipment and their peripherals, as well as the continuous updating of technology, has generated a significant growth in telecommunication/ICT waste. It is estimated that between 20 and 50 million tonnes of telecommunication/ICT waste are generated every year worldwide. However, recycling and

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

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responsible disposal of telecommunication/ICT waste remain at low levels, making it difficult to even find figures on this issue at regional level.

The consequences of not carrying out proper recycling or disposal are environmental problems of large magnitude, especially for developing countries.

The exponential growth of telecommunication/ICT terminals, the associated high turnover of terminals and advances in technology make it imperative to put forward actions in the immediate future to prevent the environmental catastrophe that would result in developing countries if we fail to produce an adequate regulatory framework and work towards policies that address this problem.

2 Question or issue for study

There are a variety of issues that members will address under this Question in the next four years. It is expected that the following steps for the study will play a major role in the future in order to meet the objective of this Question:

- a) In close collaboration with the respective BDT programme(s), identify the regional needs for relevant applications for developing countries.
- b) Elaborate a methodology for the implementation of this Question, in particular gathering evidence and information regarding current best practices on how ICTs can help reduce overall GHG emissions, taking into consideration progress achieved by ITU-T and ITU-R in this regard.
- c) Consider the role of Earth observation in climate change, as determined by the implementation of Resolution 673 (Rev. WRC-12), on radiocommunication use for Earth observation applications, in order to enhance the knowledge and understanding of developing countries in respect of the utilization and benefits of relevant applications in connection with climate change.
- d) Develop best-practice guidelines for the implementation of relevant Recommendations adopted by ITU-T as a result of the implementation of Resolution 73 (Rev. Hammamet, 2016), both for monitoring changes in the climate and reducing the impact of climate change using the action plan in WTSA Resolution 44 (Rev. Dubai, 2012), in particular programmes 1, 2, 3 and 4 thereof.
- e) Strategies to develop a responsible approach to, and comprehensive treatment of, telecommunication/ICT waste: policy and regulatory actions required in developing countries, in close collaboration with ITU-T Study Group 5.

3 Expected outputs

The output will be a report or reports on the results of the work concluded for each step identified above, taking into account the specific needs of developing countries. Other outputs could be the organization of workshops and seminars for the developing countries, in relation with the relevant ITU-D programme and in consultation with the relevant ITU-T and ITU-R study groups.

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4 Timing

The output will be generated on an annual basis. The output for the first year will be analysed and assessed in order to update the work for the next year, and so on. An interim report will be produced by 2019. The final report is due by the end of 2021.

5 Proposers/sponsors

The Question was approved by WTDC-17.

6 Sources of input

Contributions are expected from:

Member States, Sector Members and Associates, as well as inputs from:

- a) Relevant BDT programmes, and particularly ICT initiatives successfully implemented for climate change and to address e-waste.
- b) Regional needs as identified by workshops on the subject.
- c) Regional and/or national action plans and/or national experiences in ICTs and climate change or e-waste.
- d) Progress achieved by ITU-T and ITU-R study groups in this domain, in particular the results of the Joint Coordination Activity on ICTs and climate change (JCA-ICTCC).
- e) Progress achieved by the United Nations Intergovernmental Panel on Climate Change (IPCC) and other similar initiative(s).

7 Target audience

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

a) Target audience – Who specifically will use the output

The output of this Question will be used by both developed and developing countries, and in particular the least developed countries (LDCs), small island developing states (SIDS), landlocked countries (LLDCs) and countries with economies in transition.

b) Proposed methods for implementation of the results

A set of guidelines and recommendations about strategies for a responsible and comprehensive approach to the treatment of waste related to telecommunications/ICTs: policy and regulatory actions required in developing countries and LDCs.

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This guide could be implemented by the developing countries and LDCs, as well as operators and manufacturers, in establishing actions for responsible and integral treatment of waste related to telecommunications/ICTs.

8 Proposed methods of handling the Question or issue

Close coordination is essential with ITU-D programmes, and other relevant ITU-D study Questions, and with ITU-R and ITU-T study groups.

a) How?

- 1) Within a study group:
 - Question (over a multi-year study period)
- 2) Within regular BDT activity:
 - Programmes
 - Projects
 - Expert consultants
- 3) In other ways – describe (e.g. regional, within other organizations, jointly with other organizations, etc.)

b) Why?

To ensure that the work and output of this study Question is not duplicated and that there is better collaboration among BDT, the other ITU Sectors, Sector Members and other United Nations agencies.

To elaborate the set of guidelines, it would be necessary to have the experience of different countries, operators and manufacturers, as well as different organizations concerned with the topic which could provide information.

9 Coordination and collaboration

- Regular ITU-D activities
- Other study group Questions or issues
- Regional organizations, as appropriate
- Work in progress in the other ITU Sectors.

10 BDT programme link

Output 4.4.

11 Other relevant information

To be determined during the implementation of this Question.