

I n t e r n a t i o n a l T e l e c o m m u n i c a t i o n U n i o n

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

WORLD TELECOMMUNICATION STANDARDIZATION
ASSEMBLY
Geneva, 1-9 March 2022

**Resolution 73 – Information and communication
technologies, environment, climate change and
circular economy**

ITU-T



FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

© ITU 2022

All rights reserved. No part of this publication may be reproduced, by any means whatsoever, without the prior written permission of ITU.

RESOLUTION 73 (Rev. Geneva, 2022)

Information and communication technologies, environment, climate change and circular economy

(Johannesburg, 2008; Dubai, 2012; Hammamet, 2016; Geneva, 2022)

The World Telecommunication Standardization Assembly (Geneva, 2022),

recalling

- a) Resolution 66 (Rev. Buenos Aires, 2017) of the World Telecommunication Development Conference, on information and communication technology (ICT) and climate change;
- b) Resolution 70/1 of the United Nations General Assembly (UNGA), on transforming our world: the 2030 Agenda for Sustainable Development;
- c) UNGA Resolution 75/231, which recognizes the potential benefits for countries to transform their economies to promote sustainable consumption and production patterns, by engaging with partners to integrate or implement concepts such as circular economy and Industry 4.0 for more sustainable industrial activity and manufacturing systems, according to national plans and priorities;
- d) Resolution 182 (Rev. Busan, 2014) of the Plenipotentiary Conference, on the role of telecommunications/ICTs in regard to climate change and the protection of the environment;
- e) Resolution 1353, adopted by the ITU Council at its 2012 session, which recognizes that telecommunications/ICTs are essential components for developed and developing countries¹ in achieving sustainable development, and instructs the Secretary-General, in collaboration with the Directors of the Bureaux, to identify new activities to be undertaken by ITU to support developing countries in achieving sustainable development through telecommunications/ICTs,

recognizing

- a) that ICTs are essential for monitoring climate, monitoring and protecting natural ecosystems, data gathering and rapid information transfer relating to the risks of climate change, and that adequate telecommunication networks are essential in ensuring that communications reach people and the appropriate relief organizations;
- b) that low-cost sustainable ICT solutions with reduced carbon footprint are an urgent requirement;
- c) that climate change largely affects:
 - i) countries located along coastal areas and those surrounded by oceans and seas, as well as inland areas that are susceptible to wildfires and drought;
 - ii) countries whose economies rely on agricultural investments;
 - iii) countries with weak capacity or lack of meteorological-support infrastructure and technical systems for the mitigation of climate-change effects,

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

resolves

- 1 to continue and further develop the ITU-T work programme initially launched in December 2007 on ICTs, climate change and circular economy, as a high priority, in order to contribute to the wider global efforts to moderate climate change, as part of the United Nations processes;
- 2 to take into account the progress already made in the international symposia on ICTs, environment, climate change and circular economy, held in various parts of the world², by distributing their outcomes as widely as possible;
- 3 to continue to maintain and update the ITU-T Global Portal on ICTs, environment, climate change and circular economy, extending its features by developing an electronic and interactive forum to share information and to disseminate ideas, standards and best practices on the relationships between ICTs and environmental sustainability, experiences and practices for disclosure, labelling schemes and recycling facilities;
- 4 to promote the development and adoption of Recommendations for enhancing the use of ICTs to serve as a potent and cross-cutting tool to assess and reduce greenhouse gas (GHG) emissions, optimize energy and water consumption, minimize e-waste and improve e-waste management across economic and social activities;
- 5 to increase awareness and promote information sharing on the role of ICTs in enhancing environmental sustainability, in particular by promoting the use of more energy-efficient³ devices and networks and more efficient working methods, as well as ICTs that can be used to replace or displace technologies/uses that have higher energy consumption;
- 6 to work towards the reductions in emissions of GHGs arising from the use of ICTs that are necessary to meet the goals of the United Nations Framework Convention on Climate Change (UNFCCC);
- 7 to work towards a reduction of the adverse environmental impact of environmentally unfriendly materials used in ICT products;
- 8 to bridge the standardization gap by providing technical assistance to countries in developing their national green ICT action plans, and develop a reporting mechanism in order to support countries in implementing their plan;
- 9 to set up e-learning programmes on Recommendations related to ICTs, environment, climate change and circular economy;
- 10 to work towards supporting cities and the ICT sector in harnessing ICTs to combat climate change and reach net zero;
- 11 to work towards identifying the environmental protection requirements of ICTs and developing strategic frameworks for assessing their environmental impacts;
- 12 to support using ICTs to facilitate climate-change mitigation and adaptation efforts as well as building climate-resilient infrastructures;

² Kyoto, Japan, 15-16 April 2008; London, United Kingdom, 17-18 June 2008; Quito, Ecuador, 8-10 July 2009; Seoul Virtual Symposium, 23 September 2009; Cairo, Egypt, 2-3 November 2010; Accra, Ghana, 7-8 July 2011; Seoul, Republic of Korea, 19 September 2011; Montreal, Canada, 29-31 May 2012, Turin, Italy, 6-7 May 2013; Kochi, India, 15 December 2014; Nassau, Bahamas, 14 December 2015; and Kuala Lumpur, Malaysia, 21 April 2016.

³ With respect to efficiency, promotion of efficient use of materials used in ICT devices and network elements should also be a consideration.

13 to work towards the implementation of circular economy in cities and human settlements in order to enhance their sustainability,

instructs the Telecommunication Standardization Advisory Group

1 to coordinate the activities of ITU-T study groups in relation to their review of relevant standardization activities of other standards-development organizations (SDOs) and facilitate collaboration between ITU and those SDOs in order to avoid duplication of, or overlap in, international standards;

2 to ensure that study groups carry out a review of all future Recommendations in order to assess their implications and the application of best practices from the standpoint of protection of the environment, climate change and circular economy;

3 to consider further possible changes to working procedures in order to meet the objective of this resolution, including extending the use of electronic working methods to reduce the impact on climate change, such as paperless meetings, virtual conferencing, teleworking, etc.,

instructs all study groups of the ITU Telecommunication Standardization Sector

1 to cooperate with ITU-T Study Group 5 to develop appropriate Recommendations on ICTs, environment and climate-change issues within the mandate and competence of ITU-T, including, for example, telecommunication networks used for monitoring and adapting to climate change, disaster preparedness, signalling and quality of service issues, taking into account any economic impact on all countries and in particular on developing countries;

2 to identify best practices and opportunities for new applications using ICTs to foster environmental sustainability, and to identify appropriate actions;

3 to identify and promote best practices towards implementing environmentally friendly policies and practices, and to share use cases and key success factors;

4 to identify initiatives which support consistently successful and sustainable approaches that will result in cost-effective application;

5 to identify and promote successful new energy-efficient technologies using renewable energy or alternative energy sources that are proven to work for both urban and rural telecommunication sites;

6 to liaise with the relevant study groups of the ITU Radiocommunication Sector and the ITU Telecommunication Development Sector and promote liaison with other SDOs and forums in order to avoid duplication of work, optimize the use of resources and accelerate the availability of global standards,

instructs the Director of the Telecommunication Standardization Bureau, in collaboration with the Directors of the other Bureaux

1 to report on progress on the application of this resolution annually to the Council and to the next world telecommunication standardization assembly;

2 to keep up to date the calendar of events relevant to ICTs, environment, climate change and circular economy, based on proposals by the Telecommunication Standardization Advisory Group and in close collaboration with the other two Sectors;

3 to launch pilot projects, aimed at bridging the standardization gap, on environmental sustainability issues, in particular in developing countries;

4 to support the development of reports on ICTs, environment, climate change and circular economy, taking into consideration relevant studies, in particular the ongoing work of Study Group 5, including issues related to, *inter alia*, circular economy, green data centres, smart buildings, green ICT procurement, cloud computing, energy efficiency, smart transportation, smart logistics, smart grids, water management, adaptation to climate change and disaster preparedness, and how the ICT sector contributes to annual reductions in GHG emissions, and submit the reports as soon as possible to Study Group 5 for its consideration;

5 to organize forums, workshops and seminars for developing countries in order to raise awareness and identify their particular needs and challenges in regard to environmental, climate-change and circular-economy issues;

6 to develop, promote and disseminate information and training programmes on ICTs, climate change, environment and circular economy;

7 to report on progress of the Joint Task Force of ITU, the World Meteorological Organization (WMO) and the United Nations Educational, Scientific and Cultural Organization Intergovernmental Oceanographic Commission (IOC-UNESCO) to investigate the potential of using submarine telecommunication cables for ocean and climate monitoring and disaster warning;

8 to promote the ITU-T Global Portal on ICTs, environment, climate change and circular economy and its use as an electronic forum for the exchange and dissemination of ideas, experience and best practices on ICTs, environment, climate change and circular economy;

9 to assist countries that are vulnerable to climate-change impact, with specific emphasis on developing countries:

- i) located along coastal areas and those surrounded by oceans and seas, as well as inland areas that are susceptible to wildfires and drought;
- ii) whose economies rely on agricultural investments;
- iii) with weak capacity or lack of meteorological-support infrastructure and technical systems for the mitigation of climate-change effects,

invites the Secretary-General

to continue to cooperate and collaborate with other entities within the United Nations in formulating future international efforts to address protection of the environment and climate change and support vulnerable countries in projects towards mitigation, adaptation and resilience efforts as well as climate-change preparedness plans, contributing to the achievement of the goals of the 2030 Agenda for Sustainable Development,

invites Member States, Sector Members and Associates

1 to continue to contribute actively to Study Group 5 and other ITU-T study groups on ICTs, environment, climate change and circular economy;

2 to continue or initiate public and private programmes that include ICTs, environment, climate change and circular economy, giving due consideration to relevant ITU-T Recommendations and relevant work;

- 3 to share best practices and raise awareness of the benefits associated with the use of green ICTs in accordance with relevant ITU Recommendations;
- 4 to promote the integration of ICT, climate, environmental and energy policies in order to improve environmental performance and enhance energy efficiency and resource management;
- 5 to integrate the use of ICTs into national adaptation plans so as to make use of ICTs as an enabling tool for addressing the effects of climate change;
- 6 to liaise with their national counterparts responsible for environmental issues in order to support and contribute to the wider United Nations process on climate change, by providing information and developing common proposals related to the role of telecommunications/ICTs in mitigating and adapting to the effects of climate change, so that they can be taken into consideration within UNFCCC.