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| Member States of European Conference of Postal and Telecommunications Administrations (CEPT) | | | |
| PROPOSED MODIFICATION OF RESOLUTION 73 | | | |
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| **Abstract:** | WTSA Resolution 73 recalls the international consensus and initiatives recognizing the impact of ICTs on the environment, biodiversity and pollution, as well as the various calls to address these issues.  The resolution resolves to promote the development and adoption of ITU-T Recommendations for enhancing the use of ICTs to assess and reduce GHG emission in all climate critical sectors, enable circular economy and preservation of natural resources and at the same time to minimize the ICT sector environmental footprint; to increase awareness and promote information sharing on the role of ICTs in enhancing environmental sustainability and to work towards the reductions in emissions to meet the goals of the United Nations Framework Convention on Climate Change (UNFCCC).  For this purpose, the resolution notably proposes to all study groups of ITU-T to cooperate with ITU-T Study Group 5 to develop appropriate ITU-T Recommendations on ICTs, environment and climate‑change issues, and to identify best practices and opportunities for new applications using ICTs to foster environmental sustainability, including both material and energy efficiency, to assess their environmental efficiency based on KPIs, evaluation and measurement methodologies as promoted by ITU-T Recommendations and to identify appropriate actions. | |
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RESOLUTION 73 (Rev. New Delhi, 2024)

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

(Johannesburg, 2008; Dubai, 2012; Hammamet, 2016; Geneva, 2022; New Delhi, 2024)

The World Telecommunication Standardization Assembly (New Delhi, 2024),

recalling

*a)* Resolution 66 (Rev. Kigali, 2022) of the World Telecommunication Development Conference, on environment, climate change and circular economy;

*b)* Resolution 79 (Rev. Geneva, 2022) of the World Telecommunication Standardization Assembly on the role of telecommunications/information and communication technologies in handling and controlling e-waste from telecommunication and information technology equipment and methods of treating it;

*c)* Goals 12, 13 and 15 of Resolution 70/1 of the United Nations General Assembly (UNGA), on transforming our world: the 2030 Agenda for Sustainable Development;

*d)* 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;

*e)* Resolution 182 (Rev. Bucharest, 2022) of the Plenipotentiary Conference, on the role of telecommunications/ICTs in regard to climate change and the protection of the environment;

*f)* Resolution 1429, adopted by the ITU Council at its 2024 session, on ITU’s role in facilitating ICTs’ contribution to sustainability and climate action, which recognizes that whereas efforts need to be taken to reduce emissions of ICTs, ICTs can also have an enabling effect in reducing GHG emissions generated by other sectors of the economy; and which resolves to support work towards identifying ICT sustainability best practices including assessing their environmental contribution and invites Member States, Sector Members, Associates and Academia to consider ITU recommendations to tackle sustainability challenges such as climate-change adaptation and mitigation, enabling the carbon neutrality as well as e-waste;

*g)* the outcomes of conferences under the United Nations Framework Convention on Climate Change (UNFCCC), in particular the Paris Agreement of COP21, the Glasgow Climate Pact of COP26, and the Dubai COP28 UAE Consensus, in particular the Global Stocktake;

*h)* that limiting global warming requires rapid, deep and sustained reductions in global greenhouse gas (GHG) emissions, including reducing global ICT sector carbon dioxide emissions by 45 per cent by 2030 versus 2020 and to net zero by 2050, as well as deep reductions in other GHG;

*i)* the importance of climate change and biodiversity challenges as stressed by the IPCC 1.5-degree Special Report[[1]](#footnote-2) and the IPBES May 2019 Report on the severity of biodiversity loss and damages, and planetary limits assessments[[2]](#footnote-3);

*j)* that ITU is already a partner in the Coalition for Digital Environmental Sustainability, mandated by the UNSG, to advance environmental digital sustainability by providing resources and opportunities to set priorities, take concerted action, and develop capacities for an inclusive sustainability-driven digital transition;

*k)* the Lisbon Declaration adopted in June / July 2022 at the United Nations Conference to Support the Implementation of Sustainable Development Goal 14 of the 2030 Agenda for Sustainable Development “Scaling up ocean action based on science and innovation of Goal 14: stocktaking, partnerships and solutions”, with the participation of civil society and other relevant stakeholders, reaffirms our strong commitment to conserve and sustainably use the ocean, seas and marine resources;

*l)* the Global Framework on Chemicals – For a Planet Free of Harm from Chemicals and Waste, adopted in September 2023, a comprehensive global framework that sets concrete targets and guidelines for key sectors across the entire lifecycle of chemicals;

*m)* that ICTs are closely linked to the generation of electrical waste which in certain forms, under the Basel convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, is classified as hazardous, it is therefore important that e-waste is treated in an environmentally sound manner to safeguard environmental and human health,

noting

ITU activities on climate change and environmental sustainability such as Green Digital Action and other relevant multi-stakeholder initiatives,

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 the threats associated with, and that adequate telecommunication networks and information technologies are essential in ensuring that communications reach people and the appropriate relief organizations;

*b)* ICT is also critical in accelerating the transition to circular economy, in particular support to enable circular business models, and that way address not only GHG emission reduction but also biodiversity loss and pollution;

*c)* that there is growing research considering the environmental impact of ICTs; however, it is still difficult to estimate the total net effect of ICTs on climate change, that is including both positive and negative aspects, while direct effects of ICTs are negative arising from production use and end-of-life of ICT products, digitalization in other sectors can have both positive and negative effect;

*d)* that the increasing dynamic pace of the ICT sector poses both opportunities for innovation, including the promotion of sustainable ICT solutions, and challenges for addressing its adverse environmental effects;

*e)* that, since ICTs also contribute to climate change through GHG and other emissions, the necessary priority must be given to reducing GHG emissions through sufficiency according to IPCC 6th Assessment Report[[3]](#footnote-4)3; material and energy efficiency and decarbonization of the energy mix;

*f)* that other environmental impacts associated with the use of ICTs are worth considering, in particular resources depletion (including rare earth elements and other strategic metals) that could be mitigated through equipment eco-design, measures to extend the lifespan of ICT products and other measures in-line with circular economy principles;

*g)* that low-cost sustainable by design ICT solutions with reduced carbon footprint are an urgent requirement;

*h)* 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 or areas susceptible to floods due to heavy rain;

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;

*i)* that other technologies are currently being developed and deployed for climate monitoring, including, but not limited to, oceanic sensing technology, which may be deployed through or using submarine cables, including the Science Monitoring And Reliable Telecommunications (SMART) initiative, for better knowledge of climate evolution; and that such technologies benefit from technical standardisation which enables their global development and implementation,

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 mitigate climate change, as part of the United Nations processes;

2 to take into account the progress already made in the international symposia on ICT, environment, climate change and circular economy, held in various parts of the world, by distributing their outcomes as widely as possible;

3 to continue to maintain and update the ITU-T Global Portal on Environment and Sustainable Digital Transformation 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 ITU-T Recommendations for enhancing the use of ICTs to serve as a potent and cross-cutting tool to assess and reduce GHG emission in all climate critical sectors and enable circular economy and preservation of natural resources, at the same time to minimize the ICT sector environmental footprint including greenhouse gas (GHG) emissions, optimize nature monitoring, conservation and restauration, minimize non-renewable natural resources use (fossil energy sources, minerals and metals) and water consumption 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 environmental, resource and energy-efficient[[4]](#footnote-7)4 devices, networks and ICT products/services and more efficient working method processes, 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 negative environmental impact of materials used in ICT products and technologies along their life cycle in particular through the use of recycled materials;

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 ITU-T Recommendations related to ICTs, environment, climate change and circular economy;

10 to work towards supporting cities, communities and the ICT sector in harnessing ICTs to combat climate change, adopt sustainable and circular business models 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;

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

14 to improve the methodological anchoring of studies devoted to measuring the ICT environmental impact through the promotion of ITU-T Recommendations,

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 consider the application of joint statement by World Standards Cooperation (ITU, ISO and IEC) on the importance of sustainability being built into technical standards’ development by design, and standards helping the world to reach net-zero emissions and achieve a resource-efficient circular and low-carbon economy published at Dubai COP 28[[5]](#footnote-8);

3 to ensure that study groups carry out a review of all future ITU-T 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;

4 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 ITU-T Recommendations on ICTs, environment and climate‑change issues including pollution and biodiversity protection within the mandate and competence of ITU‑T, including, for example, telecommunication networks used for monitoring and adapting to climate change, transition to circular economy, 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, new and emerging telecommunications/ICTs including existing solutions using ICTs to foster environmental sustainability, including both material and energy efficiency, to assess their environmental efficiency based on KPIs, evaluation and measurement methodologies as promoted by ITU-T Recommendations and to identify appropriate actions;

3 to identify and promote best practices towards implementing environmentally sustainable 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*, biodiversity protection, in cooperation with expert biodiversity bodies, circular economy, sustainable eco-design of equipment and ICT solutions, 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 Environment and Sustainable Digital Transformation 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 or areas susceptible to floods due to heavy rain;

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, biodiversity and climate 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 environmentally sustainable 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 adopt and implement ITU recommendations to tackle environmental challenges such as climate-change adaptation and mitigation, as well as e-waste and to promote smart sustainable cities and communities and give feedback to Study Group 5 in order to improve or update it;

7 to collect environmental data of/relating to the telecommunications/ICT sector and forward it to ITU in order to establish and maintain an ITU database on GHG emissions and energy consumption and, potentially, another ITU database on emission factors;

8 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.

**Reasons:** While awareness of the environmental impact of ICTs has increased significantly since 2022, various appeals have been launched via COPs, United Nations forums, etc., to identify possible ways to tackle these issues. While the current Resolution 73 addresses the role that ICTs can play in solving environmental issues (ICT for Green), the impact of these technologies on the environment (Green ICT) is not fully addressed.

The purpose of the proposed modifications is to enhance this “Green ICT” aspect, by recognizing the contribution of ICTs to climate change, resources depletion and pollution, and encouraging ITU-T to develop methods and recommendations to reduce this impact.

1. IPCC, 2018: Global Warming of 1.5°C, https://www.ipcc.ch/sr15/ [↑](#footnote-ref-2)
2. IPBES (2019): Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, https://files.ipbes.net/ipbes-web-prod-public-files/inline/files/ipbes\_global\_assessment\_report\_summary\_for\_policymakers.pdf [↑](#footnote-ref-3)
3. 3 According to IPCC 6th Assessment Report, sufficiency policies are a set of measures and daily practices that avoid demand for energy, materials, land and water while delivering human well-being for all within planetary boundaries [↑](#footnote-ref-4)
4. 4 With respect to efficiency, promotion of efficient use of materials used in ICT should also be a consideration. [↑](#footnote-ref-7)
5. <https://www.worldstandardscooperation.org/#section-group-sufVE12dDomXExxYRVgJBw> [↑](#footnote-ref-8)