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RESOLUTION 73

Information and communication technologies, the environment and climate change

(Johannesburg, 2008; Dubai, 2012)

The World Telecommunication Standardization Assembly (Dubai, 2012),

considering

*a)* that the issue of protection of the environment including climate change is rapidly emerging as a global concern and requires global collaboration;

*b)* that the United Nations Intergovernmental Panel on Climate Change (IPCC) estimated that global greenhouse gas (GHG) emissions had risen by more than 70 percent since 1970, having an effect on global warming, changing weather patterns, rising sea-levels, desertification, shrinking ice cover and other long-term effects;

*c)* that ITU, at the United Nations Conference on Climate Change in Bali, Indonesia, on 3‑14 December 2007, highlighted the role of information and communication technologies (ICTs) as both a contributor to climate change, and an important element in tackling the challenge;

*d)* the work being undertaken following agreement to the Bali roadmap, Cancun Agreements and Durban Platform and the importance of reaching international agreement on an effective post-2012 outcome;

*e)* the role that ICTs and ITU can play in contributing to the implementation of such an agreement;

*f)* the importance of promoting sustainable development and the ways in which ICTs can enable clean development,

considering also

*a)*the ITU Telecommunication Standardization Sector (ITU‑T) Technology Watch Briefing Reports highlighting the issue of climate change and the role of ICTs, and using Submarine Communications Networks to Monitor the Climate;

*b)* ITU-T Study Group 5 has led development of relevant standards to facilitate low carbon ICTs and promote adoption of low carbon ICTs in other industries;

*c)* in addition to the work in ITU‑T, the ITU Radiocommunication Sector (ITU‑R) and ITU Telecommunication Development Sector (ITU‑D) initiatives in considering climate change and the role of ICTs;

*d)* that ITU Recommendations that focus on energy-saving systems and applications can play a critical role in the development of ICTs;

*e)* the leadership of ITU‑R, in collaboration with the ITU membership, in identifying the necessary radio-frequency spectrum for climate monitoring and disaster prediction, detection and relief, including the establishment of cooperative arrangements with the World Meteorological Organization (WMO) in the field of remote-sensing applications;

*f)* the standards‑development activities on ICTs and climate change by, for example, relevant ITU‑T study groups in work related to ubiquitous sensor networks (USN), which allow the detection, storage, processing and integration of situational and environmental information gathered from sensor devices connected to telecommunication networks;

*g)* the outcomes of the various Symposia on "ICTs and Climate Change", taking particular note of the Cairo Roadmap and the Montreal Declaration;

h) the establishment of a Joint Coordination Activity (JCA) on ICTs and Climate Change by the Telecommunication Standardization Advisory Group (TSAG) in 2009;

*i)* the activities carried out by the ITU/WMO/UNESCO IOC Joint Task Force to investigate the potential of using submarine telecommunications cables for ocean and climate monitoring and disaster warning,

noting

a) Resolution 182 (Guadalajara, 2010) of the Plenipotentiary Conference, on The role of telecommunication/information and communication technologies on climate change and the protection of the environment;

b) the outcome of the United Nations conference on the UN Framework Convention on Climate Change (COP17) in Durban;

c) that there are other international forums that are working on Climate change issues that the ITU should co-operate with;

d) the role of ITU-T Study Group 5 as the lead SG on Climate Change;

e) the Dynamic Coalition on Internet and Climate Change,

recognizing

*a)* that ICTs can make a substantial contribution to mitigating and adapting to the effects of climate change;

*b)* that ICTs play a vital role in tackling environmental challenges such as climate change by supporting basic scientific research, which has helped to bring these issues into the public domain by raising awareness of future challenges and offering solutions to present and future challenges;

*c)* that a future high-bandwidth, lower-carbon information society offers a platform for economic, social and cultural development that is sustainable;

*d)* that the adverse effects of climate change and other environmental challenges may be uneven in their impact and may fall disproportionately on the most vulnerable countries, mainly the developing countries[[1]](#footnote-1)1, given their limited capacity to adapt;

*e)* that ICTs contribute approximately 2.5 percent of GHG emissions,

*f)* that ICTs can, however, be a major mitigating factor in efforts to moderate climate change and to limit and ultimately reduce GHG emissions and energy consumption through, for example, the development and introduction of energy-efficient devices, applications and networks;

*g)* that the use of ICTs as a key component of energy-efficient work methods could include the reduction of emissions through, for example, paperless meetings, virtual conferencing, teleworking, etc., which in turn would be beneficial in terms of reducing the need to travel;

h) that ICTs are essential for climate monitoring, data gathering and rapid information transfer concerning risks of climate change and that adequate telecommunication networks are essential in ensuring that communications reach people and the appropriate relief organisations;

i) that ICTs, through the development of smart grids can enable a wider access of electricity, better management of energy distribution in particular in developing countries and full exploitation of renewable sources;

j) that the energy consumption of the Internet, data centers and always-on connected devices will continue to grow,  cloud computing is a critical enabling technology that can lead to energy efficiencies and accelerate the transition for countries and companies to a low carbon economy;

k) the widespread use of electrical and electronic equipment has raised public awareness of its positive effects such as the reduction of the digital divide, but also of the negative environmental and health effects associated with the inefficient waste management of end-of-life electrical and electronic equipment,

resolves

1 to continue and further develop the ITU‑T work programme initially launched in December 2007 on ICTs, the environment and climate change, as a high priority, in order to contribute to the wider global efforts to moderate climate change and tackle other environmental challenges, as part of the United Nations processes;

2 to take into account the progress already made in Study Group 5 since 2009 by making the Recommendations available as widely as possible;

3 to continue to maintain and update the ITU-T Global Portal on ICTs, Environment and Climate Change;

4 to increase awareness and promote information sharing on the role of ICTs in enhancing environmental sustainability through dedicated workshops and International Symposia, in particular by promoting the use of more energy-efficient[[2]](#footnote-2)2 devices and networks and more efficient working methods, as well as ICTs that can be used to replace or displace higher energy consuming technologies/uses;

5 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);

6 to work towards a reduction of the adverse environmental impact of environmentally unfriendly materials used in ICT products (including batteries),

instructs the Telecommunication Standardization Advisory Group

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

invites all ITU‑T study groups

1 to cooperate with SG5 to develop appropriate Recommendations on ICTs, the environment and climate change issues within the mandate and competency of ITU‑T, including telecommunication networks used for monitoring and adapting to climate change, for example 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 cooperate with SG5 to identify best practices and opportunities for new applications using ICTs to foster environmental sustainability;

3 to liaise with the relevant ITU‑R and ITU‑D study groups and promote liaison with other standards development organizations and fora in order to avoid duplication of work, to optimize the use of resources, and to accelerate the availability of global standards,

instructs the Director of the Telecommunication Standardization Bureau in co-ordination with the Directors of the other Bureaux as appropriate

1 to report on progress on the application of this resolution annually to the ITU Council and to the 2016 World Telecommunication Standardization Assembly;

2 to continue to update the established calendar of events relevant to ICTs, the environment and climate change based on proposals by TSAG and in close collaboration with the other two Sectors;

3 to organize, in close collaboration with the Directors of the Telecommunication Development (BDT) and Radiocommunication (BR) Bureaux, workshops and seminars for developing countries, to raise awareness and identify their needs in this domain, as they are the most vulnerable countries affected by environmental challenges including climate change;

4 to demonstrate how the ICT sector contributes to annual reductions in GHG emissions, as part of an overall reduction of 20% of GHG emissions by 2020, against 1990 levels;

5 to report on progress of the ITU/WMO/UNESCO IOC Joint Task Force to investigate the potential of using submarine telecommunications cables for ocean and climate monitoring and disaster warning,

invites the Secretary-General

to take further steps to achieve climate neutral status for the ITU

invites Member States, Sector Members and Associates

1 to continue to contribute actively to the ITU‑T SG5 work programme on ICTs, the environment and climate change;

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

3 to share best practises and raise awareness of the benefits associated with the use of green ICTs;

4 to promote the integration of ICT, climate, environment and energy policies to improve environmental performance, enhance energy efficiency and resource management;

5 to integrate the use of ICT into national adaptation plans to make use of ICTs an enabling tool to address the effects of climate change;

6 to support and contribute to the wider United Nations process on climate change, drawing attention of UNFCCC delegates to the powerful use of ICTs to tackle environmental challenges the key role played by standards to promote technology transfer and diffusion.

1. 1 These include the least developed countries, small island developing states and countries with economies in transition. [↑](#footnote-ref-1)
2. 2 With respect to efficiency, promotion of efficient use of materials used in ICT devices and network elements should also be a consideration. [↑](#footnote-ref-2)