RECOMMENDATION ITU-D 21

ICT and climate change

The World Telecommunication Development Conference (Dubai, 2014),

considering

a)   that climate change is now an undeniable reality, and global action to reduce greenhouse gas (GHG) emissions is urgent in order to avoid devastating impacts on our societies;

b)   that the World Telecommunication Development Conference (Hyderabad, 2010) (WTDC-10) stated that telecommunications/ICTs can make a substantial contribution to monitoring, mitigating and adapting to the adverse effects of climate change;

c)   that the World Radiocommunication Conference (Geneva, 2012) (WRC-12) revised Resolution 673 (Rev. Geneva, 2012), on the importance of earth observation radiocommunication applications;

d)   that the Plenipotentiary Conference (Guadalajara, 2010) adopted Resolution 182 (Guadalajara, 2010), on the role of telecommunications/information and communication technologies (ICTs) in regard to climate change and the protection of the environment;

e)   that WTDC Resolution 66 (Rev. Dubai, 2014), on information and communication technology and climate change, states that radio-based remote sensing applications on board satellites are the main global observation tools employed by the Global Climate Observing System for climate monitoring, disaster prediction, detection and mitigation of the negative effects of climate change;

f)   that the economic costs imposed by extreme climates and disasters on humans, societies and ecosystems are growing;

g)   that climate modelling indicates that, in future, continued increases in GHG concentrations may drive more extreme weather events;

h)   that, according to Resolution 30 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference, countries, particularly small island developing states, least developed countries (LDCs), landlocked developing countries (LLDCs) and low-lying coastal countries, are vulnerable to global climate change and rising sea levels;

i)   that the process established by the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the ongoing negotiations of its Intergovernmental Negotiating Committee are important international actions aimed at addressing the threat of climate change, mitigating its adverse impacts and assisting all ITU Member States, especially LDCs, in adapting to its adverse consequences,

noting

a)   that ICTs can facilitate faster development of various social and economic sectors in any country and that they lead to especially perceptible equal opportunities for all mankind;

b)   the need for improvement for the most vulnerable parts of society in rural and remote areas, contributing to their inclusive growth of society;

c)   that providing assistance to developing countries in formulating national and regional strategies and measures on the use of ICTs can to help mitigate and respond to the devastating effects of climate change;

d)   that it is necessary to have an updated map of the potential upheavals that may occur in the long term due to the consequences of the warming of the climate;

e)   that mapping areas vulnerable to natural disasters and developing computer-based information systems covering the results of surveys, assessments and observations, as part of the development of adequate response strategies, adaptation policies and measures, can minimize the impact of climate change and climate variability;

f)   that assisting developing countries in the use of data from active and passive satellite-based remote sensing systems for climate monitoring, disaster prediction, detection and mitigation of the negative effects of climate change is a key issue for understanding the long-term evolution of the climate;

g)   that facilitating Member States' participation in bilateral, regional and global research, assessments, monitoring and mapping of climate impacts can help in the development of response strategies;

h)   that we can benefit from the experience of some countries, suffering from extreme weather events, which have already integrated in their strategy against climate change a list of concrete principles and actions;

i)   that the World Summit on the Information Society (WSIS) decided to launch projects to promote ICTs in the fields of environment, natural resources, green ICT sector and natural disasters,

recognizing

a)   that emissions of global warming gases continue to rise as the world burns ever more coal, oil and gas for energy;

b)   that the year 2012 was the tenth warmest year since records began in 1880, with an annually averaged temperature across global land and ocean surfaces 0.57°C above the 1950s average, and around 0.8°C above the 1880 estimated average;

c)   that there are changes in rainfall patterns, and wetter regions of the world (mid to high latitudes in the northern hemisphere and tropical regions) are generally getting increasing rainfall, and drier regions less rainfall;

d)   that significant temperature increases have been observed over the last 50 years in the Atlantic, Pacific and Indian Ocean basins and that these increases cannot be attributed to changes in solar activity, volcanic eruptions or other natural variations;

e)   that, with the operation of ground instruments since 1880 and the operation of remote sensing satellites, the constant increase in the mean sea level is a scientific fact that cannot be challenged;

f)   that the increase in the mean sea level is threatening small islands and coastal cities,

recognizing further

a)   that telecommunications/ICTs are of critical importance to overall economic, social and cultural development;

b)   that countries believe it is essential to develop Internet access and to encourage training in ICTs as part of adaptation to climate change, as insufficient data is gathered at local level and sent for analysis;

c)   that some countries want to learn more about the reduction of energy consumption and GHG emissions, and also to learn about ICTs that could operate at lower energy consumption and would require less maintenance, together with the corresponding quantified benefit for climatic change;

d)   that some countries would like to learn more about the negative effects or impact of not using "green" ICTs and how can these contribute to helping reduce global warming,

recommends

1   that countries elaborate guidelines and best practices and implement national policies and related measures to facilitate the use of ICT to combat climate-change challenges;

2   that support be provided to help countries invest more in meteorology monitoring services, in order to prevent extreme events that could be devastating, as better prediction would cost relatively little and helps reduce the carnage caused by floods, droughts and tropical cyclones;

3   that, in order to help countries invest in the technologies, they need to know more about climate change in general, and have better access to and understanding of meteorological data (satellite and terrestrial) that are supplied;

4   that countries elaborate training programmes with a view to ensuring better usage of all the monitoring data;

5   that a program be developed, based on real figures, showing the effect of reduced energy consumption and the benefit of ICT;

6   that it is necessary to adopt innovative ICT-enabled strategies to tackle climate-change adaptation and mitigation on the long term;

7   that, as ICTs may need to operate in difficult meteorological conditions (hot weather, high humidity, etc.), it becomes urgent to help countries develop more affordable, as well as more robust and reliable, green ICTs;

8   that better cooperation between countries be established in areas related to the monitoring of meteorological data and for mitigating climate change using ICTs,

recommends further

1   that appropriate steps be taken for the creation of an enabling environment at the national, regional and international levels to encourage development and investment in the ICT sector, in meteorology and in prediction of extreme events by ITU members;

2   that work on further developing the field of ICTs and climate change be continued and treated by countries as a priority and urgent task,

invites the Director of the Telecommunication Development Bureau

1   to continue to contribute actively to enhancing activities related to climate-change mitigation and adaptation;

2   to continue jointly organizing events with other ITU Sectors in order to reduce duplication and enhance sharing of information across the Sectors and Member States.

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