



ITU: Committed to Connecting the World



ANDICOM 2008

Cartagena de Indias, Colombia

From 29 to 31 October 2008

Climate change: A role of the ITU

"ICTs and Climate Change"



ITU Mandate

- ITU mandate in e-Environment relates to telecommunications and ICT applications
 - Dates from Plenipotentiary Resolution 35 (Kyoto, 1994)
- At the 2006 World Telecommunication Development Conference, ITU mandated to:
 - Assist developing countries in the implementation of relevant ICT applications for environment and sustainable development
 - To develop guidelines on the technology and policy aspects of ICT applications, including e-Environment
- ITU is co-facilitator on issues related to WSIS Action Line C7: e-Environment
- UN Conference on Climate Change, Bali. 2007, role of ICTs and climate change highlighted.



ITU Strategy

- Objective 1: Develop a knowledge base and repository on the relationship between ICTs and Climate Change
- Objective 2: Position ITU as a strategic leader on ICTS and Climate Change

ITU Strategy

- Objective 3: Promote a global understanding of the relationship between ICTs and Climate Change through international fora and agreements
- Objective 4: Achieve a climate-neutral ITU within three years

Implementation

■ Strategy involves activities within the three main ITU Sectors:

- ITU-D (Development)
- ITU-R (Radiocommunications)
- ITU-T (Standardization)
- General Secretariat

- Engagement with the UN System
- Engagement with the international community, including
- governments, private sector, academia, the indigenous
- community, NGOs and everyone concerned with climate
- change issues



ITU Council 2008 and Climate Change

- High Level Segment (HLS) of the ITU Council 2008, from 12 to 13 November 2008 at ITU Headquarters in Geneva

Themes:

- ✓ ICTs and Climate Change (including emergency communications for disaster relief and prevention).
- ✓ Cybersecurity.

Past ITU events on Climate Change:

ITU responds to industry call to accelerate work on cleaner and greener environment

New group to focus on the impact of ICT and climate change

- ITU-T meeting in December 2007 recommended the holding in the first half of 2008 of two symposia on ICTs and Climate Change
- 15 – 16 April 2008, Kobe, Japan in conjunction with the Ministry of International Affairs and Communications, Japan, Symposium on ICTs and Climate Change
- 17 – 18 June 2008, London, England, in conjunction with British Telecom, Symposium on ICTs and Climate Change

ICT and Climate Change: ITU Background Report

- **Five Main Areas**
- **1) Climate Change and the impact of ICTs**
- Recognition of natural (solar radiation, volcanic activity) and man-made (Greenhouse gases) causes of climate change
- ICT sector contributes approx. 2.5 per cent of GHGs
- ICT sector is still growing rapidly
- ICTs contribute through a proliferation of ICT user devices which need power and radiate energy
- Users now own several devices

■ 2) ICT use in Monitoring Climate Change

- The science of climate change has benefited from ICT development including:
 - Radio and telecommunication technologies, standards and equipment for weather and climate monitoring, e.g. in predicting, detecting and mitigating the effects of typhoons, tsunamis, earthquakes, etc.
 - Use of radiofrequency bands for meteorological and related environmental operations and research and for disaster management
 - World Meteorological Congress in May 2007 appealed to the ITU and its Administrations to ensure protection of radio frequencies used in their activities
 - The World Weather Watch relies heavily on ICTs for its earth observation and meteorological activities

▪ **3) Mitigating the Impact of ICTs on Climate Change**

- Key to combating global warming is to stabilize and eventually reduce emissions of Greenhouse Gases
- Reducing carbon emissions require lifestyle and behaviour changes and in relation to ICTs this can be done in three ways:
 - a) Directly by reducing the ICT sector's own energy requirements. ITU has focused on Next Generation Networks which are expected to reduce energy consumption by some 40 per cent, when compared to the older Public Switched Telecommunications Networks (PSTNs)
 - b) In a systemic way by providing the technology to implement and monitor carbon reductions in other sectors of the economy

- **3) continued**
- c) **Indirectly** through using ICTs for carbon displacement. Initiative now in place in Europe by telephone operators to reduce carbon emissions mainly by reducing the need for travel by using ICT facilities, flexible working patterns and promoting sustainable consumption and development through “dematerialization” (replacing atoms with bits. Dematerialization is achieved, for example, through online phone billing (save on paper bills), online submission of tax forms, e-commerce to reduce shopping trips and use of IPTV to reduce trips to the Video/DVD store

4) Using ICTs to reduce Greenhouse Gas Emissions

- Although ICTs account for 2.5 per cent of total greenhouse gas emissions, they have the capacity of being used in reducing the other 97.5 in other sectors of the economy. Studies have been carried out to show these possibilities and these include

Related studies

- **“Saving the Planet at the Speed of Light”** emanated from the WSIS and was carried out in 2007 by the European Telecommunications Network Operators and the World Wide Fund for nature, is designed to show how ICTs can be used to displace carbon emissions within the EU
- **“Towards a high-bandwidth, low carbon future”** carried out in 2007 by Climate Risk Pty on behalf of the Australian carrier Telstra identified telecoms-based opportunities for carbon abatement

- **“Impact of ICT on Global Emissions”**
carried out in 2007 by McKinsey on behalf of the Climate Group and GeSL identifies carbon abatement opportunities in 15 different areas generating a total of 12.4 Gigatonnes of CO₂ equivalent in areas such as smart buildings, industrial motor optimization and efficient logistics and supply chain management, areas offering the best commercial opportunities for telephone companies

5) ICTs for Adapting to the Local Effects of Climate Change

- There are predictions for the continued negative effects of global warming for some time to come
- ITU Plenipotentiary Conference in 2006 adopted Resolution 136 calling on the ITU management to continue technical studies and support the development of early-warning, mitigation and relief systems
- ITU has responded in several ways including
 - a) the assignment of a special country code (888) to the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) for facilitating the provision of an international system of naming and addressing for terminals involved in disaster relief activities

b) ITU Global Forum on Effective Use of Telecommunications/ICT for Disaster Management: Saving Lives

- ITU, Geneva, December 2007 – governments, private sector, NGOs met in order to develop strategies, adopt concrete measures aimed at giving ICTs a central role in all phases of disaster management, early warning, preparedness, relief and response
- ITU launched a major emergency telecommunications/ICT initiative – ITU Framework for Cooperation in Emergencies (IFCE)
- ITU signed partnership agreements and MOUs

Implications of ICTs and climate change for developing countries

- All countries can respond to climate change by a process of adaptation to its impacts and by reducing GHG emissions (mitigation) thereby reducing rate and magnitude of climate change
- The capacity to adapt and mitigate is dependent on socio-economic and environmental circumstances and availability of ICTs
- Many countries have limited capacity to make beneficial use of ICTs for environmental action:
 - Limited access to Internet
 - Limited human capacity to analyze and interpret climate change data
 - Limited capacity to integrate scientific data into decision and policy making
 - Limited capacity to undertake adaptation and mitigation

Conclusions

- ICTs can have both negative and positive effects on climate change
- Climate change is a matter of concern to everyone and in this regard the ITU is actively pursuing its mandate
- ITU will be making every effort to ensure the positive role of ICTs and all ITU sectors are involved
- The ITU is prepared to work with all stakeholders and is continually seeking to develop partnerships
- There is a need to assign the environment a more important profile in strategic planning initiatives at the national level and, in particular, in e-government initiatives so that the use of ICTs for the environment is integrated into planning processes from the beginning, along with other national priorities and initiatives (including the disposal of ICT equipment, devices, accessories)

More Information

- ITU Climate Change
 - www.itu.int/climate/
- ITU-D e-Environment home page
 - www.itu.int/ITU-D/cyb/app/e-env.html