ITU-WIPO Side Event on: "The Effective Use of Information and Communication Technologies (ICTs) and the Intellectual Property (IP) System for Mitigating Climate Change"

Using ICTs to Tackle Climate Change and Environmental Challenges

Cristina Bueti
Programme Coordinator, ITU

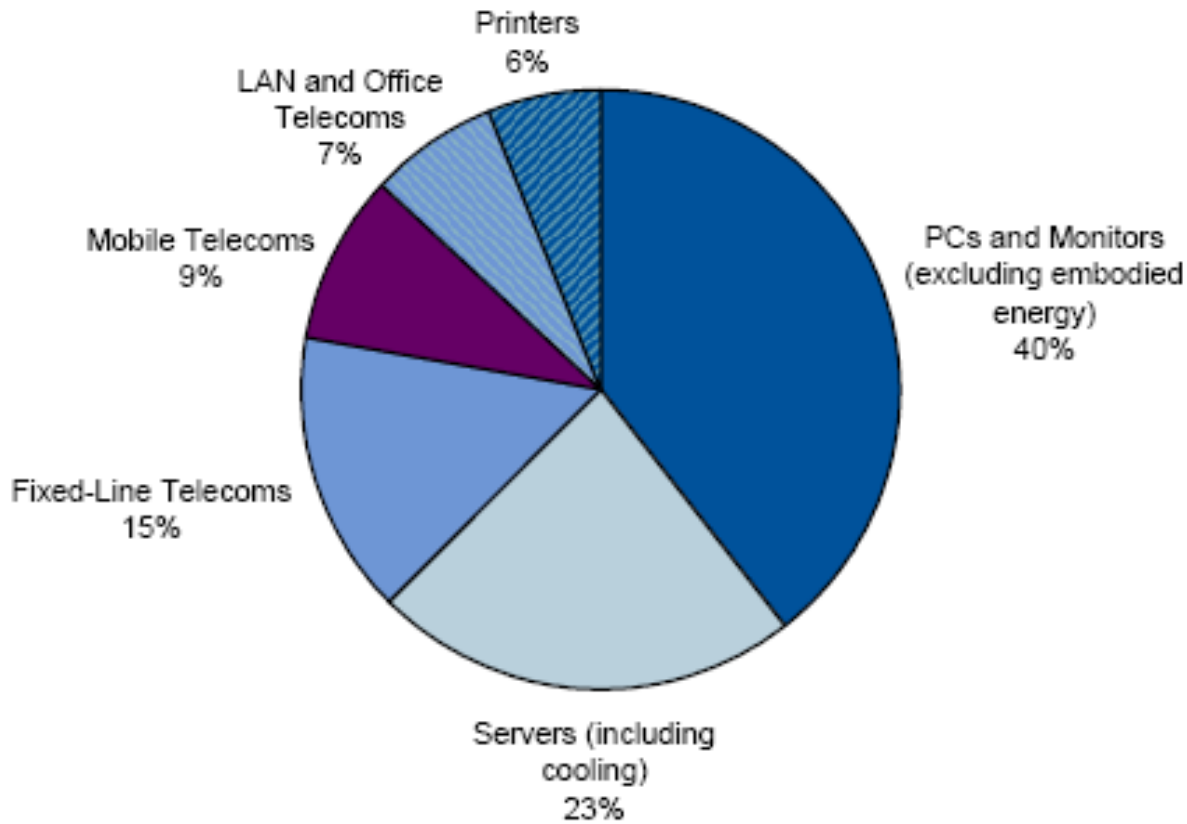Committed to connecting the world

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ITU in brief

- ITU is the leading UN agency for information and communication technologies (ICTs).

- Oldest UN agency – 144 years old

- Central role in Connecting the World

- Organized in three Sectors:

    ➢ **Radiocommunication**

    ➢ **Standardization**

    ➢ **Development**

- ITU is based in Geneva, Switzerland, with 192 Member States and >700 Sector Members and Associates.

- 760 staff, from 80 nationalities.

- Worldwide & regional exhibitions – TELECOM events

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ITU International Telecommunication Union

Why ICTs Matter

Source: Gartner Group

- ICTs (excluding broadcasting) contribute an estimated 2-3% of global Greenhouse Gas emissions

- Around 0.9 ton $GtCO_2e$ in 2007

- Telecoms contribute around one quarter of this total

- Airplanes and shipping about 3% each

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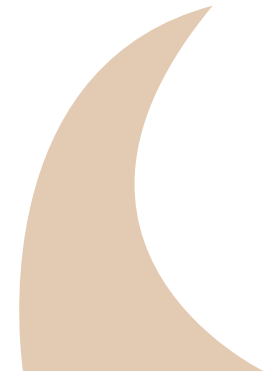# ICTs can support the key areas of the Bali Action Plan

Shared vision

Mitigation of climate change

Adaptation

Technology development and transfer

Capacity Building

UN identified "it's critical"

"Climate Change is a global challenge that the world cannot lose."

Dr Hamadoun I. Touré
ITU Secretary-General, 13 November 2008

"Climate change is the defining challenge of our era.

ITU's work to cut greenhouse gas emissions, develop standards and use 'e-environment' systems can speed up the global shift to a low-carbon economy.

Ban Ki-moon

United Nations Secretary-General, 12 November 2008

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Importance further identified at top level

- Resolution 747 (WRC-07) "Radiocommunications use for Earth observation applications"
- World Telecommunication Standardization Assembly (WTSA)-08, Resolution 73, resolves that CC is a high priority in ITU
- World Telecommunication Policy Forum (WTPF) (April 2009), Opinion 3, instructs promotion of Res. 73.
- Global Standards Collaboration (GSC)-14 (July 2009), Resolution, encourages related collaboration, etc.
- ITU Council (Oct. 2009), Resolution 1307, unanimously decided its importance and active participation in United Nations Framework Convention on Climate Change (UNFCCC) including Conference of Parties (COP)
- World Telecommunication Development Conference (WTDC)-10 (June 2010), Resolution on ICTs and CC, resolves to include, as a priority, assistance to developing countries in strengthening their human and institutional capacity in tackling ICTs and climate change

Mitigation

- Reducing energy consumption
- The promotion of Next Generation Networks (reducing power consumption by up to 40%)
- Standards and Plan for switchover from analogue to digital broadcasting – reduction transmitter consumption ~10 time
- ICT as key enabler to reduce emissions in other sectors (Transport, Building, etc..)
- Recycling, e-waste, lifecycle analysis
- All new standards are now checked for energy efficiency
- New Study Group on Environment and Climate Change

ITU-T created Study Group "Environment & Climate Change"

- ITU-T Study Group 5 (April 2009)

  - New Working Party (WP3): "ICT and Climate Change"

  - Continuing and expanding the work of ITU-T Focus Group on ICT and CC

  - **Next meeting:** 23 November-01 December 2010 (SG5 meeting)

- All ITU-T study groups to examine impact of recommendations on climate change

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Methodology

- Common methodology for measuring ICT carbon footprint
- Without, it will be impossible to provide meaningful comparisons
- Helps to establish the business case to go green
- Over 40 organisations participate in the ITU group

ITU-T established Joint Coordination Activity (JCA)

- Objectives:

  - to co-ordinate across ITU study groups

  - to seek co-operation from external bodies including non-ITU member organizations

  - **Recent Meeting** held during the ITU-T SG5 Rapporteur meeting in Rome (27 Sept. - 1 Oct. 2010)

Standard for a universal charger for mobile phones

- "Universal power adapter and charger solution for mobile terminals and other ICT devices" (ITU-T Recommendation L.1000)
  - specifies general requirements
  - covers charger for mobile phones

- Future version will cover other ICT devices

ITU's universal charger standard

Instead of this ...   **... have this:**

**Recommendation L.1000
Approved March 2010**

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New Technology

- Identifying priority sectors where ICTs can reduce emissions
  - ➤ Smart grid (new Focus Group)
  - ➤ Smart buildings
  - ➤ Intelligent transport systems
  - ➤ Remote working technologies
  - ➤ Sensor-based networks

Adaptation

- Support to get telecoms up and running after disasters
  - Recent examples Pakistan, Haiti and Chile
- E-Environment Toolkit will help countries to assess the contribution that ICTs can make to reduce GHG emissions
- New Question

  - ITU-D **SG2**, **Q24/2**: ICT and Climate Change

EARTHQUAKE | CHILE

Blackberry Messenger helps Chileans connect

BY JAVIERA QUIROGA
MIAMI HERALD AND EL NUEVO HERALD STAFF

The 8.8 earthquake that struck Chile Saturday left Chileans in South Florida cut off from their loved ones back home, and travelers en route to Santiago stranded in airports.

Two flights from LAN Airlines that departed from Miami Friday night were forced to land at the Iquique airport and also in Lima, Peru.

Saturday morning's flight to Santiago was canceled and the status of the night flights has not been determined, sources at LAN Airlines said.

People look through the rubble of a home in Santiago Chile in this image from APTN following an earthquake early Saturday morning Feb. 27, 2010. (AP

With downed powerlines in Chile, BlackBerry Messenger seemed to be the only effective method of communication. Other technologies such as Tweeting and Facebooking had frustrating results.

BlackBerry Messenger, also known as BBM, is an instant messenger application that allows BlackBerry users to text and send photographs.

"I tried reaching my family through Skype and via telephone for hours, but it was impossible and I gave up. I could talk to all of them through BlackBerry Messenger", said Cristián Gleboff, 30, resident of Miami.

The U.S. State Department is helping U.S. citizens connect with their loved ones in Chile at 1-888- 407-4747.
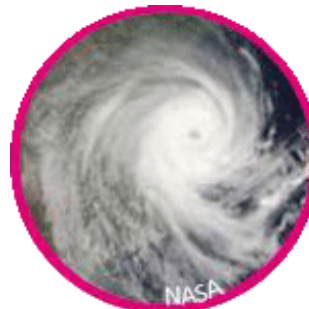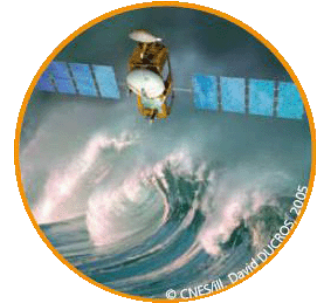
Google is also helping Chileans connect: Click here to view the person finder application.

UStream is publishing live reports and helping people connect via social networks: Click here to view the

Climate Monitoring

As the steward of the global framework for spectrum, ITU-R:

- Provides radio-frequency spectrum and satellite orbits for applications (space and terrestrial) employed in climate monitoring and climate change prediction

- Develops international treaty level standards for non-interference operation of radiocommunication systems involved in climate monitoring and mitigation of negative impact of climate change

- Carries out studies (through ITU-R Study Groups) for development of new wireless technologies

- Develops World-wide standards (ITU-R Recommendations)

- Facilitates the introduction and operation of modern radio technologies and systems with low-energy consumption

- Assists administrations in implementing radio systems by analyzing compatibility between new and existing systems

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Built knowledge and promoted visibility

- TECHWATCH Reports on CC and positive impact of new technologies
  - Next Generation Networks, Intelligent Transport Systems, etc.

- Major Symposia on ICTs and Climate Change
  - 2008: Kyoto and London
  - 2009: Quito and Seoul (virtual event)
  - 2010: Egypt

- ITU pioneering energy efficient work methods
  - Paperless meetings, on-line work tools, virtual symposia

- ITU providing secretariat to the Dynamic Coalition on Internet and Climate Change as part of the Internet Governance Forum

Raising Awareness-
Upcoming event need your support

- **5th ITU Symposium on ICTs and the Environment & Climate Change** (2-3 November 2010, Cairo, Egypt) **New**
  - ➤ Topics include: adaptation, e-waste, methodology of impact assessment...
  - ➤ The "Cairo Road Map", will be issued-
    - a set of recommendations for action on ICT, the Environment and Climate Change.

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ITU and UN Delivering As One on Climate Change

- ITU is contributing to the effort of the UN system to "deliver as one" to address climate change and is taking necessary steps to deepen the global understanding of the relation between ICTs and climate change.
  - Read the Report: "Acting on Climate Change: The UN System Delivering as One"
  - ITU is co-facilitator in issues related to WSIS Action Line C7: e-environment
- Side events and press conference with Mr. Ban Ki-moon, UN Secretary-General at COP-15 Copenhagen in December 2009
- Ongoing Collaboration with UNFCCC, UNEP, WIPO, WMO and UNIDO
- On 5 June 2010, ITU together with UNEP and other partners celebrated the **World Environment Day**
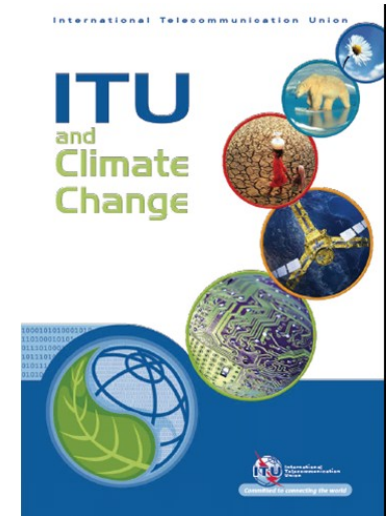
ITU @ UNFCCC

- Ongoing role in UNFCCC process
  - Promoting the role of ICTs in reducing GHGs
  - Providing technical assistance to developing countries
  - Innovation and the transfer and dissemination of technologies, including ICTs, is key to both mitigation and adaptation.
  - Standards are essential for the wide adoption of new technologies anywhere in the world.

"We invite UNFCCC delegates to consider the inclusion of ICTs in the negotiating text as a major linchpin to tackle climate change"

Related Links

- ITU and climate change
  http://www.itu.int/themes/climate/
- ITU-T and climate change
  http://www.itu.int/ITU-T/climatechange/
- ITU-R and climate change
  http://www.itu.int/ITU-R/index.asp?category=information&rlink=climate-change&lang=en
- ITU-D and climate change
  http://www.itu.int/ITU-D/cyb/app/e-env.html
- ITU-T Study Group 5
  http://www.itu.int/ITU-T/studygroups/com05/index.asp
- ITU events on climate change:
  http://www.itu.int/themes/climate/meetings.html

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