

ITU and Climate Change



Side Event
Climate Change

Ewan Sutherland
Telecommunication Standardization Policy Division (SPD)

Agenda

- ❑ Global Framework
- ❑ ICTs are:
 - a cause of global warming
 - used in monitoring climate change
 - used for mitigating of climate change
 - used for adaptation to climate change
- ❑ ITU and Climate Change



GLOBAL FRAMEWORK

- ❑ **1992 Framework Convention on Climate Change**
 - <http://unfccc.int/>

- ❑ **1997 Kyoto Protocol was adopted at COP-3**
 - while the Convention encouraged developed countries to stabilize GHG emissions, the Protocol **commits** them to do so

- ❑ **2001 Detailed implementation rules adopted at COP-7 in Marrakesh**
 - Annex I (developed countries) to reduce GHG emissions in period 2008-12; a reduction of 5% against a 1990 baseline:
 - aviation and shipping were excluded
 - Annex II (developing countries) to monitor and report GHG emissions

- ❑ **Protocol established Clean Development Mechanism (CDM)**
 - allows parties to earn and trade emission credits through projects either in developed or developing countries



GLOBAL FRAMEWORK

- ❑ **2005** Kyoto Protocol came into effect for 177 countries
- ❑ **2007** Fourth Assessment Report of IPCC
 - unequivocal link between GHG emission and climate change
 - GHG emissions continue to grow as world continues to industrialize
- ❑ **2012** End of the Kyoto Protocol commitment period
 - a new framework is needed to deliver the stringent emission reductions the IPCC insists are needed



TOWARD A NEW FRAMEWORK

2007 COP-13 in Bali launched process for negotiation of new Agreement

- established **AWGLCA** (Ad Hoc Working Group on Long Term Cooperative Action) to develop the work programme

2008 AWGLCA meetings:

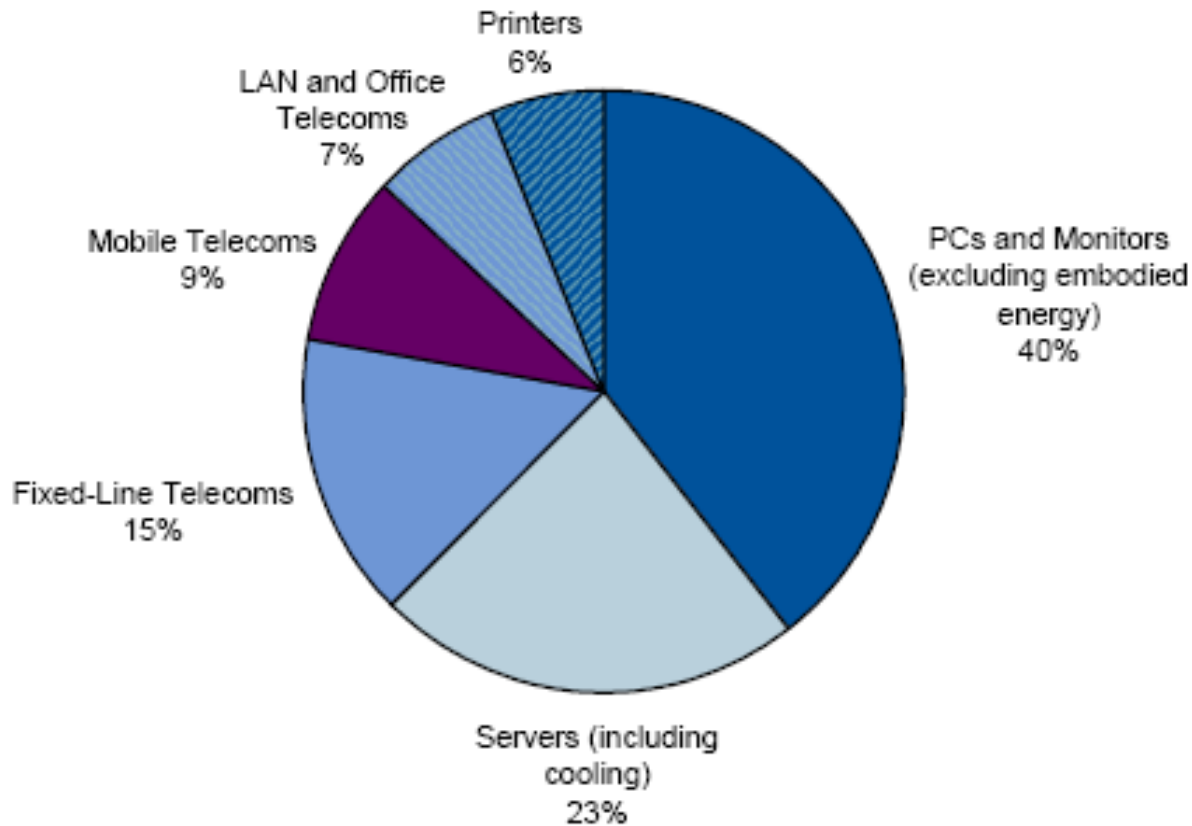
- **Bangkok (31 March–4 April)**
- **Bonn (2-13 June)**
- **Accra (21-27 August)**
 - focus of the work programme to be adaptation, mitigation, technology transfer and financing, plus deforestation
 - continuation of the Kyoto Protocol carbon market-based mechanisms under a new Agreement
- **Meeting of COP-14 - Poznan, Poland (1-12 December)**

2009 COP-15 is expected to conclude a new agreement

- **Copenhagen (December)**



TOWARD A NEW FRAMEWORK



- ICTs (excluding broadcasting) contribute 2-2.5% of global GHG emissions
- Around 0.9 tonnes GtCO₂e in 2007
- Telecoms contributed around one quarter of this



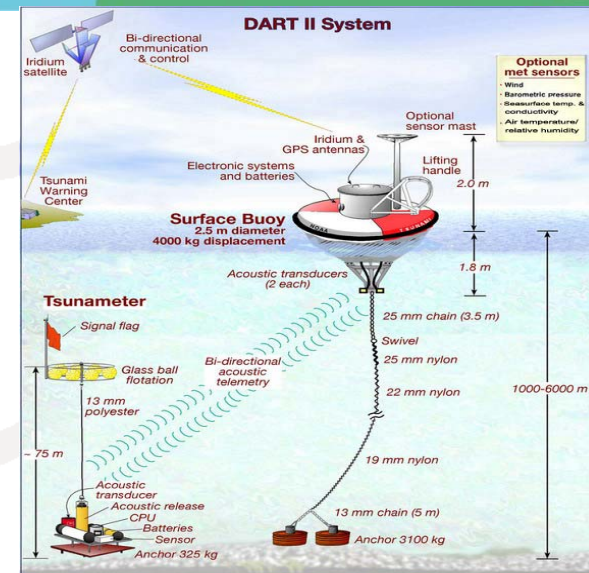
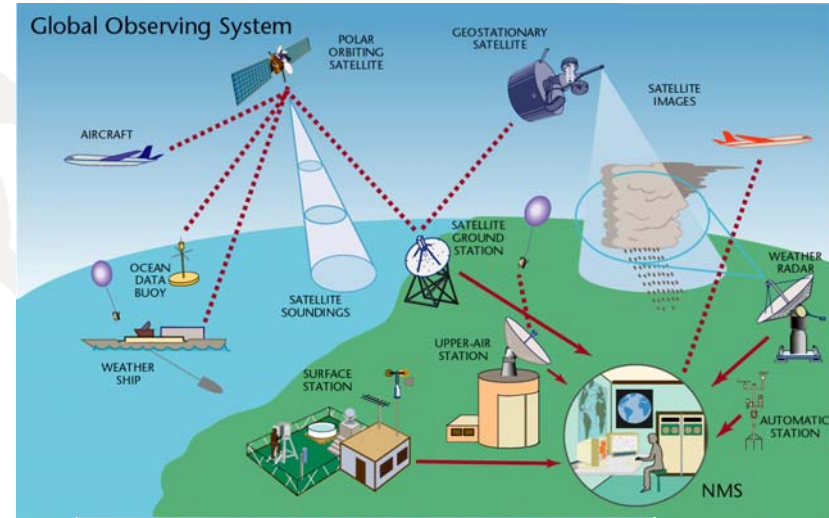
Source: Gartner Group (2007).

WTSA-08, Johannesburg, South Africa, 21-30 October 2008



Monitoring climate change

- ❑ WMO World Weather Watch:
 - Global Observing system
 - Global Telecom System
 - Global Data Processing system
- ❑ Remote sensing
- ❑ Environmental monitoring:
 - Tsunami early-warning
- ❑ Digital climate forecasting models
- ❑ GPS-enabled telemetry
- ❑ Ubiquitous sensor networks



Mitigating the effects

- ❑ **Directly**, e.g., through energy-saving:
 - NGNs can reduce network GHG emissions by 40% ([Tech Watch Report #7](#))
 - Modern radio technologies reduce energy consumption by transmitters by ~10 times
- ❑ **Indirectly**, e.g., carbon abatement:
 - Reducing business travel in Europe by 1%, through use of videoconferencing, would save 1m tonnes CO₂
- ❑ **Systemically**, e.g., by “dematerialisation”:
 - Eliminating paper directories and telephone bills
 - Intelligent Transport Systems could reduce vehicle carbon emissions to below 130g per km ([Tech Watch Report #8](#))



Towards a climate neutral ICT sector

- ❑ BT has reduced carbon emissions by 60% compared to 1996
- ❑ ETNO Members have reduced carbon emissions by 7% and carbon intensity by 14%
- ❑ NTT's "Total Power Revolution" saved 124m kWh in 2007
- ❑ Other initiatives:
 - EU codes of conduct
 - FTTH Council Europe
 - Global e-Sustainability Initiative (GeSI)
 - Green Grid
 - GSMA Green Power
 - WattWatt



Carbon abatement & displacement

- ❑ Reducing/substituting for travel:
 - In 2007, Telstra held 7,500 video conferences saving 4,200 tonnes of CO₂
- ❑ Flexible work arrangements:
 - Each EU worker could save one tonne of CO₂ annually by telecommuting
- ❑ Intelligent Transport Systems (ITS):
 - In-car systems to assist in “eco-driving” can reduce CO₂ emissions by up to 20 per cent ([Tech Watch Report #8](#))
- ❑ Dematerialization (replacing atoms with bits):
 - ITU-T Recommendations on-line saves 105 tonnes of CO₂ annually in the distribution of paper



Sources: Climate Risk report for Telstra, ETNO/WWF report, Toyota & ITU.



Adaptation: disaster preparedness

- ❑ Tampere Convention
- ❑ PP-06 Resolutions 36 and 136 on the use ICTs for humanitarian assistance
- ❑ WRC Resolutions 646, 647 and 673 on use of radiocommunications for environmental monitoring, public protection and disaster relief
- ❑ WTDC-06 Resolution 34 on the role of ICTs in mitigation of the effects of disasters and in humanitarian assistance
- ❑ Partnership Coordination Panel on Telecoms for Disaster Relief (PCP-TDR)
- ❑ E.164 country code (888) for UN Office for the Coordination of Humanitarian Affairs (OCHA)
- ❑ Recommendations E.106 on call priority and X.1303 on common alerting protocol



Towards a climate-neutral ITU

- ❑ Developing a knowledge base and repository
- ❑ Positioning ITU as a strategic leader
- ❑ Promoting a global understanding through international fora and agreements
- ❑ Achieving a climate-neutral ITU within three years:
 - conducting carbon audit
 - using remote collaboration tools
 - developing projects under the Carbon Development Mechanism



Symposia

- ❑ 15-16 April 2008 (Kyoto, Japan)
 - organized with Japanese government
- ❑ 17-18 June 2008 (London)
 - organized with BT
- ❑ Well-attended
- ❑ [Chairman's reports](#) published
- ❑ Recognition of the need for common standards to measure the effects of ICTs on climate change
- ❑ More events planned for 2009



Focus Group on ICTs &CC

- ❑ Established by TSAG in July 2008
- ❑ David Faulkner (BT) appointed as Chairman
- ❑ 4 deliverables expected by April 2009
- ❑ First meeting in September in Geneva
- ❑ Next meeting 25-28 November 2008
- ❑ Working mainly through conference calls

<http://www.itu.int/ITU-T/focusgroups/climate/index.html>



FG: Deliverables

1. Terms and Definitions
2. Gap Analysis
 - Identify energy saving measure from ICTs
 - What measures need to be standardized?
 - Roadmap for future work?
3. Methodology:
 - Definition of basic units
 - Calculation of emission reductions
 - Proposal(s) for new standard(s)
4. Direct and indirect effects of ITU-standards:
 - Develop tools and guidelines to allow ITU-T Study Groups to evaluate effects of CO₂E of each question

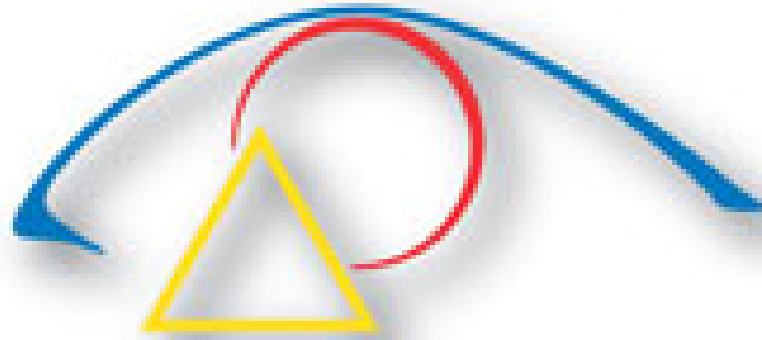


Focus Group

- ❑ Management Committee established
- ❑ 3 Working Groups organized
- ❑ Calendar of work established
- ❑ Liaison with other sectors and groups:
 - OECD
 - GeSI
 - IEC
 - ISO
- ❑ Contributions being actively sought



Some Background Materials



ITU Climate Change site

www.itu.int/climate

Climate Change symposia website

www.itu.int/ITU-T/climatechange

Technology Watch Briefing Reports

www.itu.int/ITU-T/techwatch/reports.html



Thank you

**International
Telecommunication
Union**

[<itu.int/climate>](http://itu.int/climate)



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