**ITU/MIC Kyoto Symposium on ICTs and Climate Change
15-16 April 2008**

Chairman's Report (Final, 24 April)

1   The issue of global warming needs to be tackled from a global perspective, because its impact affects the entire planet and it is growing more serious every year. Estimates from the Intergovernmental Panel on Climate Change (IPCC) showed that global greenhouse gas (GHG) emissions, the primary cause of global warming, have risen by 70 per cent since 1970. In Kyoto, in December 1997, the world took concrete steps to mitigate global warming with an international agreement to limit and reduce GHG emissions. The first commitment period set out in the Kyoto Protocol began in 2008. In the intervening decade, the number of users of information and communication technologies (ICTs) worldwide has tripled. Kyoto is therefore the best place to launch a new work programme aimed at investigating the role that ICTs play in causing global warming, but also in monitoring, mitigating and adapting to climate change. The timing of this symposium is also highly appropriate because global measures under discussion at the symposium can be forwarded for appropriate action at the G8 Summit, to be held at Lake Toya, Hokkaido Prefecture in July 2008 and at other relevant occasions.

2   On this basis, the International Telecommunication Union (ITU) and the Ministry of Internal Affairs and Communications (MIC) of the government of Japan co-organized the Kyoto Symposium on ICTs and Climate Change, at the Kyoto International Conference Centre, on April 15 - 16, 2008. The symposium was chaired by Mr. Takahashi Hanazawa of Senior Vice President and Director of R&D Planning Dept, Nippon Telegraph and Telephone Corporation (NTT) with approximately 260 participants, including those participating remotely, drawn from a wide range of organizations including the private sector, research institutes, international organizations and governments.

3   The Symposium had six substantive sessions: "Climate change: ICTs to the rescue?", "Corporate responsibility: Towards a climate-neutral ICT Sector", "ICTs for monitoring climate change", "ICTs as a clean technology", "Towards a high-bandwidth, low carbon future" and "Adapting to climate change".

4   In these sessions, it was recognised that the following aspects are vital to realizing a climate-neutral, low-carbon-emission information society through the use of ICTs.

5   Climate change: ICTs to the rescue?
  5.1   The ICT sector is experiencing rapid growth.
  5.2   It is noted that the use of ICTs can help reduce GHG emissions indirectly through their application in other sectors of the economy, whereas the reduction of GHG emissions of ICT itself is also noted for careful consideration.
  5.3   To promote the best use of ICTs, the following points were recognised:
  • the positive economic benefits for the ICT sector that can be gained through an environmentally-friendly approach to business;
  • the need for exchange of views/information on policy development at national, regional, and global levels;
  • the establishment of common approaches at the international levels to evaluate CO_2 emissions;
  • the development of policies to create an appropriate incentive mechanism; and
  • the importance of awareness and pro-environmental behaviour of individual ICT users.

6   Corporate responsibility: Towards a climate-neutral ICT Sector
  6.1   Each country should promote initiatives toward energy-saving for ICT equipment and systems and

encourage the adoption and use of energy-saving.

    6.2   There is also a corporate responsibility to achieve climate-neutral status, in which public-private partnership is essential. Creating the right environment, with appropriate incentives, is an important part of this process. To get this process moving, the following points were recognised:

- a positive outlook on environmental issues: not as a cost but as a business opportunity; and
- respect should be given to Corporate Social Responsibility (CSR) and increased awareness among company executives.

7   ICTs for monitoring climate change

    7.1   ICTs play a vital role in monitoring and addressing climate change by exploiting the experiences of basic science which has helped bring the issue of global warming into the public domain and to raise awareness of future challenges.

    7.2   ICTs—used for instance in remote sensing, climate forecasting and environmental monitoring—can also help in mitigating and adapting to climate change.

    7.3   To promote remote sensing utilizing ICTs, the following points were recognised:

- a cooperative relationship including the private sector at the international level;
- the efficient use of spectrum; and
- the greater use of observational data and a focus on efficient ways to distribute information such as disaster warnings.

8   ICTs as a clean technology

    8.1   Each country should consider promoting the use of e-government from national to local level, as well as the implementation and adoption of ICTs in various social systems, such as medical care, education, business and employment support system, in order to achieve a further reduction of GHGs through the use of ICTs.

    8.2   ICTs can also be used by companies and individuals, for instance to substitute for travel, or for "dematerialization" of goods and services by replacing transport of "atoms" by the transport of "bits".

    8.3   From the viewpoint of ICTs as the means of helping developing countries, the importance of establishing monitoring systems, using ICTs, to forecast and monitor the impact of natural and man-made disasters is recognised.

    8.4   Strengthening the capacity of developing countries to use ICTs for sustainable development is acknowledged.

9   Towards a high-bandwidth, low carbon future

    9.1   ITU should take the initiatives that may be required for energy-saving systems and applications where there is a requirement for standardization and the development of ITU Recommendations.

    9.2   The positive benefits of ICTs with respect to climate change should be actively promoted to other sectors of the economy.

    9.3   ITU should also work on the standardization of methodologies for the analysis, evaluation and quantification of the GHG reductions that may be achieved through the use of ICTs. It was proposed that ITU-T establish a Focus Group, open to non-members. The Focus Group can be an appropriate place to discuss the role of ITU-T toward a reduction in GHG emissions to be achieved through the implementation of ITU Recommendations.

    9.4   Energy Saving measures are imperative in the development of ICTs, specifically for next-generation networks, both wired and wireless, and for terminals and network infrastructure.

    9.5   The possibility of applying the Clean Development Mechanism (CDM) under the Kyoto Protocol to assist developing countries in making GHG reductions using ICTs could be studied.

10   Adapting to climate change

    10.1   ITU should assist countries, particularly developing ones, and should show how ICTs can help with disaster-preparedness against the risks associated with climate change, for instance in rising sea-levels, extreme weather conditions, droughts etc.

    10.2   The following issues were recognised as being of importance for adaptation:

- disaster preparedness;

- actions on food insecurity;
- use of remote sensing;
- assistance to rural communities; and
- coordinated actions to assist the most vulnerable countries.

11 Based on this analysis, we recognize the vitally important role that ICTs can play in developing a coherent global response to the challenge of climate change.

12 This chairman's report will be forwarded to the London Symposium on ICTs and Climate Change (17-18 June 2008)), which is expected to build upon the outcome of this symposium, as a step towards preparing for the ITU World Telecommunications Standardization Assembly (WTSA-08), to be held in Johannesburg in October 2008. At the Assembly, a draft Resolution on ICTs and climate change, as well as specific study questions on standardization, for the next study period (2009-2012) will be discussed, based on contributions from the ITU membership.

13 Based on this understanding, we confidently expect that the importance of efforts to use ICTs in combating climate change will be further recognized at other relevant meetings in the future, including the London symposium, the APEC TelMin meeting, the OECD Ministerial Meeting, to be held in Seoul in June 2008, and the G8 Summit.