During his visit to ITU headquarters (June 2007), the United Nations Secretary-General, Mr. Ban Ki-moon remarked that "ITU is one of the most important stakeholders in terms of climate change". ITU will join in the efforts of the UN system to "deliver as one" to address climate change and will act to deepen the global understanding of the relation betwen ICTs and climate change. United Nations Secretary-General also described climate change as the "moral challenge of our generation".

### **ICT AS A CLEAN TECHNOLOGY**

ITU Regional Radiocommunication Conference 2006 (RRC-06) involved 120 countries, and developed a new digital broadcasting Plan GE06 which envisages significant reduction (by almost 10 times) of transmitter power and reduction of the number of transmitters (due to the possibility of transmitting several TV and sound programmes in one channel). Taking into account that there are roughly one hundred thousands transmitters in these countries with power of up to 100-150 kW each, most of them operating 24 hours a day the energy savings will be very important!

ITU-R Study Group 5 has developed the <u>ITU-R "Intelligent Transport System" -</u> <u>Handbook on Land Mobile (including wireless), Volume 4</u>, which describes the use of radio technologies for minimizing transportation distances and cost with the positive effect on environment and on the use of cars as an environment monitoring tool to measure air temperature, humidity, precipitation, with data sent through wireless links for weather forecasting and climate control.

Committed to connecting the world

### **MONITORING CLIMATE CHANGE**

<u>World Radiocommunication Conferences (WRCs)</u> analyze spectrum requirements and allocate radio frequency spectrum for radiocommunication systems and radio based applications employed for environment and climate monitoring including weather forecasting, natural disaster prediction, detection and mitigation.

ITU-R Study Groups, decisions of the Radiocommunication Assemblies and the treaty status decisions of the World Radiocommunication Conferences provide necessary support for the development and operation of different systems involved in climate monitoring, weather and disaster prediction, detection and relief such as:

- weather satellites that track the progress of hurricanes and typhoons and weather radars for tracking tornadoes, thunderstorms, and the effluent from volcanoes and major forest fires;

-radio-based meteorological aid systems that collect and process weather data;

- different radiocommunication systems (satellite and terrestrial) used for dissemination of information concerning different natural and man-made disasters.



#### **MONITORING CLIMATE CHANGE (continued)**

- <u>WRC-07</u> and <u>Radiocommunication Assembly (RA-07)</u> adopted a number of Resolutions on studies related to remote-sensing, which is a vital component in the science of climate change.

- <u>ITU-R Recommendations</u> on radiocommunication systems and radio-based applications operating in Earth-exploration satellite, meteorological-aids and meteorological satellite services, today provide most of data for the Global Observing System (GOS) and Global Climate Observing System (GCOS).

 <u>ITU-R Study Group 7 (Science services)</u> in cooperation with the World Meteorological Organization produced WMO and <u>ITU Handbook "Use of Radio Spectrum for</u> <u>Meteorology"</u> providing information on development and a proper use radiocommunication systems and radio-based technologies for environment observation, climate control, weather forecasting and natural and man-made disaster prediction, detection and mitigation.



### **ADAPTATION**

WRC-07:

- analyzed the results of ITU-R studies and proposals of ITU Member States and allocated additional spectrum for radiocommunication systems involved in climate monitoring and disaster prediction, detection and relief.

- invited ITU to carry out studies to carry out studies related to further development of these systems.

-adopted Resolution 647 (WRC-07) "Spectrum management guidelines for emergency and disaster relief radiocommunication" requesting the BR to establish a database of currently available frequencies for use in emergency situations, which are not limited to those listed in Resolution 646 (WRC-03).

This Resolution also urges administrations to provide the relevant up to date information concerning their national frequency allocations and spectrum management practices for emergency and disaster relief radiocommunications operations.



### **ADAPTATION** (continued)

RA-07: approved Resolutions ITU-R 53 and 55 instructing all ITU-R Study Groups to carry out studies on the use of radiocommunication in disaster prediction, detection, response, mitigation and relief.

#### **MITIGATION**

In many cases, when disaster strikes the "wired" telecommunication infrastructure is significantly or completely destroyed and only radiocommunication services can be employed for disaster relief operation (especially radio amateurs and satellite systems). ITU-R's Study Groups have developed Recommendations, Reports and Handbooks related to the use of radiocommunications for mitigation of negative effects of climate change, natural and man-made disasters.

Mitigation of the negative effects of climate change is another important area of the ITU Radiocommunication Sector activities.

For more information please visit our web site: <a href="http://www.itu.int/ITU-R/go/climate-change/">www.itu.int/ITU-R/go/climate-change/</a>

BR/IAP/EDP (Promotion) - May 2008

