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| Telecommunication Development Bureau (BDT) | Telecommmunication Standardization Bureau (TSB) |
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| Ref.: | **Circular BDT/IP/CSTG-007** | **Circular TSB 202** |
|  |  | Geneva, 6 July 2011 |
|  |  | To:* Administrations of Member States ;
* Observer (Resolution 99);
* ITU-D and ITU-T Sector Members;
* ITU-D and ITU-T Associates in their respective Study Group;
* ITU-D and ITU-T Academia
* Chairmen, Vice-Chairmen, Rapporteurs and Vice-Rapporteurs of ITU-D Study Groups 1 and 2
* Chairmen, Vice-Chairmen of ITU-T Study Group 5
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| **Subject:** | **2011 ITU Survey on ICT and Climate Change** |
| Dear Sir/Madam,Climate change is a reality and it is probably one of the biggest challenges in the history of humankind. Information and Communication Technologies (ICT), such as satellites, mobile phones and the Internet, are essential for addressing the major challenges related with climate change, natural disasters and sustainable development. ICT are fundamental to monitor climate change, mitigate and adapt to its effects, and assist in the transition towards a green economy.We take this opportunity to re-affirm ITU’s commitment to developing an integrated approach for examining the co-relation between ICT and climate change, and to work closely with the international community to help countries in climate change mitigation and adaptation. The contribution that ICT makes to climate change management is immense. Although ICT contribute to climate change, ITU studies show that ICT brings more benefits in combating climate change through the introduction of new technologies that are energy efficient and the beneficial role that ICT can play in combating global warming. ITU-D Study Group 2 Question 24/2 (ICT and Climate Change) and ITU-T Study Group 5 Questions 22/5 (Setting up a low cost sustainable telecommunication infrastructure for rural communications in developing countries) and 23/5 (Using ICTs to enable countries to adapt to climate change) are jointly carrying out this survey on ICT and Climate Change. The survey seeks to gather information on existing policies, practices, technologies and standards concerning ICT and climate change. The survey also aims at identifying key gaps in these areas that need urgent attention in our ongoing efforts to assist communities, in both developed and developing countries, to mitigate and adapt better to climate change. The web-based survey can be accessed at the following address: <http://www.itu.int/ITU-D/CDS/gq/generic/questionnaire.asp?ProjectID=210> We would be grateful if you could fill in the questionnaire online, and submit it to us, not later than **31 August 2011**.Please address all your enquiries and/or questions to: * TSB Counsellor for Study Group 5: Ms Judit Katona Kiss, (tel.: + 41 22 730 5780, e-mail: tsbsg5@itu.int)
* BDT Focal Point for Study Group 2 Question 24/2: Mr Cosmas Zavazava, (tel.: + 41 22 730 5447, e-mail: cosmas.zavazava@itu.int)

The success of this survey depends on the responses that are received from Member States, ITU-D/ITU-T Sector Members, Academia, and Associates. We urge you to take the time to fully respond to the survey and submit your responses before the deadline. We thank you in advance for your cooperation. Yours sincerely, |
| [Original signed]Brahima SanouDirectorTelecommunication Development Bureau | [Original signed]Malcolm JohnsonDirectorTelecommunication Standardization Bureau |
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**2011 ITU SURVEY ON ICT AND CLIMATE CHANGE**

**(related to BDT Circular BDT/IP/CSTG-007/TSB Circular 202)**

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| Answer is mandatory |

**Legend:**

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| **Background**ITU-D assists countries combat climate change challenges using ICTs by promoting access to ICTs and facilitating the mobilization of technical, human and financial resources needed for the implementation of solutions. As noted in the World Telecommunications Development Conference (WTDC-10) Final Report: “Climate change challenges our ability to achieve economic and social objectives to support sustainable development. The adverse effects of climate change are likely to fall disproportionately on developing countries given their limited resources. Telecommunications/ICTs make a valuable contribution to monitoring, mitigating and adapting to climate change. There will continue to be a need to help countries, in particular developing ones, respond to climate change.”In this regard, the work undertaken through ITU-D Study Group 2 Question 24/2, dedicated to “ICT and climate change”, is essential and is of great concern to developing countries, but also to developed countries. This Study Question is closely linked to ITU-D Study Group 2 Question 22-1/2 on” Utilization of telecommunications/ICTs for disaster preparedness, mitigation and response.” Furthermore, ITU-D Study Group 1 Question 24/1, addresses “Strategies and policies for the proper disposal or reuse of telecommunication/ICT waste material.”Whether we exchange voice, data or video messages, communications cannot take place without telecommunication standards linking the sender and the receiver. Today’s work extends well beyond the traditional areas of telephony to encompass a far wider range of information and communications technologies. ITU-T Study Group 5 is responsible for studies on methodologies for evaluating the ICT effects on climate change and publishing guidelines for using ICTs in an eco-friendly way. Under its environmental mandate SG 5 is also responsible for studying design methodologies to reduce environmental effects, for example recycling of ICT facilities and equipment. ITU-T Study Group 5 Question 22/5 tackles “Setting up a low cost sustainable telecommunication infrastructure for rural communications in developing countries” and is closely related to enhancing the use of ICT in climate change adaptation in developing countries. ITU-T Study Group 5 Question 23/5 deals with “Using ICTs to enable countries to adapt to climate change”. Question 23/5 considers ICTs as part of the solution to climate change, in particular by helping both developed and developing countries adapt to the negative effects of climate change using ICT based systems monitoring weather and the environment worldwide.All these Study Group Questions have a common interest in promoting this consolidated Questionnaire and using the results to produce reports on the available policies, technologies and standards in place and to recommend new technologies and standards for further adoption. |
| Please select the name of your Administration/Organization from the list.If it is not available, indicate the name in the field below.

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Country/Country that your organization is based in:

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Contact person:Telephone number:Fax:E-mail address: |
| 1. Does your government (or company) have any policy regarding climate change?

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| Yes No  |

If yes, what is your policy regarding ICT for combating climate change?If no, do you intend to have future plans for implementing a policy regarding ICT? |
| 1. Does your government (or company) have current actions in terms of adaptationto climate change? Note: Adaptation involves taking action to cope with the effects of climate change on a local or country level. ICT can greatly support this action. Examples include remote sensing to gather climate data, dissemination of information such as forecast sea level rise and taking action to minimise the impact such as building on higher ground. ICT infrastructure is already used to warn of natural disasters such as earthquakes and tidal waves. Additional or new ICT infrastructure and services may be needed to help deal with problems such as water and food shortage etc. arising from extreme climate conditions.

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| Yes No  |

If yes, please specify these actions.a) Have you implemented measures to extend the lifespan of ICT equipment?

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| Yes No  |

b) Have you implemented recycling of ICT equipment in your country?

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| Yes No  |

c) Do you have a policy in the management of electronic waste?

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| Yes No  |

If no, do you intend to propose adaptation measures to climate change in the future? |
| 1. Have you estimated the global ICT footprint in your country, in terms of greenhouse gas (GHG) emissions?

Note: ICT global footprint:The ICT industry has for a long time been focused on delivering productivity enhancements in and through its products and solutions. Energy efficiency has only recently become a critical issue: in some countries, energy consumption of ICT is now more than 13%. It is estimated that the ICT industry accounts for approximately 2% of global CO2 emissions.

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| Yes No  |

If yes, what measures are you taking to reduce your GHG ICT footprint?If no, what are your plans for the future? |
| 1. Are you aware of “green” ICT initiative which would provide better design and energy consumption?

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| Yes No  |

If yes, are they: (please explain)a) regional initiatives, please explain the details, and indicate the level of implementation of these initiatives in your country.b) global initiatives, please explain the details, and indicate the level of implementation of these initiatives in your country.If no, what specific aspects of green ICT would you like to learn more about? |
| 1. Are you aware of the so-called rebound effect that would offset the beneficial aspects of green ICT or any ICT consuming less energy?

Note: Rebound effect: The rebound effect (or take–back effect) is well-known in economy and in energy saving. It generally refers to the introduction of new technologies, or other measures taken to reduce resource use: these responses tend to offset the beneficial effects of the new technology or other measures taken. While the literature on the rebound effect generally focuses on the effect of technological improvements on energy consumption, the theory can also be applied to the use of any natural resource.

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| Yes No  |

If yes, please indicate if your are planning future actions in this areaIf no, would you consider this phenomenon in the future? |
| 1. What severe weather conditions are typical in your rural/remote regions?
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| 1. Is your administration using any Systems and Applications of ICT to adapt to climate change?

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| Yes No  |

If yes, please specify in which area and the type of system and application used:

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|  Water supply (see ITU-T tech watch report on smart water and ICT)  |
|  Food supply (see ITU-T tech watch report on this)  |
| Health  |
| Maintenance of infrastructure |
| Electricity  |
| Gas |
| Road |
| Rail  |
| Airport |
| Others |
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| 1. What ICT services would enable communities to better adapt to climate change? (One example could be automated text messages to communities about water shortage and emergency water supply, etc.)
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| 1. What specific technologies or standards for ICT equipment are used by your administration to gather data to monitor climate change? Please select.

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|  Satellite systems |
|  Airborne systems  |
|  Terrestrial systems (fixed and mobile) |
|  Subsea systems |
|  Others |
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If others, please specify:  |
| 1. What technologies and/or standards could enhance the gathering of data/information about climate change for your administration?
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| 1. What information communication technologies and standards are used by your administration to disseminate information about climate change to those who need it (e.g. in broadcast, Satellite systems)? Examples include the following:

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|  Terrestrial systems (public fixed) |
|  Terrestrial systems (public cellular) |
|  Terrestrial systems (private networks/private mobile radio) |
|  Interactive voice |
|  Others |
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If others, please specify: |
| 1. What technologies and/or standards could enhance the dissemination of information about climate change to those who need it?
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| 1. Access to information is important for communities needing to adapt to climate change. What are the challenges to deploying Telecommunication infrastructure in rural/remote areas in your region? Please indicate those that affect you most from the following examples:

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|  Access to electricity |
|  Expense of power backup |
|  Terrain |
|  Accessibility and transportation |
|  Lack of skills manpower |
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|  Installation and maintenance of networks |
|  Operating costs high |
|  Average revenue per user low |
|  Population sparse and scattered |
|  Others (e.g. vandalism and/or theft) |
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Please explain any key challenges:  |
| 1. What primary and backup energy sources are available in your rural/remote areas? Examples include the following:

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|  Solar |
|  Wind |
|  Diesel |
|  Others |
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If others, please specify: |
| 1. What types of telecom/mobile systems are needed to allow enhanced access to information concerning climate change or extreme weather events in rural/ remote regions?
 |
| 1. What are the educational opportunities in rural/remote regions to train individuals in the use of ICTs for adaptation to climate change?
 |
| 1. Some systems are specifically developed for developing countries most of them have some features that are not essential enough to justify their cost and / or lack the required specification to meet the existing conditions in developing countries. What are the specifications and features that are essential in rural / remote regions in your country?
 |

**Thank you for your contribution!**

**If you have any questions regarding the work on ITU-D Study Groups, including the work ongoing on ITU-D Question 24/2, please do not hesitate to contact the ITU-D Study Group Secretariat at:** **devsg@itu.int** **or go to the main ITU-D Study Group website (**[**http://www.itu.int/ITU-D/study\_groups/**](http://www.itu.int/ITU-D/study_groups/)**).**

**For questions regarding ITU-T Study Group 5 activities, contact the ITU-T Study Group Secretariat at:** **tsbsg5@itu.int** **or go to the main ITU-T Study Group 5 website (**[**http://www.itu.int/ITU-T/studygroups/com05/index.asp**](http://www.itu.int/ITU-T/studygroups/com05/index.asp)**).**

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