International Telecommunication Union

WSIS+5

Report on the World Summit on Information Society Plus Five

ITU's five-year contribution to the WSIS Implementation and Follow-up (2005-2010)

working together towards 2015

World Summit on the Information Society
Turning targets into action
Geneva 2003
Tunis 2005

ITU

International Telecommunication Union

WSIS + 5

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Version (1.0)
(September 2010)

Background:

Following the request of the Council 2009, the Secretariat has the pleasure to present version (1.0) of the report WSIS+5 which is intended as a midterm review of the activities carried out by the ITU within the period of 5 years, from 2005 to 2010. This report includes inputs and analysis from focal points of all WSIS Action lines, in particular C2, C5 and C6.

Foreword by the ITU Secretary-General, Dr Hamadoun I. Touré

I am pleased to introduce the WSIS+5, a report on ITU's five-year contribution to the WSIS Implementation and Follow-up process (from 2005 to 2010).

The World Summit on the Information Society (WSIS) was held in two phases, with the first phase in Geneva in 2003 and the second phase in Tunis in 2005, to establish a clear vision for building an inclusive global information society. Since then, the ITU has been committed to the WSIS process by bringing all its expertise, tools and resources to advance progress towards achieving the WSIS goals.

Noting the expertise and core competencies of ITU in the fields of ICTs, ITU was assigned several mandates with reference to the WSIS process. In this context, at the operational and policy level, ITU has been carrying out several tasks, in particular: (a) in its capacity as leading facilitator in coordinating the multistakeholder implementation of the *Geneva Plan of* Action (Para 109 of TAIS); (b) Facilitator of Action Lines C2 (Information and communication infrastructure) and C5 (Building confidence and security in the use of ICTs), as well as C6 (Enabling Environment), for which ITU has accepted to temporarily play the role of Facilitator upon UNDP's request; (c) Co-Facilitator of Action Lines C1, C3, C4, C7, and C11; (d) Partner in Action Lines C8 and C9; and (e) rotating Chair and Vice-Chair of the United Nations Group on Information Society (UNGIS) (Para 103 of TAIS). At the policy level, the 2006 Plenipotentiary Conference (PP) and the following Councils have strengthened the Union's mandate in relation to WSIS implementation.

This report provides information on the key initiatives and activities carried out by the three sectors of the Union (Standardization, Radiocommunication and the Development Sector) and the General Secretariat that have considerably enhanced the WSIS outcomes in the five years since 2005. I am proud to report and share with you ITU's role in WSIS-related activities that, in partnership with other WSIS stakeholders, have led to a sincere endeavour for an inclusive information society for all.

Dr Hamadoun I. Touré

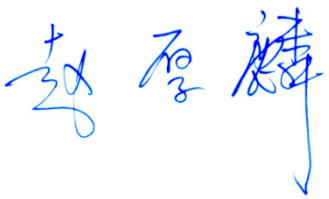
ITU Secretary-General

Foreword by the ITU Deputy Secretary-General, Mr Houlin Zhao

ITU continues to assist in the follow-up of WSIS implementation since the first phase of WSIS in 2003. Within ITU, the effective coordination of ITU's strategies and activities in relation to WSIS has been ensured by a WSIS Task Force, which I chair. As the Chairman of this Task Force, I would like to reinforce that WSIS remains a top priority for ITU. I am pleased to inform that, in collaboration with our partners from all the UN agencies involved, we are committed to implementing the WSIS outcomes and achieving targets by 2015.

Exchanging information not only makes implementation more efficient, but can create new opportunities for building partnerships. In this context, a revamped WSIS Stocktaking Platform has been launched this year to foster the implementation of WSIS outcomes. Enriched with new social networking tools, the new platform is a portal for project managers in ICT development programmes and connects practitioners on the ground. In response to stakeholders' requirements, the WSIS Stocktaking Platform and regular reports have become essential components of WSIS follow-up. We are working to develop a complete unique WSIS Stocktaking database providing project information without duplication. The number of entries is now nearing 5 000, which demonstrates the commitment of stakeholders to building a global information society and achieving the WSIS targets and the MDGs. Additionally, to respond to requirements of the WSIS stakeholders, Country Case Studies and Implementation Case Studies have been proposed to leverage the activities of Member States.

The WSIS+5 report takes stock of all the WSIS-related activities carried out by ITU from 2005 to 2010, and I hope that this report will serve as a guideline for analysis and implementation of fresh ideas to promote the use of ICTs for achieving sustained growth and inclusive development.



Houlin Zhao

ITU Deputy Secretary-General

Chairman, WSIS Task Force

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I. INTRODUCTION

1. The World Summit on the Information Society (WSIS) represents an important milestone in ITU's long and distinguished history. The original idea for a World Summit on the Information Society came from ITU Resolution 73 (Minneapolis, 1998) adopted at the Plenipotentiary Conference, which is the highest level of policy-making body of the Union. In December 2001, the UN General Assembly passed Resolution 56/183, which invited ITU to assume the leading managerial role in the Executive Secretariat of the Summit and its preparatory process.

2. WSIS, held in two phases, was an important landmark in the global effort resulting in four final documents including Geneva Plan of Action (GAP) and Tunis Agenda for the Information Society (TAIS), which amongst other things developed a clear understanding on the role of Information and Communication Technologies (ICTs) for development at the international, regional and national levels. The WSIS outcome documents, Geneva Declaration of Principles 2003[1] and Tunis Agenda for the information Society 2005[2], set forth key principles for building an inclusive Information Society.

3. WSIS noted that the core competencies of ITU in the fields of ICTs – assistance in bridging the digital divide, international and regional cooperation, radio spectrum management, standards development and the dissemination of information – are of crucial importance for building the Information Society (Geneva Declaration of Principles, para 64). Recognising its expertise, the ITU was assigned several mandates with reference to the WSIS process. In this context, at the operational level, ITU has been carrying out several tasks, in particular, in its capacity as:

a. Leading facilitator (along with UNESCO and UNDP) in coordinating the multi-stakeholder implementation of the *Geneva Plan of Action* (Para 109 of TAIS).

b. Facilitator of Action Lines C2 (Information and communication infrastructure) and C5 (Building confidence and security in the use of ICTs); upon UNDP's request the ITU accepted to play the role of the Facilitator of Action Line C6 (Enabling Environment) on a temporary basis.

c. Co-facilitator of Action Lines C1, C3, C4, C7 and C11

d. Partner Organization for C8 and C9

e. Rotating chair and vice-chair of the United Nations Group on Information Society (UNGIS) (Para 103 of TAIS)

4. In addition, recognizing ITU's expertise, the Summit outcome documents (see TAIS) encourage further work in the field of Emergency Telecommunications (Para 91 of TAIS), International Internet Connectivity (Para 77c.ii and 50d of TAIS), Connect the

[1] http://www.itu.int/wsis/docs/geneva/official/dop.html

[2] http://www.itu.int/wsis/docs2/tunis/off/6rev1.html

World (Para 98 of TAIS), Child Help Lines (Para 92 of TAIS),World Telecommunication and Information Society Day (Para 121 of TAIS), Bridging the Standardization Gap (Paras 26g and 90 of TAIS), Measuring the Information Society (Paras 113-119 of TAIS), WSIS Stocktaking (Para 120 of TAIS) and Internet Governance Forum (Para 72 of TAIS).

5. As stated in the Strategic Plans of the Union for the period from 2007 – 2011, adopted during ITU Councils from 2006 onwards the implementation of WSIS outcomes has continued to be one of the priorities of the Secretary-General of the ITU.`

6. At the policy level, the 2006 Plenipotentiary Conference (PP) and the subsequent Councils, of 2007, 2008, 2009 and 2010 strengthened the Union's mandate in relation to WSIS follow –up and implementation. PP-2006 in Resolution 140 reconfirmed the mandate given to ITU by WSIS. The Councils' High-Level Segments provided Ministers and Councilors from Member States the occasion to exchange views on various WSIS-related issues of strategic importance to the Union. More specifically, Council 2007 provided a platform to initiate discussion on Cybersecurity and ICT Infrastructure and adopted Resolution 1282 on ITU's role in implementing WSIS outcomes. Council 2008 strengthened the Union's mandate in relation to WSIS implementation and adopted (modified) Resolution 1282 on ITU's role in implementing the outcomes of the WSIS. Council 2009 strengthened the Union's mandate in relation to the implementation of WSIS outcomes and agreed on the roadmaps[3] for ITU's activities in its role as the sole facilitator for WSIS action lines C2, C5 and C6 for the implementation of WSIS up to 2015. The Dedicated Group on International Internet-related Public Policy Issues was created by Council 2008 through Res.1282 (Mod. 2008) as an integral part of CWG WSIS and was tasked to identify, study and develop matters related to international Internet-related public policy issues. In 2009, ITU Council Resolution 1305 recognized ITU's scope of work on international internet-related public policy matters, represented by topics listed in the resolution. Council 2010, recognized development of specific functionalities for monitoring and implementing road maps for Action Lines C2, C5 and C6.

7. The three Sectors of the Union (Standardization, Radiocommunication and the Development Sector) and the General Secretariat have carried out major initiatives and activities that have supported and enhanced the WSIS outcomes.

8. Within ITU, the effective coordination of ITU's strategies and activities in relation to WSIS has been ensured by a WSIS Task Force chaired by the Deputy Secretary-General.

9. This document is divided into 5 sections. Following this Introduction, the second section provides an overview of the WSIS implementation activities undertaken in 2006, 2007, 2008, 2009 and 2010 by ITU. The third section highlights forums, innovative initiatives and informs about the planned future activities to ensure the full implementation of the WSIS outcomes. The fourth section provides an analysis of the implementation of the WSIS Action Lines C2, C5 and C6 where ITU is the sole facilitator. The final section provides conclusions of the report, experiences gained and planned future action.

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[3] Roadmaps are detailed plans to guide progress towards achieving WSIS goals.

II. OVERVIEW OF ITU'S ACTIVITIES UNDERTAKEN DURING 2006, 2007, 2008, 2009 AND 2010 IN THE CONTEXT OF WSIS IMPLEMENTATION

(a) Leading facilitator (along with UNESCO and UNDP) in organizing the multi-stakeholder implementation of the Geneva Plan of Action

10. In accordance with Para 109 of TAIS and the idea of an annual cluster of WSIS – related meetings that originated from the meeting of Action Line facilitators in Geneva on 24 February 2006, since 2006, ITU has taken the leading role in coordinating and hosting this event, which has taken place every May in Geneva, centered around World Telecommunication and Information Society Day (WTISD).

11. In 2006, in conjunction with the WTISD, a series of events related to the implementation of the WSIS Action Lines took place from 9 - 19 May. Moderators/ facilitators of WSIS action lines, such as ITU, UNESCO, UNDP, UNCTAD, ILO and UNDESA held multistakeholder meetings to advance the WSIS implementation process. A second round of informal consultations were held on the setting up of the Internet Governance Forum (IGF) as a follow up to the recommendations of the Tunis Summit.

12. In 2007, a second round of Action Line consultation meetings took place in Geneva from 14- 25 May. With regard to overall coordination of WSIS Action Lines, ITU with UNESCO and UNDP organized on 25 May 2007 a second meeting of WSIS Action Line Facilitators. In total, around 26 different events were held during the cluster of meetings including action line facilitation meetings, the WTISD celebrations, IGF consultations, the CSTD meeting and other side events.

13. In 2008, ITU took the lead in coordinating the 2008 WSIS cluster of events from 13 - 30 May. ITU coordinated the registration for the overall Cluster and the organization in ITU premises of 11 Action Line Facilitation meetings, the meeting of the Action Line Facilitator and the GAID open consultation meeting. On 15 September 2008, ITU, UNESCO and UNDP organized an open consultation meeting to discuss further the organization of the 2009 Cluster of WSIS-related events, which recommended a new format for the Cluster, called WSIS Forum.

14. In 2009 the cluster of WSIS related events were rebranded as WSIS Forum, the ITU hosted the WSIS Forum 2009, from 18 - 22 May, which was jointly organized by ITU, UNESCO, UNCTAD and UNDP. This event built upon the tradition of annual WSIS May meetings, and its new format was the result of the open consultations with all WSIS Stakeholders. The five day forum comprised of high-level panels, WSIS Action Lines meetings, thematic workshops, and various platforms for networking and partnership. The annual meeting of action lines facilitators was held on 22nd of May 2009 as an integral component of the WSIS Forum, with three main objectives: exchange of information among facilitators and other stakeholders; identification of issues that needed improvement; and discussion of the modalities of reporting and the overall implementation process. In addition the 4th meeting of the United Nations Group on Information Society (UNGIS) was held during the WSIS Forum 2009.

15. With the aim of ensuring inclusiveness in the preparatory process of the WSIS Forum 2010, in December 2009, the ITU facilitated amongst organizers the launch of an Open Consultative Process focusing on the thematic aspects of the Forum. The open consultation process, consisting of three phases was well received and appreciated by all stakeholders. Multiple stakeholders from 48 countries world wide participated in the open consultation process, in the first phase by proactively discussing the Forum on the WSIS community platform and in the second phase, submitting over 110 contributions. Consequently, in the last stage the final review meeting of the WSIS Forum 2010 Open Consultations was held on 10th February 2010. The WSIS Secretariat received several workshop requests and additional comments/ suggestions. The final version of the WSIS Forum 2010 agenda reflected the inputs and suggestions submitted by WSIS Stakeholders during the open consultation.

16. WSIS Forum 2010 was held from 10 to 14 of May 2010 at the ITU Headquarters, Geneva, Switzerland. This event built upon the tradition of annual WSIS May meetings, and its new format was the result of open consultations with all WSIS Stakeholders. The Forum offered participants a series of diverse interactions, including opening ceremony, high level plenary session, five high-level debates addressing critical issues to the WSIS implementation and follow-up in multi-stakeholder set-ups, fifteen WSIS Action Line facilitation meetings, six interactive sessions, twenty thematic workshops, six kick-off meetings for new initiatives and projects, six knowledge exchanges facilitating networking among the participants, and others. The WSIS Forum 2010 provided structured opportunities to network, learn and participate in multi-stakeholder discussions and consultations on WSIS implementation. Facilities were made available to make the forum as inclusive and participatory as possible. Several sessions were conducted in a debate style to encourage participation from the participants. Translation was offered in 6 languages for various sessions. Sessions were webcast and diverse ways of social networking were used to reach the last mile.

(b) Facilitator of the WSIS Action Lines C2, C5, C6

Action Line C2:
Information and Communication Infrastructure

Establishing broadband public access points to Internet (PAPI) to rural areas of the Republic of Moldova, ITU – Republic of Moldova

17. Within the framework of the existing resources and given mandate, as well as in line with the Geneva Plan of Action, ITU carries out several activities with regard to the WSIS Action Line C2 (ALC2). These are oriented towards six domains as follows (1) Promotion of National ICT-Strategies; (2) Harmonization of ICT policies in different regions; (3) Development of regional and large-scale national initiatives; (4) Launch of global thematic ICT infrastructure initiatives; (5) Development of a virtual financing platform and (6) Deployment of an online tool. BDT leads all the work related to Action Line C2 on Information and Communication Infrastructure.

18. Since the second phase of the Summit in Tunis, the ITU has organized five facilitation meetings open to all WSIS stakeholders. The reports from the meetings can be found here: www.itu.int/wsis/c2/.

The first consultation meeting on Action Line C2 was held in Qatar on 9th March 2006 in conjunction with the World Telecommunication Development Conference (WTDC-06). WTDC-06 adopted the terms of reference, the work modalities, and reviewed the stocktaking and other on-line tools to be used for the purposes of ALC2 facilitation work.

19. The 1st Facilitation Meeting on Action Line C2 was held in Geneva in May 2006, and built upon the outcomes of the WTDC-06. The 2nd Facilitation Meeting on Action Line C2 was held jointly with Action Lines C4 and C6 on 16th May 2007. During this meeting, further discussions were held on the Plan of Action and analysis on synergies with the other Action Lines was undertaken. Several contributions were reported by entities involved in the ICT infrastructure development, like NEPAD (New Partnership for Africa's Development), IWTGC (Infinity Worldwide Telecom Group of Companies), Infinity West Africa Fiber Optic Project, and Association for Progressive Communication (APC). The 3rd Facilitation Meeting for Action Lines C2, C4 and C6 was organized jointly by ITU and UNDP and was held from 19th to 21st May 2008. The meeting focused on Action Line C2, more precisely on the progress made on the Plan of Action as well as concrete infrastructure projects. In addition, an Ambassadors Round Table was held and it addressed issues on Financing Mechanisms for Infrastructure Development. The 4th Facilitation Meeting on Action Line C2 was held in Geneva on 20th May 2009 as an integral part of the WSIS Forum 2009 and profited from the Ministerial Segment that highlighted and discussed the strategic role of ICT infrastructure development at the national, regional and international levels. The 5th Facilitation Meeting on Action Line C2 was held in Geneva on 11th May 2010 as an integral part of the WSIS Forum 2010. The meeting provided an update on the activities and programmes initiated and implemented by ITU in the area of ICT infrastructure. On this occasion, the new web portal for WSIS Action Line C2 activity reporting was presented to the audience. The portal serves as the active repository for the roadmap of ITU's ongoing and planned activities, as well as serves as a platform for feedback (through the answers to the questionnaire) from Administrations on best practices, calls for assistance, and general comments. Statistics, upcoming events, reports, etc. can also be found on the new web portal: www.itu.int/ITU-D/wsis/C2/

20. All 5 facilitation meetings have reinforced the role of the ITU in the facilitation process of C2 and paved way for the adoption of guidelines on future work.

21. In 2006, 2007, 2008, 2009 and 2010, in line with the ALC2 Plan of Action, BDT undertook several initiatives including:

i) The harmonization of ICT policies in three regions (Sub-Saharan countries, Caribbean countries, and Pacific Island States);

ii) The launch of a virtual space dedicated to the thematic ICT infrastructure initiatives;

iii) Comprehensive research work on the ICT broadband infrastructure in Africa;.

iv) Connect Series with the Connect Africa event having been held in 2007, and Connect CIS being held in 2009. It is envisaged that Connect meetings for other regions will be launched in 2011 and beyond.

v) Capacity-Building activities on ICT Policies in the Pacific Island States;

vi) Regional project on ICT Applications and Satellite Diversity in the Pacific Island States, among others.

22. Since 2006, in its role as implementer, BDT has been continuing its ongoing efforts on facilitation of the development of ICTs and infrastructure worldwide. Each year more than 50 activities directly related to the ALC2 were reflected in BDT's Operational Plan for implementation. Additional information can be found in the Operational Plans on the ITU-D website. Related activities focused mainly on the following areas: technical, policy, regulatory and legal issues; network development, broadband connectivity, access in rural areas; radio frequency spectrum planning, and broadcasting related issues (Digital Terrestrial Broadcasting Network).

23. Moreover, following decisions of the World Telecommunication Development Conference 2006 (WTDC 06), and as mandated by its Membership within the framework of the Regional Initiatives, ITU-D initiated twenty-five direct regional initiatives facilitating development of the information and communication technologies and infrastructure in the following regions: Africa, Americas, Arab States, Asia-Pacific and CIS. More information on these regional initiatives may be found in the ITU-D Projects website: www.itu.int/ITU-D/projects/

24. In 2009, following recommendations by the WG-WSIS, a comprehensive Roadmap for WSIS Action Line C2 was developed and noted by the Council-09. The Roadmaps are detailed plans to guide progress towards achieving WSIS goals and reflect ITU's activities in its role as the sole facilitator for WSIS action lines C2 in the implementation of WSIS up to 2015.

25. In the implementation of Action Line C2, TSB continued to be at the forefront of providing global standards for telecommunications. The most important standardization activities are related to Next Generation Networks (NGN), with the approval of specific standards on signaling protocols for QoS resource control, security, multimedia services over NGN, fixed mobile convergence, service level requirements and architectural framework to provide new services based on Internet Protocol Television (IPTV). Charging and accounting principles for NGN (including related telecommunication economic and policy issues) continue to be studied at international and regional levels.

26. ITU-T Study Groups focused on several subjects directly relevant to the ICT infrastructure development, including the following: Infrastructures and access networks; International Internet Connectivity; Security; Internationalized Domain Names; Multimedia services; Quality of Service; Accessibility; Emergency Telecommunications.

27. As part of its work on standards development for telecommunications equipment, software and associated telecommunications services, ITU set up the Joint Coordination Activity on Accessibility and Human Factors (JCA-AHF), and published a telecommunication accessibility guidelines and an accessibility checklist for the standards community to ensure that they takes into account, at an early stage, the

needs of those for whom accessibility to ICTs may be restricted. ITU developed jointly with G3ict an e-Accessibility toolkit to facilitate training of policy makers and regulators in mainstreaming ICT accessibility issues to comply with the UN Convention on the Rights of Persons with Disabilities (PwDs).

28. WTSA-08 approved, among others, Resolution 76 on Conformance and Interoperability testing to help in increasing probability of interoperability as requested by developing countries. A Joint Coordination Activity on Conformance and Interoperability Testing (JCA-CIT) has been established and a pilot conformity database intended to list and give visibility to products that have been tested for conformity against ITU-T Recommendations is under development. ITU organized five Forums and various workshops in the regions on this topic (see http://www.itu.int/ITU-T/worksem/wtsa-08/res76). ITU-T organized first interoperability event on IPTV to address issues of conformance to ITU IPTV standards and interoperability of products on 23-24 July 2010 in Geneva. A second IPTV interop event will be held on 23-24 September 2010 in Singapore and a third IPTV interop event is planned in December 2010 in India.With regard to radiocommunications, some areas that have been actively studied are: wireless internet access (terrestrial and satellite broadband), emergency radiocommunications (to support disaster prediction, detection, mitigation and relief), remote sensing systems (for providing information on environment control and climate change) and digital broadcasting (to help bridge the digital divide).

29. With regard to radiocommunications, some areas that have been actively studied are: wireless internet access (terrestrial and satellite broadband), emergency radiocommunications (to support disaster prediction, detection, mitigation and relief), remote sensing systems (for providing information on environment control and climate change) and digital broadcasting (to help bridge the digital divide).

30. BR has developed several recommendations relevant to internet access (terrestrial), to internet access by satellite, especially relevant to building ICT infrastructure in developing countries, on Digital Broadcasting – a package of international recommendations and standards for terrestrial and satellite digital broadcasting systems and terrestrial and satellite interactive systems have been developed; these are also relevant to Emergency Radiocommunications. Examples of other activities carried out are:

i) Regional Radiocommunication Conference (RRC-06) (2006): International Treaty for structured migration towards all digital broadcasting

ii) Regional Radiocommunication Seminars

iii) World Radiocommunication Seminars (WRS)

31. Within the framework of the *Connect the World* initiative, launched by ITU in 2005, the Union dedicates significant efforts for further development of this multi-stakeholder platform, with the aim to help mobilize the financial, human and technical resources needed to implement outcomes of the WSIS and the WTDC.

32. As part of this effort, ITU continues to organize high-level events known as Connect the World Summits (www.itu.int/partners) in each region where members

have expressed an interest. Building upon the success of its first Summit, Connect Africa, held in Kigali, Rwanda, in October 2007, that resulted in commitments of 55 billion US Dollars from various stakeholders, ITU organized the second Summit, Connect CIS with partners on 25-27 November 2009 in Minsk, Belarus. The Summit gathered 353 participants from 18 member states (10 from CIS Region), including five Heads of State (Republic of Armenia, Republic of Belarus, Republic of Kazakhstan, Kyrgyz Republic and Republic of Tadjikistan) and Government and one First Deputy Prime Minister. The administrations of 10 countries from the region were represented, including 7 at the Ministerial level. Some 40 leading ICT companies, development banks, international organizations and other stakeholders participated in the Summit. The Presidents (Heads of State) addressed participants of the Summit in a special session entitled, "Leaders Statements and Summit Declaration: Towards a Sustainable Information Society ", in which each President (Head of State) outlined their vision for the Summit and pledged their full support to the Connect CIS Initiative. The Summit concluded with the Connect CIS Declaration.

33. In early 2009, BDT launched six global *Connect the World* flagship initiatives. The aim of these initiatives is to build upon and strengthen promising projects that start in one region or with one industry partner, by providing an attractive, open platform and brand that can be promoted to additional partners globally and/or in various regions. The flagship initiatives are: 1) Wireless Broadband Partnership 2) Connecting Villages 3) Connect a School, Connect a Community 4) ITU Academy Partnership 5) ITU Mobile Health Initiative 6) ITU-IMPACT Collaboration on Cybersecurity.

34. Under the *Connect a School, Connect a Community* initiative to improve access to broadband in schools and enable them to serve as community ICT centers, ITU has developed an online toolkit to share best practices and advice with ITU members on developing national school connectivity plans. The online platform also includes a Repository of Training Materials, Applications and other tools that can be used by community ICT centres, for example, ICT literacy training to encourage women to use ICTs for their economic empowerment. A project in the Americas region is currently underway to assist a Central American country to develop a national school connectivity plan and to develop model connected schools. The initiative has attracted a number of partners that will enable ITU to assist a range of beneficiary countries in the preparation of their national school connectivity plans and development of model connected schools.

35. The ITU continues to encourage the agencies responsible for development aid and assistance to attach importance to ICTs in the development process and to accord a high priority for resource allocation to this sector. To this end, ITU approaches potential donors to encourage them to join ITU's connectivity initiatives.

36. The ITU organized the Pacific ICT Ministerial Forum with the theme of "Connecting the Unconnected" in Tonga on 19-20 February 2009 preceded by a senior officials meeting on 17-18 February 2009. Several potential offers and projects were discussed that aimed to improve connectivity in the Pacific. The Forum adopted a Communiqué that aimed to make available and accessible to all the benefits of new technologies, especially Information and Communication Technologies for all.

37. Jointly with UNESCAP, ITU organized the ITU Asia-Pacific Regional Workshop on Mainstreaming ICT Accessibility for Persons with Disabilities from 25-27 August 2009.

38. ITU successfully organized the Sub-regional Telecommunication Ministerial Forum for Cambodia, Lao PDR, Myanmar and Vietnam (CLMV) on 11-12 December 2009 in Vietnam with active participation from the business and government sectors, such as the Australian Government, as well as sub-regional and global development partners. Focusing on the theme "Towards an ICT-strengthened and connected CLMV Subregion", the Forum issued a Communiqué which called on ITU and concerned parties to plan and implement initiatives announced during the Forum focusing on capacity building, public private partnership and enabling policy and regulatory frameworks.

39. ITU organized five ITU Regional Development Forums 2009, i.e. one for each region. ITU-D developed training materials in close collaboration with TSB and BR, in bridging the standardization gap and fostering the implementation of Next Generation Networks and Broadband Networks for developing countries.

40. In addition, ITU carried out several activities as implementer of the WSIS Action Line C2, through its programmes (around 80 actions in 2009) and projects, such as:

i) Connecting Remote/Outer Islands in the Pacific, ITU and Andorra Telecom;

ii) ICT Applications and Satellite Diversity: Pacific Island States, ITU;

iii) Wireless Broadband Access Networks, ITU-McCAW Foundation-Partners;

iv) South Africa: Rural Telecoms, ICT Services and Entrepreneurship Development, RSA-ITU-UPU;

v) Feasibility Study on Digital Broadcasting Roadmap in Africa, ITU-Republic of Korea;

vi) Feasibility Study for the Implementation of Broadband Infrastructures in Africa, ITU and partners;

vii) Harmonization of policies and guidelines for the ICT market and human/institutional capacity building in the field of ICT in three regions (Sub-Saharan countries, Caribbean countries, Pacific Island States), European Commission;

viii) Implementation of the cooperation agreement signed between ITU and One Laptop Per Child (OLPC) to connect and educate children; and

ix) Under concentrated assistance to LDCs, ITU provided assistance in establishing IXPs, for instance in Afghanistan and Haiti;

x) IXP Project for Cabo Verde and Equatorial Guinea, ITU – Government of Spain

xi) IT Training for health sector employees in Rwanda, ITU – AMD Learning Labs

xii) Establishing broadband public access points to Internet (PAPI) to rural areas of the Republic of Moldova, ITU – Republic of Moldova

xiii) Rehabilitation and Reconstruction of Telecommunication Infrastructure and contribution to the establishment of an Early Warning System in Earthquake/Tsunami-hit countries, ITU

xiv) Basic PC and Internet Course in Kenya for schoolchildren, ITU and Czech Republic

41. A Telecom Network Planning Manual for evolving network architectures (versions 4 and 5) to be used to facilitate the planning of network architectures and the transition to the Next Generation Networks;

42. The version 3 of the Spectrum Management System for Developing Countries (SMS4DC) was released in November 2009.

43. Direct assistance was provided to Mali, Georgia, Kyrgyzstan, Moldova, Bhutan and Nepal in planning the countries' broadband infrastructure by making use of appropriate planning tools.

44. The WSIS Stocktaking Database is used as an effective tool for the exchange of information on the projects in relation to the implementation of Action Line C2. More information on WSIS Stocktaking can be found at WSIS Stocktaking Information System.

45. With the increasing relevance of emergency telecommunication as part of the activities carried out in context of the ICT infrastructure development in disaster management, ITU has been carrying out several activities since 2006 (http://www.itu.int/ITU-D/emergencytelecoms) including the following.

46. ITU-D and Disaster Relief: Assistance was provided to a number of countries. ITU has deployed a hybrid of communications systems for disaster relief in various countries like Samoa, Indonesia, Tonga, China, Myanmar, Haiti, and Chile, amongst others. (see: http://www.itu.int/ITU-D/emergencytelecoms/)

47. ITU-D provided direct assistance to countries in the areas of policy, regulation and technology. Designing of National Emergency Telecommunications Plans (NETP) and drafting of Standards Operating Procedures (SOPs) was provided to countries in all the 5 ITU regions. This assistance included work on preparedness, early warning, response, reconstruction and climate change adaptation.

48. In 2007, ITU designated international numbering resource 888 to the UN for use in disaster relief;

49. ITU-D organized from 10 - 12 December 2007 a Global Forum on Effective Use of Telecommunications/ICT for Disaster Management. This event brought together the main stakeholders active in developing,

deploying and using Telecommunications/ICT for disaster mitigation and served as a forum where they drew up concrete strategies and adopted practical measures. During this event the Compendium of ITU's work on emergency telecommunications was launched. ITU also develops radiocommunication and telecommunication recommendations that are fundamental to the implementation of interoperable systems, telecommunication facilities and spectrum that will allow relief workers to smoothly deploy telecom equipment and services.

50. ITU-D has established a coordination group called the Partnership Coordination Panel on Telecommunications for Disaster Relief (PCP-TDR) gathering people working with standardization of telecommunications technologies for disaster relief (ITU, ISO, OASIS, etc) and representatives of relief organizations, such as the United Nations High Commissariat for Refugees (UN-HCR), the UN Office for Coordination of Humanitarian Affairs (UN-OCHA), the International Federation of the Red Cross and Red Crescent (IFRC), and Telecoms Sans Frontière (TSF);

51. ITU-D in collaboration with various partners organized a number of regional and global forums on emergency telecommunications. For example, the "Global Forum on Effective Use of Telecommunications/ICT for Disaster Management: Saving Lives" was organized in Geneva from 10 to 12 December 2007. ITU also hosted a high-level session at the "3rd Asian Ministerial Conference on Disaster Risk Reduction (AMCDRR)" held in Malaysia between 2 and 4 December 2008.

52. ITU-D organized a Central American Workshop on Disaster Management in El Salvador from 21 to 23 September 2009 and in Jamaica, from 7 to 11 December 2009, in partnership with the Caribbean Emergency Management Agency (CDMEA), ITU organized a Training Workshop on Disaster Management to integrate emergency telecommunications plans into National Disaster Management Plans. For more information: http://www.itu.int/ITU-D/emergencytelecoms/events.html

53. ITU-T Study Groups continue to define Recommendations in support of emergency communications specifying service definition, alert messaging, call prioritization for relief workers using multimedia and cable systems, telecommunications network management, and special functionality in signaling systems.

54. At the end of 2008, ITU-T adopted a new Recommendation on Guidelines to select Emergency Numbers for public telecommunications networks. The purpose of this Recommendation is to facilitate the international harmonization of emergency numbers. In particular, it suggests that all countries implement coded 911 and 112 in addition to existing national emergency numbers.

55. In mid-2008, ITU-T adopted an Amendment, Contact information in case of emergency for mobile telephones, to the existing Recommendation on Notation for national and international telephone numbers, e-mail addresses and web addresses. That amendment specifies an international, language-independent, method that allows mobile phone users to designate, in their mobile phone, the telephone numbers of their emergency contact persons (e.g., spouse).

56. In the area of Emergency Telecommunications, early warning, and disaster relief, ITU- T facilitated the following:

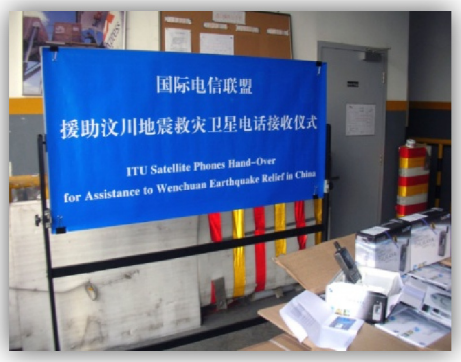
i) Operational aspects of service provision, networks and performance, recommended the allocation of the international dialing code 888 for the UN for use in disaster relief situations.

ii) ITU-T established a coordination group called the Partnership Coordination Panel on Telecommunications for Disaster Relief (PCP-TDR) as a follow-up action from the ITU-T Workshop on Telecommunications for Disaster Relief (Geneva, 17-19 February 2003; see http://itu.int/ITU-T/worksem/ets). The home page of this group is found at http://itu.int/ITU-T/special-projects/pcptdr.

iii) Telecommunication Standardization Advisory Group (TSAG) meeting held in Geneva, 7-11 November 2005, a coordinating focal point was defined in ITU-T by designating ITU-T Study Group 2 as the *Lead Study Group for Telecommunication for Disaster Relief/Early Warning*

iv) ITU-T initiated work in February 2007 on possible standardization of numbering resources used for the GSM Cell Broadcast service. Additionally, ITU-T Study Group 2 agreed to the allocation of a special country code to be managed by the United Nations Office for Coordination of Humanitarian Affairs (OCHA) for efficient communications in support of response efforts to disasters.

v) ITU-T allows the broadcast of alert messages within H.323 systems, which are widely deployed worldwide for Voice over IP (VoIP) communications. Still in the area of emergency communications, several Recommendations in SG 16 now support the prioritization of calls within the framework of ITU-T E.106's International Emergency Preference Scheme (IEPS).



vi) ITU- T developed the first version of a Roadmap for Telemedicine, which provides an overview of technologies and issues for the provision of telemedicine services.

vii) ITU-T has also created an *ITU-T Action Plan for Standardization on Telecommunications for Disaster Relief and Early Warning (TDR/EW)*, motivated by the identification of the need for new telecommunication standards following the Indian Ocean tsunami of December 2004. The latest version can be found at http://itu.int/ITU-T/emergencytelecoms/plan-tdrew.html.

57. ITU-T has approved the Common Alerting Protocol as ITU-T X.1303, that allows alert and emergency messages be exchanged in a standardized way by a wide number of systems. Various ITU-defined systems such as H.323 now support ITU-T X.1303 CAP messages. Numerous workshops were organized promoting its use, *inter alia* with OAISIS and WMO. With regard to radiocommunications, ITU-R has been actively studying emergency radiocommunications (to support disaster prediction, detection, mitigation and relief). BR has developed several recommendations relevant to internet access (terrestrial), to internet access by satellite, especially relevant to building ICT infrastructure in developing countries, on Digital Broadcasting – a package of

international Recommendations and standards for terrestrial and satellite digital broadcasting systems and terrestrial and satellite interactive systems have been developed and relevant to Emergency Radiocommunications.

58. The WRC-07 identified additional spectrum to meet the requirements for active and passive services for environment and climate control, disaster prediction, detection and mitigation. In addition, WRC-07 advocated the development of spectrum management guidelines for radiocommunications in emergency and disaster relief as well as the identification and maintenance of available frequencies for use in the very early stages of humanitarian assistance intervention in the aftermath of disaster. ITU is developing a database for frequency management in disaster situations to assist Member States with their emergency communication preparedness. The Radiocommunication Assembly 2007 recognized the importance of disaster management telecommunications and information techniques, particularly related to disaster prediction, detection, mitigation and relief and approved two new Resolutions in this area.

59. Examples of other activities carried out are:

i) ITU-R Emergency and Disaster Relief (ITU-R Special Supplement) (2006)

ii) Emergency Radiocommunications website describing the role that ITU-R plays in disaster mitigation and relief operations (2006)

iii) Regional Radiocommunication Conference (RRC-06) (2006): International Treaty for structured migration towards all digital broadcasting

iv) ITU-R Emergency and Disaster Relief (ITU-R Special Supplement) (2006)

v) Emergency Radiocommunications website describing the role that ITU-R plays in disaster mitigation and relief operations (2006)

vi) Compendium of ITU's work on Emergency Telecommunications (2007)

Action Line C5: Building Confidence and Security in the use of ICTs

60. Within the framework of the existing resources and given mandate, as well as in line with the Geneva Plan of Action the ITU carries out several activities with regard to the WSIS Action Line C5. The Tunis Phase of the WSIS nominated ITU as the sole facilitator for Action Line C5, dedicated to Building Confidence and Security in the Use of ICTs. A fundamental role of ITU, following the WSIS and the 2006 ITU Plenipotentiary Conference, is to build confidence and security in the use of ICTs. As the sole Facilitator for WSIS Action Line C5, ITU is deeply committed through a range of activities to help ensure that communication over public telecommunication networks remains secure, reliable and user-friendly.

61. C5 Action Line Facilitation Meetings have been held every year since 2006. The 1st Facilitation Meeting on Action Line C5 was held in Geneva on 15-16 May 2006 to discuss the WSIS multi-stakeholder

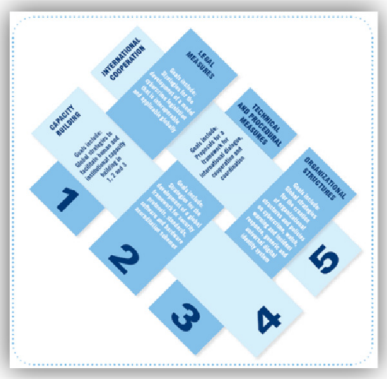
implementation process for WSIS Action Line C5. The 2nd Facilitation Meeting on Action Line C5 was held during the cluster of WSIS-related meetings, from 14-25 May 2007 in Geneva. This meeting included discussions on the changing cybersecurity threat environment and innovative solutions. In the framework of the WSIS cluster of events, ITU organized the 3rd Facilitation Meeting on Action Line C5 on 22 and 23 May 2008. The 4th Facilitation Meeting on Action Line C5 and a high-level panel on cybersecurity was held in Geneva on the 19th of May 2009 as an integral part of the WSIS Forum 2009. The 5th Facilitation Meeting on Action Line C5 and a high-level debate on cybersecurity and cyberspace was held in Geneva on the 12th of May 2010 as an integral part of the WSIS Forum 2010. The 3rd, 4th and 5th Facilitation meetings covered discussions, presentations and debates on the following five broad areas of work of the Global Cybersecurity Agenda (GCA): Legal, Technical, Organizational, Capacity Building and International Cooperation.

62. On 17th May 2007, ITU Secretary-General, Dr Hamadoun I. Touré, launched the ITU Global Cybersecurity Agenda (GCA) to provide a framework within which the international response to the growing challenges to cybersecurity can be coordinated and addressed in response to its role as sole Facilitator for Action Line C5. In accordance with its responsibilities as Facilitator for WSIS Action Line C5 under the Terms of Reference for Moderators/Facilitators of WSIS Action Lines, the GCA assembled a multistakeholder team of volunteers in the High-Level Experts Group (HLEG) to advise the ITU Secretary-General on current and long-term strategies to promote cybersecurity. The HLEG initiated the GCA process by giving advice on strategies in five work areas (legal measures, technical and procedural measures, organizational structures, capacity-building, international cooperation.). The HLEG comprised of a group of high-level experts from governments, industry, relevant regional/international organizations, research institutes, academic institutions and individual experts from every part of the world, appointed by the ITU Secretary-General. The responsibilities of the HLEG were to meet and further develop the GCA by proposing refinements to its main goals, analyze current developments in cybersecurity, including both threats and state-of-the-art solutions, anticipate emerging and future challenges, identify strategic options, and formulate proposals to the ITU Secretary-General and finally to provide guidance on possible long-term strategies and emerging trends in cybersecurity. The HLEG met on multiple occasions at the ITU and in November 2008, the ITU published their strategies in a Global Strategic Report. The Chairman's Report further summarizes the work of the HLEG, the views expressed by HLEG members and other information about the work carried out by HLEG since its inception. Some of the proposals were taken into consideration by ITU Secretary-General. Those proposals that were considered have been reviewed by all three ITU Sectors, linked to the relevant ITU mandate and are being taken into account in work programmes of the Sectors.

63. Building upon five strategic pillars of the GCA framework, which shows the complementary nature of existing ITU work programmes and facilitates the implementation of ITU-D, ITU-T, and ITU-R activities in this domain, listed below are several of the activities that were carried out between 2006-2010:

1) Legal Measures

As part of the 2006 Doha Action Plan (DAP) Programme 3, BDT has been assisting Member States in understanding the legal aspects of cybersecurity in order to harmonize their legal frameworks. This activity also takes into account the ITU-D SG 1 Q22 approach of organizing national cybersecurity efforts, highlighting that establishing appropriate legal infrastructures is an integral component of a national cybersecurity strategy.



i) BDT published *Understanding Cybercrime: A Guide for Developing Countries*, in May 2009, to help developing countries better understand and assess the national and international implications of growing cyberthreats, as well as assist in establishing a sound legal foundation.

ii) BDT released a *Toolkit for Cybercrime Legislation* in May 2009, developed by a multidisciplinary international group of experts, to provide Member States with sample legislative language and reference material to assist in harmonization of cybercrime laws and procedural rules.

iii) BDT has also developed a background paper on *Cybersecurity: The Role and Responsibilities of an Effective Regulator*" which was presented at the 2009 Global Symposium for Regulators (GSR) in November 2009.

2) Technical and Procedural Measures

i) Standards development bodies have a vital role to play in addressing security vulnerabilities in protocols. ITU's Standardization Sector (ITU-T) holds a unique position in the field of standardization; its work brings together the private sector and governments to coordinate work and promote the harmonization of security policy and security standards on an international scale.

ii) Along with many key security recommendations, ITU has developed overview security requirements, security guidelines for protocol authors, security specifications for IP-based systems it defines (NGN, H.323, IPCableCom, etc), guidance on how to identify cyber threats and countermeasures to mitigate risks. ITU also provides the international platform for the development of the protocols that protect current and Next-Generation Networks (NGN). ITU's work addresses security aspects in NGN architecture, quality of service, network management, mobility, billing and payment for NGN. ITU's work on secure communication services reviews enhancements to security specifications for mobile end-to-end data communications and considers security requirements for web services and application protocols. Initial considerations are also given to new security areas related to cloud computing and smart grid.

iii) In the move to Internet Protocol (IP) based services, ITU's H.235.x series Recommendations on "H.323 Security" defines the security infrastructure and services (including authentication and privacy) for use by the H.300-

Series IP multimedia systems (such as VoIP and videoconferencing) in point-to-point and multipoint applications. The H.235.x standards provide privacy to service providers and enterprises, while ensuring interoperability of multimedia products. The identity of users communicating through IP media is correctly authenticated and authorized using H.235.x, protecting their communications against different critical security threats.

iv) Real-time multimedia encryption adds a further layer of security, guarding against call interception. ITU's J.170 "IPCablecom Security Specification" defines security requirements for IPCablecom architecture enabling cable TV operators to deliver secure two-way capability in the provision of a variety of IP services, including VoIP.

v) ITU's work on security covers a broad range of activities in security from network attacks, theft or denial of service, theft of identity, eavesdropping, telebiometrics for authentication, security for emergency telecommunications and telecommunication network security requirements. ITU's X.805 Recommendation defines the security architecture for systems providing end-to-end communications that can provide end-to-end network security. This Recommendation allows operators to pinpoint vulnerable points in a network and address them. ITU's security framework extends this with guidelines on protection against cyber attacks.

vi) ITU-T X.1205 "Overview of Cybersecurity" provides a definition of cybersecurity and a taxonomy of security threats. It discusses the nature of the cybersecurity environment and risks, possible network protection strategies, secure communications techniques and network survivability (even under attack).

vii) Currently, all ITU study groups conduct security-related activities and review security questions as part of their work, while the telecommunication standardization sector's Study Group 17 acts as the overall lead study group on telecommunication security and identity management. In 2002, ITU agreed to cooperate with other standards development organizations in setting standards for security, monitoring security work carried out around the world and considering best practices and effective solutions. ITU hosts a regular joint security workshop inviting non-member attendees to contribute to a roadmap for future work and coordination between other standards development organizations.

viii) ITU-T Study Group 17 is the lead study group on telecommunications security and identity management. It is responsible for studies relating to security, including cybersecurity, countering spam and identity management and handles security guidance and the coordination of security related work across all ITU-T study groups. Its role as the lead study group on work related to security was confirmed by the ITU-T World Telecommunication Standardization Assemblies (WTSA) in 2000, 2004 and 2008, in close collaboration with ISO/IEC, as a tripartite joint action. WTSA-08 added to ITU-T Study Group 17 the lead study group role for identity

management. ITU-T Study Group 17 has approved over one hundred Recommendations on security for communications, mainly in the X series of Recommendations, either by itself, or jointly with ISO/IEC or other relevant organizations. It regularly updates the manual on "Security in telecommunications and information technology" as an overview of security issues and the deployment of ITU-T Recommendations for secure telecommunications across all ITU-T Study Groups (the fourth edition was issued in September 2009).

ix) The role of Study Group 17 was confirmed and reinforced by various Resolutions adopted at the WTSA-08 in Johannesburg:

- Resolution 50 on "Cybersecurity" guiding ITU-T work to build Recommendations sufficiently robust to prevent exploitation by malicious parties;
- Resolution 52 on "Countering and combating spam", seeking to integrate the technical means to combat spam into the work of ITU-T study groups and SG 17 Recommendations.

x) From September 2009, seven correspondence groups were established on subjects including security coordination, e-health, cloud computing and smart grid security, national centres for network security (NCNS), strategy for online transaction security, decentralized architecture for global IP network name resolution system, cybersecurity information exchange framework (CYBEX) and a comprehensive and structured effort of around thirty draft Recommendations related to CYBEX has emerged.

xi) ITU-T Study Group 17 also electronically publishes a Security Compendium on its website containing a catalogue of approved ITU-T Recommendations related to security and presenting an extract of security definitions from ITU-T and other sources.

xii) ITU-T Study Group 17 is also working on the implementation of WTSA-08 Resolution 58 on "Encourage the creation of national Computer Incident Response Teams, particularly for developing countries".

xiii) The ICT Security Standards Roadmap promoting collaboration between international standards bodies was launched by ITU-T Study Group 17, and became a joint effort in January 2007, when the European Network and Information Security Agency (ENISA) and the Network and Information Security Steering Group (NISSG) joined the initiative. The ICT Security Standards Roadmap promotes the development of security standards by highlighting existing standards, current work and future standards among key standards development organizations. The Roadmap informs users about security standards.

xiv) Radio spectrum global frequency management is increasingly important for building confidence and security and creating an enabling environment in the use of ICTs. Wireless applications, such as 3G, are becoming an integral part of daily life, and the global use and management of frequencies require a high level of international cooperation.

xv) ITU's Radiocommunication Sector (ITU-R) mission is to ensure, rational, equitable, efficient and economical use of the radio-frequency spectrum by all radiocommunication services, including those using satellite orbits, and to carry out studies and adopt Recommendations on radiocommunication matters.

xvi) Safeguarding quality of service against degradation or denial of service is vital for the secure functioning of networks in data transmission and service provision and many of the Radiocommunication Sector (ITU-R)'s latest Recommendations on generic requirements and the protection of radiocommunications against interference are relevant for security.

xvii) ITU's work in radiocommunication standardization continues, matching the constant evolution in modern telecommunication networks. ITU-R has approved Recommendations on security principles and mechanisms for IMT-2000 (3G) networks (Recommendation ITU-R M.1078 and Recommendations M.1223, M.1457, M.1645 are also relevant). ITU recommended early on that the security provided by mobile broadband IMT-2000 (3G) networks should be comparable to contemporary fixed networks. ITU has also issued Recommendations on security issues in network management architecture for digital satellite systems (Recommendation ITU-R S.1250) and performance enhancements of transmission control protocol over satellite networks (Recommendation ITU-R S.1711).

xviii) As part of ITU's collaboration with the International Multilateral Partnership Against Cyber Threats (IMPACT), the Global Response Centre (GRC) plays a pivotal role in realizing the GCA objective of putting technical measures in place to combat new and evolving cyberthreats. Working with leading partners in academia and governments, the Centre provides the global community with a real-time aggregated early warning system. BDT is working with IMPACT to bring this resource to interested Member States as part of a broader strategy to assist them in their efforts against cyberthreats. The two prime highlights of the GRC are NEWS (*Network Early Warning System*) and ESCAPE (*Electronically Secure Collaboration Application Platform for Experts*). NEWS is designed to help countries identify cyber threats early on and provide critical guidance on what measures to take to mitigate them. ESCAPE is an electronic tool that would enable authorized cyber-experts across different countries to pool resources and collaborate with each other remotely, yet within a secure and trusted environment. By pooling resources and expertise from many different countries on short notice, ESCAPE could enable individual nations and the global community to respond immediately to cyber-threats, especially during crisis situations.

3) Organizational Structures

i) The dearth of institutional structures to deal with cyber incidents and attacks resulting in fraud, the destruction of information and/or the dissemination of inappropriate content, is a genuine problem in responding

to cyber threats. BDT is working with Member States to provide concrete assistance in addressing this global menace, and in partnership with IMPACT, is deploying capabilities to build capacity at the national and regional level. Coordination is underway with several ITU Member States and regions (some examples include Zambia, Ghana, Uganda, Kenya, Cote d'Ivoire and other Administrations in Africa and other ITU Regions) on specific assistance to be provided for the establishment of National Computer Incident Response Teams (CIRTs). Since 2009, technical assessment has been already undertaken by ITU-IMPACT for some countries to ensure effective deployment and use of the CIRT.

ii) ITU WTSA-08 Resolution 58 further emphasizes this and encourages ITU Member States to move forward on creating national CIRTs.

iii) With support received from the Australian Government and in partnerships with other organizations (e.g., AusCERT, IMPACT), ITU is assisting the Pacific Island Countries in establishing a Pacific Computer Emergency Response Team (CERT). In cooperation with IMPACT, ITU also helped Afghanistan in a feasibility study on establishment of a national CERT.

4) Capacity Building

i) Capacity building needs to be promoted in order to develop a sustainable and proactive culture of cybersecurity. People are the weakest link. One of the key challenges of cybersecurity is effectively educating the end user. Understanding and awareness of the potential dangers are critical if the end-user is to benefit from ICTs safely. This is a matter that concerns all stakeholders from governments and industry to education both at school and at home. With the important role that ICTs play today in providing services in sectors as varied as health, education, finance and commerce, awareness of the opportunities offered by a secure cyber environment and of the threats inherent to cyber space are vital. Programmes aimed at creating a level playing-field in raising basic awareness and building capacity at all levels are important, and these also need to be undertaken within the international arena.

ii) Within the framework of GCA and in line with ITU's mandate to assist Member States in developing cybersecurity capacity, among other things, the ITU works to facilitate the implementation and deployment of cybersecurity capabilities necessary to combat cyber-threats.

iii) To assist Member States who wish to design their national approach for Cybersecurity and Critical Information Infrastructure Protection (CIIP), BDT has developed the *National Cybersecurity/CIIP Self-Assessment Tool*. An updated version is under production, reflecting the feedback received by Membership following pilot projects performed during the period 2007-2009 in accordance to the GCA. The *National Cybersecurity Guide* assists Member States in developing their national strategy by examining existing capacity for addressing challenges to cybersecurity and CIIP, identifying requirements and outlining a national response plan.

iv) BDT is organizing regional Cybersecurity forums for all ITU regions, using it as a capacity-building vehicle for different BDT programmes and activities as well as an operational platform for cooperation at the regional and international level.

v) The BDT-developed *ITU Botnet Mitigation Toolkit* is a multi-stakeholder, multi-pronged approach to track botnets and mitigate their impact, with a particular emphasis on the problems specific to emerging Internet economies. A new release of the background paper, as well as the establishment of pilot projects is in progress.

vi) In order to build capacity, BDT, through IMPACT's Training and Skills Development Centre, conducts high-level briefings for the benefit of representatives of Member States, providing invaluable exposure and privileged private sector insight on latest trends, potential threats and emerging technologies.

5) International Cooperation

i) The Internet and ICTs have enabled interconnection between countries that was not possible before. Countries cannot easily close their borders to incoming cyber threats and cannot either contain those coming from within. Attempts to solve these challenges at national or regional levels are important, but they are undermined. Cybersecurity is as global and far-reaching as the Internet. Therefore solutions need to be harmonized across all borders. This necessarily entails international cooperation, not only at government level, but also with industry, non-governmental and international organizations.

- **International Multilateral Partnership Against Cyber Threats (IMPACT)**

64. ITU-IMPACT is a truly global, multi-stakeholder public-private partnership against cyber threats, with its state-of-the-art facilities (in Cyberjaya, Malaysia) being the physical and operational home of ITU's GCA, providing the ITU's 191 Member States and other with the expertise, facilities and resources to effectively address the world's most serious cyber threats.

65. The IMPACT headquarters was inaugurated in March 2009 by the ITU Secretary-General Dr Hamadoun I. Touré and the Malaysian Prime Minister Dato' Seri Abdullah Haji Ahmad Badawi.

66. ITU maintains a IMPACT 'virtual showcase' in Geneva of the early warning system, crisis management and real-time analysis of global cyber-threats.

67. As of August 2010, more than 50 Member States have formally agreed to take part in the services offered by ITU-IMPACT.

- **ITU Cybersecurity Gateway**

68. To enable information access, dissemination and online collaboration among stakeholders working in cybersecurity, the ITU Cybersecurity Gateway was revamped in

May 2009. The feedback received from Member States participating in ITU cybersecurity initiatives (such as IMPACT services) are being incorporated into the Gateway.

- **Child Online Protection**

69. Within the framework of the GCA and in conjunction with other UN agencies and partners, ITU launched the Child Online Protection (COP) on 13 November 2008 as an international collaborative initiative for action to promote the online protection of children and young people by providing guidance on safe online behaviour. Several events have been organized, some examples being *A Strategic Dialogue on Safer Internet Environment for Children*, held in June 2009 in Tokyo, Japan and an *Open Forum on Child Online Protection*, organized during the 4th IGF in November 2009. Four guidelines for policy makers, industry, educators, parents, guardians and children on the online protection of children were prepared in close collaboration with numerous UN agencies and other organizations, including ITU, UNICRI, UNICEF, UNODC, UNIDIR, INTERPOL and the ENISA. These guidelines are available in six UN languages.

Action Line C6: Enabling Environment

70. Within the framework of the existing resources and given mandate, as well as in line with the Geneva Plan of Action the ITU carries out several activities with regard to the WSIS Action Line C6 Plan of Action. Recognizing the strong commitment of ITU's work towards bridging digital divide in the area of the enabling environment, UNDP officially handed over the lead facilitation role on WSIS Action Line C6 to ITU in May 2008. Since then, ITU has been acting as the sole facilitator for this Action Line building upon its regular work carried out within the framework of the ITU-D Programme 1: Regulatory Reform, in close collaboration with ITU-D Programme 3: E- Strategies and ICT Applications. In May 2008, ITU organized the multi-stakeholders' meeting of the WSIS Action Line C6 which focused on four main areas:

- Creating an enabling environment for ICT growth;
- Enabling environment driving innovation: best practices;
- Infrastructure Sharing: extending ICT access to all on the national level; and
- Infrastructure Sharing: extending ICT access to all on the international level

71. The 4th Facilitation Meeting on Action Line C6 was held in Geneva on the 19th of May 2009 as an integral part of the WSIS Forum 2009. ITU organized the 4th WSIS Facilitation Meeting with the main task of identifying strategies for further implementation of this Action Line. Stakeholders reached a consensus that a platform for sharing best practices by all stakeholders can be a viable driver of WSIS

implementation of the enabling environment for the years to come. For more detail see the **WSIS C6 portal**[4] and the **meeting report**.

72. The 5th Facilitation Meeting on Action Line was held in Geneva on the 10th May 2010 as an integral part of the WSIS Forum 2010. The overall theme of shaping modern broadband policies stayed in the heart of the debate and stimulated an insightful exchange of ideas and experiences among stakeholders. The meeting reached consensus that multi-stakeholder partnerships (including public-private and private-private partnerships) are the shortest way to a broadband world. For more detail see the **meeting report**.

73. In order to set a sound framework for making decisive progress in creating an enabling environment for investment, competition and innovation, ITU has created a Roadmap for the implementation of WSIS Action Line C6 (available at: www.itu.int/wsis/implementation/2010/forum/geneva/ifm/ifm_1.html). This roadmap catalogues a wide range of ongoing ITU activities in the area of policy and regulation. It is intended to evolve as a living document and will be updated on a regular basis with new activities and initiatives.

74. ITU continues to assist Member States and Sector Members in developing a pro-competitive policy and regulatory framework for telecommunications/ICTs. More specifically, ITU (www.itu.int/treg and www.itu.int/finance) has undertaken numerous activities that foster the development of an enabling environment worldwide including information sharing, creation of tools for effective regulation, national and regional assistance, and creation of training materials and opportunities. Some of these ongoing activities include:

i) The annual Trends in Telecommunication Reform publications are key part of ITU's effort to explore and amplify the wisdom of policy-makers and regulators in the ICT sector.

ii) The 8th edition of Trends in Telecommunication Reform 2007: The Road to Next-Generation Networks (NGNs) reports on the evolution of circuit-switched telecommunication into "next-generation" networks, as operators around the world fight to remain competitive. The Report aims at enabling regulators and policy-makers in developing countries to better understand the changes transforming the ICT sector so they can evolve their policy and regulatory frameworks to leverage today's technological and market developments.

iii) The 9th edition of Trends in Telecommunication Reform 2008: Six Degrees of Sharing was published in November 2008. The 10th edition, focusing on stimulating growth through effective ICT regulation, was published in February 2010. The forthcoming edition will address the challenges of convergence, the new expectations of stakeholders and the changing role of the regulator.

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4 http://www.itu.int/ITU-D/treg/wsis/c6/

iv) The 10th edition Hands-on or Hands-off? Stimulating Growth through Effective ICT Regulation issued in 2010 focused on the delicate balance that regulators need to strike in order to operate between the hands-on and the hands-off approach to regulation. This balance is required to meet the expectations of key ICT stakeholders and is critical to stimulating growth in a converged environment. The blurring of boundaries between the once-separate telecom, Internet, broadcasting and media worlds is bringing new players to the arena, driving new opportunities and challenges. At the same time, regulatory authorities more than ever have a key role to play in fostering a safe and healthy ICT sector while meeting social goals, especially in a time of economic and financial uncertainty.

75. Since its launch in 2000, the annual GSR organized by ITU has provided a unique venue for regulators and policy-makers from both developed and developing countries to meet and exchange views and experiences. The meeting fosters an open dialogue between regulators and key ICT stakeholders: the private sector, investors and consumers.

i) The latest editions of the GSR saw the adoption by the world community of regulators of best practice guidelines focusing on key areas of regulation, such as universal access (GSR03), promotion of low-cost broadband connectivity (GSR04), spectrum management (GSR05), Next-Generation Networks (NGNs) migration (GSR07), and infrastructure sharing (GSR08)

ii) The 9th GSR was held in Beirut, Lebanon, on 10-12 November 2009. The overall theme of the event was "Hands-on or hands-off? Stimulating Growth through Effective ICT Regulation" To better engage industry in the planning of future policy and regulatory reforms, the GSR was accompanied by the Global Industry Leaders Forum (GILF) on 9 November 2009.

iii) The 10th edition of GSR is going to take place in Dakar, Senegal, on 10-12 November 2010 and is going to be immediately preceded by the 3rd GILF. The shared overall theme of this year's GSR and GILF is "Enabling Tomorrow's Digital World".

iv) The ICT Regulation Toolkit, developed by ITU and its partner, *infoDev*, includes seven modules on key regulatory issues. The Toolkit, which is updated on a continuous basis, assists regulators in the design of effective and enabling regulatory frameworks by sharing analysis and information on key regulatory issues as well as best practices. A new module on Universal Access and Service has been launched on the ITU-*info*Dev ICT Regulation Toolkit. This web-based tool provides regulators, policy-makers telecom service providers, sector experts and the general public with the latest updates on regulatory topics, best practices and case studies. Other modules are being updated to reflect the latest regulatory trends.

v) The ITU World Bank ICT Regulatory Decisions Clearinghouse (ICTDec) is an online resource that provides a one-stop access point to decisions originating from ICT decision making bodies such as telecommunications regulators, industry ombudsmen and specialized dispute resolution tribunals. It also includes a meta crawler allowing to search for decisions on

specific topics. The search engine crawls and indexes thousands of documents that are published on the websites of ICT decision making bodies around the world. Partners are now working on turning this pilot into a full scale portal.

vi) A series of regional regulatory meetings, workshops, training events and direct assistance activities were organized in 2008 and 2009. The annual session of the Forum on Telecommunication and ICT regulation and Partnership Forum (FTRA) in 2008 under the theme "Connect Africa: challenges for regulators and operators" and in 2009 under the theme "Universal Service/Access Fund". In the framework of capacity building, Programme 4 organized three regional cost and tariff seminars were organized in the Africa, Asia and Pacific and Americas regions together with the ITU-T regional tariff group meetings (TAF, TAS and TAL) were organized together with the meetings of the ITU-T Study Group 3 Regional Groups for Asian and Oceania, Africa, and Latin America and the Caribbean in 2009.

vii) ITU continues to maintain the World Telecommunication Regulatory Database, which can be accessed from the ICT Eye, a password-protected online discussion forum reserved for regulators and policy-makers. Programme 4 maintains the Tariffs Policies database and a database of scientific institutions focusing on telecommunication/ICTs which can also be accessed from the ICT Eye. In addition, the TREG resource centre provides access to a wealth of online resources, including events, publications, reports, case studies and a Regulatory newslog tracking the latest regulatory news and developments.

viii) Global Regulators' Exchange (G-REX) is ITU's unique password-protected online discussion forum reserved for regulators and policy makers. The virtual forum provides assistance to countries enhancing the in-depth discussion on a full range of topics and facilitating the exchange of best practices among fellow regulators.

76. Moreover in 2009, ITU hosted the World Telecommunication Policy Forum (WTPF) in Lisbon, Portugal, to exchange views on the key policy issues arising from today's fast-changing ICT environment. In accordance with Decision 9 of the ITU Plenipotentiary Conference 2006, WTPF-09 examined the implications of convergence, including Internet-related public policy issues, and new emerging telecommunications policy and regulatory issues. It culminated with the adoption of six opinions on: Internet-related public policy matters; the implications of the advent of NGNs and advanced broadband access; ICT and the Environment; collaborative strategies for creating confidence and security in the use of ICTs; Capacity building in support of the adoption of IPv6; and the International Telecommunication Regulations (ITRs).ITU also assists its Members to develop policies to ensure ICT accessibility for persons with disabilities. In May 2009, ITU together with its partner G3ict launched an online toolkit to share best practices with policy makers and regulators on promoting accessible ICTs for persons with disabilities. ITU has shared best practices and provided capacity building on the e-Accessibility toolkit in two events in 2009, one held for the Asia-Pacific

region and one for African countries, and two events in 2010, one for the CIS region and an information session on the e-Accessibility toolkit organized during the Telecommunication Development Advisory Group (TDAG) in February 2010.

77. Through a project funded by the EC, ITU led an initiative to support an integrated ICT market in West Africa, resulting in the adoption of a harmonized ICT legal framework currently being transposed into national law by 15 West African States. Building on the success of the West Africa project, ITU and the EC continued implementation of new projects to harmonize ICT frameworks and build capacity in the field of policy and regulation in Sub-Saharan Africa, the Caribbean and the Pacific Island Countries. The programme seeks to develop and promote harmonized policies and regulatory guidelines for the ICT market as well as building human and institutional capacity in the field of ICT regulation through a range of targeted training and knowledge sharing measures. This project will result in the creation of harmonized regional and national policy, legal and regulatory frameworks conducive to significant investments in the ICT infrastructures and services.

78. ITU, which launched the *Connect a School, Connect a Community* initiative, endorsed by the UN Secretary General during the 2009 ITU World TELECOM Youth Forum, to assist its members to develop policies and national school connectivity plans to meet the WSIS targets of connecting all schools by 2015, launched an online toolkit sharing best practices and policies on steps ITU administrations can take to connect their schools to broadband and implementing low cost computing device programmes. ITU is adding three new modules in 2010, one each on using connected schools as community centres for women, indigenous people and persons with disabilities in 2010. The module on persons with disabilities will explore how to design community ICT centres for the economic empowerment of persons with disabilities and the use of assistive technologies for the education of children with persons with disabilities.

79. ITU also assists its Members to develop policies to ensure ICT accessibility for persons with disabilities. In May 2009, ITU together with its partner, G3ict, launched an online toolkit to share best practices with policy-makers and regulators on promoting accessible ICTs for persons with disabilities. ITU has shared best practices and provided capacity building on the e-Accessibility toolkit in two events in 2009, one held for the Asia-Pacific region and one for African countries, and two events in 2010, one for the CIS region and an information session on the e-Accessibility toolkit organized during the Telecommunication Development Advisory Group (TDAG) in February 2010.

80. A number of countries have benefited from direct assistance in the area of regulatory reform, costing and creating an enabling environment for investment in 2008, including Afghanistan, Albania, Bhutan, Burundi, Central African Republic, Costa Rica, Equatorial Guinea, Gabon, The Gambia, Kiribati, Laos, Paraguay, Papua New Guinea, Sri Lanka, Swaziland, and Thailand. Further direct assistance will be provided in 2009. A number of trainings were carried out under the ITU Centre of Excellence Network initiative to ensure the enabling environment on policy and regulation in the case of the Asia-Pacific region.

81. ITU has undertaken projects with partners such as the Asian Development Bank (ADB) and the National Telecommunications Commission of Thailand (NTC) on rural ICT policy and regulation development in the Asia-Pacific region. The projects aim to create tools for policy-makers and regulators in view of rural ICT development. More than ten countries have participated in the projects.

82. ITU continued to carry out studies and established Recommendations on questions related to the broad aspects of spectrum management. The improvement of the international spectrum regulatory framework was considered during the 2007 World Radiocommunication Conference. The Conference decided to call for further studies on general allocation and procedural issues relating to spectrum management solutions, which are expected to provide flexibility to administrations in accommodating converging services. In order to provide additional flexibility and improved efficiency in the usage of the radiofrequency spectrum, new regulatory measures are being studied in the run-up to the World Radiocommunication Conference in 2012, which are expected to enable the introduction of software-defined radio and cognitive radio systems. As part of its regular activity, ITU carries out studies and establishes recommendations related to the broad aspects of spectrum management, including long-term strategies for spectrum utilization and on issues related to the introduction of ultra-wideband devices.

83. Under specific requests from Member States, ITU is currently undertaking a set of activities to assist countries in building national capacity and improving awareness on issues pertaining to internet-related public policy issues, including Internet governance, in order to improve developing countries' contribution and involvement in the management of this key global resource. This also includes facilitating the exchange of technical information between Member States and relevant organizations on issues related to internationalized domain names (IDNs). Some examples of these activities include the following:

i) ITU supports Member States in their assessment and management of the country code Top Level Domain (ccTLD) and/or creation of generic Top Level Domains (gTLDs) in order to further improve the development and access to ICT content and applications for local/regional needs and in local languages.

ii) ITU has provided assistance to Somalia on the finalization of the re-delegation process for the ccTLD (.so). This activity includes technical assistance and capacity building, allowing the government of Somalia to start making full use of this critical Internet resource and develop local content.

iii) The development of the gTLD area can allow for new opportunities and innovation, however, as this is a complex process that requires full involvement by Member States, in this regard ITU is providing assistance to Member States in understanding the related challenges and benefits. For example, ITU is assisting the Arab Region, in coordination with the League of Arab States, with the establishment of the new .ARAB gTLD, and its multilingual version in Arabic. This activity aims to provide expert assistance in the policy process and related capacity building.

iv) ITU-T SG 16 held initial discussion in July 2010 on standardization needs to avoid visual confusion in domain names.

84. ITU provides assistance in order to support Member States with their migration to IPv6 and related efforts, to ensure that they can benefit from equitable and fair access to this key Internet resource.

85. In addition, ITU has provided assistance to East African Community (EAC) and South African Development Community (SADC) countries on the creation of national Internet Exchange Points (IXPs) and achieving efficient and cost effective Regional Internet connectivity.

86. Negotiating tariffs or rates is a delicate matter, whether it is for a new operator entering a liberalized market or a regulator wishing to set affordable tariffs for national calls without compromising competitiveness among operators. The COSITU (http://www.itu.int/ITU-D/finance/COSITU/)) model permits network operators, service providers, regulators, and policy makers to calculate costs, taxes related to trade in international traffic, interconnection rates between local and international operators, and tariffs for national and international telephone services, both for fixed and mobile.

87. In the fast changing ICTs environment, pricing and cost modeling practices are central to the regulator's role in fostering a fair, competitive and healthy telecommunication and ICT sector that ensures affordable access to ICTs and promotes investment incentives for all market players. Because of this rapid technological development, it is necessary to provide technical staff of regulatory authorities with sufficient cost modeling tools and knowledge to enable them to understand how to develop their own cost models or to adapt existing cost models to the changing environment. To respond to this need, a two-week, high-level in-depth training on cost model development was provided to regulatory costing experts in Geneva in 2008 in addition to a two-day executive-level training event designed for heads of regulatory authorities on the strategic impact of cost models. Expert level trainings on cost model development were held in 2009 and 2010 in Africa, Arab States, Caribbean, Asia Pacific and Latin American countries.

88. The World Telecommunication Standardization Assembly (WTSA-08) Resolution 76 on conformance and interoperability testing will help in increasing probability of interoperability as requested by developing countries. Council 2009 endorsed the TSB Director's recommendations to implement the proposed conformity assessment programme, interoperability events programme, human resources capacity building and recommendations to assist establishment of test facilities in developing countries.

89. ITU organized some 30 workshops and seminars in 2009 around the world, some in collaboration with all sectors, on implementation of WTSA-08 decisions, bridging the standardization gap, standardization activity related to climate change, cybersecurity, NGN and accessibility. TSB also organized together with the Korea Communications Commission and TTA the first fully virtual ITU symposium on ICTs and climate change. ITU organized five Forums and various workshops in the regions disseminating awareness about standards and ITU's dedication to the reduction of the standardization gap between developed and developing countries (see http://www.itu.int/ITU-T/worksem/wtsa-08/res76).

90. Pursuant to WTSA-08 Resolutions 44, 17 and 59, Bridging the Standardization Gap (BSG) remains a key focus of TSB activities. A TSB-internal task force was established to implement the Action Plan in Resolution 44, training materials and best practices have been being prepared, and future workshops planned. In December 2009, TSB published the "ITU-T Research Project: Measuring and Reducing the Standards Gap", which is a comprehensive report on the importance of standards to developing countries containing case studies and recommendations for best practices.

91. In 2009, ITU-T Study Groups approved 135 ITU-T Recommendations. There was a significant increase in the role and participation of developing countries in Study Group management, following decisions taken at WTSA-08. Written contributions from developing countries have also risen steadily to 19% of total, up from 6% in 2000.

(c) Co-facilitator of Action Lines C1, C3, C4, C7 and C11

Action Line C1:
The Role of Public Governance Authorities and all Stakeholders in the Promotion of ICTs for Development and

Action Line C11:
International and Regional Cooperation

92. In its role as co-facilitator ITU has been proactively partnering with the lead facilitator (DESA) and co-facilitators (ECOSOC/UN Regional Commissions/ITU). On an annual basis ITU has been contributing to the facilitation meetings of the WSIS Action Line C1. The 1st Consultation Meeting on the Implementation of Action Line C1 took place in Geneva, Switzerland, on 16th May 2006. The objective of the meeting was to exchange information and discuss possible cooperation modalities among stakeholders for the implementation of the specific Action Line. The 2nd Consultation Meeting on the Implementation of Action Line C1 took place in Geneva, Switzerland on 24th May 2007. The 3rd Facilitation Meeting on Action Line C1 took place in Geneva on 22nd May 2008. The 4th Facilitation Meeting on Action Line C1 was held in Geneva on the 20th of May 2009 as an integral part of the WSIS Forum 2009. The 5th Facilitation Meeting on Action Line was held jointly with Action Line C7 and C11 in Geneva on the 12th of May 2010 as an integral part of the WSIS Forum 2010.

93. At the implementation level in accordance with its mandate, the ITU continues to foster international and regional cooperation on a broad range of activities in ALC1 and ALC11 since 2006, 2007, 2008, 2009 and 2010. ITU organized amongst the others the GSR and GILF (2008 Thailand, 2009 Lebanon), the Global Symposium on the Human Capacity Building (July 2008, UK), and the ITU TELECOM Telecommunication Development Symposiums and Youth Forum (Africa TELECOM 2007, Cairo, Asia Telecom, 2008, Thailand; World TELECOM, 2009 Geneva,). The ITU intends to leverage these multi-stakeholder platforms to broaden international dialogue on innovative means in harnessing ICTs for advancing development.

94. Connect the World aims to mobilize human, financial and technical resources for the implementation of the connectivity targets of the WSIS and the Regional Initiatives adopted by Member States at the ITU WTDC 2006. ITU and partners are organizing a series of regional Summits to mobilize resources and build partnerships. The Connect Africa Summit, the first in the series, was held in Kigali, Rwanda in October 2007 and the 2nd Connect CIS Summit took place in Minsk, Republic of Belarus in November 2009.

95. In 2009 and 2010, in accordance with its mandate, the ITU continues to foster international and regional cooperation on a broad range of activities. ITU conducted several meetings, conferences and symposiums to provide a platform to broaden international dialogue on innovative means in harnessing ICTs for advancing development. For example, ITU organized the Global Symposium for Regulators and Global Industry Leaders Forum (Beirut, November 2009), the ITU TELECOM World 2009 as well as ITU TELECOM Telecommunication Development Symposium and Youth Forum (Geneva, October 2009), World Telecommunication Policy Forum (WTPF) (Lisbon, April 2009). In addition the ITU conducted five Regional Preparatory Meetings for the 2010 World Telecommunication Conference (WTDC-2010), where one of the topics discussed was the WSIS implementation.

Action Line C3: Access to Information and Knowledge

96. In its role as co-facilitator ITU has been proactively contributing to the annual facilitation meetings of the WSIS Action Line C1. The 1st Consultation Meeting on the Implementation of Action Line C3 took place in Paris, France, on 16th October 2006. The 2nd Consultation Meeting on the Implementation of Action Line C3 took place in Geneva, Switzerland on 23rd of May 2007. The 3rd Facilitation Meeting on Action Line C3 took place in Geneva on 19th May 2008. The 4th Facilitation Meeting on Action Line C3 was held in Geneva on the 18th of May 2009 as an integral part of the WSIS Forum 2009. The 5th Facilitation Meeting on Action Line C3 was organized jointly with Action Line C7 in Geneva on the 10th of May 2010 as an integral part of the WSIS Forum 2010.

97. ITU continues to promote universal access with equal opportunities for all, to scientific knowledge and the creation and dissemination of scientific and technical information. In 2006, 2007, 2008, 2009 and 2010 ITU held numerous workshops, conferences and symposiums, making materials widely available for free on the web. In addition, a number of online resources have been made available, including web-based information portals, practical ICT toolkits and online databases, while existing resources updated.

98. ITU carried out several actions, activities and events related to accessibility at the headquarters and in all the regions of the world. The technical cooperation in the field of accessibility included, among others a number of MCTs/ICT centres targeting marginalized communities and PwDs were implemented in partnership with some

developing countries in Asia and Africa. In the area of Accessibility, ITU-T conducted the following activities/events:

i) Published an 'Accessibility Checklist';

ii) *Accessibility I: ITU Takes Deaf People's Accessibility Needs Into Account (Las Vegas, USA, July 2003)*;

iii) Accessibility II: Communication by all means: Accessibility for all in telecommunications enabled by multimedia standards *(Geneva, October 2003)*;

iv) Question 26 of ITU-T Study Group 16 contributed to other accessibility events including:

- *FCC summit on Accessibility and IP based services (Washington, USA, May 2004)*
- *4th Conference:* Handicap 2006 *(Paris, June 2006)*

v) "Designing Next Generation Networks for all", ITU-T Workshop on "NGN technology and Standardization" *(Las Vegas, USA, 19-20 March 2006);*

vi) "Accessibility in New Emerging Networks and Services", Joint ITU-T Workshop and IMTC Forum 2006 on "H.323, SIP: is H.325 next?" *(San Diego, USA, 9-11 May 2006)*;

vii) "Convenient invocation of relay services at ITU-T SG2 meeting *(Geneva, 07 February 2007)*;

viii) ICT Accessibility Side Event during WTSA-08 *(Johannesburg, South Africa, 22 October 2008);*

ix) ITU Tutorial on Accessibility: "Making ITU Accessible: Web Design, Web Conferencing and Real Time Web Captioning" *(Geneva, April 2008);*

x) Joint ITU and G3ict Forum 2008 on "The Convention on the Rights of Persons with Disabilities: Challenges and Opportunities for ICT Standards" *(Geneva, April 2008)*;

xi) Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI) conference *(Washington, USA, July 2009)*;

xii) ITU/ESCAP Asia-Pacific Regional Workshop on "Mainstreaming ICT Accessibility for Persons with Disabilities" *(Bangkok, Thailand, August 2009)*;

xiii) A panel on accessibility at the Forum of the World Telecom 2009 *(Geneva, October 2009)*;

xiv) Workshop on Accessibility *(Bamako, Mali, October 2009)*, which included training for African policy makers and regulators on the e-Accessibility toolkit;

xv) ITU-T Workshop on "The impact of the United Nations Convention on the Rights of Persons with Disabilities on the work of the ITU-T" *(Geneva, November 2009)* ;

xvi) "The Globalization of Accessibility to the Internet for Persons with Disabilities" Workshop at IGF 09 *(Sharm El-Sheikh, Egypt, November 2009)*;

xvii) "Best practices for an Accessible Web" Workshop at IGF 09 *(Sharm El-Sheikh, Egypt, November 2009)*;

xviii) ITU/WIPO workshop on Accessibility (Geneva, February 2010), to promote awareness and encourage webmasters to implement accessibility in their daily work;

xix) ITU Workshop: "Accessibility to ICTs" in World Expo 2010 *(Shanghai, China, July 2010)*;

xx) ITU-EBU Joint Workshop on Accessibility to Broadcasting and IPTV - ACCESS for ALL (Geneva, November 2010); and

xxi) World Standards Cooperation (WSC) International Workshop "Accessibility and the contribution of International Standards" (Geneva, November 2010)

99. ITU increased its dialogue with academia and Universities by organizing a series of forward looking academic conferences 'The Kaleidoscope' on innovations in ICTs and related standardization issues. Building upon the success of the first Kaleidoscope event "Innovations in NGN" which was held in May 2008 in Geneva to link universities to ITU's activities and studies on new and emerging technologies, the second one "Innovations for Digital Inclusion" took place on 31 August - 1 September 2009 in Argentina. A third event "Beyond the Internet? – Innovations for future networks and services" will take place on 13-15 December 2010, in Pune, India.

100. ITU proactively participated in the 4th Facilitation Meeting on Action Line C3 "Access to information and knowledge" which was organized by UNESCO on 18 May 2009 at ITU headquarters. This session focused specifically on opening access to scientific data and knowledge, building on the prior discussions of the High-Level Panel on Accessing Knowledge.

Action Line C4: Capacity-Building

101. The 1st Facilitation Meeting on the Implementation of Action Line C4 was organized jointly by ITU and UNDP in Geneva on 11 May 2006, in the framework of a Joint Facilitation Meeting on Action Lines C2, C4, and C6. The meeting provided an opportunity to discuss ways to enhance collaboration and information sharing among diverse stakeholders to contribute to effective multi-stakeholder implementation, identify priority areas for focus and explore ideas on how the action line team might organize their work. The 2nd Facilitation Meeting on Implementation of Action Line C4 took place in Geneva, Switzerland on 16 May 2007. The 3rd Facilitation Meeting on Action Line C4 took place in Geneva on 19-21 May 2008. The 4th Facilitation Meeting was held in Geneva on the 20 May 2009 as part of WSIS Forum 2009. This meeting focused on emerging trends challenging existing capacity building paradigms, including the growing availability of 'open education resources', new Web 2.0 and social networking tools that allow far more interactivity and collaborative learning

environments. The 5th Facilitation Meeting on Action Line C4 was organized in Geneva on the 10 May 2010 as part of WSIS Forum 2010.

102. During this period, ITU had continued to implement a number of major ICT-related capacity-building initiatives including:

i) Face-to-face workshops and distance learning training interventions in ICT and telecommunication regulations and policy, rural communications, business management, corporate management, spectrum management and standardization.

ii) The promotion of distance learning activities at regional levels by training local and regional experts to conduct distance learning courses in various domains and assisting them in creating regional open-source e-learning platforms.

iii) Formulation and implementation of various large scale human capacity building projects such as the rehabilitation and reconstruction of the Information and Communication Training Institute (ICTI) in Kabul, Afghanistan.

iv) ITU has carried a broad range of capacity building activities through its Human Capacity Building (HCB) programme, including regional and international trainings, workshops, e-learning, sharing of experts, etc. In 2009, ITU launched a series of ITU Regional Human Capacity Development Forums, with the objective of promoting excellence in human capacity development in the information and communications technology (ICT) and telecoms sector.

v) Through its activities, the HCB programme has trained over 13,000 individuals from more than 100 countries in all regions during the cycle 2006-2009. On an average, 115 courses are run annually with approximately 60% being distance learning and 40% Face to Face. In 2010, an estimated 132 courses will be conducted with an estimated 3,000 participants trained. Training interventions are delivered principally through the ITU Academy global network of more than 60 Centres of Excellence (CoE) and approximately 80 Internet training centres in 62 countries.

vi) For example, in the Asia Pacific region, 17 training courses were held under the Asia-Pacific Centres of Excellence (ASP CoE) Network in 2009. These trainings included 9 online courses and 8 face-to-face courses benefiting more than 450 participants. A new node for training on Broadcasting was recently approved by the Asia-Pacific Centre of Excellence Network Management Committee. In the CIS Region, 14 training courses were held under the framework the CIS Center of Excellence (CIS CoE) in 2009. These training courses included 8 distance learning courses and 6 face to face seminars/workshops, and were attended by more than 300 participants from CIS and from other Regions. The Centre of Excellence for the Americas Region (AMS CoE) implemented in 2009, in partnership with its 23 Nodes,

35 online and face-to-face training activities, including 2 online post graduation courses in benefit of more than 650 participants. The valuable collaboration of OAS/CITEL, which granted more than 129 fellowships, was important to the achievement of these results.

vii) In partnership with the Australian Government (DBCDE), ITU jointly organized the ACMA/ITU International Training Programme from 30 November-4 December, 2009, in Melbourne, Australia, where 100 participants from 40 different countries within the Asia-Pacific region learned from Australia's regulatory model.

viii) During the WSIS Forum 2009, ITU officially launched *ITU Academy*, an initiative to pull together the diverse education, training and information efforts of the ITU in order to develop a harmonized and streamlined approach to capacity building. The intent is to promote the ITU Academy portal at http://academy.itu.int as a single access point for ICT training opportunities whether delivered face-to-face, or through instructor or self-paced distance learning.

Action Line C7: ICT Applications

103. ITU is one of the co-facilitators together with UNESCO, UNDESA and Regional Commissions, ILO, ITC, FAO, UPU, UNEP, WMO, UNCTAD, WHO, etc. for the eight areas of ICT applications that are covered by WSIS Action Line C7.

104. Facilitation Meetings : Action Line C7:

i) E-Government

The 1st Consultation Meeting on Action Line C7: e-government was held on 16th May 2006 in Geneva. The 2nd Joint Facilitation Meeting on Action Lines C1, C7 e-government, and C11 was held on 24 May 2007 in Geneva. The 3rd Facilitation Meeting on Action Lines C7 e-government, was held on 22 May 2008, in Geneva. The 4th Facilitation Meeting on Action Line C7 e-government was held on 20 May 2009 in Geneva. The 5th Facilitation Meeting on Action Lines C7 e-government, and C11 was held on 12 May 2010 at Geneva.

ii) E-Business

The 1st Facilitation Meeting on action lines C7 e-business and C7 e-employment was held on 17 May in Geneva. The 2nd Joint Facilitation meeting on action lines C7 e-business and C7 e-employment was held on 24 May 2007 in Geneva. The 4th Facilitation Meeting on action line C7 e-business was held on 20 May 2009 in Geneva. The 5th Facilitation Meeting on action line C7 e-business was held jointly with action line C7 e-agriculture on 10 May 2010 in Geneva.

iii) E-Learning

The 1st Consultation Meeting of Action Line C7 e-learning was held on 18 October 2006 in Paris. The 2nd Facilitation Meeting on Action Line C7 e-learning was held on 23 May 2007 in Geneva. The 4th Facilitation Meeting on Action Line C7 e-learning was held on 20 May 2009 in Geneva. The 5th Facilitation Meeting on Action Line C7 e-learning was held on 10 May 2010 in Geneva.

iv) E-Health

The 5th Facilitation Meeting on Action Line C7 e-health was held on 12 May 2010 in Geneva.

v) E-Employment

The 1st Facilitation Meeting on action lines C7 e-business and C7 e-employment was held on 17 May in Geneva. The 2nd Joint Facilitation meeting on action lines C7 e-business and C7 e-employment was on 24 May 2007 in Geneva.

vi) E-Environment

The 2nd Facilitation Meeting on Action Line C7 e-environment was held on 21 May 2008 in Geneva. The 4th Facilitation Meeting on Action Line C7 e-environment was held on 20 May 2009 in Geneva. The 5th Facilitation Meeting on Action Line C7 e-environment was held on 11 May 2010 in Geneva. During this meeting, two sessions were held, one session was held on e waste and the second one was on energy resources.

vii) E-Agriculture

The 4th Facilitation Meeting on action line C7 e-business was held on 20 May 2009 in Geneva. The 5th facilitation meeting on action line C7 e-business was held jointly with action line C7 e-agriculture on 10 May 2010 in Geneva.

viii) E-Science

The 1st Consultation Meeting on WSIS Action Line C7-e-science was held on 22nd October 2006 in Beijing. The 2nd Facilitation Meeting on WSIS Action Line C7-e-science was held on 21 May 2007 in Geneva. The 4th Facilitation Meeting on WSIS Action Line C7-e-science was held on 18 May 2009 in Geneva. The 5th Facilitation Meeting on WSIS Action Line C7-e-science was held on 10 May 2010 in Geneva.

105. During the cluster of WSIS related events in May 2007, ITU as co-facilitator/moderator participated in meetings of the components of Action Line C7 organized by the leading agencies. The standards negotiated at ITU are also key enablers for ICT Applications in fields such as egovernment, e-business, e-learning, e-health, e-employment, e-environment, e-agriculture and escience. Under the banner of the World Standards Cooperation (WSC), ITU – together with IEC (International Electrotechnical Commission) and ISO (International Organization for Standardization) – adopted a harmonized approach to address the inclusion of patented technology in

standards in 2007. These world's leading international standards organizations have aligned their policies which allow for commercial entities to contribute the fruits of their research and development activity safe in the knowledge that their intellectual property rights are respected. In 2008 ITU took the main lead in organizing the Action Line C7 (e-environment) meeting. New emerging issues were discussed such as climate change and the role of ICTs. The meeting was an opportunity for stakeholders to present their initiatives.

106. In 2006, 2007, 2008, 2009 and 2010 ITU has undertaken a number of Action Line C7 supporting Activities including the unveiling of new websites providing access to a comprehensive set of resources on e-services and ICT applications and strategies and the deployment of newslogs providing regular updates.

107. In 2007, under the banner of the World Standards Cooperation (WSC), ITU together with IEC (International Electrotechnical Commission) and ISO (International Organization for Standardization) have adopted a harmonized approach to address the inclusion of patented technology in standards. These world's leading international standards organizations, have aligned their policies which allow for commercial entities to contribute the fruits of their research and development (R&D) activity as long as such intellectual property is made available under reasonable and non-discriminatory terms and conditions. This common policy balanced the respect for the intellectual property rights of those who are innovating with the cost to consumers and enables ICT and telecommunication standards to benefit from advanced technologies.

108. In 2008, new scoping studies and policy reviews of available reference materials and guidelines to support national decision-making and implementation of ICT applications and services in the areas of e-health, e-government, and e-environment were released.

109. On an exceptional basis as one of the co-facilitators/co-moderators of the Action Line C7 on eenvironment, ITU chaired the Second Facilitation Meeting of this Action Line on 21 May 2008 - jointly organized with the United Nations Environment Programme (UNEP). Taking account of the strong role ICTs play in both contributing to and combating climate change in the ICT and other sectors, activities are carried out throughout the Union, for instance:

i) Designing and implementing ITU strategy on ICTs and climate change;

ii) Organizing symposia focusing on ICTs and climate change (together with MIC Japan in Kyoto in April 2008 and with BT in London in June 2008) as well as disseminating information at relevant events dedicated to climate change such as the United Nations

iii) Framework Convention on Climate Change (UNFCCC), the UN's Environmental Management Group, etc.;

iv) Allocating radio-frequency spectrum to foster operations without interference of radiocommunications systems and satellites used for climate monitoring and control, weather forecasting, remote sensing and disaster prediction and detection;

v) Promoting the use of more energy efficient devices and networks and the development of technical standards (ITU Recommendations) to limit and reduce the power requirements of ICT equipment and services;

vi) Assisting ITU Member States in the use of ICT applications for e-environment and sustainable development, for example through a scoping study aimed at decision makers on"ICTs for e-environment" and to use telecommunication/ICTs to adapt to and mitigate the effects of climate change, including the use of emergency telecommunications and alerting systems for disaster relief (see section 3.1);

vii) Partnering with various stakeholders from the public and private sector and the UN system; and

viii) An ITU-T Focus Group on ICTs and Climate Change was setup in July 2008 to study the relation of ICTs and Climate Change and ways to measure the impact of ICTs on green house gas emissions. The Focus Group produced four deliverables and successfully completed its work in April 2009.

110. The ITU in its standards making process is committed to technical standards (Recommendations) that meet environmental sustainability and energy efficiency. ITU-T Study Group 5 is tasked to oversee environment and climate change aspects of standardization. One recent high profile Recommendation concerned the adoption of a universal mobile charging solution where users will be able to use the same mobile phone charger for different models.

111. At the Third Facilitation Meeting on Action Line C7 on e-agriculture, organized by the Food and Agriculture Organization of the United Nations (FAO) and taking place at ITU premises on 22 May, ITU pro-actively participated in the discussions. ITU interventions highlighted the use of ICT applications and services in the area of accessing market information, forecasts and reporting, technical support tools and services, early warning systems focusing on agricultural matters, and distance education for farmers – aiming to promote farmers' welfare, improved agricultural production and productivity, using e-environment applications for sustainable use of natural resources, and thus support enhanced food security.

112. The Third Facilitation Meeting on Action Line C7 on both e-business and e-employment took place at ITU premises on 22 May and was jointly organized by UNCTAD, ITC, ILO and UPU. The main activities in this area are related to the Memorandum of Understanding on Electronic Business of the Standardization Sector, signed together with the International Electrotechnical Commission (IEC), the International Organization for Standardization (ISO) and the United Nations Economic Commission for Europe (UN/ECE).

113. The Third Facilitation Meeting on Action Line C7 on e-government took place at ITU premises on 22 May and was organized by UNDESA, together with Action Line C1 and C11. One of the key ITU activities under Action Line C7 was to undertake a scoping study to examine the adoption of egovernment services in countries with developing economies and to assist decision-makers with strategies of using ICTs in public administration while serving the citizens. Other important activities are carried out in the area of cybersecurity (see chapter 2.2.4 on Action Line C5). Regarding e-science, the

meeting was dealing with access to the scientific information and with knowledge sharing, and information about African Virtual Campus has been presented

114. Within the framework of its mandate as co-facilitator for Action Line C7 ITU co-organized and participated in several facilitation meetings and thematic workshops which took place during the WSIS Forum 2009, for instance Facilitation Meeting on e-Environment (co-organized with UNEP), High Level Panel on Climate Change, thematic workshop on e-Government and Public Private Partnerships for Better Public Service Delivery and MDGs Implementation (co-organized with UNDESA). In addition ITU contributed to several sessions emphasizing on its role and activities related to ICT applications.

115. To build public awareness of the opportunities that ICT applications can bring especially to the government, health and environment sectors in developing countries, ITU has in addition to providing direct assistance to Member States also been developing scoping studies and implementation toolkits. ITU has conducted studies in the areas of e-government, e-environment and e-health and shared the findings through three main deliverables, scoping studies on *"Electronic Government for Developing Countries", "ICTs for e-Environment – Guidelines for Developing Countries, with a Focus on Climate Change"*, and *"Implementing e-Health in Developing Countries—Guidance and Principles"* respectively. The studies overview the available technologies, applications, trends and key players in each sector, addressing specific challenges faced by developing countries in implementing such e-projects and providing recommendations for future actions. Drawing from the lessons and recommendations highlighted in the scoping studies, ITU is currently developing toolkits in each of the three areas to assist developing countries in the creation and implementation of national e-health, e-environment and e-government strategies. Produced in a series of modules, the toolkits provide principles and suggest course of actions to guide policymakers through the different stages in the life-cycle of a national e-strategy. For example in the area of e-Environment, an *"E-Environment Implementation Toolkit"* that provides policymakers with principles and guidelines for the development and deployment of electronic applications and services in the environment area, has been developed. One of the components of this Toolkit is the ITU's *e-Environment Readiness Index (EERI)*, a tool for evaluating the e-Environment readiness of a country to use ICTs for mitigating and adjusting to the impacts of climate change.

116. During 2009, several activities were undertaken to facilitate progress on the role of ICTs in climate change. ITU has played an active role during the United Nations Climate Change Conference 2009 (COP-15), and shared information on ITU's role and activities in combating climate change to contribute to the development of the Global Framework for Climate Services as requested by the World Climate Conference 3 (WCC-3) held in Geneva, Switzerland in August/September 2009.

117. With the increasing relevance of emergency telecommunication as part of the activities carried out in context of the WSIS Action Line C7 e-environment, in particular establishing monitoring systems using ICTs to forecast and monitor the impact of natural and man-made disasters, in particular in developing countries LDCs and small economies, ITU has been carrying out several activities since 2006 (http://www.itu.int/ITU-D/emergencytelecoms). For detailed information, please see para 44 onwards.

118. In collaboration with partners such as the Australian Government (DBCDE) and in line with other ITU's activities particularly on ICT infrastructure development, ITU has undertaken activities aiming at developing ICT applications suitable for local communities and particular user groups such as multi-purpose community telecentres (MCTs), Persons with Disabilities (PwDs), and marginalized people.

119. Under the Asia-Pacific Regional Initiative on NGN Planning, Migration and Applications to address the need for capacity building in the Asia-Pacific region both from policy makers/regulators and operators' perspective; a regional workshop on migration, technical, management, regulatory and security issues was organized in Tehran, Iran, in June 2009 attended by 54 delegates from 13 countries

120. Based on the methodology suggested in ITU's 2008 report "Implementing e-Health in Developing Countries", ITU is working with WHO and other key players on a series of tools underscoring principles, strategies and resources that Member Countries can use when developing their eHealth national master plans.

121. WHO and ITU are collaborating on the Second "Global Observatory for e-Health" report. The report will provide updated information on e-Health projects and strategies being implemented worldwide. WHO prepared the first survey for WSIS in 2005.

122. ITU along with WHO, the Health Metrics Network, USAID and the World Bank, hosted a Leadership Forum for the Eastern Africa region on Country Ownership Strategies: Leadership Forum on Health Information Systems (HIS) (Addis Ababa, Ethiopia, 10-12 August 2009). The Forum aimed to facilitate the implementation of HIS in the region by improving the collaboration between the ministries of health, telecommunication and finance in each country and across the region.

123. ITU also contributed to the High Level Panel on ICT Applications for a Better Life at the WSIS Forum 2009. At the meeting, BDT's Director, Sami Al Basheer, highlighted the Bureau's activities in the area of e-Health.

124. ITU and WHO worked together on the organization of the e-Health Pavilion at ITU TELECOM World 2009 (Geneva, Switzerland, 5-9 October 2009). The Pavilion provided a dynamic environment to showcase e-Health applications from around the world.

125. In July 2009 ITU/BDT organized seminar on readiness for emergency situations and liquidation of their consequences with use of telemedicine and e-Health (Moscow, Russia).

126. ITU and WHO jointly organized the Facilitation Meeting on WSIS AL C7: e-Health at the WSIS Forum 2010 on 12th May 2010. The meeting highlighted the main obstacles for e-Health uptake and provided recommendations for next steps.

127. A two- day Meeting on "e-Government and New Technologies: Towards better citizen engagement for development" was organized jointly by the United Nations Department for Economic and Social Affairs (UNDESA) and the International Telecommunication Union, as co-facilitators for WSIS Action Line C7 on e-Government, on 13-14 May 2010, at ITU. During the meeting the different ways of citizen engagement to invigorate accountability, transparency and the delivery of services as well as the role

of social media networks by reviewing existing approaches worldwide have been analyzed.

128. A report on "National e-Strategies for Development, Global Status and Perspectives, 2010" was launched in the framework of the World Summit on the Information Society (WSIS) on the occasion of the fifth anniversary of the WSIS's Tunis phase and the adoption of the Tunis Agenda for Information Society. The Report reviewed the progress in the elaboration of comprehensive, forward-looking and sustainable national e-strategies, and made recommendations on policies and measures. The report's findings confirm global recognition of the critical importance of ICTs to ongoing economic and social development.

(d) Partner Organization for C8 and C9

Action Line C8:
Cultural diversity and identity, linguistic diversity and local content

129. The 1st Consultation Meeting on the Implementation of Action Line C8 took place Geneva, on the 12th of May 2006. The 2nd Consultation Meeting on the Implementation of Action Line C8 took place in Geneva, on the 24th of May 2007. The 3rd Facilitation Meeting on Action Line C8 took place in Geneva on 20th of May 2008. The 4th Facilitation Meeting on Action Line C8 was held in Geneva on the 18th of May 2009 as an integral part of the WSIS Forum 2009. The 5th Facilitation Meeting on Action Line C8 was organized in Geneva on the 11th of May 2010 as an integral part of the WSIS Forum 2010.

130. In 2006,2007, 2008, 2009 and 2010 ITU has carried out a number of activities supporting cultural diversity and identity, linguistic diversity and local content. Also in relation to Action Line C8, ITU continued studying issues relating to Internationalized Domain Names (IDN) to contribute to easier and greater use of the Internet in those countries where the native or official scripts are not represented in International Reference Alphabet (IRA) characters. In particular, ITU and UNESCO work together to develop a set of universal standards aimed at facilitating the creation of multilingual Information Society, making use of the expertise of ITU in global standards development and the role of UNESCO as the UN agency responsible for promoting cultural diversity and identity, linguistic diversity and local content. This effort includes the development of an internationalized country code Top Level Domain (ccTLD) reference table, which will foster and further facilitate the implementation of projects on Internationalized Domain Names.

131. In 2008 ITU carried out a number of activities supporting cultural diversity and identity, linguistic diversity and local content. A special initiative was launched on "Assistance to Indigenous People" to create dedicated actions and projects with respect to equitable access, use and knowledge of ICTs, based on preservation of their heritage and cultural legacy. The planned activities include:

i) Identification and support of self-sustaining projects for indigenous communities in the Americas region;

ii) Provision of ICT equipment for telecentres giving indigenous people access to ICTs with the aim of increasing their knowledge and use of ICTs to help them become members of the global information society;

iii) Promotion of ICT education through online training courses, encouragement of research on information, and adapting innovative forms of networking;

iv) A study on ICT access, use and knowledge for indigenous communities in Africa and Arab regions and identification of particular needs for development of their respective ICT portals;

v) A workshop on ICTs for indigenous communities representatives/leaders in the Africa Region for development of Guidelines for their ICT portals.

vi) Also in relation to Action Line C8, ITU continued studying issues relating to Multilingualism

vii) Internationalized Domain Names (IDN) to contribute to easier and greater use of the Internet in those countries where the native or official scripts are not represented in International Reference Alphabet (IRA) characters.

132. In 2009 ITU carried out a number of activities supporting cultural diversity and identity, linguistic diversity and local content. ITU developed an ICT Portal for indigenous people of the Americas region, supported by the Navajo Nation, ANACOM and the Inter-tribal Council of Brazil, which includes six tailor-made applications on banking, commerce, environment, government, health and learning which is available in English and Spanish. The portal was donated in 2009 to the beneficiaries through the Indigenous ICT Task Force so that it can be used by indigenous people around the world for social and economic development and to preserve their heritage and cultural legacy. ITU is developing a module on designing community ICT centres for indigenous peoples as part of the Connect a School, Connect a Community online toolkit.

133. Additionally, in relation to Action Line C8, ITU continued studying issues relating to Internationalized Domain Names (IDN) to contribute to easier and greater use of the Internet in those countries, where native or official scripts are not represented in International Reference Alphabet (IRA) characters.

134. In the Americas region, ITU has provided on-line career training courses to over 500 indigenous people by 2010. In addition it developed an ICT Portal for indigenous people, including six tailor-made applications on banking, commerce, environment, government, health and learning available in English and Spanish, which was donated to the Indigenous ICT Task Force, during the II Regional Indigenous Workshop on ICTs carried out in 2009. To ensure the self-sustainability of the Portal, indigenous representatives from the Americas Region were trained as trainers in the use of this ICT tool. ITU is also developing a users manual for the ICT Portal in 2010.

Action Line C9: Media

135. The 1st Consultation Meeting on the Implementation of Action Line C9 took place in Paris, 19th of October 2006. The 2nd Consultation Meeting on the Implementation of Action Line C9 took place in Geneva on the 24th of May 2007. The 3rd Facilitation Meeting on Action Line C9 took place in Geneva on 21st of May 2008. The 4th Facilitation Meeting on Action Line C9 was held in Geneva on the 19th of May 2009 as an integral part of the WSIS Forum 2009. The 5th Facilitation Meeting on Action Line C8 was organized in Geneva on the 11th of May 2010 as an integral part of the WSIS Forum 2010.

136. Since 2006 Facilitation Meetings on Action Line C9, Media, organized by UNESCO, discussed the following topics:

i) Community Media;

ii) Promotion of freedom of expression, press freedom and legislation that guarantees the independence and plurality of the media;

iii) Media Development indicators; and

iv) Media education.

137. In addition the Action Line C9 facilitation meetings have also discussed the questions of the digital transition and the digital dividend in which questions ITU actively contributed.

138. ITU is in the process of implementing a project on Transition from Analogue to Digital Broadcasting aiming to assist the developing and least developed countries particularly in the African Region to smoothly shift to digital terrestrial broadcasting.

With aim of assisting the countries in Digital Switchover, in 2010 ITU-D has published the Guidelines for the Transition from Analogue to Digital Broadcasting 2010. The guidelines are intended to provide information and recommendations on policy, regulation, technologies, network planning, customer awareness and business planning for the smooth transition to Digital Terrestrial Television Broadcasting (DTTB) and introduction of Mobile Television Broadcasting (MTV). They will help develop a well defined roadmap for transition covering national goals, strategies and key activities, helping to reach consensus on requirements and solutions, providing a mechanism to help forecast the key miles stones and a framework to help plan and coordinate the steps for the transition.

139. In addition ITU carried out various studies for Internet Protocol TV (IPTV) that will enable enhanced, media rich delivery of content to users around the world, as well as NGN to reduce international imbalances affecting the media, particularly as regards infrastructure and technical resources. IPTV system standards developed under the umbrella of ITU IPTV-GSI that congregates various ITU-T SGs (2, 9, 11, 13, 16, 17) will allow IP-based delivery of TV and advanced entertainment services on a global basis.

140. In 2009 a Number of recommendations relevant to providing access to ICTs through terrestrial and satellite radiocommunication and broadcasting infrastructures were established, and are under study currently, broadcasting infrastructures are

particularly relevant in developing countries and/or underserved areas such as remote and sparsely populated areas.

(e) Rotating Chair of the United Nations Group on the Information Society (UNGIS) (Para 103)

141. In April 2006, UNGIS was endorsed by the CEB. Since then UNGIS serves as an interagency mechanism to coordinate substantive policy issues facing the United Nations system's implementation of the Geneva Plan of Action and Tunis Agenda for the Information Society adopted by the World Summit on the Information Society, thereby contributing to improving policy coherence in the UN system, as requested by the 2005 World Summit.

142. The Second UNGIS Meeting was held in Paris, at UNESCO Headquarters on Tuesday, 17 July 2007.

143. The Third UNGIS meeting took place in Geneva, at ITU Headquarters on Friday, 19 September 2008.

144. In May 2009 ITU took over from UNESCO the Chairmanship of the Group, and coordinates with Vice-Chairs in order to ensure implementation of the UNGIS Work Programme 2009-2010. In 2009 ITU hosted two physical UNGIS meetings, in May and October.

145. Moreover, following an ECOSOC resolution 2008/3, the ITU hosted the Open Consultations on Financial Mechanisms for Meeting the Challenges of ICT for Development, which was held in October 2009 and was organized jointly by UNGIS Chair and Vice-Chairs, i.e., ITU, UNESCO, UNCTAD, UNDP, and UNECA. Results of the consultations were the basis for the several meetings addressing the issue of Financial Mechanisms, including CSTD intersessional Panel, held in November 2009 in Geneva, as well as a briefing meeting during Forum ICT4All+4, November 2009 in Hammamet.

146. The Sixth Meeting took place on 10th and 14th May 2010 at the ITU Headquarters in Geneva, during the WSIS Forum 2010 (www.wsis.org/forum).The meeting consisted of a High-Level Segment and a Working Level Meeting. High Level Segment provided an opportunity to high-level representatives of the Member Organizations to discuss UNGIS' Strategic Orientation, while Working Level Meeting provide an opportunity to advance the group's objectives of coordination of substantive and policy issues facing the United Nations system's implementation of the outcomes of the World Summit on the Information Society. Particular focus was directed towards review of progress made in implementation of the activities reflected in the Work Program 2009-2010 as well as elaboration of new Work Program for period 2010-2011. On the occasion of the Sixth Meeting the rotating chairmanship was been handed over to UNESCO, while keeping the role of vice-chair.

147. Since 2006 UNGIS has gradually become an efficient platform for coordination of policy issues and activities related to the Information Society.

(f) Implementation of other WSIS outcomes

(i) Emergency Telecommunications (Para 91 of TAIS)

148. Please see details on this under WSIS Action Line C2 section, para 44 onwards as well as WSIS Action Line C7: e-environment, para 110.

(ii) International Internet Connectivity (Para 77c.ii and 50d of TAIS)

149. Following a revised version of ITU-T Recommendation D.50, which was approved in 2008 by the World Telecommunication Standardization Assembly (WTSA), the ITU continues to study the question of IIC. Considering the rapid changes in NGN-related signalling, several activities have been identified in relation to recommendation on charging and accounting principles for NGN.

150. ITU continued to study the question of International Internet Connectivity. Work in this subject includes: *Tariff and accounting principles including related telecommunication economic and policy issues*

i) A Recommendation was approved on Indicative rate for international mobile termination

ii) The work on International Internet Connectivity and network externalities is ongoing.

iii) A new accounting procedure and revised time-scales for settlement of account for international telecommunication services were introduced.

iv) The regional tariff groups for, respectively, Africa, Asia-Pacific, and Latin America, each met once per year, as in the past. They analyzed regional tariff data and prepared inputs to the work, including draft recommendations

(iii) Connect the World Initiative (Para 98 of TAIS)

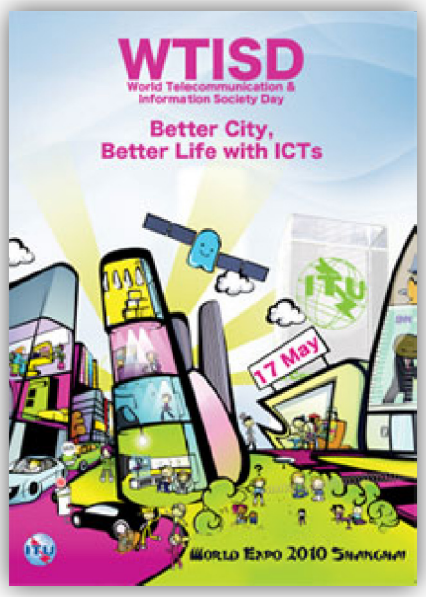
151. Please see details on this in paragraphs 30 to 33, under WSIS Action Line C2 section

(iv) Child Help lines (Para 92 of TAIS)

152. In 2008, ITU approved a Supplement to one of its main related Recommendations. This Supplement, *Guidance with regard to the selection of numbers for help lines for children,* reviews and examines the idea of harmonizing an approach to the selection of national numbers on a global basis. National Administrations were invited to consider such global harmonization of numbers associated with help lines specifically those help lines that are aimed at providing assistance for children. Further efforts were dedicated towards other aspects of child welfare, for example: the case of children who have been displaced from their country of origin or kidnapped that might require special telecommunications applications such as short numbers.

153. By the end of 2009 a new Recommendation, Specification of an International Numbering Resource for use in the provisioning of International Help lines was approved.

(v) World Telecommunication and Information Society Day (Para 121 of TAIS)



154. WSIS Summit called upon the United Nations to proclaim 17 May as World Information Society Day. A resolution to this effect was adopted by the UN General Assembly on 27 March 2006. Celebrating the first World Information Society Day, a series of events related to the implementation of the WSIS action lines took place from 9 to 23 May. On this important occasion, ITU presented the ITU World Information Society Award to His Excellency Mr Abdoulaye Wade, President of the Republic of Senegal, and to Professor Muhammad Yunus, Managing Director of the Grameen Bank, Bangladesh. The ITU World Information Society Award has been created to honour individuals or institutions that have made a significant contribution to promoting, building, or strengthening a people centred, development-oriented and knowledge-based Information Society. Achievement may take the form of social accomplishment, mobilization of public opinion, or a key technical innovation. The ITU World Information Society Award is presented on 17 May, World Information Society Day, which is also World Telecommunication Day, commemorating the founding of ITU in 1865.

155. The second ITU World Telecommunication and Information Society Award was presented to three laureates: H.E. Dr Margarita Cedeño de Fernández, First Lady of the Dominican Republic, for her pioneering work in the expansion of telecentres throughout the Dominican Republic; Ms Mitchell Baker, on behalf of Mozilla Corporation of the United States, for its work in open source software; and Professor Mark Krivocheev of the Russian Federation for his lifetime's work on television imagery. On this occasion, ITU also launched a portal on national reports on WSIS implementation. Reports include comprehensive descriptions of the national mechanisms established to advance WSIS objectives, as well as information on e-strategies and key initiatives undertaken since WSIS in 2005.

156. The third ITU World Telecommunication and Information Society Award Ceremony took place in Cairo on 15th of May 2008, in conjunction with ITU TELECOM Africa. The theme for this year's WTISD was "Connecting persons with Disabilities: ICT Opportunities for all". The award was presented to three laureates: H.E. Mrs. Suzanne Mubarak, First Lady of Egypt, Ms. Andrea Saks, and the Daisy Consortium (represented by its President, Mr. Hiroshi Kawamura). A demonstration of assistive technology was given during the ceremony by Microsoft and QualiLife.

157. The worldwide celebration of World Telecommunication and Information Society Day in 2009 took place on the 17th of May. The ITU WTISD Awards Ceremony took place on Monday, 18 May. To mark the World Telecommunication and Information Society Day, ITU Council adopted the theme: Protecting Children in Cyberspace. Her Majesty Queen Silvia of Sweden was the patron of the 2009 World Telecommunication and Information Society Day. During the ceremony ITU awarded three eminent personalities, H.E. Mr Luiz Inacio Lula de Silva, President of the Federative Republic of Brazil, Ms Deborah Taylor Tate, International Advocate for ICT Child Safety Issues , and Mr Robert G. Conway, CEO, GSMA, for their exceptional contributions towards protecting children in cyberspace. The WSIS

outcomes in 2009 specifically recognized the needs of children and young people and their protection in cyberspace. The Tunis Commitment recognized "the role of information and communication technologies (ICTs) in the protection of children and in enhancing the development of children" as well as the need to "strengthen action to protect children from abuse and defend their rights in the context of ICT". On the same occasion within the framework of the Child Online Protection (COP) initiative, the first release of the first release of the "*Guidelines for Policy-Makers, Industry, Parents, Guardians, Educators, and Children on Child Online Safety*" was presented.

158. The worldwide celebration of World Telecommunication and Information Society Day in 2010 took place on the 17th of May in the Shanghai Hall of the Expo Center. The WTISD-2010 theme "Better city, better life with ICTs" was aligned with that of the World Expo: "Better city, better life", which represents the common wish of all humankind to achieve better living standards in future urban environments. Information and communication technologies (ICT) play a catalysing role in achieving this goal.

(vi) Bridging the standardization gap (Paras 26g and 90 of TAIS)

159. ITU is working to implement PP-06 Resolution 123 on bridging the Standardization Gap between developed and developing countries. In this framework several meetings were organized including:

i) ITU Development Forums

ii) 2008: http://www.itu.int/ITU-D/tech/StandardizationGap/index.html

iii) 2009: in five regions. Four of meetings focused on *NGN and Broadband, Opportunities and Challenges* (Zambia, May 2009; Indonesia, July; Moldova, August 2009; Dominican Republic, November 2009). Forum for the Arab Region focused on *Access to Spectrum, including Broadcasting Services – Trends and Technologies* (Tunisia, June 2009)

iv) Forum on Implementation of WTSA-08 Decisions and Workshop on Bridging the Standardization Gap (Fiji, September 2009)

v) Forum on Implementation of decisions of WTSA-08" Ecuador, 7 July 2009

vi) Meeting of SG12 Africa, Accra, Ghana, 18-19 June 2009

vii) Forum on Implementation of decisions of WTSA-08", Ghana, June 2009

(vii) Measuring the Information Society (paras 113-119 of TAIS)

160. ITU continues to be the leading organization within the UN system in the area of ICT measurement. ITU-D is responsible for collecting, harmonizing and disseminating more than 100 statistical indicators from over 200 economies worldwide. The data are maintained in the ITU World Telecommunication/ICT Indicators (WTI) database, which includes time series dating back to 1960. Since the conclusion of WSIS, ITU has continued to carry out a large number of activities to improve the measurement of the information society globally. These include data collection and dissemination, defining indicators and setting standards, analyzing the data and publishing reports, organizing events, providing capacity building and cooperating with other relevant international agencies, in particular through the Partnership on Measuring ICT for Development.

161. *Data collection*

ITU's data collection is constantly being reviewed and adjusted to the rapidly changing sector. In 2006, 2007, 2008, 2009 and 2010, ITU collected the following key sets of statistics directly from countries (http://www.itu.int/ITU-D/ict/datacollection/):

i) Statistics on telecommunication/ICT infrastructure and access through two annual questionnaires sent to ICT ministries and telecommunication regulatory authorities; these include indicators on the fixed telephone network, mobile cellular services, Internet/broadband, traffic, revenues and investment;

ii) Statistics on household and individual access to, and use of, ICTs through an annual questionnaire sent to national statistical offices (NSOs); these include the core ICT indicators developed by the Partnership on Measuring ICT for Development;

iii) Statistics on the price/tariff of telecommunication/ICT services through an annual questionnaire sent to ICT ministries and telecommunication regulatory authorities; these include prices on fixed telephony, mobile cellular prepaid and fixed (wired) broadband Internet services.

162. *Data dissemination*

ITU-D continued to disseminate data on the information society through various means (http://www.itu.int/ITU-D/ict/statistics/):

i) The flagship publication Yearbook of Statistics (2006, 2007, 2008, 2009 and 2010 editions)

ii) The World Telecommunication/ICT Indicators (WTI) database (two editions per year, through CD-ROM and be electronic download)

iii) The ITU online data portal ICT Eye, which provided free access to key ICT indicators

163. *Data analysis, benchmarking, monitoring the digital divide*

ITU-D analyzes telecommunication and information society trends and produces regional and global research reports, including benchmarking ICT developments and clarifying the magnitude of the digital divide through tools such as the ICT Development Index and the ICT Price Basket (http://www.itu.int/ITU-D/ict/publications/). Since 2006, the following reports have been published:

i) World Telecommunication/ICT Development Report (WTDR) 2006: Measuring ICT for social and economic development

ii) Telecommunication/ICT markets and trends in Africa 2007, as an input to the Connect Africa Summit held in Rwanda in October 2007

iii) Measuring the Information Society 2007 – ICT Opportunity Index and World Telecommunication/ICT Indicators

iv) African Telecommunication/ICT Indicators Report 2008, which was published during Africa Telecom in May 2008

v) Use of information and communication technology by the world's children and youth, 2008

vi) Measuring Information and Communication Technology availability in villages and rural areas, 2008

vii) Asia-Pacific Telecommunication/ICT Indicators Report 2008, which was published during Asia Telecom in September 2008

viii) Measuring the Information Society 2009 – the ICT Development Index. This edition featured the inaugural ICT Development Index (IDI), an important new resource for benchmarking the information society and measuring the magnitude and evolution of the global digital divide. The IDI compares ICT developments in 154 countries over a five-year period from 2002 to 2007. The Index combines 11 indicators into a single measure that can be used as a benchmarking tool globally, regionally and at the country level. These are related to ICT access, use and skills, such as households with a computer; the number of Internet users; and literacy levels. The publication also features for the first time the ICT Price Basket, a new tool that allows countries to measure and compare the relative cost of fixed lines, mobile cellular and fixed broadband

ix) Information Society Statistical Profiles 2009: Africa

x) Information Society Statistical Profiles 2009: Asia and the Pacific

xi) Information Society Statistical Profiles 2009: Americas

xii) Information Society Statistical Profiles 2009: Commonwealth of Independent States (CIS)

xiii) Information Society Statistical Profiles 2009: Europe

xiv) Information Society Statistical Profiles 2009: Arab States

xv) Measuring the Information Society 2010, which includes an update of the IDI and the ICT Price Basket

xvi) World Telecommunication/ICT Development Report (WTDR) 2010: Monitoring the WSIS Targets. A mid-term review. The year 2010 marks the midpoint between the 2005 Tunis phase of the WSIS and 2015, the deadline for achieving the ten targets that governments agreed upon at the WSIS. The WTDR 2010 is a mid-term review, and provides policy makers with a comprehensive assessment of what has been achieved so far, and what remains to be done. The Report was prepared specifically for the WSIS Forum 2010 and the ITU World Telecommunication Development Conference (WTDC-10), both held in May 2010. The Report, which features contributions from UNDESA, UNESCO and WHO, reviews the 10 WSIS targets, proposes concrete indicators to monitor them and makes recommendations on policies and measures to help achieve them.

164. *Capacity building and training*

ITU-D provides capacity building and technical advice to member States in areas related to indicators definition, data collection, storage and dissemination through organizing workshops and training courses and developing guidelines, methodological tools and training material. In order to assist countries in their collection of ICT household statistics, ITU-D has developed the Manual for Measuring ICT Access and Use by Households and Individuals and a training course on collecting ICT household statistics (both a face-to-face course and a short e-learning course). The following workshops, training courses and technical missions on measuring the information society have been carried out by ITU since 2006.

i) Joint ITU – UNCTAD – UNESCAP Regional Workshop on Information Society Measurements in Asia-Pacific, 26-28 July 2006, Bangkok, Thailand

ii) Joint ITU – UNCTAD – UNECA Regional Workshop on Information Society Measurements in Africa, 7-9 March 2007, Addis Ababa, Ethiopia

iii) Capacity-Building Workshop on "Information Society Measurements: Infrastructure, Household and Business Surveys", Cairo-Egypt, 20-21 June 2007, for countries from the Arab region (jointly organized by ITU, UNCTAD, UNESCWA and OECD, under the patronage of the Government of Egypt and the League of Arab States)

iv) National training on "How to establish an ICT indicator database", 29 October – 2 November 2007, Jakarta, Indonesia,

v) Joint ITU – UNESCAP – APT Regional Capacity Building Workshop on Information Society Statistics, 6-8 November 2007, Bangkok, Thailand

vi) Delivery of Training Course on Measuring ICT Access and Use in Households and Businesses, Port of Spain, Trinidad and Tobago, 26-30 January 2009 (jointly organized by ITU, UNECLAC and UNCTAD), for countries from the Caribbean region

vii) National Seminar on "ICT Measurement Issues, Challenges and Way Forward", New Delhi, India, 12-14 May 2009

viii) National capacity building on ICT indicators in Bangladesh, May 2009

ix) Joint ITU-UNCTAD Training of Trainers on ICT statistics, Geneva, Switzerland, June 2009

x) Delivery of Training course on Measuring ICT access and use in Households and Businesses, 13-24 July 2009, Addis Ababa, Ethiopia, (organized jointly by ITU, UNCTAD and UNECA), for Anglophone African countries

xi) Delivery of Training Course on Measuring ICT access and use by Households and Individuals,19-23 October 2009, Bangkok, Thailand (organized jointly by ITU and LirneAsia and hosted by the Ministry of ICT of Thailand), for countries from the Asia-Pacific region

xii) Regional Seminar for CIS countries on "Effective tools for measuring the Information Society and the creation of state e-government systems", Baku, Azerbaijan, 14-16 December 2009.

xiii) Joint ITU-UNCTAD fact finding mission on information society measurements, Tunisia, 7-9 June 2010

xiv) National capacity building on ICT indicators in the Philippines, July-August 2010

xv) Delivery of Training course on Measuring ICT access and use in Households and Businesses, 13-24 October 2010, Addis Ababa, Ethiopia, (organized jointly by ITU, UNCTAD and UNECA), for Francophone African countries

165. Forum for discussion of indicators and standards

ITU-D provides a global forum for the discussion of information society measurements through its World Telecommunication/ICT Indicators Meetings (WTIMs) and related expert groups. Since WSIS, the following meetings were held:

i) 5th World Telecommunication/ICT Indicators Meeting, Geneva, Switzerland, 11-13 October 2006

ii) 6th ITU World Telecommunication/ICT Indicators Meeting, Geneva, Switzerland, 13-15 December 2007

iii) 7th World Telecommunication/ICT Indicators Meeting, Cairo, Egypt, 3-5 March 2009.

iv) Meeting of the Expert Group on Telecommunication/ICT Indicators (EGTI), 29-31 March 2010, Geneva, Switzerland

v) 8th World Telecommunication/ICT Indicators Meeting, Geneva, Switzerland, 24-26 November 2010

166. International cooperation

ITU-D cooperates closely with other regional and international agencies on the subject of information society measurement. ITU is a founding member of the Partnership on Measuring ICT for Development and has been on its Steering Committee (together with UNCTAD and ECLAC) since the conclusion of WSIS. ITU contributes to the monitoring of internationally agreed development goals and targets, such as the Millennium Development Goals and the targets agreed at the World Summit on the Information Society; http://www.itu.int/ITU-D/ict/intlcoop.html.

Since the conclusion of WSIS, the Partnership has carried out the following key activities, to which ITU contributed substantially.

i) **Core list of ICT indicators**: One of the key achievements of the Partnership has been the identification of a core list of indicators. This list of 50 indicators, which was agreed upon through a consultation process involving governments and international organisations, covers basic infrastructure and access indicators as well as ICTs in households, enterprises, and education. The list, which was endorsed by the UN Statistical Commission in

2007, has been revised and extended in 2008 and 2009. Currently, an additional set of indicators on e-government are being finalized.

ii) **Publications**: While each member organization of the Partnership publishes documents in their area of expertise (see above for ITU publications), the Partnership has released some joint publications since 2006, such as "Core ICT Indicators 2010"; "Revisions and Additions to the Core List of ICT Indicators", background document to the fortieth session of the United Nations Statistical Commission, 24-27 February, 2009; "Report of the Partnership on Measuring ICT for Development" to the UN Statistical Commission's 40th session (2009) and 38th session (2007); "The Global Information Society: a Statistical View", 2008.

iii) **Capacity building**: Capacity building activities delivered by different members of the Partnership (see above for ITU activities jointly with other organizations). Based on the core ICT indicators, ITU, UNCTAD and UNESCO have developed technical manuals and guidebooks which are being used in the various technical assistance activities.

iv) **Global events**: ITU has actively contributed to the organization of Partnership events. These include: the "Global Event on Measuring the Information Society", Geneva, Switzerland, 27-29 May 2008 (in conjunction with the cluster of WSIS events); two WSIS Forum events (WSIS Forum 2009, "Measuring the impact of ICTs", 19 May 2009, Geneva, Switzerland and WSIS Forum 2010, "Measuring the WSIS Targets", 10 May 2010, Geneva, Switzerland); and the "International Seminar on Information and Communication Technology Statistics", 19 to 21 July, 2010 in Seoul, Korea (jointly organized by UNSD-ITU-UNCTAD and the Partnership).

v) **Task Group on WSIS targets**: The Partnership carries out part of its work through specialized task groups. ITU is leading the task group on "Measuring the WSIS Targets" (TG WSIS), which was launched during the WSIS Forum 2010. The overall objective of the task group is to develop a framework for monitoring the WSIS goals and targets based on internationally defined indicators and standards. The task group is open to members and non-members of the Partnership that are involved in measuring one or several of the WSIS targets. In order to accommodate the inputs of a wide range of stakeholders, a discussion forum was set up to facilitate the discussion for different targets (http://groups.itu.int/wsis-targets).

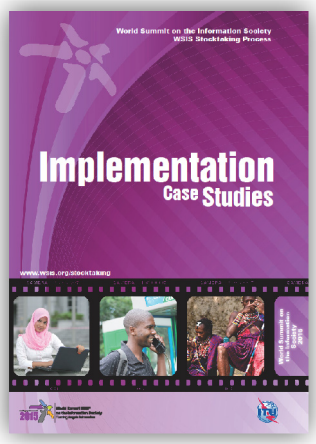
(viii) Maintaining the WSIS Stocktaking Database (Para 120)

167. Pursuing the outcomes of the Tunis Agenda, Para 120, the ITU continues the work on the WSIS Stocktaking process, providing the means for sharing information related to the implementation of the WSIS outcomes. A publicly-accessible database of WSIS-related implementation activities, initiated during the Tunis phase of WSIS, has been maintained and improved.

168. The Stocktaking Database has also become an effective tool for the exchange of information on the projects in relation to the implementation of the 11 Action

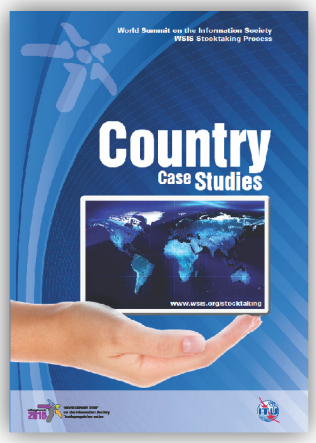
Lines. By May 2008, more than 3800 projects were registered in the database and the number of entries continues to grow. In order to expand the functionality and interactivity of this publicly available tool, several improvements were made during 2007. The database architecture was adjusted in order to accelerate responsiveness of the search interface. All existing hyperlinks (URLs) were reviewed and updated. The level of interactivity has been improved by allowing stakeholders to directly update their entries. Finally, all WSIS stakeholders have now the possibility of installing the stocktaking database web-interface directly onto their own website.

169. In May 2008 the Report on the WSIS Stocktaking 2008 was published. The aim of this report is to update stakeholders on activities undertaken by governments and other organizations with regard to the achievement of WSIS objectives and targets in the period of time from end 2005 to mid 2008. The report is a continuation of the WSIS Stocktaking Report series, which was officially launched at the Summit in November 2005.



170. By end of 2009, more than 4000 entries were registered in the database and the number of entries continues to grow. More than a quarter of entries have been updated on a continuous basis. It is worth mentioning that many of entries reflect more than one flagship initiative and project carried out by the WSIS Stakeholders. By July 2010, the number of entries in the database increased to 4770 entries.

171. The Version 1.1 for the WSIS Stocktaking Report: Tracking Progress was released on the May 2010. All recommendations and comments collected during WSIS Forum 2010 were complied in the Version 1.2.The 2010 Edition of the WSIS Stocktaking Report is a continuation of the WSIS Stocktaking Report series and it is based on data contributed by stakeholders that is available at www.wsis.org/stocktaking. The third edition of the report presents an analytical overview of emerging issues identified during the 2010 open consultation process on thematic focus of the WSIS Forum, including Build on Broadband, Turning Targets into Action, Social Networking, Cybersecurity and Cyberspace and ICT for Disaster Management. Furthermore, the report provides showcase briefings on particular actions undertaken by the global community in the implementation of WSIS goals during the period from the end of 2008 to mid-2010. Each entity that had provided information to the WSIS Stocktaking platform during this period has been reflected in the Report with at least one project.



172. The new WSIS Stocktaking Platform was officially launched by ITU on the occasion of the 16th meeting of the Council Working Group on WSIS, held from 2-4 February 2010 at the ITU Headquarters in Geneva. The new WSIS Stocktaking platform integrates improved features, for e.g. the application of web 2.0 tools and adds additional functionalities to the existing website for e.g. searchable database, thereby providing a platform for networking and community building for stakeholders .Introduction of new components like global events calendar, global repository of WSIS-related publications, regular interviews with stakeholders, ability to create communities of practice and forums for discussion, could serve as effective instrument of information circulation and communication among stakeholders. Future plans include developing inbuilt evaluation and monitoring tools for WSIS Stocktaking.

173. Based on the information from WSIS Stocktaking, the BDT in collaboration with ITU General Secretariat and UN Regional Commissions prepared the report on National

e-Strategies for Development: Global Status and Perspectives 2010 (http://www.itu.int/ITU-D/cyb/estrat/estrat2010.html).

174. Based on web 2.0, social networking tools were developed and applied on the WSIS Stocktaking Platform offering community-building opportunities to users and members. New components such as global events calendar, global repository of WSIS-related publications, regular newsletters and testimonials were introduced to stakeholders during the WSIS Forum 2010.

175. In order to foster dialogue among stakeholders regarding the WSIS implementation, the WSIS Stocktaking Platform will serve as the open platform for the facilitators for Action Lines C1, C7 (e-government) and C11.

176. The WSIS Stocktaking experience related to social networking, with the contribution of ITU Emerging Trends programme, will be transferred to other sister platforms developed across ITU, e.g. Cybersecurity Gateway, Infrastructure and Enabling Environment.

177. The outcomes of the WSIS Stocktaking Session, which was held on 11 May 2010, aim to leverage the efforts of countries and increase their visibility in the WSIS implementation with the development of analytical input in the framework of WSIS Stocktaking. To respond to these requirements, country case studies and implementation case studies were proposed as an alternative to leverage the activities of Member States related to ICT framework at national level and WSIS implementation. The case studies will be elaborated in partnerships with the WSIS stakeholders.

178. The following activities are in focus for 2010-2011:

i) Development of particular functionalities in order to respond to the requirements of the UNGIS group, especially in terms of tracking activities carried out by international organizations

ii) Development of a fundraising component which will offer stakeholders the opportunity to brand themselves through different communication channels which the WSIS Stocktaking Platform could apply. All proposals will be adjusted to each stakeholder on an individual basis.

iii) Development of a WSIS-MDGs component on the WSIS Stocktaking Platform in order to evaluate and assess the impact of WSIS on the achievement of the internationally agreed MDGs.

iv) Coordination with CSTD Secretariat on the process of elaboration of the annual UN Secretary General Report on the WSIS implementation and follow-up.

ICT Success Stories Portal

179. Since 2006, building upon reporting through the WSIS Stocktaking process, ITU has been continuing to maintain the ICT Success Stories website to track progress made in building an inclusive Information Society for all. The portal showcases innovative ICT strategies, business models, good governance practices and small-scale local development initiatives, providing replicable best practices in various fields of everyday life, as well as the lessons learned from multi-stakeholder partnerships across different

geographic, social and economic environments using different ICT technologies. A searchable online database permits access to over 650 ICT projects from over 70 countries.

Internet Governance Forum

180. Paragraph 72 of the Tunis Agenda requests the UN Secretary-General to convene an open and inclusive process, by the second quarter of 2006, a meeting of the new forum for multi-stakeholder policy dialogue-called the Internet Governance Forum (IGF).

181. ITU has played an important facilitation role and participated actively in all the IGF meetings held since its inception.

182. The Inaugural Meeting of the IGF took place in Athens, Greece, from 30 October – 2 November 2006.

183. The second Internet Governance Forum meeting was held in Rio de Janeiro, Brazil, during November 2007.Three events were organized and co-organized by ITU:

i) Open Forum on Cybersecurity entitled "Can we win the war against cyber-threats?" on 12 November 2007;

ii) Thematic workshop on Multilingualism entitled "Towards international standards for a truly multilingual global Internet Multilingualism" on 13 November 2007 (in collaboration with UNESCO and ICANN); and

iii) Thematic Workshop on Diversity entitled "Making accessibility a reality in emerging technologies and the web" on 13 November 2007

ITU also facilitated the participation of experts from developing countries to the Forum through fellowships made available with the kind assistance of the Government of Canada.

184. The Third Annual IGF Meeting was held in Hyderabad, India, on 3-6 December 2008. ITU played an important facilitation role in the organization of the third IGF (Hyderabad). ITU organized seven events on Internet-related topics, provided funds for the participation of 40 experts from developing countries (through financial assistance from the government of Canada) and co-produced a book in collaboration with UNDESA and UNESCO.

The fourth Internet Governance Forum was held on the 15th of November 2009 at Sharm El Sheikh, Egypt. ITU played an important facilitation role and participated actively in the fourth Internet Governance Forum meeting. Ten events were organized or co-organized by ITU:

i) Regional Workshop on Arabic Domain Names and Internet Governance

ii) IGF – Open Forum on Child Online Protection

iii) The Governance Issues of Country Code Top Level Domains

iv) ITU Open Forum on Cybersecurity

v) Adopting IPv6: What You Need To Know

vi) Greening the Internet

vii) Dynamic Coalition on Internet and Climate Change (DCICC)

viii) Best Practices for an Accessible Web

ix) Global Internet Access for Persons with Disabilities

x) Peace and Security in the Cyberspace

ITU also facilitated the participation of experts from developing countries to the Forum through fellowships made available with the kind assistance of the Government of Canada.

III. FORUMS, INNOVATIVE INITIATIVES AND FUTURE ACTIONS

(a) Forums

i) WSIS Forum

185. Building upon the tradition of annual WSIS May meetings and the outcomes of the open consultations with WSIS Stakeholders, the ITU, UNESCO, UNCTAD and UNDP, proposed a new format for the cluster of the WSIS related meetings, called the WSIS FORUM. The first WSIS Forum was held from 18 to 22 May 2009, at the ITU Headquarters, Geneva, Switzerland.

186. The Forum offered participants a series of diverse meetings, including high-level panels addressing critical issues to the WSIS implementation and follow-up in multi-stakeholder set-ups, WSIS action line facilitation meetings, thematic workshops, kick-off meetings for new initiatives and projects, speed-exchanges facilitating networking among the participants, and the others. It provided an opportunity for structured networking, learning and participation in the multi-stakeholder discussions and consultations on the WSIS implementation. WSIS Forum concluded with an Annual Meeting of Moderators/Facilitators of all Action Lines as requested by TAIS Para 109 and fourth meeting of United Nations Group on the Information Society (UNGIS).

187. WSIS Forum 2010 was held from 10th to 14th of May 2010 at the ITU Headquarters, Geneva, Switzerland. This event built upon the tradition of annual WSIS May meetings, and its new format was the result of open consultations with all WSIS Stakeholders. The host ITU and the co organizers ITU, UNESCO, UNCTAD and UNDP would like to thank all participants of the WSIS Forum 2010 for their enthusiastic, meaningful and engaged participation. The Forum offered participants a series of diverse interactions, including opening ceremony, high level plenary session, five high-level debatesaddressing critical issues to the WSIS implementation and follow-up in multi-stakeholder set-ups, fifteen WSIS Action Line facilitation meetings, six interactive sessions, twenty thematic workshops, six kick-off meetings for new initiatives and projects, six knowledge exchangesfacilitating networking among the participants, and others. The WSIS Forum 2010 provided structured opportunities to network, learn and to participate in multi-stakeholder discussions and consultations on WSIS implementation. This year, an Exhibition space was made available for stakeholders to exhibit and display their efforts towards WSIS implementation. Twenty One exhibition stalls were set up in total.

188. Facilities were made available to ensure inclusiveness and participation during the WSIS Forum 2010. Several sessions were conducted in debate style to encourage participation from the participants. Translation was offered in 6 languages for various sessions. Sessions were webcast and diverse ways of social networking were used to reach the last mile.

189. A range of topics were discussed and deliberated upon from Broadband Infrastructure, Cybersecurity, Media, ICT and Gender to ICT

for Human Rights and ICT for Peace amongst others. Several partnerships and collaborations emerged during the sessions, to work together towards achieving the WSIS targets.

190. The WSIS Forum 2010 marked the way forward in creating a reflection of the "WSIS spirit" and euphoria felt during the Tunis and Geneva Summits. WSIS stakeholders participated with full enthusiasm and the eagerness to achieve the WSIS targets by 2015. The new forward looking WSIS campaign initiated to focus on Turning Targets into Action mirrored the ambition of the WSIS Stakeholders. Action Line Facilitators from various UN agencies, Regional Commissions, Private Sector, Governments and Civil Society participated enthusiastically in all the interactive sessions and debates, not only reporting and assessing their efforts towards WSIS implementation and follow up but also drawing up and sharing their future plans to achieve the targets set in the WSIS Outcome documents. For further details please visit www.wsis.org/forum

ii) Dedicated Group on International Internet-related Public Policy Issues

191. This group was established as an integral part of WG WSIS, open only to all Member States, in accordance with Resolution 75 (WTSA, 2008), and Council Resolution 1282 (Mod. 2008)

192. It is tasked to identify, study and develop matters related to international Internet-related public policy issues, to disseminate its outputs throughout ITU's membership, and to contribute to the work of WG - WSIS on international Internet-related public policy issues within the mandate of ITU pursuant to the relevant resolutions of the Plenipotentiary Conference (Antalya, 2006) and 2008 Council Resolution 1282.

193. 2009 Council Resolution 1305 invites Member States to recognize the scope of work of ITU on international Internet-related public policy matters, represented by the list of topics of Annex 1 of the Resolution, which was established in accordance with decisions of ITU membership at the Plenipotentiary Conference, Council and World Conferences; and to elaborate their respective position on each of the international Internet-related public policy issues referenced in the list of topics and to contribute actively to the work of ITU on these issues. Accordingly, the Dedicated Group is a forum for all governments, on an equal footing, to discuss public policy issues pertaining to topics falling under several Action Lines. For example:

- AL C2: Availability, affordability, reliability, and quality of service, especially in the developing world
- AL C5: Combating Cybercrime, Dealing effectively with spam, Issues pertaining to the use and misuse of the Internet, Respect for privacy and the protection of personal information and data, Protecting children and young people from abuse and exploitation
- AL C6: International public policy issues pertaining to the Internet and the management of Internet resources.

194. The Dedicated Group has so far held four meetings as part of its ongoing work: in February 2009, June 2009, February 2010 and June 2010.

195. PP Resolution 102 (Rev. Antalya 2006) – ITU's role with regard to international public policy issues pertaining to the Internet and the management of Internet resources, including domain names and addresses – was adopted in 1998 and subsequently amended. In relation to the WSIS outcomes, Resolution 102 (Rev. Antalya, 2006) instructs the Secretary-General to take a significant role in international discussions and initiatives on the management of Internet names, addresses and other resources, and to take the necessary steps for ITU to continue to play a facilitating role in the coordination of international public policy issues pertaining to the Internet (§35 d) of the Tunis Agenda. It instructs the Directors of the Bureaux to support these actions.

196. ITU activities since PP06, related to Resolution 102, are covered in the annual reports to Council: C07/42, C08/32, C09/49 and C10/13.

(b) Innovative multi-stakeholder initiatives

i) The Global Cyber security Agenda (GCA)

197. As noted in Para 46 and 47, in May 2007, ITU Secretary-General launched the GCA: a framework for international cooperation in cyber security. The GCA is made up of seven main strategic goals and builds upon the following five work areas or pillars: (1) Legal Measures; (2) Technical and Procedural Measures; (3) Organizational Structures; (4) Capacity Building; and (5) International Cooperation. It builds on existing national and regional initiatives to avoid duplication of work and encourage collaboration amongst all relevant partners.

198. For further information on the GCA, please see section 1 (b) (ii) on Action Line C5.

ii) The Connect the World Initiative

199. As noted in Para 66, in 2005, ITU launched the *Connect the World* initiative to help mobilize the financial, human and technical resources needed to implement outcomes of the World Telecommunication Development Conference (WTDC) and the World Summit on the Information Society (WSIS).

200. As part of this effort, ITU is organizing high-level events known as *Connect the World* Summits in each region where Members have expressed an interest. These Summits bring together like-minded stakeholders to work together on concrete actions and projects to expand information and communication (ICT) networks and access as a means of spurring investment, employment and broader social and economic development.

201. Connect Africa Summit

The Connect Africa Summit, the first in the series, was held in Kigali, Rwanda in October 2007 and generated the level of financial commitment of more than 55 billion USD to be spent for the development of inclusive information society in Africa. As part of follow-up to Connect Africa, several actions by ITU and partners are under

implementation. More information on them is available on at the Summit's website assisted by providing financial support for the centre of excellence.

202. Connect CIS Summit

As the second regional event in the series, ITU organized the *Connect CIS Summit* with partners on 26-27 November 2009 in Minsk, Belarus. The Summit gathered some 353 participants from 18 Member States (10 from CIS Region), including five Heads of State (Republic of Armenia, Republic of Belarus, Republic of Kazakhstan, Kyrgyz Republic and Republic of Tajikistan) and Government and one First Deputy Prime Minister. The administrations of 10 countries from the region were represented, including 7 at the Ministerial level. Some 40 leading ICT companies, development banks, international organizations and other stakeholders participated in the Summit. The Presidents (Heads of State) addressed participants of the Summit in a special session entitled, "Leaders Statements and Summit Declaration: Towards a Sustainable Information Society ", in which each President (Head of State) outlined their vision for the Summit and pledged their full support to the Connect CIS Initiative. The Connect CIS Summit concluded with the Connect CIS Declaration.

203. This Summit was organized in partnership with the Regional Commonwealth in the Field of Communications, the Commonwealth of Independent States Executive Committee, the World Bank, the European Bank for Reconstruction and Development, the European Investment Bank, the Islamic Development Bank, the United Nations Economic Commission for Europe and the United Nations Global Alliance for ICT and Development among others. The overall objective of the *Connect CIS Summit* was to mobilize the human, financial and technical resources to support a rapid, region-wide transition to digital infrastructure and services, widely recognized as the engine of future economic growth and social and economic development. Priorities include rolling out broadband Internet, expanding rural connectivity, creating a policy and regulatory environment to support investment and new business models, enhancing ICT training and human capacities and stimulating locally relevant applications and services.

204. Global Flagship Initiatives

In early 2009, BDT launched four global *Connect the World* flagship initiatives. The aim of these initiatives is to build upon and strengthen promising projects that start in one region or with one industry partner, by providing an attractive, open platform and brand that can be promoted to additional partners globally and/or in various regions:

i) *Wireless Broadband Partnership*: high-speed connectivity for developing countries, with extra capacity for public uses, including schools and hospitals. This global flagship initiative builds on the wireless broadband project in Africa mentioned above;

ii) *Connecting Villages*: low cost solutions for basic connectivity in rural areas;

iii) *Connect a School, Connect a Community*: partnership effort to promote broadband school connectivity to serve both students and the communities in which they live, with a special emphasis on groups with special needs; and,

iv) *ITU Academy Partnership*: training and courseware on cutting-edge ICT innovations in areas such as NGN and mobile.

v) *ITU Mobile Health Initiative*: partnership effort to support developing countries making the best use of mobile technologies to assist patients and improve health services. The initiative will facilitate the launch of demonstration projects and provide capacity building to develop simple and cost-effective mobile applications that respond to critical national health priorities.

vi) *ITU-IMPACT Collaboration*: to facilitate the deployment of solutions and services to address cyber threats at a global scale, together with ITU Member States and leading global partners from industry and academia.

Each of the flagship initiatives outlines clear roles for government, industry and other partners, with ITU playing a neutral brokering and expert role. These initiatives will enhance donor/partner recognition and ITU visibility globally and in the regions, as well as provide greater coherence in partner outreach.

iii) Broadband Commission

205. In May 2010 ITU and UNESCO announced the establishment of a top level Broadband Commission for Digital Development with the aim of defining strategies for accelerating broadband rollout worldwide and examine applications that could see broadband networks improve the delivery of a huge range of social services, from healthcare to education, environmental management, safety and much more.

206. The establishment of the Broadband Commission in 2010 came five years after the World Summit on the Information Society, and ten years after the launch of the Millennium Development Goals. Expanding broadband access in every country is the key way to accelerate attainment of those goals by the target date of 2015. The Broadband Commission will define practical ways in which countries – at all stages of development – can achieve this, in cooperation with the private sector.

207. The *Broadband Commission* for Digital Development believes that high-speed, high-capacity broadband connections to the Internet are an essential element in modern society, with wide economic and social benefits. Its mission is to promote the adoption of broadband-friendly practice and policies so that the entire world can take advantage of the benefits broadband can offer.

208. More specifically, the Broadband Commission wants to demonstrate that broadband networks:

i) have the same level of importance as roads and electricity networks; they are basic infrastructure in a modern society;

ii) are uniquely powerful tools for achieving the Millennium Development Goals (MDGs);

iii) are remarkably cost-effective and offer an impressive return-on-investment (ROI) for both developed and developing economies;

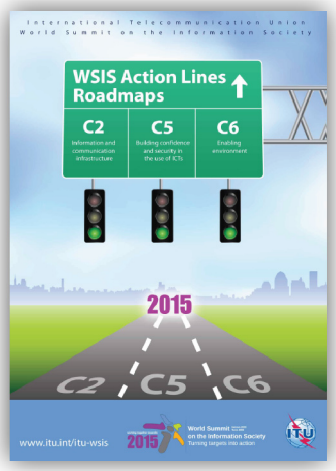
iv) underpin all industrial sectors and increasingly are the foundation of public services and social progress

v) must be coordinated nationally by governments in partnership with industry, in order too reap the full benefit of these powerful tools.

209. The Commissioners represent governments from around the world, relevant industries, international agencies, and organizations concerned with development. Leaders in their field, they each present on this site a vision for a future based on broadband.

210. The Commission is co-chaired by President Paul Kagame of Rwanda and Mr Carlos Slim Helú, Honorary Lifetime Chairman of Grupo Carso, with ITU Secretary-General Dr Hamadoun Touré and UNESCO Director-General, Ms Irina Bokova, serving as joint vice chairs. It delivered its outcomes to UN Secretary-General Ban Ki-moon on 19 September 2010 at an official side event of the UN MDG Summit in New York, which started on September 20.

iv) Roadmaps for WSIS Action Lines C2, C5, C6



211. In line with its mandate and the WSIS outcome documents, the ITU continues to play a key role in the WSIS implementation and follow-up process, in particular, as the WSIS Action Lines Sole Facilitator for AL C2 (Information and Communication Infrastructure), AL C5 (Building Confidence and Security in the Use of ICTs), and AL C6 (Enabling Environment).

212. With the aim of strengthening the implementation mechanism, ITU Council 2009 agreed on the framework for roadmaps of ITU's activities in its role as the sole facilitator for the above mentioned WSIS action lines in the implementation of WSIS up to 2015. Roadmaps are detailed plans to guide progress towards achieving WSIS goals. They provide broad vision and detailed overview of the activities planned within the mandate of the Union. Direct links between the activities and the strategic goals and relevant resolutions, programmes and initiatives of the ITU are highlighted. The roadmaps include timeframes, expected results, impact on ITU's human and financial resources as well as list relevant partners.

213. Elaborated framework may serve as a template for the other WSIS Action Line moderators/facilitators to strengthen the implementation mechanism of WSIS process. It has been widely disseminated amongst the WSIS Action Line Facilitators, members of the United Group on the Information Society as well as WSIS stakeholders. The Roadmaps can be accessed at www.itu.int/itu-wsis

v) WSIS Stocktaking Portal

214. A revamped WSIS Stocktaking Platform has been launched in 2010 to foster the implementation of WSIS outcomes. The platform is based on a community-building approach offering fresh options for networking, collaborating and the exchange of information. It has also been enriched with new social networking tools, so the new platform can become a new portal for project managers in ICT development programmes and connect practitioners on the ground. www.wsis.org/stocktaking

IV. ANALYSIS OF THE IMPLEMENTATION OF THE WSIS ACTION LINES C2, C5, C6

i) Analysis of the implementation of Action Line C2

215. Infrastructure, in terms of information and communication, is ever more necessary not only to bridge the digital divide, but needed in terms of providing the possibility of accessing the internet to the more than two thirds of the planet that still do not have access as of yet to the world wide web.

216. ITU, as the sole Facilitator for Action Line C2, will continue to provide continuous support through the guidance of its member States, to enable all that is possible to confront the challenges of the foundation of what is needed for most of the WSIS outcomes: a reliable information & communication infrastructure.

217. Indeed, without laying down and setting up the needed infrastructure, many targeted WSIS goals would just be waiting for implementation until the primary groundwork is accomplished.

218. Therefore, the administrations are expected to identify ICT's as one of their highest priorities and to take necessary policy, regulatory, legal and financial measures for the development of ICT infrastructure. The private sector and development banks are expected to play an active role in funding infrastructure projects through suitable financing mechanisms and Public-Private Partnerships.

219. Also, the regional, sub-regional and international organizations are expected to assist the developing countries to build their telecommunication/ICT infrastructures to achieve the other WSIS Goals. In this respect, ITU-D as the main Action Line C2 Implementer will continue to fulfill its role in the development of ICT infrastructure by implementing relevant activities through regular programmes, regional initiatives and large scale projects.

220. To help facilitate reporting and analysis on the C2 web portal and for increased visibility, a regrouping was made of the 12 WSIS outcomes, which are described in the Geneva Plan of Action regarding Action Line C2, into 8 thematic areas:

1) National ICT Policies
(http://www.itu.int/ITU-D/wsis/C2/NationalICTPolicies.html)

2) Universal Access Policies
(http://www.itu.int/ITU-D/wsis/C2/UniversalAccessPolicies.html)

3) Public Service Connectivity
(http://www.itu.int/ITU-D/wsis/C2/PublicServiceConnectivity.html)

4) Broadband Network Infrastructure
(http://www.itu.int/ITU-D/wsis/C2/BroadbandNetworkInfrastructure.html)

5) Special Group Inclusion
(http://www.itu.int/ITU-D/wsis/C2/SpecialGroupInclusion.html)

6) Affordable ICT Equipment
(http://www.itu.int/ITU-D/wsis/C2/AffordableICTEquipment.html)

7) Optimized Connectivity (http://www.itu.int/ITU-D/wsis/C2/OptimizedConnectivity.html)

8) Traditional Media Inclusion (http://www.itu.int/ITU-D/wsis/C2/TraditionalMediaInclusion.html)

221. The 8 thematic areas will improve communication and relevance to Action Line C2 stakeholders, increase clarification on where ITU acts as the Facilitator and where it acts as the main Implementer. The thematic areas are expected to be a vehicle for resource mobilization.

222. Considering the time left in the implementation of WSIS Action Line C2, it is necessary to re-visit the level of implementation. In this regard, a roadmap has been developed to guide the stakeholders in the implementation of Action Line C2 until 2015. The roadmap itself is also being gradually integrated into the web portal. This allows stakeholders to provide feedback and updates.

223. More feedback is needed from Administrations assessing the implementation levels of WSIS Action Line C2. In this regard, a questionnaire was sent to ITU Member States in March 2010. About 15% of administrations sent back the completed questionnaire, with a good balance on the returns between regions and levels of development. This is a good start as for relevant status updates, although not entirely representative yet; we should continue to receive feedback through this questionnaire continuously, to enable further updates for WSIS-related reporting on the way to 2015.[5]

224. Analysis of the Questionnaire in relation to the 8 thematic areas

A questionnaire was sent out to ITU Member States in early 2010. Fifteen percent of the Member States responded. ITU carried out an analysis from which to following information was drawn. Many of the thematic areas are on track as we see that most countries are in the process of implementing (or have fully implemented in a third of cases) the set-out targets. Broadband infrastructure implementation is trailing slightly, which is why there is such a drive this year for Broadband initiatives across the board, notably with the Broadband Commission and a great push from the ITU's Secretary General in this field. Calls for assistance are often financial but also, like in the case of National ICT Policies and Public Service Connectivity, the calls for assistance are to share best practices on what had been done in other countries and successfully implemented. Optimized connectivity and traditional media inclusion (which includes transition from analog to digital TV) are the closest to full implementation at over 40%, and where comparatively the least assistance is called for.

In light of the response to the questionnaire but also to what lies ahead, all stakeholders are encouraged to make concerted efforts at national, regional and international levels in order to implement activities in support of Action Line C2. This is the only way that we

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[5] Reminder: If you are an Administration that has not yet filled out and returned the questionnaire, please do so whenever possible, as it will greatly enhance our continuous updating and reporting of the implementation levels of Action Line C2 and most importantly, we will see where the gaps need to be filled! The questionnaire is available for download here: http://www.itu.int/ITU-D/wsis/C2/documents/C2questionnaire2010.pdf

can collectively maximize all of the efforts made going towards 2015 and reach the broader WSIS goals.

225. For more on statistics on key global telecom indicators:
http://www.itu.int/ITU-D/ict/statistics/at_glance/KeyTelecom.html

226. For reference, the 2010 ICT Development Report on monitoring the WSIS targets:
http://www.itu.int/ITU-D/ict/publications/wtdr_10/index.html

ii) Analysis of the implementation of Action Line C5

227. Today, the Internet has become an integral part of modern societies, propelling the end user to the forefront of communication. All kinds of information is available, in all different formats and of varying topics and point of views.

228. The difficulty with this ever-growing multitude of resources is effectively surfing through the vast amount of information available on the Internet. How much of that information is factual, or even genuine? The real concern is not just with the dissemination of inaccurate or misleading information, but above all with malicious content. Fraud, theft and forgery exist online just as they do offline. If users are to benefit from the full advantages of the Internet, then confidence in the infrastructure is primary and of utmost importance.

229. Cyber threats such as malware and attacks are becoming extremely sophisticated. This is especially true with the increased presence of organized criminal groups online. The Internet has ceased to be the domain of the technically competent. User-friendly software and interfaces have enabled all types of users, including children and novices, to interact remotely. This new territory contains a gold-mine of valuable information and potential victims. The complicated infrastructure of the Internet also makes it more difficult to track down criminals.

230. But criminals are not the only threats to the Internet. The vulnerabilities of ICTs are a lure for potentially more damaging activities such as espionage. Cyber warfare and espionage have made their appearance and can pose serious threats to critical information infrastructure.

231. Even though national measures are being taken, cyber threats remain an international problem. Loopholes in legal frameworks are being exploited by perpetrators and harmonization between existing laws is far from satisfactory. Coupled with the absence of appropriate organizational structures, there is a genuine problem in responding to cyber threats.

232. This is without counting on the constant evolution and sophistication of such threats and the vulnerabilities in software, and more recently hardware, applications. With the phenomenal growth in mobile ICTs and new trends such as cloud computing and virtualization, it is increasingly likely that cyber threats will spread to new levels.

ITU: a unique global forum to discuss cybersecurity

233. ITU recognizes that information and technology security are critical priorities for the international community. Cybersecurity generally is in everyone's best interest and this can only be achieved through a global effort, within the principles of international

cooperation. Cyber threats are global and therefore the solutions must be global too. It is vital that all countries arrive at a common understanding regarding cybersecurity, namely providing protection against unauthorized access, manipulation and destruction of critical resources. ITU believes that the strategy for a solution must identify those existing national and regional initiatives, in order to work effectively with all relevant players and to identify priorities.

234. With its 191 Member States and more than 700 Sector Members, ITU is uniquely placed to propose a framework for international cooperation in cybersecurity. Its membership includes least developed countries, developing and emerging economies, as well as developed countries. ITU is therefore an excellent forum for action and response to promote cybersecurity and to tackle cybercrime.

ITU and WSIS AL C5 Implementation

235. ITU, due to its long history, mandate and commitment, works hard to address cybersecurity challenges as these emerge and evolve. ITU is promoting cybersecurity through a range of activities related to standardization and technical assistance to developing countries tailored to their specific needs. At the WSIS, world leaders and governments entrusted ITU to take the lead in coordinating international efforts in the field of cybersecurity, as the sole Facilitator of Action Line C5, "Building confidence and security in the use of ICTs". In line with these developments, ITU membership has been calling for a greater role to be played by ITU in matters relating to cybersecurity through various Resolutions, Decisions, Programmes and Recommendations.

236. ITU takes very seriously its responsibility for WSIS Action Line C5 and is working hard to address the emerging challenges of the Information Society. The Global Cybersecurity Agenda as an international framework has helped ITU take a leadership role in both cybersecurity issues and in WSIS implementation. It has helped build awareness of ITU's activities among experts within the field and won their commitment and ownership of the strategies developed by the HLEG.

237. The GCA continues onwards, forming partnerships and enabling ITU Sectors to implement these strategies through concrete activities. ITU initiatives under the GCA have found significant support from and participation of Member States. The ITU-IMPACT initiative is a prominent example, where more than 50 countries have already signed up to be a part of the first truly global, multi-stakeholder public-private partnership against cyber threats.

238. Much has been achieved but cybersecurity is a constantly evolving challenge, which needs to be continually addressed due to the ever changing nature of ICTs. ITU will persistently work to build confidence and trust to ensure a safe and secure cyber environment for all.

239. For more on ITU and Cybersecurity, please visit:
http://www.itu.int/cybersecurity

240. Information on the Global Cybersecurity Agenda (GCA) can be found at:
http://www.itu.int/osg/csd/cybersecurity/gca/

iii) Analysis of the implementation of Action Line C6

241. Huge strides in ICT service penetration have been made since the first phase of WSIS in 2003, with particularly strong gains in mobile voice services. In 2009, more than two thirds of the world population had access to a mobile phone. But growth has not been confined to mobile services. According to ITU, the number of Internet users worldwide more than doubled between 2003 and 2009. In developing countries, the increase was tenfold. Continued growth is widely anticipated.

242. ICT markets have been very dynamic over the past 5 years – various technologies were brought to commercial services, new business models have allowed strong revenue growth for operators, multiple play offers have provided better value for money to consumers and falling prices of ICT equipment, have spurred growth in subscriptions. Behind the scene, however, there are also other factors that have created, what we call "an enabling environment" in the ICT sector. Importantly, regulation is one of the key factors for promoting investment in networks and services and driving economic growth.

243. Policy-makers and regulators have been focusing increasingly on achieving extensive, and even ubiquitous, availability of advanced ICT services, in order to address the "digital divide" and to reap the trans-sector benefits of network effects available from ICTs. While the digital divide has narrowed significantly for voice services, it is widening between and within societies in the technology sectors that have a major impact on innovation and economic development. These include high-speed telecommunication connectivity and computer processing. Increasing numbers of people engage in, and benefit from, advanced ICT services, while others advance slowly or even remain stuck, lacking access or the ability to use such services. As much as 73 per cent of the world's population did not use the Internet in 2009.

244. However, in today's online world, access to broadband and to broadband-enabled services and applications is critical, not only to ensure economic growth but also to respond to changing business practices and social behaviours sparked by the rapid technological changes taking place in the industry. ICT regulators and decision makers need to maintain a delicate balance between a hands-on or hands-off approach to regulation. Meeting ICT stakeholders' expectations and ensuring growth of the ICT sector calls for regulatory reforms that, given the current economic environment, require innovative, targeted and forward-looking approaches in order to create an enabling environment for ICT development.

245. The Tunis Agenda for the Information Society has recognized that an enabling environment at the national and international level is essential for the development of the Information Society. Since WSIS, as the lead facilitator on Action Line C6 ITU has been assisting countries around the world to pursue sector reforms ranging from introducing limited changes to extended restructuring. The first wave of regulatory reform has resulted in the establishment of separate telecom/ICT regulators, privatization and liberalization of the telecom markets. Regulatory reform over this period attempted to create more transparent and stable legal and regulatory frameworks:

i) At first place, regulatory frameworks were established to oversee the introduction of competition & curb anti-competitive behavior by natural monopoly incumbents;

ii) Safeguarding social interests in areas where the market may be unable to deliver socially optimal outcomes is another vital area of modern regulatory frameworks – today, this includes universal service objectives;

iii) Consumer protection and empowerment became a major focus of regulation and

iv) Establishing ground rules over the use of common resources (spectrum, numbering & IP addresses) have also been recognized as important areas of modern regulatory work.

246. Drastic changes in the sector flowed from technological innovations, convergence of services and growth in competition. Today, these changes may require a further regulatory shift to open new market segments to competition and update licensing and spectrum management practices in order to foster growth in broadband networks, converged services and new media as well.

247. ITU is now the lead international organization to assist countries in designing and enforcing modern regulatory frameworks. Regulators need to seek and apply durable policies and principles that can be continually brought to bear in a changing market. Primary among these is competition policy, which should be applied in a holistic manner to ensure that regulators regard the ICT ecosystem as a whole in defining relevant markets and identifying dominance and abuses of market power. In areas still subject to significant government or regulatory control, such as radio spectrum, regulators must do everything in their power to maximize efficient use of such resources. Regulators need to adopt a trans-sector focus, tailoring regulation to help multiply the effects of ICTs across all sectors of the economy – and without excluding large segments of society. Another key principle that ITU has been promoting since WSIS to allow countries spur growth in ICTs is innovation-oriented regulation. Such regulation seeks to generate opportunities for developing and marketing ideas which may affect key shifts in how ICT is provided and how resources are used, including improving synergies between computing and transport of data. And last but not least, a key pillar of today's and probably tomorrow's regulatory best practice is Integral social and economic development, ensuring that society as a whole advances without irreversible and deepening exclusion. Such policy, regulatory and institutional measures can be taken to attract and facilitate investment and reduce, one of the negative factors for potential investors known as regulatory risk.

248. With such complexity of markets and policies, regulation as we know it is challenged to come up with inspired regulatory approaches that are as innovative as the technologies that are their subject. The new industry and social realities call for new regulatory models:

i) Out-of-the-box models that promote competition, innovation and growth by identifying adaptive and targeted regulations, leading possibly to a new ladder of regulation;

ii) Models allowing for different degree of regulations (from heavy to light touch) according to the different levels or layers of the ICT market (from infrastructure to applications and services);

iii) Next generation regulation is expected to foster access and adoption of NGN and access to broadband applications and services for all;

iv) And before even regulating, regulators need to take the time to examine how changes in technology are transforming the society into a knowledge-based society and what this means for regulation and regulators with regards to redefining universal access and service to extend universal service beyond network deployment, aiming at providing access to the digital world to all based on sustainable business models (this is particularly important in the area of, for example, education and school connectivity, e-health and telemedicine, as well as new media and content.)

249. In the face of all this, the challenges for ICT regulatory agencies can sometimes seem insurmountable. Regulators increasingly need not only to understand engineering and to carry out complex economic and legal analysis, but to have the foresight to quickly recognize and adapt to shifting technology paradigms. They need to be ready to question previous approaches in a fast-evolving market, while nevertheless applying consistent regulatory principles. Regulators face the challenge of judging when market failure requires regulation, and where regulation is no longer required and can be removed. And as the impact of regulation endures for many years after regulations are issued, regulators face great responsibility to ensure that they maintain minds as open as the Internet itself.

250. To respond to the new and emerging challenges, ITU seeks to develop and promote harmonized policies and regulatory guidelines for the ICT market as well as building human and institutional capacity in the field of ICT regulation through a range of targeted training and knowledge sharing measures. The activities deployed with this regard are expected to result in the creation of harmonized regional and national policy, legal and regulatory frameworks conducive to significant investments in the ICT infrastructures and services. More than ever, ITU is committed to help Member States strengthen regulation and policy to support growth of the sector and ensure a level playing field through a range of targeted activities. A strong focus has been given to ITU activities on policy and regulation which promote low cost ICT access, including infrastructure sharing, global standards for interoperability of broadband infrastructure, simplifying and lowering duties and levies, ensuring spectrum availability, helping broadband expansion via universal service funds (and change legislation to allow this where necessary) to support health, education, commerce etc, and introducing programmes for efficient, low cost alternative energy sources. In addition,

251. In many ways, WSIS has catalysed implementation in the area of creating the enabling environment. Considerable progress has been made towards building a richer and more inclusive Information Society, in which everyone can participate. Although WSIS set 2015 as the date for the overall review of WSIS implementation, the signs are encouraging, providing all stakeholders can remain engaged.

252. New issues are arising all the time. Finding viable models or modes of regulating phenomena that are bursting and growing so fast will remain a challenge. ITU will

continue to acompany the Member States in maximizing the utilization of appropriate new technologies, including broadband, in designing and deploying resilient ICT network infrastructures and robust and enabling policy and regulatory frameworks.

V. FINAL CONCLUSIONS: Lessons learned, future actions, appreciation of contributions by membership

253. As documented in this report, the ITU has initiated, facilitated and implemented several activities related to the implementation of the WSIS outcomes in the past five years. The three ITU sectors, ITU-R, ITU–T, ITU-D, and the General Secretariat played an active role in this process in their respective areas of expertise and have brought out the complimentary role between the sectors with reference to WSIS. As the leading UN specialized agency focusing on ICTs, ITU organized several of these activities on its own and in partnership, highlighting and prioritizing the importance of multi-stakeholder collaboration. Participation from the governments, international organizations, civil society and private sector from all over the world was noted in all these efforts, which significantly contributed to the progress towards achievement of the WSIS goals.

254. The year 2011 paves the way for the path beyond the halfway point between the successful conclusion of the WSIS in 2005 and 2015, the year by which world leaders committed to achieve the UN Millennium Development Goals (MDGs) and WSIS targets. ITU is proactively engaged in further improving the WSIS process and evolving towards a balanced and inclusive information society at the same time, working in close collaboration with all WSIS Stakeholders right from grassroots organizations, to Governments, Private Sector and other UN Agencies.

VI. GLOSSARY

ADB:	Asian Development Bank
AMCDRR:	Asian Ministerial Conference on Disaster Risk Reduction
ANACOM:	Autoridade Nacional de Comunicações
APC:	Association for Progressive Communication.
ASP CoE:	Asia-Pacific Centres of Excellence
BDT:	ITU – Telecommunication Development Bureau
BR:	ITU – Radiocommunication Bureau
ccTLD:	country code Top Level Domain
CDMEA:	Caribbean Emergency Management Agency
CIIP:	Critical Information Infrastructure Protection
CIRTs:	Computer Incident Response Teams
CIS CoE:	CIS Center of Excellence
CIS:	Commonwealth of Independent States
CLMV:	Cambodia, Lao PDR, Myanmar and Vietnam
COP:	Child Online Protection
CSTD:	Commission on Science and Technology for Development
CYBEX:	Cybersecurity Information Exchange Framework
DAP:	Doha Plan of Action
EAC:East	African Community
ECLAC:	United Nations Economic Commission for Latin America and the Caribbean
ECOSOC:	Economic and Social Council
EERI:	e-Environment Readiness Index
ENISA:	European Network and Information Security Agency
ESCAP:	United Nations Economic and Social Commission for Asia and the Pacific
ESCAPE:	Electronically Secure Collaboration Application Platform for Experts
ESCWA:	United Nations Economic and Social Commission for Western Asia
FAO:	Food and Agriculture Organization of the United Nations
FTRA:	Forum on Telecommunication and ICT regulation and Partnership Forum
GAID:	Global Alliance for ICT and Development
GAP:	Geneva Action Plan
GCA:	Global Cyber security Agenda
GILF:	Global Industry Leaders Forum
GRC:	Global Response Centre
G-REX:	Global Regulators' Exchange
GSR:	Global Symposium for Regulators
gTLDs:	generic Top Level Domains
HCB:	Human Capacity Building
HIS:	Health Information Systems
HLEG:	High-Level Experts Group
ICTDec:	ICT Regulatory Decisions Clearinghouse
ICTs:	Information and Communication Technologies

IDNs:	Internationalized domain names
IEC:	International Electrotechnical Commission
IEPS:	International Emergency Preference Scheme
IFRC:	International Federation of the Red Cross and Red Crescent
IGF:	Internet Governance Forum -
ILO:	International Labour Organization
IMPACT:	International Multilateral Partnership Against Cyber Threats
IP:	Internet Protocol
IPTV:	Internet Protocol Television
IRA:	International Reference Alphabet
ISO:	International Organization for Standardization
ITC:	Internet Training Centre
ITU:	International Telecommunications Union
ITU-D:	Telecommunication Development Sector
ITU-R:	Radiocommunication Sector
ITU-T:	Telecommunication Standardization Sector
IWTGC:	Infinity Worldwide Telecom Group of Companies
IXPs:	Internet exchange point
JCA-AHF:	Joint Coordination Activity on Accessibility and Human Factors
LDC:	Least Developed Countries
MCTs:	Multi-Purpose Community Telecentres
MDGs:	Millennium Development Goals
NEPAD	(New Partnership for Africa's Development),
NETP:	National Emergency Telecommunications Plans
NEWS:	Network Early Warning System
NGN:	Next Generation Networks
NISSG:	Network and Information Security Steering Group
NSN:	Nokia-Siemens Network
NTC:	National Telecommunications Commission of Thailand
OECD:	Organisation for Economic Co-operation and Development
OLPC:	One Laptop Per Child
PCP-TDR:	Partnership Coordination Panel on Telecommunications for Disaster Relief
PP:	Plenipotentiary Conference
PwDs:	Persons with Disabilities
RRC:	Regional Radiocommuncation Conference
SADC:	South African Development Community
SMS4DC:	Spectrum Management System for Developing Countries
SOPs:	Standards Operating Procedures
TAIS:	Tunis Agenda for Information Society
TDAG:	Telecommunication Development Advisory Group
TDR/EW:	Telecommunications for Disaster Relief and Early Warning
TSB:	Telecommunication Standardization Bureau
TSF:	Telecoms Sans Frontière

UN:	United Nations
UNCTAD:	United Nations Conference on Trade and Development.
UNDESA:	United Nations Department of Economic and Social Affairs
UNDP:	United Nations Development Programme
UNECA:	United Nations Economic Commission for Africa (ECA)
UNEP:	United Nations Environment Programme
UNESCO:	United Nations Educational, Scientific and Cultural Organization
UNFCCC :	United Nations Framework Convention on Climate Change
UNGIS:	United Nations Group on the Information Society
UN-HCR:	United Nations High Commissariat for Refugees
UNICRI:	United Nations Interregional Crime and Justice Research Institute
UN-OCHA:	UN Office for Coordination of Humanitarian Affairs
UPU:	Universal Postal Union
VoIP:	Voice over IP
WG-WSIS:	Council Working Group - WSIS
WHO:	World Health Organization
WMO:	World Meteorological Organization
WRC:	World Radiocommuncation Conference
WRS:	World Radiocommunication Seminars
WSC:	World Standards Cooperation
WSIS:	World Summit on the Information Society
WSIS+5:	World Summit on the Information Society Plus 5
WTDC:	World Telecommunication Development Conference
WTIM:	World Telecommunication/ICT Indicators Meeting
WTISD:	World Telecommunication and Information Society Day
WTPF:	World Telecommunication Policy Forum
WTSA:	World Telecommunication Standardization Assembly

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