

# ITU Contribution to the Implementation of the WSIS Outcomes

2016









# ITU Contribution to the Implementation of the WSIS Outcomes: 2016

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#### I. Introduction

1. As stated in the Strategic Plan of the Union (2016-2019), set out in Resolution 71 (Rev. Busan, 2014) adopted by PP-14, the implementation of the outcomes of the World Summit on the Information Society (WSIS) continues to be one of the priorities of the Secretary-General of the International Telecommunication Union (ITU). The strategic plan also highlights the use of to create a positive impact on socio-economic development (as recognized by the outcome texts of the World Summit on the Information Society (WSIS). Furthermore, the strategic plan for the Union for 2016-2019 contains a commitment to the implementation of the relevant WSIS outcomes in response to the changing telecommunication/ICT environment and its effects on the Union, as well as the priority areas to be addressed in implementing the WSIS outcomes till 20205.



2. The UNGA review on the implementation of WSIS resulted in a UNGA Resolution A/70/125 (Outcome Document of the UNGA Overall Review) that was adopted on 16 December 2015. The resolution provides guidance on the implementation of the WSIS Outcomes till 2025. In particular it calls for close alignment between the World Summit on the Information



Society process and the 2030 Agenda for Sustainable Development (para.5) and requests all stakeholders to integrate ICTs into their approaches to implementing the Goals, and request UN entities facilitating WSIS Action Lines to review their reporting and work plans to support implementation of the 2030 Agenda (para.12). United Nations entities that are facilitating the World Summit on the Information Society action lines, within their mandate and existing resources, were called upon to continue working together to regularly analyse the nature of digital divides, study strategies to bridge them, and make their findings available to the international community (para.23)

The World Summit on the Information Society Forum was recognized "as a platform for discussion and sharing of best practices in the implementation of the World Summit outcomes by all stakeholders, and it should continue to be held annually" (para.69).

In addition, some of the key outcomes of the overall review are listed below:

- We recognize that ending the **gender digital divide** and the achievement of Sustainable Development Goal 5 on gender are mutually reinforcing efforts, and we commit to mainstreaming gender in the World Summit on the Information Society process, including through a **new emphasis on gender in the implementation and monitoring of the action lines**, with the support of relevant United Nations entities, including the United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women), (para.7).
- We recognize that certain policies have substantially contributed to bridging digital divides and the value of information and communications technologies for sustainable development, and we commit to continuing to identify and implement best and emerging practices for the establishment and functioning of





education, innovation and investment frameworks for information and communications technologies, (para.28).

- We also request the Commission on Science and Technology for Development, within its mandate related to the follow-up to the World Summit on the Information Society, and all action line facilitators, within their respective mandates and existing resources, to work with all stakeholders to regularly identify and promote specific, detailed actions to support the enabling environment for information and communications technologies and development and provide the demand-driven policy advice, technical assistance and capacity-building, as appropriate, to realize them, (para.33).
- We encourage a prominent profile for information and communications technologies in the new Technology Facilitation Mechanism established in the Addis Ababa Action Agenda, and consideration of how it can contribute to implementation of the World Summit on the Information Society action lines, (para. 39).
- Regular review of progress of the full set of Summit action lines will be essential to achieving the vision of the Summit, (para.66).
- We also call for the continuation of the work of the United Nations Group on the Information Society in coordinating the work of United Nations agencies, according to their mandates and competencies, and we invite the regional commissions to continue their work in implementation of the World Summit on the Information Society action lines and their contribution to the reviews thereof, including through regional reviews, (para.68).
- The activities of the Partnership on Measuring Information and Communications
   Technology for Development have made a valuable contribution to data-gathering and dissemination and should be continued, (para.70).
- 3. At the policy level, following the revision of Resolution 140 (Rev. Busan, 2014), "ITU's role in implementing the outcomes of the World Summit on the Information Society and in the overall review by United Nations General Assembly of their implementation",
  - the ITU Plenipotentiary Conference in 2014 further strengthened the Union's mandate in relation to the implementation of WSIS outcomes. Revised Resolution 140 provides strategic guidance on ITU's future role in WSIS implementation and follow-up as well as the UNGA Overall Review. Through the resolution 140 the ITU Plenipotentiary Conference resolved to endorse the outcomes of the WSIS+10 High-Level Event, namely: the WSIS+10 Statement on the Implementation of the WSIS Outcomes and WSIS+10 Vision for WSIS beyond 2015. Subsequently, both documents were submitted to the UNGA Overall Review and referenced in its outcome document. According to the resolution, ITU should continue to be the sole facilitator of WSIS Action Lines C2, C5 and C6 and as co-facilitator of the other action lines. It should also continue the





coordination of WSIS forums, the World Telecommunication and Information Society Day, WSIS Project Prizes and the maintenance of the WSIS Stocktaking database. The updated resolution also resolved that ITU, in coordination with UNESCO, UNCTAD and UNDP, should contribute to the topic of ICT



for development in the debate on the Development Agenda Beyond 2015 arranged by the United Nations General Assembly, taking into account WSIS+10 High-Level Event (2014) outcome documents; with a focus on bridging the digital divide through sustainable development.

The Resolution 140 (Rev. Busan, 2014) invited Member States inter alia to support, through relevant UN processes, the creation of synergies and institutional linkages between WSIS and the Post-2015 Development Agenda to continue strengthening the impact of ICT for sustainable development. Member States are also invited to contribute and closely collaborate with the Partnership on Measuring the ICT for Development as an international, multistakeholder initiative to improve the availability and quality of ICT data and indicators, particularly in developing countries.

- 4. Building upon the outcomes of the UNGA overall review, the ITU Council 2016 modified Resolution 1332 and suppressed Resolution 1334 thereby strengthening the ITU's leadership and role in the WSIS Process till 2025.
- 5. The ITU Council 2016, resolved that ITU should play a leading facilitating role in the WSIS implementation process, along with UNESCO and UNDP, as stated in § 109 of the Tunis Agenda, that ITU should continue to coordinate WSIS Forums, World Telecommunication and Information Society Day (WTISD) and WSIS Project Prizes and maintain the WSIS Stocktaking database, as well as continue to coordinate and support the activities of the Partnership for Measuring ICT for Development. Council also resolved to use the WSIS framework as the foundation through which the ITU helps achieve the 2030 Agenda, within the ITU's mandate and within the allocated resources in the financial plan and biennial budget, noting the WSIS-SDG Matrix developed by UN Agencies, working through the Council Working Group on WSIS. In addition, the Terms of Reference of the WG-WSIS, annex to the Council Resolution 1332, was altered to include the 2030 Agenda for Sustainable Development, in particular monitoring and evaluation on a yearly basis the actions taken by ITU with respect to implementation of WSIS outcomes and the 2030 Agenda for Sustainable Development.
- 6. The Council Working Group (CWG) on WSIS, created in 2002, continues to monitor and evaluate on a yearly basis the actions taken by ITU with respect to implementation of WSIS outcomes. The CWG facilitates inputs from membership on the ITU implementation of relevant WSIS outcomes through its regular meetings and circular letters, questionnaires





or other appropriate methods of query and provides guidance to the membership regarding the actions to be performed by ITU in the implementation of WSIS outcomes.



- 7. A Council Working Group (CWG) on Internet related public policy issues was established as a separate group by
  - Council Resolution 1336, in accordance with Resolutions 102 and 140 of the 2010 Plenipotentiary Conference. This CWG is limited to Member States, with open consultation to all stakeholders. Previously, this group was established as the Dedicated Group 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). Council 2012 Resolution 1344, modified 2015, decided the modality of the open consultation for the Group. 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 in Annex 1 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.
- 8. The three Sectors of the Union (Standardization, Radiocommunication and the Development Sector) and the General Secretariat have carried out several important activities and projects that enhance the WSIS outcomes and objectives.
- 9. At the operational level, ITU has been carrying out the tasks assigned by the WSIS Outcomes Documents, in particular, in its capacity as:
  - Lead facilitator (along with UNESCO and UNDP) in coordinating the multistakeholder implementation of the *Geneva Plan of Action*.
  - Facilitator of Action Lines C2 (Information and communication infrastructure) and C5 (Building confidence and security in the use of ICTs); upon the UNDP's request the ITU accepted to play the role of the Facilitator of Action Line C6 (Enabling Environment).
  - Co-facilitator of Action Lines C1, C3, C4, C7 and C11; and partner for C8 and C9.
  - Rotating chair of the United Nations Group on Information Society (UNGIS).
  - Steering committee member of the Partnership on Measuring ICT for Measurement.
  - Facilitator of the WSIS Stocktaking process.
  - Initiator and facilitator of the WSIS Project Prize
  - Implementation of other WSIS outcomes.
- 10. Within the ITU, the effective coordination of ITU's strategies and activities in relation to WSIS has been ensured by a WSIS Task Force that is chaired by the Deputy Secretary-







General. Taking into account resolves of Resolution 1332, the terms of reference of the WSIS Task Force have been amended incorporating coordination on the activities of ITU related to SDGs.

11. This document is divided into 5 sections, following the introduction, the second section provides an overview of ITU activities and projects undertaken in 2016 in the context of the implementation of WSIS Outcomes, while the third section informs about ITUs Role in the Overall Review of the Implementation of the Outcomes of the World Summit on the Information Society. The fourth section highlights forums, innovative initiatives and informs about the planned future activities to ensure the full implementation of the WSIS outcomes. The final section provides conclusions of the report.

# II. WSIS Action Lines and the 2030 Agenda for Sustainable Development

- 12. The UNGA Resolution A/70/1 on Transforming Our World: the 2030 Agenda for Sustainable Development was adopted in 2015. This Agenda is a plan of action for people, planet and prosperity. It also seeks to strengthen universal peace in larger freedom. It recognizes that eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development.
- 13. The vital role of ICTs as a catalyst for development is specifically recognized in the new development framework of the 2030 Agenda, which acknowledges that "the spread of information and communication technology and global interconnectedness has great potential to accelerate human progress and to develop knowledge societies, to bridge the digital divide and to develop knowledge societies, as does scientific and technological innovation across areas as diverse as medicine and energy"

The UNGA overall review on the implementation of WSIS resulted in a UNGA Resolution A/70/125 that was adopted on 16 December 2015. The resolution provides guidance on the implementation of the WSIS Outcomes till 2025. In particular it calls for close alignment between the WSIS process and the 2030 Agenda for Sustainable Development (para.5) and requests all stakeholders to integrate ICTs into their approaches to implementing the Goals, and request UN entities facilitating WSIS Action Lines to review their reporting and work plans to support implementation of the 2030 Agenda, (para.12). ICTs are identified as targets in the SDGs for education, gender equality, infrastructure (universal and affordable access to the internet) and in the implementation goal as a cross cutting tool to be utilized for the achievement of all of the SDGs. The effective implementation of the WSIS Action Lines can help accelerate the achievement of the SDGs. To that end, the WSIS SDGs Matrix, developed by the UN Action line Facilitators, clearly shows the linkage between each Action line and the 17 SDGs and provides rationale for each. Please see paras. 19-25 below.

14. ICTs empower billions of individuals around the world with wide ranging applications cutting across sectoral boundaries in agricultural productivity; population, health and education; transportation; industry, trade and finance; climate change and protection of our environment; as well as for the prevention and management of disasters, among many others.





15.The postnew 2015 development agenda, "Transforming our World: The 2030 Agenda for Sustainable Development" was adopted at the UN General **Assembly Summit** held from 25-27



September 2015. The agenda has four sections: a Preamble and Declaration, Goals and Targets, Means of Implementation and Global Partnerships, and Follow-up and Review.

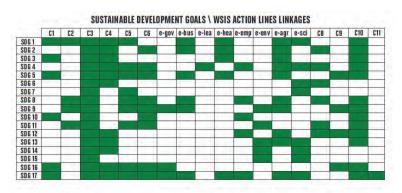
- 16. The Declaration, section "Our world today," addresses key challenges and opportunities to the existing inequalities within and among countries. It also recognizes that "the spread of information and communication technology and global interconnectedness has great potential to accelerate human progress, to bridge the digital divide and to develop knowledge societies, as does scientific and technological innovation across areas as diverse as medicine and energy" (para. 15).
- 17. The SDGs contain 17 goals and 169 targets and are intended to be action-oriented, concise and easy to communicate, limited in number, aspirational, global in nature and universally applicable to all countries, and focused on priority areas for the achievement of sustainable development; Equally important is the need to assess progress towards the achievement of the goals, accompanied by targets and indicators, while taking into account different national circumstances, capacities and levels of development.
- 18. Four targets of the SDGs explicitly recognize the role of ICTs. This applies to the targets on Education and Scholarships (4.b) on Gender Empowerment (5.b) on Infrastructure for Universal and Affordable access to ICTs and the Internet in the Least Developed Countries (9.c) and more broadly, Goal 17 on Strengthen the means of implementation and revitalizing the global partnership for Sustainable Development, which calls to enhance the use of enabling technology, in particular ICTs. There are also several references to technology in general throughout the SDGs in which ICTs play an important direct or indirect role.
- 19. The Agenda notes that the Means of Implementation (MOI) targets under each SDG and Goal 17 are key to realizing the agenda and of equal importance with other Goals and targets. Science, Technology (in particular ICTs), Innovation, the Technology Bank, and new technology facilitation mechanism are called to play a relevant role as MOI's in achieving the SDGs.
- a) WSIS Action Lines and SDG Matrix
- 20. At the WSIS Forum 2015, ITU coordinated the WSIS Action Lines and SDG matrix, a new tool developed by a number of United Nations agencies to map how ICTs may contribute to the implementation of the new SDGs. The Matrix will serve as an easy reference for stakeholders





engaged in shaping the future of both, the SDGs and the WSIS processes beyond 2015 and the 2030 Agenda for Sustainable Development.

- 21. The mapping exercise draws direct linkages of the WSIS Action Lines with the proposed SDGs to continue strengthening impact of Information and the Communication Technologies (ICTs) for sustainable development. Each UN Action Line Facilitator has analyzed connections and relations of respective Action Line with the proposed SDGs and their targets. This is a living document and changes can be introduced by Action Line Facilitators, if needed.
- 22. The goal is to create a clear and direct link and an explicit connection between the key aim of the WSIS, that of harnessing the potential of ICTs to promote and realize the development goals, and the post 2015 development agenda, so as to contribute to the realisation of the latter.
- 23. The WSIS Forum continues to evolve and adapt, by strengthening the synergies between the WSIS Action Lines and SDGs, and taking into account the outcomes of the UNGA Overall Review. In this regard, the WSIS Forum 2016 was entitled WSIS Action lines: Supporting Implementation of the SDGs, please read more at www.wsis.org/sdgs

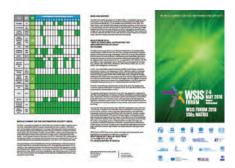






Please read the complete document at www.wsis.org/sdg

- 24. One of the Outcomes of WSIS Forum 2016 was the WSIS Action lines and SDGs Matrix This document builds upon the WSIS-SDG Matrix and provides guidance on the outcomes of
  - more than 100 sessions held during the forum, emphasizing linkages between the WSIS Action Lines and SDGs as well as highlighting rational for each linkage that has been established, please see at www.wsis.org/forum.
- 25. In response to the call by the UN General Assembly within the framework of the ten year review of the WSIS (Res. A/70/125) calling for a close alignment between the WSIS process and the 2030 Agenda for Sustainable Development, the WSIS Stocktaking process highlighted the contribution of 11 WSIS Action Lines to the achievement of 17 Sustainable Development Goals (SDGs).







26.In this regard, the WSIS Prize 2017 contest also aligns its rules to highlight the linkage between the WSIS Action lines and SDGs.





- III. Overview of ITU activities and projects undertaken since in 2016 in the context of the implementation of WSIS Outcomes, also related to the 2030 agenda for Sustainable Development
  - (a) Lead facilitator (along with UNESCO and UNDP) in organizing the multistakeholder implementation of the *Geneva Plan of Action*.
  - 27. Since 2006, ITU (along with UNESCO and UNDP) has played a leading facilitating role in the implementation of the Geneva Plan of Action (para 109 of the Tunis Agenda). At the international level the cluster of the WSIS related Meetings held every May from 2006 to 2008, and the WSIS Forum has been held every year since 2009. In 2015, the UNGA resolution A/70/125 recognized the WSIS Forum as a platform for discussion and sharing of best practices in the implementation of the World Summit outcomes by all stakeholders, and stated that it should continue to be held annually.
  - 28. At the regional level the Regional Commissions have played a key role in the implementation of the Geneva Plan of Action and reported at the WSIS Forum globally.
  - 29. The ITU has planned, organized and hosted the WSIS Forum since 2009 in collaboration with the coorganizers, UNESCO, UNCTAD and UNDP. The annual WSIS Forum is a global multistakeholder platform facilitating the implementation of the WSIS Action Lines. The Forum, co-organized by ITU, UNESCO, UNDP and UNCTAD, in close collaboration with all WSIS Action Line co-/facilitators and other UN organizations (UNDESA, FAO, UNEP, WHO, UN Women, WIPO, WFP, ILO, WMO, ITC, UPU, UNODC, UNICEF and UN Regional Commissions), is also an opportunity for information exchange, knowledge creation and sharing of best practices, taking into account the evolving Information and Knowledge Societies. The WSIS Forum provides opportunities for developing multistakeholder and public-private partnerships to advance development goals.
  - 30. The WSIS Forum is a natural evolution of the Cluster of the WSIS related Meetings held every May from 2006 to 2008 organized by the WSIS Action Line facilitations and coordinated by ITU. Since 2009, the WSIS Forum itself has evolved into a unique platform for multistakeholder consensus and discussions on crucial issues concerning the information society. The WSIS Forum results in several documents in particular the WSIS Forum Outcome Document is released on the last day of the Event each year. The agenda, programme and format of the Forum is built in an open multistakeholder consultation process that consists of physical meetings and online consultations. The Forum comprises of a high-level and forum track that include high-level panels, WSIS Action Lines meetings, WSIS Action Line Facilitator's meeting, thematic workshops, and various platforms for networking and initiation of partnerships.







31. Please refer to the following for the yearly editions of the WSIS Forum, you can also find the Outcome Documents and the Emerging Trends Document:

• Cluster of WSIS Related Events 2006:

http://www.itu.int/net/wsis/implementation/cluster.asp?year=2006&month=0&type='alf'&subtype=0

Cluster of WSIS Related Events 2007:

http://www.itu.int/net/wsis/implementation/cluster.asp?year=2007&month=0&type='alf'&subtype=0

Cluster of WSIS Related Events 2008 :

http://www.itu.int/net/wsis/implementation/cluster.asp?year=2008&month=0&type='alf'&subtype=0

WSIS Forum 2009-

http://www.itu.int/wsis/implementation/2009/forum/geneva/

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- WSIS Forum 2015- http://www.itu.int/wsis/implementation/2015/forum/
- WSIS Forum 2016: http://www.itu.int/wsis/implementation/2016/forum/
- 32. At the regional level, each year the regional commissions report on their actions at the annual WSIS-Regional Commissions meeting held at the WSIS Forum. In follow up to the UNGA resolution A/70/125 that invites the **regional commissions to continue** their work in implementation of the World Summit on the Information Society action lines and their contribution to the reviews thereof, including through regional reviews, the regional commissions in collaboration with ITU, UNESCO and UNDP, will organize regional WSIS Implementation Workshops.
- Building regional capacity on the WSIS Implementation process and its alignment with 2030 Agenda
- Building awareness on the enabling role of ICTs in sustainable development towards programming of future UNDAFs
- Contributing as regional formal submission to the WSIS Forum 2017 Open Consultation
   Process bringing the regional emerging trends, challenges and opportunities to the global dialogue on WSIS implementation
- Regional reporting on projects to the WSIS Stocktaking 2017





- Identification of possible projects for submission to the 2017 edition of the WSIS Prize competition
- Regional inputs to the WSIS Action Line facilitation process
- 33. The WSIS Forum 2016 was held from the 2-6 May 2016 at the ITU Headquarters in Geneva. This year the Forum attracted more than 1800 WSIS Stakeholders from more than 140 countries onsite and more than 600 remote participants from 85 countries. Several high-level representatives of the wider WSIS Stakeholder community graced the Forum with more than 85 ministers and deputies, several ambassadors, CEOs and Civil Society leaders contributing passionately towards the programme of the Forum. The highlight of the WSIS Forum was the Prime Minister of Tonga, who graced the event with his presence.
- 34. The WSIS Forum, co-organized by ITU, UNESCO, UNDP and UNCTAD, in close collaboration with all WSIS Action Line Facilitators/Co-Facilitators (UNDESA, FAO, UNEP, WHO, UN Women, WIPO, WFP, ILO, WMO, UN, ITC, UPU, UNODC, UNICEF and UN Regional Commissions) has proven to be an efficient mechanism for coordination of multistakeholder implementation activities, information exchange, creation of knowledge, sharing of best practices and continues to provide assistance in developing multistakeholder and public/private partnerships to advance development goals. This forum provided structured opportunities to network, learn and participate in multistakeholder discussions and consultations on WSIS implementation.
- 35. The Chairman of the WSIS Forum 2016 was Mr Daniel Sepulveda, USA who played a key role in providing high-level guidance for the Forum and its outcomes.
- 36. At the WSIS Forum 2016, moderated High-Level Policy Sessions of the High-level Track (HLT) took place on the 3rd and 4th of May. During these sessions, moderated Policy Sessions with high-ranking officials of the WSIS Stakeholder community, representing the Government, Private Sector, Civil Society, Academia and International Organizations were held. High-Level Policy Sessions were divided into sixteen sessions covering fourteen themes. The themes, based on the Geneva Plan of Action with particular focus on the WSIS Action Lines, build on the outcomes of the United Nations Overall Review and the submissions received during the open consultation process. The high-level track was moderated by High-level Track Facilitators who were nominated by different stakeholder types to represent their respective communities.
- 37. Building on the open consultation process, more than 150 sessions were held during the WSIS Forum 2016. The overall theme of the WSIS Forum 2016 this year was "WSIS Action Lines: Supporting the Implementation of SDGs". This provided a vibrant atmosphere for facilitation and exchange on a multistakeholder vision of the WSIS Process. An exhibition space provided the perfect atmosphere to network, learn and share .The commitment and dedication of the WSIS Stakeholders was evident from the outcomes submitted by the session organizers.
- 38. The WSIS-SDG Matrix developed by UN WSIS Action Line Facilitators continued to serve as the mechanism to map, analyze and coordinate the implementation of WSIS Action Lines, and more specifically, ICTs as enablers and accelerators of the SDGs.





39. The outcomes of the WSIS Forum 2016 were presented on the last day of the Forum, 6th May, and were submitted to the Commission on Science and Technology (CSTD) on the first day of the Session.

Key outcomes of the WSIS Forum 2016 include the following:

- WSIS Forum 2016: Outcome Document
- WSIS Forum 2016: High Level Track Outcomes and Executive Brief
- WSIS Action Lines Supporting Implementation of the Sustainable Development Goals (2016)
- WSIS Stocktaking Report 2016
- WSIS Stocktaking Success Stories 2016
- WSIS Forum 2016 and SDG Matrix











All WSIS Forum 2016 Outcomes, photos and videos documentation and highlights are available at <a href="https://www.wsis.org/forum">www.wsis.org/forum</a>.



40. The **WSIS Forum 2017** is scheduled to be held from the 12-16 June at the ITU Headquarters, Geneva. The agenda and programme will build upon the Open Consultation Process, structured in six phases, for further information please visit www.wsis.org/forum





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

Action Line C2: Information and Communication Infrastructure, (also related to the 2030 Agenda for Sustainable Development)



Related to the SDGs: SDG 1 (1.4), SDG 8 (8.2), SDG 9 (9.1, 9.a, 9.c), SDG 11 (11.5, 11.b)



- 41. Within the framework of the existing resources and given mandate, as well as in line with the Geneva Action Plan, the ITU carries out several activities with regard to the WSIS Action Line C2. These are oriented toward six domains as follows (1) Promotion of National ICT-Strategies; (2) Harmonization of the 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 for ICT development assessment.
- 42. ITU plans and activities are taking into consideration the approved <a href="Resolution 70/1">Resolution 70/1</a>
  (Transforming our world: the 2030 Agenda for Sustainable Development) where it was recognized that high-speed broadband is an essential enabler of sustainable development. Another relevant tool is the <a href="WSIS-SDG Matrix">WSIS-SDG Matrix</a> developed by UN WSIS Action line Facilitators, serving as a mechanism to map, analyze and coordinate the use of ICTs as catalysts for the implementation of the SDGs.
- 43. The 11<sup>th</sup> Action line C2 Facilitation Meeting was held in Geneva on 5 May 2016 as an



integral part of the WSIS Forum 2016. Based on proposals received during the WSIS Forum 2016 multistakeholder open consultation process, the theme for the Action Line Facilitation meeting was Evolving Affordable Broadband Infrastructure for Bringing ICT to All. Among the debated issues, participants discussed: the many challenges and key opportunities to achieve ICT infrastructure goals; ways on how to cope with connectivity

problems; successful case stories from different corners of the world; among others. Please find the outcome of the meeting here: <a href="http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016/E2%80%94ForumTrack-Outcomes.pdf">http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016/E2%80%94ForumTrack-Outcomes.pdf</a>.

44. ITU Global Development Initiatives are supporting the implementation of SDGs, such as: the <u>m-Powering Development for a Better Tomorrow</u> that is an innovative and unique ITU initiative. The goal is to extend the benefits of mobile telephony to all strata of society, in order to build a truly inclusive information society, with special focus on remote rural and underserviced areas; The <u>Smart Sustainable Development Model initiative</u> aims at linking rural telecommunications development for general communications, business, education





health and banking to disaster risk reduction and disaster management initiatives, to ensure an optimal use of technology and avoid duplication of efforts and investments.

- 45. Within the framework of the Connect World initiative, trainings for informatics teachers in the rural settlements of the Republic of Kyrgyzstan were held by ITU, in cooperation with Institute of Electronics and Telecommunication under the KSTU. Having received positive feedback in 2014 and 2015 ITU continued its efforts and trained 107 more teachers in March-April 2016 of which 83 are women.
- 46. Based on a previous successful project to connect 5 schools in Comoros, a new project to connect additional 10 schools has been signed in January 2015. This new project is expected to be fully implemented by December 2016.
- 47. ITU also organized the <u>Asia-Pacific Regional Forum on Universal Access and Service and Broadband Deployment 2015</u> in Bangkok, Thailand during 25-27 March 2015 in partnership with the National Broadcasting and Telecommunications Commission of Thailand (NBTC) and the Asian Development Bank (ADB). The forum successfully mobilized resources and partnerships to undertaking new projects aimed at promoting universal service and access and broadband deployment in the region.
- 48. ITU organized the NBTC Workshop on Cross-Border Frequency Coordination in Bangkok, 29-30 June 2015 in partnership with the National Broadcasting and Telecommunications Commission of Thailand (NBTC). The Workshop gave an overview to the participating countries on the different aspects of the cross-border frequency coordination. <a href="http://www.itu.int/en/ITU-D/Regional-Presence/AsiaPacific/Pages/Events/2015/June-NBTC-Frequency-Workshop/home.aspx">http://www.itu.int/en/ITU-D/Regional-Presence/AsiaPacific/Pages/Events/2015/June-NBTC-Frequency-Workshop/home.aspx</a>.
- 49. In cooperation with APT, training was provided on <u>Radio Spectrum Management and Services in the Pacific</u>, 6-9 July 2015 in Nadi, Fiji, and the Pacific Regional <u>Seminar</u> on Spectrum Management & Terrestrial TV Broadcast, 10 July, at the same venue.
- 50. Concentrated assistance aimed at improving access to broadband in schools and enables them to serve as community ICT Centers in Haiti's Rural School Connectivity Programme. The Centres will facilitate ICT training programmes in rural and undeserved areas. This will facilitate extending ICT access and services to rural communities by providing basic sets of accessible ICT equipment, increase access to broadband services and promoting investment in networks for Haiti and ensuring ICTs for all.
- 51. ITU assistance for the establishment of Community Centres in the Barbados, Belize, Grenada and St. Kitts and Nevis in ensuring access to information through appropriate infrastructure deployment. The rationale for such Community Telecentres is that these shared sites would provide and increase public access to the technology tools for productivity and development training and access to Internet and primarily to information and services available via the Internet. This also provides complement to the beneficiary countries' policy in relation to Universal Access, towards increasing Broadband access and Connectivity and creating platforms for access to information, facilitating and promoting E-government, and the creation of local content. The sustainability of the Centres was endorsed the governments.





- Within projects in cooperation with MSIP, Republic of Korea, Spectrum Management Master Plans have been prepared for Fiji, Brunei and Bangladesh, and additional Master Plans are under preparation for Thailand, Vietnam, Pakistan, Grenada, St. Vincent and the Grenadines and Jamaica. The activities of the project with respect to each beneficiary country include the assessment of spectrum management scheme (i.e. spectrum policy, spectrum use, authorization, spectrum sharing, spectrum pricing, spectrum monitoring and compliance), and the provision of advice in connection with each beneficiary country's development of relevant policies, legislations and regulations, based on request and interest of the countries. This project will also build human capacity and provide guidance in preparing the implementation of the master plans where requested by beneficiary country and agreed to by ITU.
- 53. ITU prepared <u>Guidelines</u> for: *i)* setting up spectrum fee regime; and *ii)* tendering radio monitoring systems.
- 54. As a follow-up to the <u>Connect Africa Summit</u> the ITU/Craig and Susan McCaw Broadband Wireless Network project for Africa is implementing broadband wireless networks and developing ICT applications to provide free or low cost digital access for schools and hospitals, and for underserved populations in rural and remote areas in selected countries. Activities taken from 2015-2016:
- In Burkina Faso, a Broadband Network has been fully installed and is operational. Local engineers were trained to operate and maintain the Network with a remote assistance as required. A challenge identified that is being tackled is the low bandwidth at the Backhaul side within the Government Network.
- In Djibouti the broadband extension to 9 other cities is ongoing with the procurement process ongoing for the required equipment to cover these cities. This activity is the 2<sup>nd</sup> and final phase of the installation of the Project in Djibouti. This project is expected to be completely finalized in October 2016.
- In Lesotho the network equipment is on field and local engineers have been trained.
- Swaziland: procurement process is ongoing for broadband network equipment and installation to cover 20 sites in Swaziland.
- The Evaluation of the Commercial proposals for Rwanda Broadband Network is in process and is planned to be finalized by 2016.
- Broadband Network in Mali: Preparation for site selection is ongoing. After that a tender process is going to be put in place by the end of 2016.
- Madagascar is going to receiving ITU assistance in order to develop and implement a
  Broadband Wireless network. A mission of experts has been organized in July 2016: The
  partnership with UNESCO and WHO has been a significant mile stone. In this context, ITU
  and WHO have organized a joint workshop and a press conference to enhance awareness
  on EMF effects on human beings.





55. To show a global perspective of broadband connectivity that will allow membership to identify broadband investment opportunities, ITU Interactive Transmission Maps is continuously adding network links from all regions. The maps are a cutting-edge <a href="ICT-data mapping platform">ICT-data mapping platform</a> to take stock of national backbone connectivity (Optical fiber, Microwave links and Satellite Earth Stations) as well as of other key metrics of the ICT sector, which currently covers Africa, Asia-Pacific, Arab, CIS, Europe and Latin America



with data from more than 380 operators across the globe. A project to include information on Internet Exchange Point (IXP) is ongoing.

- 56. ITU is carrying out a project to foster affordable access to the digital world by providing stakeholders with a platform to identify the appropriate policy, regulatory, technical and commercial measures to achieve affordable access to international bandwidth. The aim of the project is to strengthen cooperation at the global level, bringing together fiber optic communication stakeholders, as well as policy makers and regulators to identify measures to address the main bottlenecks, strengthen commercial agreements and regulatory frameworks and thus promote open access to fiber optic communications and associated infrastructure and develop harmonized related model regulation.
- 57. The 16<sup>th</sup> edition of the Global Symposium for Regulators (GSR) was held in Sharm el-Sheikh, Egypt, from 11 to 14 May 2016. One of the discussion papers presented there has focused on emerging technologies and infrastructure platforms and their implications for the global regulatory agenda. The paper surveys recent efforts in bringing robust connectivity to all corners of the globe, which is helping drive both innovation and ways in which technologies can be used to improve economic and social development. New means of connectivity plus enhanced architectures promise improved coverage, greater capacity, more efficient use of spectrum, and more flexibility for effective delivery of the ICT services. In turn, technological innovations are unlocking new applications, such as those composing the Internet of Things (IoT) and the emerging Smart Society.
- 58. ITU through its training programs, including Centers of Excellence, built human capacity in countries to support infrastructure development in areas such as broadband network planning, conformity and interoperability, transition from analogue to digital broadcasting, spectrum management, effective deployment of IPv6, quality of service, cloud computing amongst others (details available at <a href="ITU Academy">ITU Academy</a>).
- 59. Broadband and Digital broadcasting has been identified as one of the WTDC Regional Initiatives for ICT development in all regions.
- 60. The ITU-D Sector maintains a <u>portal</u> indicating the status of the deployment of Digital Terrestrial Television (DTT) broadcasting worldwide.
- 61. An <u>ITU-R Report BT.2140-7 (2014)</u> on 'Transition from analogue to digital terrestrial broadcasting' is available online free of charge.





- 62. ITU, in cooperation with Republic of Korea, has provided assistance on Digital Broadcasting Transition since 2008. Roadmaps for Afghanistan, Solomon Islands, Vietnam, Vanuatu and Guyana and a case study of Thailand have been published in 2015. The ITU works closely with regional organizations such as Asia-Pacific Broadcasting Union and Asia-Pacific Institute for Broadcasting Development.
- 63. Also, in cooperation with the Ministry of Internal Affairs and Communications (MIC), Japan, ITU has extended assistance to countries (Bangladesh and Micronesia) for the establishment of Digital Broadcasting Conversion, and published a case study of Japan on digital conversion implementation.
- 64. ITU in partnership with the National Broadcasting and Telecommunications Commission of Thailand (NBTC) has implemented a number of projects aimed at transitioning from analogue to digital broadcasting in Thailand. These projects include digital terrestrial TV and Radio broadcasting as well as mobile TV broadcasting services. Under the project framework, ITU also organized regional forums/training on digital broadcasting.
- 65. Furthermore, with the assistance from Department of Communications, Australia, development of the roadmap reports on digital broadcasting transition for Pacific Island countries (Samoa, Kiribati, and Nauru) and an Australian case study have been published in 2015. As a result, Digital Terrestrial Television Broadcasting (DTTB) assistance in Asia-Pacific region has now been completed in 24 countries. In addition a report on Interactive multimedia services in Asia Pacific: Trends and insights was prepared.
- 66. In Thailand, a project is being undertaken on frequency planning for DTTB to assess the need for additional stations and Portable Indoor antenna to achieve a network coverage target of fixed DTTB reception at 95% of the households.
- 67. In cooperation with the Andean Development Bank (CAF), ITU is providing support to at least 6 countries in the Americas Region on Transition from Analogue to Digital Broadcasting.
- 68. As a joint project with the Latin-American Development Bank, guidelines on the digital broadcasting transition were translated into Spanish. Beneficiary countries have been selected and the first reports for the 8 beneficiary countries (Bolivia, Dominican Republic, Venezuela, Costa Rica, Panama, Colombia, Paraguay and Jamaica) were prepared and are under revision for DTTB transition. The Project addresses the regulatory, political, technological and economic challenges which the beneficiary countries will face when implementing the transition.
- 69. ITU supports the development of Road Maps for the transition to Digital Broadcasting in Guatemala, El Salvador, Honduras and Nicaragua.
- 70. In addition, forums, seminars, and workshops to ensure the transition from Analog to Digital broadcasting *were* organized by the Union:
- The international symposium "A milestone for Digital Terrestrial Television" was held in Geneva on 17 June 2015. The day was the deadline for switching off analogue television broadcasting in UHF band applicable for all countries belonging to ITU Region 1 and Iran.





The symposium addressed the objectives of ASO, shared experiences and status of member countries, and introduced advances in digital broadcasting.

- The ITU workshop for Europe and CIS on "Spectrum Management and Transition to Digital Terrestrial Television Broadcasting" was held from 5 to 7 May 2015 in Budapest, Hungary.
- ITU Regional Workshop for the CIS on Experience in the Implementation and Operation of Digital TV Broadcasting in the CIS, Moscow, Russian Federation, 16-18 February 2016.
- 71. ITU-D has made available a computer program known as <a href="MS4DC">SMS4DC</a> (Spectrum Management System for Developing Countries) to assist administrations of developing countries in performing their spectrum management responsibilities more effectively. ITU has kept updating this program and more than 40 countries have subscribed to the tool ITU Arab regional training workshop on the SMS4DC was held in Djibouti, 14-18 June, 2015. Within the project supported by Korea, new modules and functionalities have been enhanced and published in December 2015.
- 72. In the Americas region, the ITU has implemented a technical cooperation project for an integrated spectrum management for the ICT Ministry of Colombia. Assistance was provided to the National Communications Commission of Argentina in reviewing requirements for the procurement of a Spectrum Management Solution.
- 73. ITU, with support from Korea, is assisting developing countries in establishing modern spectrum management master-plans in ASP region. The final report for Bangladesh, Brunei and Fiji were prepared in 2015. Pakistan, Vietnam and Thailand have been selected as additional beneficiary countries. The new project to support three countries in the Caribbean region was launched in March 2015. Jamaica, Grenada and St. Vincent & the Grenadines have been selected as the beneficiaries.
- 74. The ITU assisted the Government of Mongolia in preparing for satellite launch related coordination procedures and the related ITU International Spectrum Regulations.
- 75. Issues on Optimization and Efficient Use of Spectrum, including WRC-15 preparatory works, were discussed by more than 120 participants from 11 American countries who attended an ITU Forum organized in Mexico, in July 2015.
- 76. In March 2016 ITU organized a Regional Seminar for CIS on "C&I on Mobile Number Portability (MNP) according to ITU Recommendation" in Moscow, Russian Federation. It was attended by 40 representatives from 8 CIS countries and contributed to bridging the standardization gap and improving conformance and interoperability testing in the region.
- 77. In June 2016 ITU organized Regional workshop for the CIS countries on "Integrated Aspects of Infocommunication Cybersecurity" in Odessa, Ukraine. It was attended by more than 70 representatives from 9 countries and contributed to building confidence and security in the use of the ICTs.
- 78. Later in June 2016, ITU held another Regional workshop for the CIS countries on "Impact of WRC-15 and RA-15 Decisions on the Development of Radiocommunication Systems in the CIS countries". It was attended by 55 representatives from 8 countries and facilitated implementation of WRC-15 and RA-15 decisions in the region.





- 79. In September 2016, ITU organized the Regional <u>workshop</u> for the CIS countries on "Most Popular Mobile Applications: Implementation and Development in the CIS countries". It contributed to the adoption of such promising services as mobile payments and e-health.
- 80. In November 2016, ITU organized the Regional Development Forum (RDF) for the CIS which was dedicated to the use of ICTs for sustainable development. The RDF was organized backto-back with RPM CIS and provided a platform for all the stakeholders in the region to discuss issues of ICT development and identify further ways of resource mobilization.
- 81. To provide a basis for the exchange of best practices encountered on the path of digital terrestrial television broadcasting transition and to consider the ways of enhancement of spectrum management tools and structures, ITU Regional Workshop for Europe and CIS on "Spectrum Management and Transition to Digital Terrestrial Television Broadcasting" was held in Budapest, Hungary, from 5 to 7 May 2015.
- 82. For Swaziland assistance was provided on spectrum management and monitoring issues in April 2014.
- 83. The ITU-NBTC workshop on 'Cross-Border frequency coordination' was held from 29 June to 1 July 2015 in Bangkok, Thailand.
- 84. A list of ITU Projects on the initiated during in 2015-2016, and respective signature date in the area of Action Line C2 (Information and Communication Infrastructure) is presented as below:

#	Project	Project Name	Signature		
••	Number	r roject name	Date		
	,	AFRICA REGION			
1	2BDI15002	Strengthening institutional, regulatory and technical	25 Feb		
		capabilities of Burundi for sustainable broadband	2015		
		development			
2	7RAF08073-	Broadband Wireless Network - Swaziland	22 Jan		
	08		2015		
3	7ZIM15007	Extension of Telemedicine to cover remote Areas in	25 Nov		
		Zimbabwe	2015		
	AMERICAS REGION				
4	9PAR15001	Support the National Communications Commission	14 Oct		
		(CONATEL) of Paraguay in priority areas within the	2015		
		telecommunications sector			
	ARAB REGION				
5	2COM15001	Connect a School, Connect a Community in the Comoros	05 Feb		
		,	2015		
6	2EGY16002	Smart Groundwater Management	12 May		
			2016		
7	9RAB15024	ICT Cooperation and partnership-TRA-UAE	03 Nov		
			2015		
	ASIA-PACIFIC REGION				





8	9RAS14054	Supporting implementation of the ITU Asia-Pacific Regional Initiatives	
9	9THA15028	Development of a framework for introducing community TV broadcasting services in Thailand	20 Jul 2015
10	9THA15029	Terrestrial Radio Broadcasting Frequency Planning in Thailand (Phase 1)	24 Jul 2015
11	9RAS16055	Master Plans for Spectrum Management and Country Assistance in Spectrum Management	26 Nov 2015
		GLOBAL	
12	2GLO15074	Development of platform to foster open access to international fibre	25 Mar 2015
13	9GLO15075	Development of a toolkit for ICT innovation policy/governance and ICT innovation ecosystem	18 May 2015
14	9GLO15078	Delivery of the Spectrum Management Training Program (SMTP)	09 Dec 2015
15	2GLO16079	ICT-Eye: keeping an eye on ICT data	02 Jun 2016
16	9GLO16080	Delivery of the Spectrum Management Training Program (SMTP)	07 Apr 2016
17	2GLO16081	Big Data for Measuring the Information Society	09 Jun 2016

- 85. Furthermore, ITU develops a number of the large scale regional projects focusing on 28 regional initiatives facilitating development of the information and communication infrastructure. More information on these projects as well as the other projects can be found ITU-D Projects webpage.
- 86. ITU assisted Somalia in monitoring and measurements of their spectrum and provide them with Test Mobile System (TMS). The TMS was provided to Somalia in 2014.
- 87. ITU through its concentrated assistance program to LDCs. training on SMS4DC were provided to Arab LDCs. The training took place in Djibouti, 14-18 June, 2015.
- 88. ITU in its implementation to the PP/WTDC Resolutions related to Palestine had organized a dedicated training on Spectrum planning Engineering and Management. The training hosted by TRA of UAE in April 2015.
- 89. In the Framework of ITU-D Study Group, the following questions related to AL-C2 have been approved by WTDC-14 with working mandate till 2017:
- Question 1/1: Policy, regulatory and technical aspects of the migration from existing networks to broadband networks in developing countries, including next-generation networks, m-services, OTT services and the implementation of IPv6.
- Question 2/1: Broadband access technologies, including IMT, for developing countries
- Question 5/1: Telecommunications/ICTs for rural and remote areas
- <u>Question 8/1</u>: Examination of strategies and methods of migration from analogue to digital terrestrial broadcasting and implementation of new services





- Question 4/2: Assistance to developing countries for implementing conformance and interoperability programmes
- <u>Resolution 9</u>: Participation of countries, particularly developing countries, in spectrum management
- Question 7/2: Strategies and policies concerning human exposure to electromagnetic fields
- 90. As an input document to Question 1/1, ITU is continuously updating, a Report on Implementation of Evolving Telecommunication/ICT Infrastructure for Developing Countries: Technical, Economic and Policy Aspects. The report introduces essential telecommunication/ICT infrastructures and their technologies, economic and policy aspects supporting effective adoption of Next-generation Networks, and it is available online.
- 91. ITU is contributing to bridging the standardization gap between developing and developed countries. Instructed by <u>PP-14 Resolution 123</u> and the new <u>WTDC-14 Recommendation 22</u> on Bridging the Standardization Gap (BSG), regional workshops and other regional activities are receiving support from ITU Regional Offices to improve awareness, understanding and participation on the development of ICT standards developed by global and regional Standardization Development Organizations (SDOs).
- 92. In the implementation of Action Line C2, ITU continues to be at the forefront of providing global standards for telecommunication. Since 1 January 2016, ITU-T approved 274 work items (as of 27 July 2016), including ITU-T Recommendations, Supplements and Technical Papers.
- 93. ITU-T completed 40-Gigabit-40-Gigabit-capable fibre to the home NG-PON2 (Gigabit-capable passive optical networks). NG-PON2 is a major milestone in the field of access networking as the first series of standards to provide fibre-optic access speeds beyond 10 Gbit/s. The NG-PON2 series consists of three standards: Recommendations ITU-T G.989.1, G.989.2 and G.989.3.
- 94. 10-Gigabit-capable symmetric fibre to the home achieved first-stage approval ("consent"): XGS-PON (10-Gigabit-capable symmetric passive optical networks) is a new standard for optical access at the rate of 10 Gbit/s both downstream and upstream.
- 95. Further amendments to G.fast was approved G.fast is a new ITU broadband standard that allows delivery of up to 1 Gbit/s broadband access over the traditional copper telephone lines that still make up a substantial proportion of so-called "last-mile" networks.
- 96. Optical Transport Network Beyond 100G (5<sup>th</sup> edition of Recommendation ITU-T G.709/Y.1331 "Interfaces for the Optical Transport Network") was consented, signalling the provisional conclusion of a three-year process to enable optical transport at rates higher than 100 Gbit/s. Industry demands increased capacity in metro and long-haul transport networks to support the unceasing growth of video and data traffic.
- 97. The Focus Group on network aspects of IMT-2020 ("5G") progresses strongly in the development of six baseline documents, which the group is working to progress to close-to-final state with the aim of having these documents ready for adoption by ITU-T Study Group 13 in early 2017. The six baseline documents focus on: Network Management





Framework for IMT-2020; IMT-2020 Network Management Requirements; Framework of IMT-2020 network architecture; Requirements of IMT-2020 from network perspective; Requirements of IMT-2020 fixed-mobile convergence; Application of network softwarization to IMT-2020.

- 98. Internet of Things (IoT) standardization progressed and numerous ITU-T Recommendations were published by ITU-T Study Group 20: Recommendation ITU-T Y.4702 "Common requirements and capabilities of device management in the Internet of Things" and ITU-T Y.4553 "Requirements of the smartphone as sink node for IoT applications and services".
- 99. On smart sustainable cities, ITU members have approved three Recommendations ITU-T L.1600 "Overview of key performance indicators in smart sustainable cities", ITU-T L.1601 "Key performance indicators related to the use of information and communication technology in smart sustainable cities", ITU-T L.1602 "Key performance indicators related to the sustainability impacts of information and communication technology in smart sustainable cities", and consented two Recommendations ITU-T L.1603 "Key performance indicators for smart sustainable cities to assess the achievement of sustainable development goals" and ITU-T L.1350 "Energy efficiency metrics of base station site".
- 100. ITU, ISO, and IEC have approved two new international standards fundamental to the cohesion of cloud computing's development. The standards provide a terminology foundation to be applied universally across the industry as well as a reference architecture to develop interoperable cloud computing systems and services, Recommendation ITU-T Y.3510 "Cloud computing infrastructure requirements" and ITU-T M.3070/Y.3521 "Overview of end-to-end cloud computing management" were approved.
- 101. Standardized signalling requirements and protocols for software-defined networking (SDN) (overview, framework, high-level capabilities, basic requirements, functional requirements, and architecture) is progressing rapidly, Recommendations ITU-T Y.3015 "Functional architecture of network virtualization for future networks" and ITU-T Y.3014 "Resource control and management function for virtual networks for carriers" were approved.
- 102. In June 2016, ITU members achieved first-stage approval ("consent") of two major updates to the personal connected health specifications in the H.810-H.850 series.
- 103. On emergency telecommunication, ITU members approved Recommendations ITU-T L.392 "Disaster management for improving network resilience and recovery with movable and deployable ICT resource units", ITU-T E.108 "Requirements for a disaster relief mobile message service", Q Supplement 68 "ETS ETS(Emergency Telecommunications Service) interoperability limitations", Y.2239 "Requirements for Information Control Networks and related applications" (Information Control Networks (ICN) allow the organization of a trusted environment for the provisioning of mission-critical services, such as emergency management, e-government, e-commerce, e-health, by introducing the ICN operator as a single point of service management).
- 104. The Focus Group on Digital Financial Services at its meeting in April 2016 endorsed a range of thematic reports including Regulation in the Digital Financial Services Ecosystem; The Digital Financial Services Ecosystem; Enabling Merchant Payments Acceptance in the





Digital Financial Ecosystems; Quality of Service (QoS) and Quality of Experience (QoE) aspects of Digital Financial Services.

- 105. Discussion on a new generation of video compression standard has continued within the informal Joint Video Exploration Team (JVET) with MPEG, as well as within the formal Joint Collaborative Team (JCT) on Video Compression, which has to date focused on HEVC. A new Recommendation ITU-T H.273 (ex H.STI) has been completed, defining coding-independent code points for video signal type identification. Two new specifications for interoperable visual surveillance systems were consented: ITU-T F.743.2 "Requirements for cloud storage in visual surveillance" and ITU-T F.743.3 "Requirements for visual surveillance system interworking". SG16 has launched new work on systems for Immersive Live Experience (ILE), which will bring the sensation of live events to remote audiences, replicating the experience of being present at the event venue.
- 106. A Technical Report on "Trust Provisioning for future ICT infrastructures and services" was released in April 2016, describing the importance and necessity of trust in the ICT context, highlighting its relevance to emerging knowledge societies and describing the concepts and key features of trust.
- 107. ITU and UNECE have launched the United for Smart Sustainable Cities (U4SSC), a global initiative which advocates for public policies aimed at ensuring a catalytic role for information and communication technologies (ICTs) in enabling the transition to smart sustainable cities.
- 108. ITU and UNECE presented a set of key performance indicators (KPIs) they have developed to measure the "smartness" and "sustainability" of cities, in line with the Sustainable Development Goals. Dubai followed by Singapore were the first two cities to assess the KPIs in ITU-T L.1601 "Key performance indicators related to the use of information and communication technology in smart sustainable cities" and ITU-T L.1602 "Key performance indicators related to the sustainability impacts of information and communication technologies in smart sustainable cities". Cities including Manizales, Montevideo, Buenos Aires, Valencia and Rimini have also agreed to trial these key performance indicators.
- 109. The ITU/WMO/UNESCO-IOC Joint Task Force on SMART (Green) Cables Systems is tasked with developing a strategy and roadmap to add climate and hazard monitoring sensors to repeaters on submarine telecommunication cables to create a global real-time ocean observation network. The Joint Task Force is now advancing to a Wet Demonstrator Project in partnership with industry and a research cabled ocean observatory. This task force held a workshop in Dubai on 17 and 18 April 2016 collocating with SubOptic 2016, a major conference on submarine cable.
- 110. ITU-T is carrying out various activities to encourage and facilitate the participation of academia in the work of the Sector, as well as to benefit from their technical and intellectual expertise. The Kaleidoscope 2015 event "Trust in the Information Society" was held in Universidad Autònoma de Barcelona, Spain, 9-11 December 2015 –contributed to the celebration of ITU's 150<sup>th</sup> anniversary, highlighting academia's contribution in service of ITU's mission to "Connect the World".





- 111. Sixteen ICT leaders from China, Japan and Korea and the strategic management of the ITU Telecommunication Standardization Sector (ITU-T) were hosted by KT in Seoul, Korea, 21 March 2016, for a CTO consultation meeting convened by the Director of ITU's Telecommunication Standardization Bureau
- 112. Resolution 177 on Conformance and Interoperability (Dubai, 2014) endorsed the objectives of both Resolution 76 (Rev. Dubai, 2012) and Resolution 47 (Rev. Dubai, 2014) on conformity and interoperability of ICT equipment. The goal of Resolution 76 on Conformance and Interoperability testing is to help in increasing probability of interoperability and to ensure all the countries to benefit of ICTs. WTDC-14 reviewed Resolution 47 on enhancement of knowledge and effective application of ITU Recommendations in developing countries, including Conformance and Interoperability (C&I) testing of systems manufactured on the basis of ITU Recommendations". C&I issues are in the Dubai Declaration and are part of Regional Initiatives for AFR and ARB. Also, ITU Council-16 (May 2016) reviewed the C&I action plan.
- The <u>C&I Portal</u> is responsible to gather all information about the work done in Pillars 1 (conformance assessment) and 2 (interoperability); as Pillars 3 (capacity building) and 4 (assistance in the establishment of test centres and C&I programmes in developing countries).
- A 2<sup>nd</sup> ITU test event on the performance of mobile phones as gateways to car hands-free systems was held in Geneva, 23-25 May 2016, with the participation of Bosch, Toyota, Jaguar Land Rover Limited, and Continental Automotive GmbH. Only 22 per cent of the state-of-the-art mobile phones tested were found to comply with the requirements of ITU-T P.1100 and P.1110, standards for narrowband and wideband communications in motor vehicles.
- The following <u>ITU guidelines</u> have been published on C&I: i) Guidelines for the development, implementation and management of mutual recognition arrangements/agreements (MRAs) on conformity assessment; ii) a Feasibility Study for the establishment of a Conformance Testing Center; iii) Guidelines on Establishing Conformity and Interoperability Regimes Basic and Complete Guidelines.; iv) Guidelines for Developing Countries on establishing conformity assessment test labs in different regions.
- ITU has organized <u>C&I training events and workshops</u> in the regions. During these events, key issues were discussed highlighting the relevance of accreditation and certification, including mutual recognition agreements and arrangements to increase confidence in
  - conformity assessment and decreasing the need of repeated testing. Trainings on EMC, mobile terminals, and C&I regimes for experts from Americas, Africa, Arab, CIS, and Asia-Pacific regions has been organized in the premises of partners' laboratories in the regions. Guidelines for building Test Labs for C&I of equipment and systems in developing countries were distributed, during the forums and the training courses.







- ITU is preparing <u>assessment studies</u> in the regions to determine C&I areas of commonalities and differences in the concerned countries, allowing to assessing the present situation in each beneficiary country and proposing a common C&I regimes for the participant countries. While promoting regional integration on ICT, the result of the studies can include either building new labs and/or establishing MRAs, as appropriate. Until 2016, assessment studies on C&I for SADC, Maghreb, EAC, COMTELCA the Caribbean Regions were finalized. Follow-up for each of the regions are taking place.
- The ITU is providing assistance to developing countries on conformity and interoperability tailored to their needs. The ITU assisted Sri-Lanka, Zambia, Tanzania, Paraguay, and Ghana in building national Human capacity for C&I and to Government of Mongolia in setting up Type Approval systems in the country.
- 113. Products which have been tested to comply with Recommendation ITU-T G.8011/Y.1307 "Ethernet Services Characteristics" were added to the ITU Product Conformity Database (<a href="http://www.itu.int/net/itu-t/cdb/ConformityDB.aspx">http://www.itu.int/net/itu-t/cdb/ConformityDB.aspx</a>). The "ICT product conformity database" provides industry with a means to publicize the conformance of ICT products and services with ITU-T's international standards. It contains ~90 E-Health products compliant with ITU-T H.810 "Interoperability design guidelines for personal health systems", eight mobile phones tested in accordance with Chapter 12 ("Verification of the transmission performance of short-range wireless (SRW) transmission enabled phones") of Recommendations ITU-T P.1100 and ITU-T P.1110 (01/2015) and 200+ Ethernet services compliant to ITU-T G.8011/Y.1307.
- ITU-T SG11 was designated by WTSA-12 as a lead ITU-T study group on test specification, conformance and interoperability testing.SG11 initiated in 2016 a new, high-priority ITU-T standards initiative to broker the international agreement of a framework for the interconnection of Voice and Video over LTE (VoLTE/ViLTE)-based networks. The framework will assist in expanding industry's offer of VoLTE/ViLTE 'roaming', where interactions between subscribers of different networks will be supported by seamless packet-based, high-quality voice and video communications.
- 114. ITU has developed an 'EMF Guide mobile app' providing an up-to-date reference of the EMF information provided by the World Health Organization and ITU. The 'EMF Guide mobile app' is available in 6 languages. In April 2016, the EMF Guide & Mobile App on EMF was translated into Malay. It was launched during the Symposium on ICT, Environment and Climate Change by Dato'Jailani Johari, Deputy Minister of Communication & Multimedia, Malaysia.
- 115. ITU and its partners, sharing a common community of interest, have recognized the relationship between IMT <u>International Mobile Telecommunication</u> system and "5G" and are working towards realizing the future vision of mobile broadband communications.
- In the framework of ITU-R Sector and Intersectoral objective number R.1: 'Meet, in a rational, equitable, efficient, economical and timely way, the ITU membership's requirements for radio-frequency spectrum and satellite-orbit resources, while avoiding harmful interference', the following outcomes and outputs have been achieved:





#### **Outcomes:**

- R.1-1: Increased number of countries having satellite networks and earth stations recorded in the Master International Frequency Register (MIFR)
- R.1-2: Increased number of countries having terrestrial frequency assignments recorded in the MIFR
- R.1-3: Increased percentage of assignments recorded in the MIFR with favourable finding
- R.1-4: Increased percentage of countries which have completed the transition to digital terrestrial television broadcasting
- R.1-5: Increased percentage of spectrum assigned to satellite networks which is free from harmful interference
- R.1-6: Increased percentage of assignments to terrestrial services recorded in the MIFR which are free from harmful interference

# **Outputs:**

- R.1-1 Final acts of world radiocommunication conferences, updated Radio Regulations
- R.1-2 Final acts of regional radiocommunication conferences, regional agreements
- R.1-3 Rules of Procedure adopted by Radio Regulations Board (RRB)
- R.1-4 Results of the processing of space notices and other related activities
- R.1-5 Results of the processing of terrestrial notices and other related activities
- R.1-6 RRB decisions other than the adoption of Rules of Procedure
- R.1-7 Improvement of ITU-R software

# **Outputs:**

#### R.1-1 Final acts of world radiocommunication conferences, updated Radio Regulations

The World Radiocommunication Conference 2015 (WRC-15) was held in Geneva from 2 to 27 November 2015. A total of 3,275 participants representing 162 Member States and 130 observer organizations attended WRC-15. The WRC-15 Final Acts are freely available to the public. The updated version of the Radio Regulations (RR-15) is to be produced during 2016.

# R.1-2 Final acts of regional radiocommunication conferences, regional agreements

No regional radiocommunication conferences were organized during the considered period.

#### R.1-3 Rules of Procedure adopted by Radio Regulations Board (RRB)

The Radio Regulations Board adopted no new Rules of Procedure (RoPs) in 2015. The matters which had been discussed for possible adoption of a RoP, i.e. **No 11.44B**, satellite failure during the ninety-day bringing into use period and submission of information under Resolutions **552** (WRC-12) and **553** (WRC-12), were referred to WRC-15, which took action on these issues.





# R.1-4 Results of the processing of space notices and other related activities

The Space notices (API (785), CR/C (320 notices), Notifications (89 space stations, 347 earth stations), AP30/30A Articles 4 and 5 (66 notices), AP30 B Articles 6, 7 and 8 (52 notices), Cost Recovery (6 667441 CHF) have been generally treated within the statutory time-limit of the Radio Regulations (temporary excesses of up to 2.4 months were experienced following the submission of massive NGSO-FSS constellations). The assistance (97 cases for space stations, 341 cases for earth stations) under the various provisions of the Radio Regulations, included 7 requests for assistance in resolving cases of harmful interference.

# R.1-5 Results of the processing of terrestrial notices and other related activities

The BR continued to process notices relating to terrestrial services according to the procedures in the RR and Regional Agreements within the defined periods. In the reporting period, a total of 85 524 terrestrial notices have been processed.

The State of Palestine, in accordance with Resolution 99 and the GE06 Agreement, submitted 1959 notices for the land mobile service stations operating in the band 790 – 862 MHz for inclusion in the GE06L List. These notices have been processed in June 2015 and are in the coordination stage under the procedure of the GE06 Agreement.

Following the end of the Transition period defined by the GE06 Agreement as 17 June 2015, all UHF and relevant VHF analogue entries have been cancelled from the GE06 Plan. Plan remarks with respect to these analogue entries ceased to apply. The corresponding analogue television assignments recorded in the MIFR have been reviewed. This review resulted in the suppression of 17 554 assignments of 28 administrations and modification of the findings of 26 330 assignments of 56 administrations.

The BR also reviewed the findings of 9 053 assignments to fixed service stations pursuant to Resolution 755 (WRC-12) and 6 151 assignments to mobile service stations in the GE06 bands following the change of the allocation situation on 17 June 2015.

During 2015, the BR processed 1538 reports of harmful interference concerning terrestrial services, 86% of them triggered action by the Bureau.

# R.1-6 RRB decisions other than the adoption of Rules of Procedure

The RRB met three times during the period June 2015 to February 2016. The Board received several requests for decisions from administrations and the BR relating to various satellite networks and cases of harmful interference. In relation to the satellite networks, the Board decided:

- To suppress the frequency assignments of two satellite networks from the Master Register due to the application of RR No. 13.6;
- To extend the regulatory deadline for the bringing into use (BIU) date of two other satellite networks;
- To accept the resubmission of a satellite network under RR No. 11.41 and to maintain the previous date of receipt;
- To maintain the frequency assignments of one satellite network in the Master Register;
- To instruct the BR to continue to take into account the frequency assignments of a satellite
  network until 31 December 2015 and to report this matter to the WRC-15 for its final
  decision.





The Board also adopted its Report on Resolution **80 (Rev.WRC-07)** which brought several issues to the attention and for action of WRC-15 on cases which were presented to the Board during the period 2012 – 2015.

The Board also regularly addressed the situation of harmful interference from the sound and television broadcasting transmitters of Italy to its neighbouring countries.

All Board's decisions taken in the period 2012-2015 were noted and endorsed by WRC-15.

# R.1-7 Improvement of ITU-R software

Concerning space application software, the Bureau continued the implementation of the recommendations of the RAG on the BR information Systems, in parallel with regular work on implementing user requests for features. The Bureau also continued implementing Res. 908 (Rev. WRC-15) (project SpaceWISC, in production as of June 2015, used by more than 50 administrations) and started implementing Res 186 (PP-14) (project SIRRS – Space Interference Reporting and Resolution System).

The Bureau continued its regular work on developing, updating and maintaining the various software modules needed to ensure the timely processing, examination and publication of the relevant terrestrial frequency notifications. The integration of the various terrestrial Plans in *TerRaSys* (GE06, GE75, RJ81) is also progressing.

The Bureau also continued to address the security related aspects of its databases, taking into account the RAG's advice.

In addition, the Bureau developed two new applications:

- The ITU Radio Regulations Navigation Tool, which consists in an indexed, integrated electronic browser for the RR and other basic texts of the Union referred to in the RR. A free of charge trial version was made available to the membership in time for the WRC-15 and until the end of 2015.
- A spectrum management tool to conduct detailed search and analysis on the Table of Frequency Allocations of Article 5 of the Radio Regulations, enabling filtering and reformatting by frequency range, service, category of service, footnote, country, etc.

Work on these applications continues in order to take into account the feedback received, as well as WRC-15 decisions.

In consultation with the RAG, a database to enable ITU-R Recommendations to be searched and filtered by categories has been developed with financial support and participation by experts from the Japanese administration. This database is now being further enhanced to include ITU-R Questions, Reports and Resolutions as well as handbooks developed by the ITU-R.

The Bureau also developed and made available to the membership two mobile applications related to the schedule of meetings and associated documents for RA-15 and WRC-15. Following the positive feedback received, work started to make these applications available for all ITU-R meetings.

117. In the framework of ITU-R Sector and Intersectoral objective number R.2 to: 'Provide for worldwide connectivity and interoperability, improved performance, quality, affordability and timeliness of service and overall system economy in radiocommunications,





including through the development of international standards', the following outcomes and outputs have been achieved:

# **Outcomes:**

- R.2-1: Increased mobile-broadband access, including in frequency bands identified for international mobile telecommunications (IMT)
- R.2-2: Reduced mobile-broadband price basket, as a percentage of gross national income (GNI) per capita
- R.2-3: Increased number of fixed links and increased amount of traffic handled by the fixed service (Tbit/s)
- R.2-4: Number of households with digital terrestrial television reception
- R.2-5: Number of satellite transponders (equivalent 36 MHz) in operation and corresponding capacity (Tbit/s); Number of VSAT terminals; Number of households with satellite television reception
- R.2-6: Increased number of devices with radionavigation-satellite reception
- R.2-7: Number of Earth exploration satellites in operation, corresponding quantity and resolution of transmitted images and data volume downloaded (Tbytes)

# **Outputs:**

- R.2-1 Decisions of Radiocommunication Assembly, ITU-R resolutions
- R.2-2 ITU-R recommendations, reports (including the CPM report) and handbooks
- R.2-3 Advice from the Radiocommunication Advisory Group

#### **Outputs:**

## R.2-1 Decisions of Radiocommunication Assembly, ITU-R resolutions

The Radiocommunication Assembly was held on 2-27 November 2015 with 457 participants representing 96 Administrations and 38 Sector Members and Academia.

The Radiocommunication Assembly made substantial revisions to the working methods of the ITU-R Study Groups to streamline and clarify the procedures and approved 36 new or revised ITU-R Resolutions including:

**Resolution ITU-R 55** - ITU-R studies of disaster prediction, detection, mitigation and relief (http://www.itu.int/pub/R-RES-R.55)

**Resolution ITU-R 65** - Principles for the process of future development of IMT for 2020 and beyond (http://www.itu.int/pub/R-RES-R.65)

**Resolution ITU-R 66** - Studies related to wireless systems and applications for the development of the Internet of Things (IoT) (<a href="http://www.itu.int/pub/R-RES-R.66">http://www.itu.int/pub/R-RES-R.66</a>)

**Resolution ITU-R 67** - Telecommunication/ICT accessibility for persons with disabilities and persons with specific needs (http://www.itu.int/pub/R-RES-R.67)





**Resolution ITU-R 68** - Improving the dissemination of knowledge concerning the applicable regulatory procedures for small satellites, including nanosatellites and picosatellites. (http://www.itu.int/pub/R-RES-R.68)

**Resolution ITU-R 69** - Development and deployment of international public telecommunications via satellite in developing countries (<a href="http://www.itu.int/pub/R-RES-R.69">http://www.itu.int/pub/R-RES-R.69</a>).

# R.2-2 ITU-R recommendations, reports (including the CPM report) and handbooks

In 2015, the ITU-R approved 123 new or revised ITU-R Recommendations, 70 new or revised ITU-R Reports, the Conference Preparatory Meeting Report to the World Radiocommunication Conference 2015 and 3 new or revised ITU-R Handbooks.

# R.2-3 Advice from the Radiocommunication Advisory Group

The RAG met annually and provided advice on further development of the BR information system, the updating of the guidelines for the working methods of the Radiocommunication Assembly, Study Groups and related groups, as well as of the format of ITU-R Recommendations. The RAG also reviewed the priorities, programmes, operations, financial matters and strategies related to the work of the Sector, and monitored the progress in the implementation of the programme of work, including the four-year rolling operational plan.

118. In the framework of ITU-R Sector and Intersectoral objective number R.3: 'Foster the acquisition and sharing of knowledge and know-how on radiocommunications', the following outcomes and outputs have been achieved:

#### **Outcomes:**

- R.3-1: Increased knowledge and know-how on the Radio Regulations, Rules of Procedures, regional agreements, recommendations and best practices on spectrum use
- R.3-2: Increased participation in ITU-R activities (including through remote participation), in particular by developing countries

#### **Outputs:**

- R.3-1 ITU-R publications
- R.3-2 Assistance to members, in particular developing countries and LDCs
- R.3-3 Liaison/support to development activities
- R.3-4 Seminars, workshops and other events

#### **Outputs:**

#### R.3-1 ITU-R publications

Radio Regulations (2012 edition) and Rules of Procedure (RoP)





Following the free-on-line access policy adopted by Council, over 20,000 free downloads of the Radio Regulations (2012 edition) were made from 190 countries, while more than 18,000 copies were sold in 37 months. This is to be compared with the 15,000 copies of the 2008 edition sold over 51 months in the absence of a free download option, which confirms that the positive impact of this policy from both financial and outreach perspectives.

# Handbooks on radio-frequency spectrum management

More than 5,000 free downloads of these handbooks were made, the most popular one being the Spectrum Monitoring Handbook (>60%). When comparing it with the 108 sold copies during the same period, we confirm again the very low impact on the level of sales and the positive impact of the free-on-line access policy from both financial and outreach perspectives.

## **ITU-R Recommendations and ITU-R Reports**

Downloads of ITU-R Recommendations and ITU-R Reports skyrocketed worldwide. In the period 2013-2015 downloads of ITU-R Recommendations (16 series, 1152 in force) overpassed 5 million, while ITU-R Reports' downloads (13 series, 411 in force) exceeded 2 million.

## **Radio Regulations tools**

As indicated in section R.1-7 above, the Bureau has developed new software tools to facilitate the use and review of the Radio Regulations. These tools are currently being updated to take into account feedback received and WRC-15 decisions.

# R.3-2 Assistance to members, in particular developing countries and LDCs

The BR continued to provide assistance to developing countries, as follows:

- Provision of support to national spectrum management activities, long term frequency management for mobile broadband, as well as transition to digital broadcasting and the allocation of the digital dividend, including the provision of technical assistance and capacity building.
- Individual or group training at ITU headquarters on radio regulatory procedures upon demand from interested administrations.
- Support to the meetings of the regional groups.

#### R.3-3 Liaison/support to development activities

#### Cooperation with ITU-D

BR continues to fulfil its objective of assisting the ITU membership, in particular developing countries, on matters relating to radiocommunications. For this purpose, the BR organizes and participates in many spectrum related workshops, seminars, meetings and capacity building activities. These are carried out in close cooperation with the BDT and the ITU regional and area offices, and the relevant international organizations and national authorities. In particular, the BR has been actively participating in a joint project with BDT to develop a *Spectrum Management Training Programme*.





# Cooperation with international and regional organizations

During 2015, the BR continued its close cooperation with relevant international and regional organizations dealing with the use of spectrum (mainly APT, ASMG, ATU, CEPT, CITEL and RCC) or more generally with the use of radiocommunication services (e.g. ICTO, ITSO, ESOA, GVF, GSMA, EBU) by organizing, promoting and participating in events to build capacity on the use of the RRs, including WRS and RRS, as indicated in R.3-4.

## R.3-4 Seminars, workshops and other events

As a complement to the biennial Word Radiocommunication Seminars, the BR has implemented, in consultation with the RAG, a strategy for regional outreach through the organization of yearly cycles of Regional Radiocommunication Seminars (RRS), held in different regions worldwide, fostering human capacity building on the use of the radio-frequency spectrum and the satellite orbits, and, in particular, the application of the provisions of the ITU Radio Regulations. These seminars are hosted by the entity in charge of spectrum management in the host country, in cooperation with the relevant regional organizations and the ITU regional/areas offices. Some 80 partial fellowships have been granted by the BR for RRS participants so far (one per administration per eligible country). The participation in WRSs and RRSs during the last four years shows that these two types of seminars complement each other:

- In two WRSs: 751 participants from 121 countries (including 49 not coming to RRS)
- In ten RRSs: 824 participants from 115 countries (including 42 not coming to WRS)
- Total: 12 seminars, 1575 participants from 165 countries.

2015 also witnessed a busy schedule of workshops and other events organized by the BR or in cooperation with BDT/TSB and/or other bodies (see details at: http://www.itu.int/ITU-R/go/seminars).





Action Line C5: Building Confidence and Security in the use of ICTs (also related to the 2030 Agenda for Sustainable Development)



Related to SDGs: SDG 1 (1.4), SDG 4 (4.1, 4.3, 4.5), SDGs 5 (5.b), SDGs 7 (7.1, 7.a, 7.b), SDG 8 (8.1), SDGs 9 (9.1, 9.c), 11.3, 11.b, 16.2, 17.8



- 119. A fundamental role of the ITU, following the WSIS Summit and the 2006 ITU Plenipotentiary Conference, is to build confidence and security in the use of ICTs.
- 120. The 11th Action Line C5 facilitator's meeting was held as an integral component of the WSIS Forum 2016, on 5 May 2016. The theme of this year was "National Cybersecurity Strategies for Sustainable Development". Among the debated issues were the need for better alignment between national digital agendas and cybersecurity agendas, as well as the need for enhanced collaboration among the different impacted sectors; issues of privacy, encryption and the prevention of backdoors; different existing models of regulatory practices to encourage cybersecurity conformity. The outcome of the meeting is

http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum20 16%E2%80%94ForumTrack-Outcomes.pdf

121. As 2015 marks the 10-year anniversary of WSIS and is also the year of the review of the Millennium Development Goals (MDGs), and the elaboration of the Post-2015 Sustainable Development Goals (SDGs), this session specifically addressed issues concerning building confidence and security in the use of ICTs as a means for sustainable development, taking also into account the priorities identified by the multistakeholder community



for Action Line C5 beyond 2015 during the 2014 WSIS+10 High Level Event.

- 122. Cybersecurity and Countering Spam Activities:
- a) The Global Cybersecurity Agenda (GCA) provides a framework within which an international response to the growing challenges to cybersecurity can be addressed. Resolution 130 (Rev. Busan, 2014) clearly endorses the GCA as the ITU-wide strategy on Cybersecurity.





- b) Within ITU, the GCA shows the complementary nature of existing ITU work programmes and facilitates the implementation of BDT, TSB and BR activities in this domain. The GCA is built upon five strategic pillars or work areas around which its work is organized: (1) Legal Measures, (2) Technical and Procedural Measures, (3) Organizational Structures, (4) Capacity Building and (5) International Cooperation.
  - 1) Legal Measures (SDG 7 (7.1, 7.a, 7.b), SDG 9 (9.1, 9.c), SDG 11 (11.3, 11.b), SDG 16 (16.2), SDG 17 (17.8))
- 123. As part of Objective 3 of the Dubai Action Plan, and taking into account ITU-D Q 3/2 (former Q22/1), ITU is assisting Member States in understanding the legal aspects of cybersecurity through its <a href="ITU Cybercrime Legislation Resources">ITU Cybercrime Legislation Resources</a> in order to help harmonize their legal frameworks.
- 124. In the area of legal measures, ITU collaborates closely with partners such as UNODC and others that may have expertise in this area.
  - 2) Technical and Procedural Measures (SDG 1 (1.4), SDG 7 (7.1, 7.a, 7.b), SDG 9 (9.1, 9.c), SDG 11 (11.3, 11.b), SDG 17 (17.8))
- 125. In order to identify cyberthreats and countermeasures to mitigate risks, ITU-T has developed Recommendations of security requirements, guidelines and specifications for ICT and IP-based systems. ITU-T also provides an international platform for the development of the protocols, systems and services that protect current and Next Generation Networks (NGN). ITU-T'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.
- 126. ITU-T Study Group 17 (SG17) is the lead study group on security and identity management with its role being reinforced by WTSA-12 Res. 50 and 52. SG17 is also working on the implementation of WTSA-12 Res. 58 to "Encourage the creation of national Computer Incident Response Teams, particularly for developing countries" and is following Resolution 130 of the Plenipotentiary Conference. Since December 2012, Study Group 17 has continued its responsibility for building confidence and security in the use of information and communication technologies (ICTs), and continues to be instrumental in study and standardization in the area of cybersecurity, anti-spam, identity management, X.509 certificates, information security management, ubiquitous sensors networks, telebiometrics, IPTV security, virtualization security towards cloud computing security, and security architecture and application security, often in cooperation with external SDOs and Consortia. Since March 2016, Study Group 17 has approved eight Recommendations on security, among them Rec. ITU-T X.1033 on Guidelines on security of the individual information service provided by the operators, revised Rec. ITU-T X.1051 on Information technology – Security techniques – Code of practice for Information security controls based on ISO/IEC 27002 for telecommunications organizations, Rec. ITU-T X.1247 on Technical framework for countering mobile messaging spam, Rec. ITU-T X.1256 on Guidelines and framework for sharing network authentication results with service applications, Rec. ITU-T X.1257 on Identity and access management taxonomy, Revised Rec. ITU-T X.1521 on Common vulnerability scoring system 3.0, Rec. ITU-T X.1602 on Security requirements for





software as a service application environments, and Rec. ITU-T X.1642 on Guidelines for the operational security of cloud computing.

- 127. ITU-R's work in radiocommunication standardization continues, matching the constant evolution in modern telecommunication networks. ITU-R established clear security principles for IMT (3G, 4G and 5G) networks (Rec. ITU-R M.1078, M.1223, M.1457, M.1645, M.2012 and M.2083). It has also issued Recommendations on security issues in network management architecture for digital satellite systems (Rec. ITU-R S.1250) and performance enhancements of transmission control protocol over satellite networks (Rec. ITU-R S.1711). Futuristic mobile technologies foresee "IMT for 2020 and beyond", please read more here: <a href="https://www.itu.int/en/ITU-R/study-groups/rsg5/rwp5d/imt-2020/Pages/default.aspx">https://www.itu.int/en/ITU-R/study-groups/rsg5/rwp5d/imt-2020/Pages/default.aspx</a>
- 3) Organizational Structures (SDG 1 (1.4), SDG 7 (7.1, 7.a, 7.b), SDG 9 (9.1, 9.c), SDG 11 (11.3, 11.b), SDG 17 (17.8))
- 128. BDT is working with Member States, regions, and with partners, to deploy capabilities to build capacity at national and regional levels through the establishment of <a href="National Computer Incident Response Teams">National Computer Incident Response Teams</a> (CIRTs).
- 129. To date, 65 countries have received assistance in assessing their national cybersecurity preparedness and response capabilities. An assessment exercise is typically conducted during a five-day on-site visit, which also includes an initial workshop to provide an appreciation of cybersecurity issues at national level and to better understand the operations of a national CIRT. The ensuing analysis and report elaboration are done off site, culminating in a final report submitted to the country. This document is essentially a customized, detailed roadmap for implementing the country's national CIRT.
- 130. Twelve countries (Barbados, Burkina Faso, Côte d'Ivoire, Cyprus, Ghana, Jamaica, Kenya, Montenegro, Tanzania, Trinidad and Tobago, Uganda, Zambia) have availed themselves of ITU support to set up a national computer incident response team, and three others (Burundi, Gambia and Lebanon) are currently receiving assistance to do likewise. National CIRT implementation can be undertaken in 11 months if the country is fully engaged at all times.
- 131. To ensure that the national CIRTs are effective in managing incidents in harmony with international standards and good practice, and to foster technical-level cooperation between national CIRTs, cyberdrills are conducted at a regional level. A cyberdrill is a multi-



day event comprising a workshop for an unlimited number of participants, followed by a two-day simulation of attack exercise for the technical staff of national CIRTs. To date, 16 such cyberdrills have taken place with the participation of over 100 countries. In 2015 the ITU conducted four Cyberdrills: a) from 5 to 7 May 2015 in Rwanda for the Africa region, b) from 17 to 19 May 2015 in Egypt for the Arab Region, c) from 3 to 5 August





2015 in Colombia for the Americas Region and d) from 30 September to 2 October 2015 in Montenegro for the Europe Region. Three Cyberdrills have been conducted in 2016 so far: a) from 4 to 8 April 2016 in Mauritius for the Africa region, b) from 23 to 27 May 2016 in Tunisia for the Arab Region, and c) from 27 June to 1 July 2016 in Ecuador for the Americas Region.

- 132. The Oman regional cybersecurity centre has been operational since 2013 and has successfully undertaken capacity building, organizing 20 events and assisting 7 countries in the region. The project proposal for a similar entity in the African region, to be located in Nigeria, is being finalized. Expressions of interest have been received from several other Member States and a centre for the Asia-Pacific region is being contemplated for hosting in Malaysia. Work is ongoing with regard to bringing in international training institutions with a view to providing cybersecurity training through the ITU Academy.
- 4) Capacity Building (SDG 1 (1.4), SDG 7 (7.1, 7.a, 7.b), SDG 9 (9.1, 9.c), SDG 11 (11.3, 11.b), SDG 17 (17.8))
- 133. Within the framework of GCA, ITU facilitates the implementation and deployment of cybersecurity capabilities that is necessary to combat cyberthreats.
- 134. ITU has organized, co-organized, and has participated in various human capacitybuilding forums: a) The first Sub-Regional Forum on Cybersecurity and fight against Cybercrime for members of the Economic Community of Central African States (ECCAS) was held on 24-27 February 2015 in Yaoundé, Cameroon, organized by ITU in partnership with the Ministry of Posts and Telecommunications of Cameroon and CTO; b) ITU organized for the Asia and Pacific region a Workshop on Cybersecurity and Cybercrime Legislation & Cybersecurity Incident Simulation, held on 23 March 2015 in Bangkok, Thailand; c) a Regional Workshop on Critical National Infrastructure Protection was held in Hurghada, Egypt, on 20-21 May 2015; d) ITU participated in the Third Regional Forum on Interconnectivity, Cyber Security and IPV6 held on 10-11 September 2015 in Panama city, Panama, as well as in the Cybersecurity workshop on Global Cybersecurity Challenges -Collaborating for effective enhancement of cybersecurity in developing countries held on 8 September 2015, in Geneva, Switzerland; e) ITU, in collaboration with the Swiss WebAcademy in Romania and the CERT-RO, supported the Central European Cybersecurity Public-Private Dialogue Platform Events held on 23-26 September 2015 in Sibiu, Romania.
- 135. Training courses in cybersecurity are being identified, and discussions have been initiated with a view to providing courses through the ITU Academy. To facilitate regional training in cybersecurity, the ITU Centre of Excellence Global network has endorsed five training institutions; namely two in the Africa region, one in Asia-Pacific and two in Europe. These institutions have been conducting training in Cybersecurity as part of their regional training plans under the Centres of Excellence initiative.
- 136. The cybersecurity needs of the least developed countries (LDCs) are the focus of particular attention under ITU's "Enhancing Cybersecurity in Least Developed Countries" project. This project focuses on assisting the LDCs to enhance their capabilities, capacity, readiness, skills and knowledge in the area of cybersecurity. Apart from human capacity building, the project is also geared towards providing the appropriate enabling





technologies and related tools to assist LDCs in carrying out activities with regard to securing their cyberspace.

137. To date, the project has been implemented in Sierra Leone, Republic of Guinea, Djibouti, Comoros and Vanuatu, and is at different stages of implementation in Afghanistan, Angola, Bhutan, Burundi, Chad, Haiti, Kiribati, Lao, Mauritania, Myanmar, Rwanda, Tanzania, Uganda and Zambia. Given the strong interest of Gambia in enhancing its cybersecurity capabilities, the project in Gambia has been augmented to a national CIRT establishment.





- 138. ITU provided direct country assistance to Lao PDR on drafting its National Cybersecurity Policy. ITU assisted Nepal in creating Cybersecurity awareness for the Ministry, regulator, industry and relevant stakeholders including child online protection. ITU assisted Afghanistan in delivering penetration testing training for professionals of Afghanistan CERT to build their capability.
- 139. Capacity Building also implies having factual information about the state of cybersecurity readiness at a national and international level. Work is ongoing on the second version of the Global Cybersecurity Index (GCI), following the publication of the 2014 results and its inclusion in Resolution 130 (Rev. Busan, 2014). This new iteration of the GCI will have a unique value addition to the sphere of existing cybersecurity indices, will capture more details cybersecurity, require improved consultation with Member States and further expand the partnerships into a multi-stakeholder collaborative platform.



140. An <u>ITU Workshop on Future Trust and Knowledge Infrastructure, Phase 2</u>, took place on 1 July 2016, in Geneva, Switzerland, where interesting insights into the topic of trust



were gained, and the strategic and technical priorities for future ICT infrastructure and services were reviewed from the perspective of trust. The workshop raised awareness regarding key technical, policy and governance issues in order to make ICT Infrastructure and services trustworthy, and provided an overview on trust standardization landscape and the work of

ITU in this field while identifying priorities for future standards development work for the next study period.

# 5) International Cooperation (SDG 1 (1.4), SDG 7 (7.1, 7.a, 7.b), SDG 9 (9.1, 9.c), SDG 11 (11.3, 11.b), SDG 17 (17.8))

- 141. The GCA is based on international cooperation and strives to engage all relevant stakeholders in a concerted effort to build confidence and security in the use of ICTs.
- 142. BDT has consolidated its global alliance with governments, academia and industry experts to promote a culture of cybersecurity awareness and a holistic approach to counter misuses of online networks. An active <u>partnership</u> with the UNODC, ENISA, Oxford University, Symantec, Trend Micro, the Commonwealth Cybercrime Initiative (CCI), the Commonwealth Telecommunication Organisation (CTO), Nuix and INTERPOL is maintained.





Collaboration with FIRST, the biggest association of CIRT teams, is well established, with the FIRST affiliation for attending CIRTs in ITU cyberdrills being facilitated and subsidized. As well, ITU contributes to the development of a Services Framework for CIRTs under FIRST's leadership, which will be used in BDT's CIRT program.

- 143. A Memorandum of Understanding with the Economic Community of West African States (ECOWAS) was signed on 8 June 2015 to provide a framework for collaboration on cybersecurity in the region.
- 144. We are currently working on upcoming collaboration with CERT regional groups namely AfricaCERT, APCERT and OIC CERT. These collaboration will synergise our activities in the regions and will enhance CERT specific knowledge exchanges between regions.
- 145. During the Global Conference on Cyberspace (GCCS) held in The Hague, Netherlands, in April 2015, the Global Forum on Cyber Expertise (GFCE) was launched. The forum now comprises 50 Members participating in 12 initiatives. ITU is a co-initiator of the "CSIRT Maturity Initiative", along with the Netherlands, the Organization of American States (OAS) and Microsoft. The objective of the cybersecurity CSIRT Maturity Initiative is to provide a platform to GFCE members to help emerging and existing Computer Security Incident Response Teams (CSIRTs) increase their maturity level. This activity also contributes greatly to ensuring BDT's CIRT program makes use of all existing resources from the wider community and helps ensure an approach to CIRT capacity building that is well coordinated at the global level. Expert workshops were held alongside the FIRST Technical Colloquium in Prague in January 2016 and the FIRST Annual Conference in Seoul in June 2016. A third expert workshop is being planned for October 2016.
- 146. During the ITU Plenipotentiary Conference 2014, a letter of agreement was signed between BDT and ISOC on joint activities related to combating the proliferation of spam. Following this agreement, ITU and ISOC organized joint workshops during the 2015 and 2016 WSIS Forums on "Collaborative Internet Security: Best Practices in Addressing Spam and Establishing CSIRTs" and "Spam: Understanding and Mitigating the Challenges Faced by Emerging Internet Economies".
- 147. BDT is also actively participating in the London Action Plan (LAP). The purpose of this Action Plan is to promote international spam enforcement cooperation and address spam-related problems, such as online fraud and deception, phishing, and dissemination of viruses. LAP and BDT are discussing joint initiatives aimed at improving information exchange.

# 6) The Child Online Protection (COP) Global Initiative (SDG 4 (4.1, 4.5) and SDG 16 (16.2))

- 148. Within the framework of the GCA, the Child Online Protection (COP) Initiative was established by ITU as an international collaborative network for action to promote the online protection of children worldwide.
- 149. ITU has been raising awareness on COP issues through organizing workshops, strategic dialogues and regional forums, holding several workshops at different international conferences and leading or participating in different projects.





- 150. In October 2015, the ITU Arab Regional Office organized the "ITU Regional Strategy Workshop on Child Online Protection (COP) for the Arab Region: Empowering the future digital citizens", in Cairo, Egypt. The workshop was kindly organized with and hosted by the Ministry of Communications and Information Technology in Egypt (MCIT). The event raised awareness on challenges concerning COP, as well as facilitated sharing of relevant knowledge and experience in making the online world safe for our children.
- 151. Following the adoption of the Regional Initiative on COP in Europe at <u>World Telecommunication Development Conference 2014</u>, ITU and its partners updated the "Guidelines for Children on Child Online Protection" and "Guidelines for Parents, Educators and Guardians on Child Online Protection". The new updated versions are available <u>online</u> and have been translated and distributed in several European countries.
- 152. Within the framework of CIS Regional Initiative on COP, ITU-D Sector Member A.S. Popov ONAT and ITU produced several important deliverables. In 2015 ONAT launched a course titled "Multimedia distance-learning course on the safe use of Internet resources". The course is divided into three parts: Basic (for children of pre-school and junior school age), Intermediate (for children in classes 5 to 9) and Advanced (for senior school pupils, students, parents and teachers). Additionally, an offline course edition (on DVD) is distributed among the schools of the CIS region lacking high-speed Internet connection. Currently the course is available in Russian language only.
- 153. Under the Regional Initiative framework, ITU together with the government of Turkey and ECPAT International initiated a benchmarking study on the national initiatives on COP among the European countries. The study was presented during the <a href="ITU Regional Workshop on Child Online Protection">ITU Regional Workshop on Child Online Protection</a> (COP) for the Europe Region: "Empowering the future digital citizens", which was held in Istanbul, Turkey on 25-26 April 2016.
- 154. ITU participated in the final meeting of the Interagency Working Group (IWG) on sexual exploitation of children. At the initiative of ECPAT International, and with the aim of facilitating agreement on the terms used to describe different forms of sexual exploitation and sexual abuse of children amongst UN entities, international child rights NGOs, and international and regional law enforcement agencies, the IWG was established in September 2014, comprising representatives from key stakeholders. The <a href="Terminology Guidelines">Terminology Guidelines</a> that resulted from this process were launched and distributed in June 2016.
- 155. On the occasion of the celebration of the Safer Internet Day 2016 on 9 February, ITU published a <u>blog post</u> on the importance of "Working for a safer online environment for young people". The blog was shared within the COP Community and promoted ITU's activities related to child online safety.
- 156. In May 2016, ITU and Child Helpline International launched the Campaign: "Partnering to Protect Children and Youth", which aims to showcase how ITU membership (Member States, regulators, industry and academia) are strengthening the work of national child helplines, while fostering awareness and collaboration on Child Online Protection (COP) issues. The campaign will recognize the efforts of ITU members, which actively support child helplines, in their commitment towards achieving a safer and more secure online and offline environment for children. ITU members are encouraged to fill out an online survey that collects best practices and initiatives on the promotion and development of child





helplines. The case studies will be presented at ITU Telecom World 2016, which will take place 14-17 November 2016 in Bangkok, Thailand.

- 157. The <a href="ITU Annual Regional Capacity Building Workshop on Child Online Protection for sub-Saharan African Countries">ITU Annual Regional Capacity Building Workshop on Child Online Saharan African Countries</a> was held in Lilongwe, Malawi, from 18 20 July 2016. The theme of the workshop was "Ensuring Child Online Safety (COS) in a digital world: building human capacity in COS policy formulation and implementation". The theme focused on child online safety in an African context where several initiatives and measures are being taken to bridge the digital gap and reach social and economic development through the use of ICT.
- 158. The International Conference "Keeping Children and Young People Safe Online" will be held in Warsaw, Poland on 20-21 September 2016. The conference is co-organized by the ITU and Polish and German Safer Internet Centres. Addressing a broad spectrum of issues related to the safety of children and young people on the Internet and involving representatives of the education sector, NGOs, the judiciary and law enforcement agencies and Internet content service providers, the conference aims to raise awareness about the new challenges and opportunities in fighting online threats, as well as to popularize best practices across different sectors.
- 159. Following the instruction of the Plenipotentiary Conference 2014, ITU Council Working Group on Child Online Protection was encouraged to conduct one-day online consultations for youth prior to its meetings in order to listen to their views and opinions on different matters related to child online protection. The online consultation on cyberbullying is currently ongoing on the <a href="Re-Rights Platform">Re-Rights Platform</a>. The results will be presented during the next CWG-COP meeting which will be held on 10 October 2016 in Geneva, Switzerland.

Action Line C6: Enabling Environment (also related to the 2030 Agenda for Sustainable Development)





Related to the SDGs: SDG 2 (2.a), SDG 4 (4.4), SDG 5 (5.b), SDG 8 (8.2, 8.3), SDG 9 (9.1, 9.c), SDG 10 (10.3), SDG 11 (11.3, 11.b), SDG 16 (16.3, 16.6, 16.7, 16.10, 16.b), SDG 17 (17.6, 17.14, 17.16)

- 160. Recognizing the strong commitment of ITU's work towards bridging the digital divide in the area of the enabling environment, UNDP officially handed over the lead facilitation role on WSIS Action Line C6 Enabling Environment to the 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 three sectors framework of the ITU-D Programme 3: Enabling Environment.
- 161. **ITU** carries out several activities directly related to WSIS Action Line C6, through projects such as the ones listed below. More information on these projects as well as the other projects can be found on the ITU-D Projects webpage (<a href="http://www.itu.int/en/ITU-D/Projects/Pages/default.aspx">http://www.itu.int/en/ITU-D/Projects/Pages/default.aspx</a>).





162. **The 11<sup>th</sup> Action Line C6 facilitation meeting** was held as an integral component of the 2016 WSIS Forum, on 5 May 2016. The theme of this year was: "Affordable Access for Sustainable Development". Panelists focused on infrastructure sharing, among other issues. The outcomes of the meeting are available here:

http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum20 16%E2%80%94ForumTrack-Outcomes.pdf

- 163. ITU organized a session at the WSIS Forum in 2016 on policies and standards for the public procurement of accessible ICTs.
- 164. ITU announced the WSIS Prizes:
  winning projects for 2016
  during the 2016 WSIS Forum.
  The prize winner for Action Line
  C6 was 'Life Long Learning
  and Employment for People
  with Disabilities', Ministry of
  Communications and
  Information Technology, Egypt.



165. The 2015 World Radiocommunication Conference 2015 took place from 2 to 27 November 2015. World Radiocommunication conferences (WRC) are held every three to four years. It is the job of WRC to review, and, if necessary, revise the Radio Regulations, the international treaty governing the use of the radio-frequency spectrum and the geostationary-satellite and non-geostationary-satellite orbits. Revisions are made on the basis of an agenda determined by the ITU Council, which takes into account recommendations made by previous world



radiocommunication conferences. A total of 3,275 participants representing 162 Member States and 130 observer organizations attended WRC-15. Preparations for WRC 15 continued throughout 2015, taking into account Resolution 80 (Rev. Marrakesh, 2002), in particular through BR's active participation in the final preparatory meetings of the regional groups, APT, ASMG, ATU, CEPT, CITEL and RCC. ITU has been assisting these preparations wherever possible and, noting in particular WRC Resolution 72 (Rev. Geneva, 2007), organized the 3rd ITU Inter-regional Workshop on the WRC-15 preparation on 1 to 3 September 2015.

166. WRC-19 (World Radiocommunication Conference 2019) preparation: The WRC-19 Agenda, as contained in Resolution 809 (WRC-15) [COM6/16], will be considered at the 2016 session of the Council, which will be invited to adopt a Resolution containing that Agenda, as well as the venue and exact dates of WRC-19 and RA-19. The first session of the Conference Preparatory Meeting for WRC-19 (CPM19-1) was held from 30 November to 1 December 2015 to organize the preparatory studies for WRC-19, based on the WRC-19 Agenda prepared at WRC-15 and taking into account relevant





WRC-15 resolutions calling for urgent and other ITU-R studies to be reported by the Director at WRC-15.

167. ITU continues to assist Member States and Sector Members in developing pro-competitive policy and regulatory frameworks for telecommunications. More specifically, through Objective 2/1: Policy and Regulatory frameworks, ITU 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. Activities include:



- BDT , under Objective 2/1 Policy and regulatory frameworks, assists membership in the formulation, review and effective implementation of telecommunication /ICT policies, legislation and regulations. ITU BDT conducts, global and regional research and analysis on the latest policy, regulatory, economic financial and market trends in telecommunications/ICTs. Some of the relevant activities in relation with WSIS are the following:
  - а number of flagship reports including Trends produces Telecommunication Reform, focusing on best practice regulation to enable ubiquitous broadband markets to thrive. Various thematic studies provide valuable viewpoints and strategies on multiple issues that affect regulation and economics in a converged broadband world. The annual Trends in Telecommunication Reform publications are a key part of the dialogue with the world's information and communications technology (ICT) policy-makers and regulators in an increasingly converged digital environment. Under the overarching theme "Regulatory incentives to achieve digital opportunities", the 16th edition of Trends explores topical issues regulators need to address to ensure that citizens can benefit from the social and economic opportunities brought about by the digital economy. For digital opportunities to fully materialize, an adaptive, consultative and innovative approach to ICT policy and regulation is more than ever necessary. The thematic chapters, drawing up from discussion papers presented at the 2015 ITU Global Symposium for Regulators, examine investment strategies to foster the deployment of broadband and access to the digital economy, network sharing and co-investment regulation, regulation and the Internet of Things (IoT), interoperability in the digital ecosystem and smart regulation to facilitate m-services and applications uptake and diffusion. As in previous editions, the publication features an in-depth analysis of current market and regulatory trends based on ITU data from one of the world's most comprehensive data platforms, the ICT Eye. See Table of contents and preview at: http://www.itu.int/en/publications/Documents/Trends2015-shortversion pass-e374681.pdf
- The ICT Regulation Toolkit, developed by ITU in partnership with the World Bank/infoDev, assists regulators in developing effective regulatory frameworks by sharing information on key regulatory issues and best practices. The content





management system of Toolkit and the design are currently being modernized to enhance the navigation and interactivity of the web platform.

ITU has launched its "ICT Regulatory Tracker".



The Tracker was built as a tool to monitor and measure the changes taking place in the telecommunication/ ICT regulatory environment, and covers over 150 countries for a period of 11 years, showcasing regulatory progress within the same country, amongst regions and worldwide. A variety of traditional and new subjects is included in the Tracker

and are allocated into four clusters overlooking the telecommunication/ICTs regulatory environment: regulatory authority, regulatory mandate, regulatory regime and competition framework.



The 16th edition of the Global Symposium for Regulators (GSR) was held in Sharm el- Sheikh, Egypt, from 11 to 14 May 2016. A series of GSR pre-events took place on 11 May. They included a Thematic Pre-Conference for a Global Dialogue on Digital Financial Inclusion with the support of the Bill & Melinda Gates Foundation and in collaboration with other partners. The Regional Regulatory Associations Meeting and Private Sector Chief Regulatory Officers Meeting was also held on 11 May. The Global Regulators-Industry Dialogue (GRID) sessions of the GSR, 12 and 13 May, were open to regulators, policy makers and

members of ITU's Development Sector. On 14 May, two parallel tracks were held, a Regulators' track, open only to regulators and policy makers, and an Industry track, open to ITU-D sector members, in addition to the final closing ceremony open to all participants. The chairman report is available here: http://www.itu.int/en/ITU-D/Conferences/GSR/Pages/GSR2016/default.aspx

- Database, which can be accessed from the ICT Eye, as well as the TREG website and the Global Regulators' Exchange (G-REX), a password-protected online discussion forum reserved for regulators and policy makers. ITU also maintains the World Tariffs Policies database, which focuses on trends related to pricing, cost and tariff models, interconnection rates, price control of different services, charging issues related to International Internet Connectivity and taxation of telecommunication services. This database can also be accessed from the ICT Eye.
- ITU is carrying out a project to foster affordable access to the digital world by providing stakeholders with a platform to identify the appropriate policy, regulatory, technical and commercial measures to achieve affordable access to international bandwidth. The aim of the project is to strengthen cooperation at the global level, bringing together fiber optic communication stakeholders, as well





- as policy makers and regulators to identify measures to address the main bottlenecks, strengthen commercial agreements and regulatory frameworks and thus promote open access to fiber optic communications and associated infrastructure and develop harmonized related model regulation.
- ITU is developing a toolkit for ICT innovation policy/governance and ICT innovation ecosystem. This project aims to develop a toolkit for fostering ICT innovation ecosystems as well as fostering ICT innovation policy and governance. The toolkit will contain guidelines and best practices for the ICT Innovation policy and governance, and guidelines on developing a vibrant ICT ecosystem with the best practices built on relationship among the stakeholders including policymakers, regulators, industry and academia as well as innovators.
- ITU has continued to support the strengthening of the Brazilian National Telecommunications Agency (ANATEL). In the framework of this Project ITU has recently started to support Anatel in the development and implementation of its main strategic projects, such as preparing the Agency for Strategic Management, assisting on the Regulatory Model review, dimensioning ANATEL's workforce and its ideal allocation taking into account the strategic and business processes, reviewing business processes and structuring the bases of information, in order to improve the efficiency of the Agency. This work is being performed under a USD 4 million dollar contract. An ambitious capacity building programme which worth more than USD 1 million is also being developed under the scope of the Project.
- ITU has recently finalized implementation of a project with the Peruvian Regulator (OSIPTEL) to provide technical assistance to the telecommunications regulator of Peru, (OSIPTEL) by means of studies and recommendations aimed at enhancing OSIPTEL's supervisory and control functions of certain telecommunications services. Under the Project, OSIPTEL and ITU, together with a group of external experts, performed a study of international best practices for monitoring and control of public telecommunications services (telephony fixed and mobile, cable broadcasting and internet). Findings were then compared to ongoing methodologies and procedures currently in place in OSIPTEL. In terms of concrete results the project developed and delivered important recommendations identifying opportunities for improvement in OSIPTEL's monitoring and control functions while also determining the resources needed for implementation. It is expected that the project's recommendations, if implemented, shall be useful for OSIPTEL as it will allow improvements in the regulatory framework towards a more preventive and enabling supervisory approach, enhancing the quality of public telecommunication services to the end users.
- ITU kicked off in September 2015 the implementation of a technical cooperation project to review the National Telecommunications Plan that was in force in Paraguay and assisted national authorities with the elaboration of the new NTP for the period 2016-2020 in addition of training the staff of CONATEL as to improve the quality of the services provided in the framework of CONATEL's





- mandate. The new NTP entered in force in March 2016. Currently, the Americas Regional Office is finalizing negotiations for another Project that will support CONATEL in the development of cost modelling and training for Anatel staff.
- With the financial support from the Republic of Korea, the ITU is assisting selected Caribbean countries to establish national spectrum management master plans. The activities of the project with respect to each beneficiary country include the assessment of spectrum management scheme (i.e. spectrum policy, spectrum use, authorization, spectrum sharing, spectrum pricing, spectrum monitoring and compliance), and the provision of advice in connection with each beneficiary country's development of relevant policies, legislations and regulations, based on request and interest of the countries. This project will also build human capacity and provide guidance in preparing the implementation of the master plans where requested by beneficiary country and agreed to by ITU.
- Since 2014, in cooperation with the Development Bank of Latin America (CAF), ITU provides support to 8 countries (Bolivia, Colombia, Costa Rica, Dominican Republic, Jamaica, Panama, Paraguay and Venezuela) in the Americas Region on a project in the field of Transition from Analogue to Digital Broadcasting. The Project addresses the regulatory, political, technological and economic challenges which the beneficiary countries will face when implementing the transition.
- ITU supports the development of Road Maps for the transition to Digital Broadcasting in Guatemala, El Salvador, Honduras and Nicaragua.
- In August 2015, ITU kicked off the implementation of a regional Project to Support Harmonization of the ICT Policies in the Caribbean (HIPCAR II). This Project aims at building on the platform and dynamism created in the region by the ITU-EC "Enhancing the competitiveness in the Caribbean through the harmonization of ICT Policies, Legislation and Regulatory Procedures (HIPCAR)" implemented by the ITU from 2007 to 2013. It will support further regional organizations/institutions and selected countries of the Caribbean to develop and promote use of harmonized ICT policies and regulatory guidelines for the Information and Communication Technology (ICT) market in the region as well as building human and institutional capacity in the field of ICTs through a range of knowledge transfer measures. To ensure ICT standardization contributes to accessibility, ITU together with IEC and ISO developed an joint IEC/ISO/ITU Policy on Standardization and accessibility which emphasizes the importance of the following four points: Apply the principles of Accessible or Universal Design; Engage older persons and persons with disabilities in standards development; Train standards developers on the importance of accessibility; and Improve accessibility of standardization secretariat support.
- ITU is carrying out a project to strengthen Burundi's institutional and technical capabilities for an accelerated and sustainable broadband development with a view to assist Burundi in harnessing the benefits of ICT through deployed Broadband infrastructures and making its ICT sector to be one of the main engines of its development. This will be achieved through providing to Burundi not only a national ICT policy and/or a broadband development strategy, but also necessary





- technical knowledge and know-how for ICT policy/strategy development and implementation.
- ITU is providing advisory Services to Saudi Arabia's Communication and Information Technology Commission (CITC): The project intends to support the Government's telecommunications development programs through advisory services, in the field of radio frequency spectrum management.
- ITU organized a regional Workshop on "Competition in Telecommunications Market" for Arab states. The workshop was held in Khartoum, Sudan 24-26 May 2016. The workshop identified key issues with respect to the relationship between competition law, telecommunications regulation and telecom services providers.
- ITU organized a regional workshop for Arab states on "Digital Financial Inclusion" in Khartoum from 24-25 of August, 2016. The workshop discussed the policy and regulation of the digital financial services and the harmonized framework to be adopted by the countries as well as the regulatory issues and requirements related to each framework.
- ITU will organize a regional training workshop for Arab states on "The Big Challenges for Telecom Operators and Regulators". The training will be held in Rabat-Morocco, from 2-4 Nov. 2016.
- ITU with the support of MSIP, Republic of Korea is developing Spectrum Master
   Plans in some Asia-Pacific and Caribbean countries.
- ITU prepared Guidelines for: setting up spectrum fee regime; and tendering radio monitoring systems
- ITU is developing a Roadmap for Mobile Television Broadcasting Deployment and Regulation in Thailand through the National Broadcasting and Telecommunications Commission (NBTC) of Thailand, that is mandated to put in place policy and regulatory frameworks for, and ensuring the provision of, digital broadcasting services in Thailand. The ITU and NBTC are implementing a project to study the feasibility as well as developing a roadmap for mobile television broadcasting deployment and regulation in Thailand.
- ITU is working with the National Broadcasting and Telecommunications Commission (NBTC) of Thailand that is mandated to implement Universal Service Obligation (USO) for telecommunications/ICTs in Thailand. The ITU and NBTC are jointly implementing a project which will establish an international platform for cooperation on USO subject matters, organize a regional forum, and build human capacity of the NBTC.
- ITU is carrying out a project supported by the Department of Communications Australia to facilitate the implementation of the Asia-Pacific Regional Initiatives identified in the Dubai Action Plan DuAP: Special consideration for Least Developed Countries, including Pacific Island Countries, and Landlocked Developing Countries; Emergency Telecommunications; Harnessing the Benefits of new Technologies; Development of Broadband Access and Adoption of Broadband; Policy and Regulation. The activities carried out under this project include





- 1. Policy and Regulatory Assistance for Cambodia and Lao PDR,
- 2. Assistance to the Communications Regulatory Commission, Mongolia,
- 3. Telecommunication Regulatory Dispute Resolution for Myanmar,
- 4. Review and Amendment/Revision of the Philippines Telecoms Law (Republic Act 7925),
- 5. Recommendation on Tariff structure for Samoa National Broadband Highway (NBH),
- 6. Review on Post-Liberalization of the Telecommunication Sector in Timor Leste,
- 7. Cost Modeling for ICT Services, Bangladesh and Sri Lanka.
- 8. Tariff Regulation in Lao PDR
- 9. Capacity Building on ICT Statistics and Indicators for Indonesia, Lao PDR, Myanmar, Timor Leste and Vietnam
- 10. ITU is carrying out a study on telecom strategy for the Pacific-Next 5 years. A training of senior managers on this theme was carried out in partnership with PITA, MICT (Thailand) and the Department of Communications, Government of Fiji from 16-18 November, in Nadi, Fiji.





- 168. In order to increase enhanced dialogue and knowledge exchange between national regulators, policy-makers and other Telecommunication/ICT stakeholders on regulatory, economic and financial issues in all regions, ITU is carrying out a number of activities, including:
  - A number of trainings were carried out in coordination with the ITU Centre of Excellence Network and ITU Regional Offices to ensure the enabling environment on policy & regulation and economic & financial issues (including costing and pricing) worldwide. In this framework a Series of ITU Advance Level Training sessions have being organized at regional level for Africa, Americas and Arab States.
  - ITU organized in 2015 several regional economic and financial fora, including for Africa, Latin America and the Caribbean, and the Arab States. These Fora were held in conjunction with ITU-T Study Group 3 Regional Groups as part of the ITU coordination activities. This year the Fora focused, among other interesting subjects, on taxation in a digital economy, digital financial inclusion, affordable access as well as other economic and financial issues in a digital economy and a converged broadband environment.
  - ITU organizes the annual Asia-Pacific Regulators' Roundtable back to back with the International Training Programme, both of which are now on their 6<sup>th</sup> year.
  - ITU organized its first Regional Forum for Telecommunication/ICT and Financial Regulators on Digital Financial Inclusion for Asia and the Pacific in August 2015 in Kuala Lumpur, Malaysia.
  - Other related ITU Asia-Pacific Regional events successfully held in 2016 include (a) Innovative Strategies for Development Summit (June 2016, Manila, Philippines),(b) Workshop on Spectrum Management and Monitoring (May 2016, Chengdu China) (c) Asia-Pacific Digital Societies Policy Forum (April 2016, Bangkok, Thailand), (d) The 2nd Asia-Pacific Spectrum Management Conference (April 2016, Bangkok Thailand), (e) ITU-TRAI Training on Consumer Protection (Mar 2016, New Delhi, India), (f) ITU Multi-Country Workshop for national focal points on ICT indicators and Measurements (Mar 2016, Naypitaw, Myanmar), (g) Workshop on National Spectrum Management and Spectrum Management System for Developing Countries (SMS4DC) (Feb 2016, Suva, Fiji).
  - Direct assistance to Communications Authority of Maldives was provided on .MV Domain Name Management and Operation, Male, Maldives from 3-7 April 2016.
     A clear consensus was reached on potential contentious matter of management of country level domain names by an ISP which could be managed by an independent entity following principles of transparency, fairness, predictability of policy.
  - ITU-TRAI Training on Consumer Protection was carried out in New Delhi from 21 March 2016 aiming at sharing real experiences, brainstorm on possible solutions to address existing as well as emerging challenges amongst





telecommunication, broadcasting and converged ICT regulators. This training was attended by over 100 participants from 15 countries from Asia-Pacific region as well as representation from European Union.

- ITU and GSM Association (GSMA) jointly organized the "Asia-Pacific Digital Societies Policy Forum 2016" from 27-28 April 2016 in Bangkok, Thailand. The Forum was hosted by the Ministry of Information and Communication Technology of Thailand (MICT) with support from the Australian Government and partners. It was attended by over 150 participants from over 20 countries.
- The ITU and MIIT China organized a Seminar on ICT Development in Internet+ Age from 9 July 10 July, 2015 at Harbin, Heilongjiang Province, P.R. China, which raised awareness on policy and regulatory challenges in the connected age, amongst more than 100 participants from policy and regulatory body, industry and academia from China and international experts.
- The MIIT ITU Seminar on "ICT Regulation in New Era" from 14 15 July, 2016 at Chongqing, P.R. China raised awareness on policy and regulator issues in new era for around 150 participants from policy and regulatory body, industry and academia from China and international experts.
- ITU is undertaking several activities within its mobile roaming imitative LET'S ROAM THE WORLD. This initiative started with the organization of the LET'S ROAM THE WORLD: The ITU Global Dialogue on International Mobile Roaming in Geneva on 18 September 2015 back to back with the ITU-D Study Groups meetings. The main objective of this initiative is to support Members in the definition and adaptation of best practices and guidelines for all stakeholders around the world on IMR. Collaboration with regional regulatory organizations is envisaged to draft building blocks for strategic guidelines on IMR.
- ITU In addition, the Intersectoral International Mobile Roaming (IMR) Resources web portal consolidates in one portal all ITU activities on IMR, and lists activities bv other regional international organizations, as well as updated information on the initiatives at bilateral. national. regional and international level.



ITU-D Study Groups (<a href="http://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2014">http://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2014</a>) provide an opportunity for all Member States and Sector Members (including Associates and Academia) to share experiences, present ideas, exchange views, and achieve consensus on appropriate strategies to address ICT priorities. ITU-D Study Groups are responsible for developing Reports, Guidelines, and Recommendations based on input received from the membership. The Study Groups examine specific task-oriented telecommunication/ICT questions of priority to developing countries, to support them in achieving their development goals. Relevant questions in ITU-D





Study Group 1 include: Q1/1 (broadband), Q2/1 (broadband access technologies), Q3/1 (access to cloud computing services), Q4/1 (economic models and methods), Q5/1 (access to ICTs in rural/remote areas) and Q6/1 (consumer protection). Outputs agreed on in the ITU-D Study Groups, and related reference material, are used as input for the implementation of policies, strategies, projects and special initiatives in Member States. These activities also serve to strengthen the shared knowledge base of the membership.

- ITU also provides support, assistance and training to developing countries in bridging the standardization gap on ICT technologies. ITU-T has 13 Regional Groups to stimulate effective participation in ITU-T Study Groups and increase the number of quality Contributions from the various regions five in Africa, three in the Americas, three in the Arab region, and two in the APT region. ITU-T also continues to offer a mentoring programme for new delegates to ITU-T Study Groups. Remote participation is offered during all study group meetings. Closing plenaries benefit from full interpretation.
- ITU organizes annual Regional ICT Standardization Forums as part of activities under WTSA Resolution 44 on bridging the standardization gap. The Forums discuss current standardization topical issues in ITU-T study groups and focus groups to engage more developing countries in the standardization work and could also feature capacity building on ITU-T Recommendations.
- The Focus Group on Digital Financial Services addresses a series of critical issues currently preventing digital financial services from reaching unbanked or underbanked populations. The Focus Group is developing a standardization roadmap for interoperable mobile money services and best practices to support national policy-makers and regulatory authorities in their efforts to encourage the adoption and use of these services.
- An ITU-T Global Portal was launched with special focus on activities in the Africa,
   Asia Pacific, Arab, and Americas regions.
- An ITU webportal is providing information about the status of the digital terrestrial television broadcasting implementation around the world.

169. ITU is actively supporting implementation of enabling environment frameworks to promote ICT accessibility for persons with disabilities in line with Output 4.3 of the 2014 World Telecommunication Development Conference and Connect 2020 Target 2.5B. This work includes:

- A series of reports to support decision makers on how to ensure accessible ICT devices and services are widely available in their countries. These publications, available in all 6 official ITU languages and accessible e-book versions, include the following:
  - Model ICT Accessibility Policy Report. This report includes model policy, regulations, codes of conduct and legislation that can be adopted and adapted by ITU Member States based on their priorities (mobile, web,





public access center and TV/audio visual media accessibility as well as changes to existing ICT legislation and a model policy for the public procurement of accessible ICTs);

- Making Mobile Phones and Services accessible for Persons with Disabilities. G3ict-ITU;
- Making Television Accessible Report. G3ict-ITU,
- ITU-D Study Group 1, Question 7/1, Access to telecommunications/ICT services by persons with disabilities and with specific needs" Rapporteurs Group meeting was held on 4 April 2016 in ITU-HQ in Geneva. BDT provided capacity building training to the Members on the following topics covered by the Model ICT Accessibility policy report:
  - How to promote accessibility of government websites
  - How to ensure mobile phone devices and services are accessible
  - How to ensure TV/audio visual media accessibility
- ITU continues to develop standards in ITU-T study groups(SGs) to promote accessible ICT technologies: ITU-T SG16 has 17 ongoing work items on accessibility, including: accessibility terms and definitions, Guidelines for accessible meetings, Accessibility features for mobile media devices; Requirements for captioning and audio description for accessibility; Application layer information specification at the terminal to network interface for people with hearing and speaking difficulties to request rescue to emergency rescue agencies, Guidelines for supporting remote participation in meetings for all, etc. ITU-T SG2 has two ongoing work items on human factors, namely 'User interface for face-to-face speech translation considering human factors' and 'Onscreen keyboards for ICT devices'. The ITU Inter-sector Rapporteur Group on Audiovisual Media Accessibility studies topics related to audio-visual media accessibility for all media delivery systems including broadcast, cable, Internet, and IPTV.
- ITU raised visibility on ICT accessibility policies at a series of events in 2016 including "Inclusive Education and ICTs for All" organized at the UN Palais in Geneva and the Committee on Rights of Persons with Disabilities Geneva in March and the two ITU-T JCA-HFA meetings in 2016; as well as the Seminar on social inclusion of people with disabilities through access to telecommunications" organized by OSIPTEL during the 53rd meeting of the APEC-Telecommunications and Information Working Group in (Tacna, Peru) in June.
- ITU was a panelist on an M-Enabling Summit 2016 session on public procurement of accessible ICTs on 13 June 2016 and moderated a session on International good practices in promoting ICT accessibility on 14 June 2016 in Washington DC-US. The M-Enabling Summit promotes international exchanges among policy makers, organizations of persons with disabilities and private sector companies involved in developing ICT accessibility policies and programs in their respective countries. ITU also delivered presentation during the International Briefing Implementing ICT Accessibility Rules and Standards in Public Procurement, hosted by the US Access Board, the International Disability Alliance and G3ict in Washington on 9-10 June 2016 which highlighted ITU's role in promoting policies for the public procurement of accessible ICTs and raised awareness about ITU's activities in the area





### of ICT accessibility

- ITU has organized the series of "Accessible Americas Information and Communication for ALL" events. These events, held in 2014 in Brazil, in 2015 in Colombia and in 2016, from 28-30 November in Mexico, have become one of the key events in the Americas region on the topic of ICT accessibility for persons with disabilities. Through these events Americas region target not only to bring together all stakeholders involved to work together to implement ICT Accessibility Policies but also to raise awareness, provide training, share best practices and track concrete results and progress in this topic.
- ITU will also organize a workshop on development of an ICT-accessibility Policy for the East Africa region. The workshop is organized by the ITU Regional Office for Africa in partnership with East Africa Community (EAC) and hosted by the Communications Authority of Kenya in Nairobi, on the 6th and 7th October 2016. The objective of the workshop is to discuss and develop policy recommendations on ICT accessibility. The policy recommendations will be addressed to policy makers in EAC Member States. It is expected that, upon validation and approval, the policies will then be transposed and implemented at the national level. The recommendations will also constitute a valuable benchmark for replication across Africa.
- ITU has provided ICT accessibility policy advice to Egypt and Peru.
- The ITU annual regulatory survey includes questions on ICT accessibility policies in ITU
  Member States in order to measure progress in achieving Connect 2020 Target 2.5B.
  The survey results show that around 40 out of 193 ITU Member States have an ICT
  accessibility policy.
- Implementation of Regional Initiatives on ICT accessibility in the ITU regional offices for the Arab states, CIS countries and Europe includes:
  - Raising awareness on the ITU Model TV/Audio visual media policy in Slovenia's national workshop on TV accessibility on 7 December 2015.
  - Making ICTs Accessible and Inclusive for All, a knowledge exchange on ICT accessibility was organized within the framework of the European Regional Initiative on ICT Accessibility with the Israeli Mission in Geneva.
  - Online training on ITU Academy will be provided in 2016 on ICT accessibility policies such as the public procurement of accessible ICTs and accessible TV/audio-visual media.
  - The EUR Regional Initiative is also conducting a survey on accessible TV/audio-visual services provided by ITU members.
  - The ITU ARB Regional Office participated in Egypt's annual ICT for Persons with Disabilities meeting, highlighting the Model ICT Accessibility Policy report.
  - The ITU ARB Regional Office established a regional center for ICT Accessibility for Persons with Disabilities that assists countries in the region in formulating national ICT Accessibility policies in addition to many other activities.
  - The ITU Area Office in Moscow created an Internet Access and Training
     Centre for visually impaired users (1 working place for a blind users and 2





working places for partially sight users) in suburb Chisinau, Republic of Moldova in partnership with a local blind society and established an Internet access and training centre for persons with disabilities in Belarus within the framework of the CIS Regional Initiative.

# (c) Co-facilitator of Action Lines C1, C3, C4, C7, C11 and Partners for C8 and C9.

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, (also related to the 2030 Agenda for Sustainable Development)





Related to SDGs: SDG 1, SDG 3 (3.8, 3.d), SDG 5, SDG 10 (10.c), SDG 16 (16.5, 16.6, 16.10), SDG 17 (17.18)

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. In 2015 ITU organized a number of events. Series of regional meetings on private-public partnerships as a solution to address the needs of regions for digital technology deployment were organized. The 11th Action line Facilitation meeting of C1 and C11 was held on 5<sup>th</sup> May 2016 on the topic of "The Role of Public Authorities and Global/Regional Cooperation in Ensuring the No One is Left Behind in the Information Society". There were many debated issues, such as the importance of developing national strategies in a multi-stakeholder process, the importance of promoting SMEs, the use of ICTs in parliaments for greater citizen Please engagements, among others. read the outcomes here:http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016 %E2%80%94ForumTrack-Outcomes.pdf

The ITU has been contributing greatly to WSIS implementation and follow-up from 2005 to the present. In 2016, ITU, in close partnership with other United Nations agencies and all WSIS stakeholders, has been leading numerous activities worldwide in the field of information and communication technologies for development, these activities are reflected throughout the report. This section will present major and the most significant initiatives fostered by ITU in 2016.ITU presented its vision at the Plenary Session of OECD Ministerial Meeting held in June 2016 in Cancun, Mexico. This was an opportunity to highlighting ITU 'Connect 2020 Agenda' which was universally adopted by ITU's 193 Member States at ITU Plenipotentiary Conference in 2014. This Agenda sets an ambitious global connectivity goals and targets, to which Member States have committed to achieve in collaboration with all stakeholders across the ICT ecosystem.

ITU also co-organize ITU-OECD "Innovation Dialogue" during the OECD Ministerial Meeting drawing the attention to the need to strengthen the digital innovation capacity of countries to integrate ICT innovation into their national development agendas — in





recognition not just of the digital divide, but a growing innovation divide in particular. Other ITU collaborative platforms were also highlighted such as the UN Broadband Commission for Sustainable Development, which was set up by ITU and UNESCO in 2010, with a refreshed mandate in 2016 to bring it into line with the SDGs.

- 170. ITU Telecom World 2015 took place from 12 to 15 October in Budapest, Hungary. As the global platform for accelerating ICT innovation for social good, it brought together governments, corporates and small and medium enterprises (SMEs) from emerging and developed markets around the world. It combined an exhibition for digital solutions, a forum for sharing knowledge and a networking hub between nations, organizations and individuals. The event focused in particular on the role of SMEs in driving growth throughout the ICT ecosystem. By helping ideas go further, faster, ITU Telecom World 2015 aimed to make the world better, sooner, together. The outcome of ITU Telecom World 2015 is available here: http://telecomworld.itu.int/news-blog/outcomes/
- 171. ITU Telecom World 2016 will be held from 14-17 November 2016 in Bangkok, Thailand. Please read the agenda and other details here: <a href="http://telecomworld.itu.int/">http://telecomworld.itu.int/</a>.
- 172. Advisory Groups for each Sector: Advisory Groups for each Sector meet every year and review priorities, strategies, operations and financial matters of the Sector. Please see the Advisory Groups for the sectors below:

The Telecommunication Development Advisory Group (TDAG) for the ITU-D. The 21st meeting of the Telecommunication Development Advisory Group (TDAG) took place from 16 to 18 March 2016 at ITU headquarters in Geneva. (Please see <a href="http://www.itu.int/en/ITU-D/Conferences/TDAG/Pages/TDAG21/default.aspx">http://www.itu.int/en/ITU-D/Conferences/TDAG/Pages/TDAG21/default.aspx</a>)

Telecommunication Standardization Advisory Group (TSAG) for the ITU-T sector. This year, the Telecommunications Standardization Advisory Group took place from the 18<sup>th</sup> to 22<sup>nd</sup> of July. (Please see <a href="http://www.itu.int/en/ITU-T/tsag/2013-2016/Pages/default.aspx">http://www.itu.int/en/ITU-T/tsag/2013-2016/Pages/default.aspx</a>)

Radiocommunication Advisory Group (RAG) for the ITU-R. This year, the Radiocommunication Advisory Group took place from the 10<sup>th</sup> to 13<sup>th</sup> of May. (Please see http://www.itu.int/en/ITU-R/conferences/rag/Pages/default.aspx)

# 173. Study Groups for each sector:

- 1.1. Standardization work is carried out by the technical Study Groups (SGs) in which representatives of the <a href="ITU-T membership">ITU-T membership</a> develop <a href="Recommendations">Recommendations</a> (standards) for the various fields of international telecommunications.
- 1.2. ITU-D Study Groups provide an opportunity for all Member States and Sector Members (including Associates and Academia) to share experiences, present ideas, exchange views, and achieve consensus on appropriate strategies to address ICT priorities. ITU-D Study Groups are responsible for developing Reports, Guidelines, Best Practices and Recommendations based on input received from the membership. Information is gathered through contributions, case studies and





surveys and is made available for easy access by the membership using content management and web publication tools. The Study Groups examine specific task-oriented telecommunication/ICT questions of priority to developing countries, to support them in achieving their development goals.

Outputs agreed on in the ITU-D Study Groups, and related reference material, are used as guidance for the implementation of policies, strategies, projects and specific telecommunication/ICT initiatives in Member States. These activities also serve to strengthen the **shared knowledge base** of the membership. Sharing of topics of common interest is carried out through face-to-face meetings, multilingual remote participation and online collaborative sites, in an atmosphere that encourages **open debate** and **exchange of information** and for receiving input from experts on the topics under study.

ITU-D Study Group 1 scope focuses on "Enabling environment for the development of telecommunications/ICTs" while the work of ITU-D Study Group 2 relates to "ICT applications, cybersecurity, emergency telecommunications and climate-change adaptation".

This year, the ITU-D Study Group 1 Expert meetings took place from 15<sup>th</sup> to 19<sup>th</sup> of February in Budapest, Hungary (Please see http://www.itu.int/net4/ITU-D/CDS/sg/blkmeetings.asp?lg=1&sp=2014&blk=15729). Rapporteur meetings for ITU-D Study Groups 1 and 2 took place in Geneva, Switzerland from 15<sup>th</sup> 2016 (Please http://www.itu.int/net4/ITU-April see D/CDS/sg/blkmeetings.asp?lg=1&sp=2014&blk=15702 ) and from 18<sup>th</sup> to 29<sup>th</sup> April (Please http://www.itu.int/net4/ITU-2016, see D/CDS/sg/blkmeetings.asp?lg=1&sp=2014&blk=15703), respectively.

The Third meeting of ITU-D Study Groups for the 2014-2017 study period will be held from 19<sup>th</sup> to 23<sup>rd</sup> September 2016 (for Study Group 1) and from 26<sup>th</sup> to 30<sup>th</sup> September 2016 (for Study Group 2), respectively, both in Geneva, Switzerland.

1.3. The ITU-R Study Groups develop the technical bases for decisions taken at World Radiocommunication Conferences and develop global standards (Recommendations), Reports and Handbooks on radiocommunication matters. More than 4 000 specialists, from administrations, the telecommunications industry as a whole and academic organizations throughout the world, participate in the work of the Study Groups on topics such as efficient management and use of the spectrum/orbit resource, radio systems characteristics and performance, spectrum monitoring and emergency radiocommunications for public protection and disaster relief.

The next meeting for the Study Group 4 (Satellite Services) will be held in Geneva, Switzerland on Friday 7<sup>th</sup> October 2016. The next meeting for the Study Group 5 (Terrestrial Services) will take place in Geneva, Switzerland on Monday 21<sup>st</sup> and Tuesday 22<sup>nd</sup> of November 2016. The next meeting for Study Group 6 (Broadcasting service) will be held in Geneva, Switzerland on 28<sup>th</sup> October 2016. The next meetings for Study Groups 1, 3 and 7 (respectively Spectrum





Management, Radiowave Propagation and Science Services) will be announced later. (Please see http://www.itu.int/en/ITU-R/study-groups/Pages/default.aspx)

#### 174. World Telecommunication Development Conferences

The World Telecommunication Development Conference (WTDC) sets the agenda and guidelines for the ITU-D Sector for the following four-year cycle, while Regional Conferences review "work-in-progress" towards the overall objectives and ensure that goals are met. The Telecommunication Development Conferences serve as forums for the discussion of the digital divide, telecommunications and development by all stakeholders involved in and concerned with ITU-D's work. In addition, they review the numerous programmes and projects of the Sector and Telecommunication Development Bureau (BDT). Results are reported and new projects are launched. Each Regional Preparatory Meeting brings together the countries in its region to explore and discuss their needs and the present and future projects of the Sector.

The World Telecommunication Development Conference (WTDC) is an international event organized every 4 years by the ITU. The sixth World Telecommunication Development Conference (WTDC) took place at the Dubai World Trade Centre in Dubai, United Arab Emirates, from 30 March to 10 April 2014 at the kind invitation of the United Arab Emirates. The theme of WTDC-14 was "Broadband for Sustainable Development". (Please see <a href="http://www.itu.int/en/ITU-D/Conferences/WTDC/WTDC14/Pages/default.aspx">http://www.itu.int/en/ITU-D/Conferences/WTDC/WTDC14/Pages/default.aspx</a>).

Details on the World Telecommunication Development Conference to be held in 2017 (WTDC-17) will be available once the consultation period with Member States has been concluded.

Action Line C3: Access to Information and Knowledge, (also related to the 2030 Agenda for Sustainable Development)





Related to SDGs: SDG 1, SDG 2, SDG 3, SDG 4, SDG 5, SDG 6, SDG 7, SDG 8, SDG 9, SDG 10, SDG 11, SDG 12, SDG 13, SDG 14, SDG 15, SDG 16, SDG 17

The Action line C3 Access to Information and Knowledge Facilitation Meeting was held on the 5<sup>th</sup> of May 2016, entitled "Access to Scientific Knowledge (A2SK): Lessons Learned and the Way Forward for SDG2030". The session discussed, in detail, how the access to scientific information is changing from its current shape and becoming more interactive and interconnected, what are new data and information collection efforts underway, how to institutionalize good practices and processes, among others. Please read the outcomes here: <a href="http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016/E2%80%94ForumTrack-Outcomes.pdf">http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016/E2%80%94ForumTrack-Outcomes.pdf</a>







- 176. In 2016 ITU-D held numerous workshops, conferences and symposiums, making materials widely available for free on the web. In addition, a number of information-rich resources have been made available including web-based information portals, practical ICT toolkits and online databases have been launched and/or existing resources updated.
- 177. ITU developed a set of "Guidelines for Promoting ICT Accessibility for Persons with Disabilities in the Americas Region". These Guidelines are available in English, Spanish and Portuguese.
- 178. The joint ITU-G3ict Model ICT Accessibility policy report was launched during the Accessible Americas event November 2014.
- 179. The "Smart Accessibility on Connected TV" workshop was held in Barcelona on 18 March, 2015 organized by the Autonomous University of Barcelona in partnership with the International Telecommunication Union and European Commission.
- 180. Concerning broadband Access ITU, with support from Korea, has assisted countries in developing broadband policies and plans. Currently, support has been provided to develop Wireless Broadband Master Plans and National Broadband Plans/Policies to Fiji, Cambodia, Brunei, Vietnam, Samoa, Nepal, Myanmar, Bhutan, Bangladesh, Papua New Guinea, Indonesia, Pakistan, Lao PDR, Vanuatu, Marshall Islands, Philippines and St Lucia, Malawi, Congo Brazzaville, South Sudan and Bissau Guinea.
- 181. ITU developed and is maintaining a database for following the transition from analogue to digital terrestrial television broadcasting:

http://www.itu.int/en/ITU-D/Spectrum-Broadcasting/Pages/DSO/Default.aspx





182. The World Radiocommunication Conference 2015 (WRC-15), was held in Geneva from 2-27 November 2015. It is the job of WRC to review, and, if necessary, revise the Radio Regulations, the international treaty governing the use of the radio-frequency spectrum and the geostationary-satellite and non-geostationary-satellite orbits. Revisions are made on the basis of an agenda determined by the ITU Council, which takes into account recommendations made by previous world Radiocommunication conferences. The Radio Regulations edition following the decisions of the WRC-15 and it's Final Acts will come into force on 1 January 2017.

### **Regulatory publications**

During the 2012-2015 time-frame, the preparation of the ITU-R regulatory publications followed the standard pattern, as foreseen in the Operational Plan, including the edition of the Radio Regulations reflecting the changes decided by WRC-12 in all ITU languages; the consolidated version of the Rules of Procedure reflecting the WRC-12 decisions was published with seven updates with the modifications decided by the RRB. The Rules of Procedure and their updates are published in all ITU languages.

#### **Service publications**

The Bureau prepares and issues various service publications, as specified in Article 20 of the Radio Regulations (RR).

In view of the importance of the operational information contained in the maritime-related service publications, particularly with regard to safety, administrations are required to communicate the necessary amendments, as stipulated in No. 20.16 of the RR.

#### Service publications include:

- -List of Coast Stations and Special Service Stations (List IV);
- -List of Ship Stations and Maritime Mobile Service Identity Assignments (List V);
- -List of International Monitoring stations (List VIII)
- -Maritime Manual
- 183. ITU will host the World Radiocommunication Seminar 2016 (WRS-16) in Geneva from 12 to 16 December 2016, offering training focusing on the application of the ITU Radio Regulations and regulatory aspects of the use of the radio-frequency spectrum and satellite orbits. More than 400 participants are expected attended from over 90 countries. ITU organizes world seminars on spectrum management every two years, as well as regional seminars aimed in particular at addressing the needs of developing countries. During WRS-14, the Director of the Radiocommunication Bureau (BR), noted that "Radiocommunication today are undergoing constant changes. These changes occur as a result of technological improvements and changes in practice and they need to be reflected in the international regulations on spectrum. [...] They need to be reflected in the World Radiocommunication Conferences, ITU Radiocommunication Sector (ITU–R) Recommendations, best practices on spectrum use, and the software tools used by ITU to process the thousands of notices we receive every week reliably and efficiently".





# Action Line C4: Capacity-Building (also related to the 2030 Agenda for Sustainable Development)





Related to SDGs: SDG 1 (1.b), SDG 2, SDG 3 (3.7, 3.b, 3.d), SDG 4 (4.4, 4.7), SDG 5 (5.5, 5.b), SDG 6 (6.a), SDG 12 (12.7, 12.8, 12.a, 12.b), SDG 13 (13.2, 13.3, 13.b), SDG 14 (14.a), SDG (16.a), SDG 17 (17.9, 17.18)

- 184. Within the framework of its mandate as facilitator for Action Line C4, the ITU organized the
  - facilitation meeting of AL C4 on capacity building which took place as an integral part of the WSIS Forum 2016. The meeting was conducted under the theme "Transcending from Infrastructure to Applications: Building capacity to leverage e-Health applications". Among the main conclusions reached during the session was that the proliferation of e-applications is creating a demand for new skills sets, and that capacity building is a key pillar in the design of any successful e-Health



the design of any successful e-Health program. Please read the outcomes here: <a href="http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016%E2%80%94ForumTrack-Outcomes.pdf">http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016%E2%80%94ForumTrack-Outcomes.pdf</a>

- 185. The ITU continues to support its <u>Centres of Excellence (CoEs)</u>. The <u>CoEs</u> are institutions sharing expertise, resources and capacity-building know-how in telecommunications and ICTs training/education, distributed around the world. Designed to offer training to ICT managers in the public and private spheres through face-to-face or distance learning programmes, the Centres serve as regional focal points for professional development, research, and knowledge sharing, as well as providing specialist training services to external clients. CoEs networks have been established in all regions including Africa, Africa the Americas, Arab States, Asia-Pacific, Caribbean, Commonwealth of Independent States (CIS) and Europe. Under the umbrella of the ITU Academy, these regional networks are now being joined together into a single global network sharing training curricula, resources and expertise.
- 186. Following Resolution 73 of WTDC-2010, calling for a study to review the strategy of the Centres of Excellence, a new strategy has now been put in place, and took effect from January 2015. Under the new strategy, Centres of Excellence are now restricted to a maximum of six per each region. They are aligned to the priority areas for each four year cycle as determined by World Telecommunications







Conferences, and are appointed for a specific area of competency within a specific cycle.

Following the adoption of the priority areas for the next four years by the World Telecommunication Development Conference (WTDC 2014), an open and transparent application and selection process for new Centres of Excellence for the next four years was undertaken. A total of 32 new Centres were selected for the 2015-2018 cycle, out of a total of 99 applications received and processed. Regional Steering Committee meetings were held in the first quarter of the year, and all the centres are now fully functional. Training activities under the Centres of Excellence have been taking place in all the 6 regions. Areas for which trainings have been conducted are: Policy and Regulation, Broadband Access, Cybersecurity, Spectrum Management, Digital Broadcasting, ICT Applications and Services, Emergency Telecommunications, e-Waste, and Internet Governance

A regional governance structure for t the Centres of Excellence has been put in place in the form of regional Steering Committees which meet once every year to oversee the operations of the Centres of Excellence and provide strategic direction and advice to ITU. The Centres of Excellence have proved to be a key vehicle for training and capacity building for the ITU membership.

- 187. 4G Mobile Networks, Digital Terrestrial Television, Spectrum Utilization and Harmonization, TV White Spaces, Security Information Systems, Web Security, Satellite Network Registration Procedures and International Relations, IPv6 Infrastructure Security, Spectrum Monitoring, Next Generation Broadband Internet Access, New and Advanced Technologies of Digital Television and Related Video Applications, Optical Networks, Methods of spectrum allocation and assignment, Principles for Radioelectronic and Spectrum Management.
- 188. As the main ITU umbrella for training activities, the ITU Academy has finalised the development of the ITU Spectrum Management Training Programme (SMTP). This program consists of 9 modules at Basic level and six modules at Advanced level, leading to the award of a professional ITU certificate, or even a degree, if taken through University. The program was pilot tested in January 2015 with 45 participants from all regions taking part in an online course on Module 1 on the "Legal basis and regulatory framework of Spectrum Management". An agreement has already been signed with one University, to deliver SMTP as a program up to degree level, and discussions are ongoing with Universities and other institutions such as Centres of Excellence, interested in delivering this program as part of their curricula. A Quality of Service Training Program (QoSTP) has also been developed. Modules are also being developed for ICT and Climate Change. In all instances the ITU Academy work A Masters in Communications Management degree programme has also been launched in collaboration with the United kingdom Telecommunications academy ( UKTA).
- 189. The ITU Academy platform underwent a major upgrade in 2015, which resulted has witnessed an improvement in its service offerings and functionalities that will greatly improve the quality of service and experience offered to the ITU members and all other users. The new themes in Moodle and in Joomla are inspired by academic institutions platforms to give the learner a good learning environment experience, There are new and improved features—such as online payment using debits and credit cards; online registration; smart search engine; smart content repository; personalized—learner

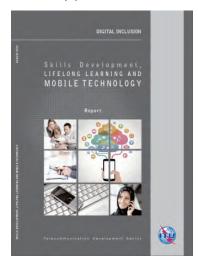




access, and improved course design and delivery, among others. Guidelines have been prepared to assist users, -mainly Centres of Excellence- to understand the new platform. A training of ITU staff from all the bureaus on the use of the ITU Academy platform will take

place in 2016. Sixteen staff members have enrolled for the training.

190. Close contact has continued with the BDT on work of mutual interest to ITU-R and ITU-D. The BR has participated in relevant meetings of ITU-D Study Groups, Rapporteur Groups and TDAG, where liaison activities have involved topics such as spectrum management, digital broadcasting and migration from analogue systems, transition towards and implementation of IMT, and broadband wireless access technologies. These topics are in addition to the collaboration undertaken through ITU-D Question 9-3/2 that calls for the identification of study topics in ITU-R (and ITU-T) considered of particular interest to developing countries.



191. In response to requests from the BDT, experts from ITU-R and BR have participated in ITU seminars and workshops organized by ITU-D (see also Section 8.2.4). Within the framework of Resolution ITU-R 11-4 (Further development of the spectrum management system for developing countries), BR has been involved with the design, testing and training associated with the software SMS4DC (Spectrum Management System for Developing Countries), with advice provided on the use of relevant ITU-R Recommendations. In addition, ITU-R Study Group 1 has continued to work closely with the ITU-D Study Groups in pursuing studies on spectrum usage in accordance with Resolution ITU-D 9.

In 2013, the BR developed jointly with the BDT an ITU Report on the Digital Dividend. On this basis, ITU-R Study Group 1 has since developed and recently adopted an ITU-R Report on this subject.

With the needs of developing countries always in mind, the production of Handbooks has continued to be viewed as a major Study Group activity. In this respect, new or revised Handbooks have been developed on topics such as spectrum monitoring, radiowave propagation information for designing terrestrial point-to-point links, amateur and amateur-satellite services, migration to IMT-2000 systems and use of radio spectrum for meteorology – weather, water and climate monitoring and prediction.

Since 2013, the BR actively participated in a joint project with the BDT to develop the Spectrum Management Training Programme (SMTP) through its different phases: design, material preparation, peer review, pilot test (conducted in 2015 and now under evaluation). In 2016, it is planned to implement the full SMTP programme for training of the staff of a Spectrum Regulatory Authority in a developing country.

192. In addition to climate change and emergency communications, topics of mutual interest between ITU-R and ITU-T include IMT 2020, the effects of human exposure to radio frequencies, power line transmission systems, intelligent transport systems, common patent policy and intellectual property rights and audiovisual media accessibility.





- 193. SG 6 established a new Intersector Rapporteur Group (IRG) on Integrated Broadband Broadcasting (IBB) systems in addition to the two existing IRGs on audiovisual media accessibility (IRG-AVA) and on audiovisual quality assessments (IRG-AVQA).
- 194. There continues to be a requirement for close coordination on the various topics being addressed by ITU-T that impinge on radiocommunication issues to reduce the potential for overlap, duplication and conflict of work undertaken by the two Sectors.
- 195. A publication on Skills Development, Lifelong Learning and Mobile Technology, has been produced and is ready for release. The document is the work of an international team of experts, who have contributed to nine chapters dealing with using mobiles for learning and capacity building.
- 196. Under a partnership with International Telecommunications Satellite Organisation (ITSO), two training activities on satellite communications were held in Nairobi, Kenya, for English speaking Africa June 2015 and in Dakar, Senegal for French speaking Africa in. The training in Nairobi attracted 40 participants, while the Dakar training attracted 37 participants. Similar training will be repeated within the region in 2016. Another training for the Caribbean region will be held in September in Trinidad and Tobago, under the auspices of the Caribbean Telecommunications Union (CTU).



- 197. A regional capacity building workshop was held on Child-online safety, for countries of the Common Market for Eastern and Southern Africa (COMESA) in Lilongwe Malawi. The main objective of this workshop provided a platform to African countries to share experiences, strengthen their knowledge and raise awareness on children and youth safe digital inclusion policies and strategies, through a multi-stakeholders approach and interaction.
- 198. Following a Capacity building Cooperation Agreement signed between ITU and Intel in 2014 during WTDC-14, a virtual Classroom training on Universal Service Policy for Broadband Rollout and Implementation of Smart Learning was run in March for the Arab States. The training covered areas such as Universal Service Policy for Broadband Rollout; Effective use of Universal Service Funds (USF) for broadband projects; and Leveraging ICTs for education in a broadband environment. Programme (STM Programme) is being negotiated for the Americas region. This project is designed to improve the managerial skills and competencies of the professional and executives working in the ICT sector in the Americas Region. The STM Program will comprise of 9 modules to be delivered through a constellation of partner universities within the region.





199. **ITU Regional Radiocommunication Seminars (RRS):** The Radiocommunication Bureau (BR) organizes world seminars on spectrum management every two years in Geneva, as well as regional seminars aiming at the particular needs of developing countries.

The main objectives of BR seminars and workshops are:

- to provide assistance to Member States in spectrum management activities, e.g. through training, information meetings, seminars, development of handbooks and the provision of tools for automated spectrum management; and
- to expand the assistance offered to Member States in coordinating and registering frequency assignments and in applying the Radio Regulations, with special attention to developing countries and Member States that have recently joined the Union.

The following RRS were held in 2015 -2016:

RRS-15-Eastern Europe and CIS, Bishkek, Kyrgyz Republic, 2-6 March 2015

RRS-15-Africa, Niamey, Niger, 20-24 April 2015

RRS-15-Asia-Pacific, Manila, Philippines, 25-30 May 2015

RRS-15-Americas, San Salvador, El Salvador, 27-31 July 2015

RRS-16-Americas, Port of Spain, Trinidad and Tobago, 18-22 July 2016

**RRS-16-Asia-Pacific,** ITU/PITA Regional Radiocommunication Seminar 2016 for Asia&Pacific, Apia, Samoa, 19-23 September 2016.

## 200. Inter-Sectoral cooperation on ITU Workshops

The period since WRC-12 witnessed a busy schedule of events organized entirely by BR or in cooperation with BDT/TSB and/or other bodies (see <a href="http://www.itu.int/ITU-R/go/seminars">http://www.itu.int/ITU-R/go/seminars</a>). A new series of workshops on the efficient use of the orbit and spectrum was organized with a view to openly discussing issues often qualified as "sensitive" and making progress on the exchange of ideas to adapt and improve the international satellite regulatory registration framework at the next WRC.

Within the framework of the ITU Centres of Excellence for Asia-Pacific Region, the Bureau organized the first online training program on "Satellite Network Registration Procedures and International Regulations" for the Asia-Pacific Region jointly with the ITU office in Bangkok (Thailand) and the State Radio Monitoring Centre (SRMC), MIIT, China, from 1<sup>st</sup> till 28<sup>th</sup> June 2015. The program focused on Satellite Network Registration Procedures and International Regulations and covered an introduction to satellite projects, the Radiocommunication Sector in the ITU & Orbit-Spectrum Regulations, Non-planned Space Services Procedures, Planned Space Services (BSS & FSS) Procedures and other topics.

The course objectives were to develop a basic knowledge of satellite projects, to understand the international regulations governing satellite network registration, to understand in detail, the coordination procedures concerning satellite registration and share experiences and challenges concerning satellite network registration.

An ITU Symposium and Workshop on small satellite regulation and communication systems was also held in Prague, Czech Republic, 2-4 March 2015. The three-day event focused on the regulatory aspects of the use of the radio-frequency spectrum and satellite orbits for small satellite communication systems, in particular on the application of the provisions of





the ITU Radio Regulations. It was organized by the ITU in cooperation with the Czech Technical University's Faculty of Electrical Engineering (CTU FEE), an ITU Academia Member. It was attended by more than 160 participants from around 40 countries.

The participants concluded the Symposium with the unanimous endorsement of the 'Prague Declaration on Small Satellite Regulation and Communication Systems', which urges the small satellite community to comply with the applicable international and national laws, regulations and procedures, indispensable to guarantee the long-term sustainability of small satellite projects, the avoidance of harmful interference and proper management of space debris. The declaration also recommends that ITU continue capacity-building activities on the regulation of satellite communication systems (see <a href="http://www.itu.int/en/ITU-R/space/workshops/2015-prague-small-sat/Documents/Prague%20Declaration.pdf">http://www.itu.int/en/ITU-R/space/workshops/2015-prague-small-sat/Documents/Prague%20Declaration.pdf</a>).

The Bureau intends to continue its cooperation with the ITU Centres of Excellence for Asia-Pacific Region and to organize, on a regular basis, online courses on satellite network registration procedures. In view of the success of this activity, the Bureau intends also to develop the same online course for Africa and the Americas.

**Action Line C7: ICT Applications** 

**Action Line C7: E- Government** 



Related to the SDGs: SGD 9 (9.c), SDG 16 (16.6, 16.7, 16.10), SDG 17 (17.8)



201. The Action line C7 E Government Facilitation Meeting was held on the 5<sup>th</sup> of May 2016, entitled "How e-Government can ensure that No One is Left Behind in the Implementation of the Sustainable Development Goals (SDGs)". The participants discussed many issues, such as: the overall situation of e-government development in the world; e-participation initiatives at the local level, where citizens can report problems with public services; the problem of lack of lack of implementation of e-government strategy documents and lack of ownership of these documents, among others. Please read the outcomes here:

 $\frac{http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016\%}{E2\%80\%94ForumTrack-Outcomes.pdf}$ 





Action Line C7: E-Health, Action Line C7 E -Agriculture, Action Line C7 E-Education (also related to the 2030 Agenda for Sustainable Development)



#### **Related to the SDGs:**

- e-health: SDG 1 (1.3, 1.4, 1.5), SDG 2 (2.1,2.2), SDG 3 (3.3, 3.8), SDG 5 (5.6, 5.b), SDG 17 (17.8, 17.19)
- e-agriculture: SDG 1 (1.5) , SDG 2 (2.3,2.4,2.a) , SDG 3 (3.d),
   SDG 4, SDG 5 (5.5), SDG 8 (8.2) , SDG 9 (9.1, 9.c) , SDG 12 (12.8), SDG 13 (13.1, 13.3), SDG 17 (17.16, 17.17)



202. The Action line C7 E Health Facilitation meeting was held jointly with the Action line C7 E Agriculture Facilitation Meeting on the 2 of May 2016 as an integral component of the WSIS Forum 2016. It was co-organized by WHO, FAO and ITU. The topic of the meeting was "ICT Applications for Achieving SDGs". The session discussed the potential of ICT as a crosscutting enabler to address the multifaceted nature of nutrition and how ICTs can federate actions by addressing multiple interlinked goals. The different panelists looked at how impact can be increased by overcoming working in silos and avoiding duplication of efforts to tackle the development challenges of the 2030 Agenda more effectively. Please read the outcomes here:

http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016%E2%80%94ForumTrack-Outcomes.pdf



203. A High-Level joint ITU-WHO "Digital Health Policy Dialog" was organized in Geneva on 23-24 May 2016. The event facilitated a dialog on how policies and cross-sectoral collaboration between the health and ICT sectors could foster innovation to improve the quality, equity





- and accessibility of health services in support of the timely attainment of the Sustainable Development Goal (SDG) for "Healthy Lives and Wellbeing for All (SDG3)".
- 204. A West African Regional Workshop on National eHealth Strategy Implementation was held on 26-27 April 2016 in Abuja, Nigeria to support West African countries to develop and/or to implement their national eHealth strategies.
- 205. A regional workshop on National eHealth Strategy development was conducted in Cotonou, Benin on 24-26 November 2015 to build country capacity to develop national eHealth Strategies.
- 206. Technical Assistance was provided to Benin and Mali to develop and validate their national e-Health Strategy.
- 207. A "Toolkit and Implementation Guidelines for a Digital Health Platform" was developed to guide decision makers and health planners in designing and implementing a national "digital health platform" on which local innovative, healthcare applications can be developed and hosted.
- 208. Three different mDiabetes programme were launched in Senegal, India and Egypt in collaboration between the Ministry of Health and the Ministry of ICT along with the private sector companies such as Alcatel Lucent, Sanofi and local telecom operators to help diabetic patients to safely manage their illness and reduce the number of emergency hospitalizations.
- 209. Three mSmokingCessation Programme were launched in India, Tunisia and the Philippines to use mobile to assist smokers to quit smoking.
- 210. Guides on the use of mobile for Smoking Cessation, Diabetes prevention and control and Cervical Cancer were finalized in collaboration with WHO and will be published by late 2016.
- 211. A joint UNESCO-ITU "Policy Forum on Mobile Learning" was held on 11 March 2016. The Policy Forum examined the role that government policies can play in fostering ICT innovation in the education sector and facilitating the use of mobile technology for learning. The Forum brought together ministers of education as well as ministers of ICT to discuss how new, more affordable digital devices can help address urgent educational challenges and meet the needs of students, teachers and administrators.
- 212. A joint ITU-UNESCO Policy Note on Mobile Learning was published in 3 languages (English, French and Spanish). The Policy Note is available at: <a href="http://www.itu.int/en/ITU-D/Initiatives/m-Powering/Pages/ITU UNESCO MLW PolicyForum.aspx">http://www.itu.int/en/ITU-D/Initiatives/m-Powering/Pages/ITU UNESCO MLW PolicyForum.aspx</a>.
- 213. A joint ITU-FAO e-Agriculture Strategy Guide was published to provide countries with a framework to develop their national e-agriculture strategies. E-agriculture strategies will help to rationalize both financial and human resources, and address ICT opportunities for the agricultural sector in a more holistic and efficient manner. The guide is available at: https://www.itu.int/pub/D-STR-E\_AGRICULT.01-2016
- 214. A joint ITU-UNESCO "Mobile Learning Policy Reviews" are planned to be conducted in targeted countries to ensure that education and ICT policies will help accelerate progress towards the Education 2030 agenda and broader Sustainable Development Goals.





- 215. Technical Assistance was provided to Sri Lanka, Bhutan, Fiji and PNG to develop their national e-Agriculture Strategy.
- 216. A joint ITU-FAO e-Agriculture Solutions Forum will take place in Bangkok on 29 August 2 September. The Forum will bring together proven e-agriculture solutions that will benefit agriculture stakeholders; share knowledge on successful e-agriculture solutions and identifying ways of scaling up implementations; and establish a Community-of-Practice (CoP) among e-agriculture solution providers. See for more information: <a href="http://itu.int/go/eagricultureforum2016">http://itu.int/go/eagricultureforum2016</a>
- 217. Two study group meetings for the new ITU-D Question 1/2 on "Smart Society" were held in 2016.
- 218. Two study group meetings for the ITU-D Question 2/2 on "e-Health" were held in 2016.

## **Action Line C7: E - Environment**



Related to SDGs: SGD 9 (9.4), SDG 11 (11.6, 11.b), SDG 13 (13.1, 13.3, 13.b), SDG 14, SDG 15



 $219.\, The$  Action line C7 E Environment Facilitation meeting was held on the 6th of May 2016

as an integral component of the WSIS Forum 2016. It was co-organized by WMO and ITU. The topic of the meeting was "Early Warning Systems for Disaster Risk Reduction". This session looked at technologies, processes policies and other means to strengthen the importance of early warning message dissemination to the last mile, the end user, and explored how capacity building in different areas of disaster risk reduction and management



could assist different stakeholders in achieving their. Some of these areas of action require innovative approaches, strong partnerships and advanced planning. Please read the outcome of the meeting here: <a href="http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016%E2%80%94ForumTrack-Outcomes.pdf">http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016%E2%80%94ForumTrack-Outcomes.pdf</a>

The Development sector of the ITU has undertaken several activities falling under the action line c7 e- environment, in particular Emergency Telecommunications, E-waste, Climate change, Diaster risk management and so on:

- 1. Emergency Telecommunications:
  - BDT deployed emergency telecommunications equipment to the following countries: Myanmar, Dominica, Niger, Fiji and Ecuador. The equipment included satellite mobile phones, broadband global area network (BGAN)





- terminals, laptops, and solar panels for charging the equipment. Training on the use of the equipment was also provided to staff designated by the respective governments.
- Early warning systems (EWS): Final implementation of the EWS for Uganda and ongoing implementation of the EWS Zambia in Zambia.
- Closure of the Movable and Deployable Unit Project as its implementation was completed.
- Ongoing implementation of the ITU Big Data Project for mitigating epidemics. This project involves three countries, Sierra Leone, Guinea and Liberia
- Development of the Second Global Forum on Emergency Telecommunications, GET-2016. This event took place in Kuwait City, Kuwait from 25 to 28 January 2016 and was jointly organized with the government of Kuwait. The Forum was attended by over 500 participants from 70 countries. Two Deputy Prime Ministers, Ministers, Regulators, Industry Leaders, United Nations Agencies, NGOs, academia and other humanitarian organizations were part of the participants.

#### 2. E-waste:

- o BDT completed a study entitled "Review of international practices relating to the control of imports/production of TV devices and e-waste management practices and standards in the Caribbean." There is also ongoing work on the development of e-waste policy for St Lucia. The <a href="output">output</a> developed by Question 8/2 during the previous study period will be taken into account during the development of the sample policy for St. Lucia.
- o BDT has initiated a similar study for the Arab Region to identify regional challenges with e-waste management and advise possible solutions.
- BDT has initiated a publication on successful case studies on e-waste management focused on ICT devices. This publication will consider effective solutions in Africa, America, Europe and Asia and the Pacific.

#### 3. Climate Change:

- O Within the ITU Academy, BDT is developing standardized training materials for a full training program on ICTs and Climate Change. Capacity Building efforts will be based on this material. Contributions by relevant experts in ITU-T have enriched the preparation of these modules. A number of academic institutions are also contributing and editing the materials. ITU Centres of Excellence will also benefit from these materials.
- BDT organized a session during the WSIS Forum in May 2016. A Thematic Workshop on Early Warning systems was jointly organized with WMO.
   This event focused on last mile connectivity to improve information





- gathering and reporting much needed for both climate change adaptation and mitigation.
- BDT is contributing to the organization of an International Conference on Early Warning Systems that will be held in Cancun, Mexico, in 22 May 2017. The following organizations will also be co-organizers: WMO, UNISDR, UNICEF, UNOCHA, among others.

The Standardization sector of the ITU has undertaken several activities falling under the action line c7 e- environment, in particular Smart Sustainable Cities and Climate Change, Internet of Things, Energy Efficiency and E-waste, E-waste and EMF, and have developed important standards and recommendations in the area, please see the activities in detail below,

#### **Raising Awareness**

# **Smart Sustainable Cities and Climate Change (Past Events)**

- o TSB organized the 5th Edition of the Green Standards Week in Nassau, The Bahamas from 14-18 December 2015. Since its inception in 2011, the annual Green Standards Week acts as global platform for discussion and knowledge-sharing in order to raise awareness of the importance and opportunities of using information and communication technologies (ICTs) to expedite the transition to smart sustainable cities and ensuring a sustainable urban future. Green Standards Week 2015 was dedicated to the theme of "Cities and Climate Change: From the New Climate Agreement to the New Urban Agenda". The 5th Edition of the Green Standards Week was organized together with the Basel Convention Regional Centre for the Caribbean Region (BCRC-Caribbean), the Basel Convention Regional Centre for the South American Region (CRBAS), the Economic Commission for Latin America and the Caribbean (ECLAC), the Regional Bureau for Sciences in Latin America and the Caribbean of the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Human Settlements Programme (UN-Habitat), the United Nations Industrial Development Organization (UNIDO).
- A Forum on "Internet of Things in Smart Sustainable Cities: A New Age of Smarter Living" was held on 18 January 2016 in Singapore in conjunction with the Study Group 20 Meeting. This forum provided an open platform for discussions on the role that Internet of Things (IoT) in dealing with development challenges and creating a smart world that facilitates sustainable economic development along with a high quality of life within smart sustainable cities.
- TSB together with UNECE organized a workshop on "Laying the Foundation for Sustainable Development Goals: Role of Smart Sustainable Cities" on 2 May 2016 during WSIS Forum. This session helped highlight the potential of smart sustainable cities in securing the main targets set forth in the Sustainable Development Goals (SDGs) and providing inputs to the New Urban Agenda. This event also provided a platform for discussions on fulfilling the global smart sustainable city agenda.





- TSB and UNECE are organizing a Forum on "Shaping smarter and more sustainable cities: striving for sustainable development goals" in Rome on 18-19 May 2016. Malcolm Johnson, Deputy Secretary General, ITU delivered opening remarks and launched the ITU and UNECE initiative titled United for Smart Sustainable Cities (U4SSC) and its Advisory Board forum. This Forum provided a platform for analysing and conducting discussions on the concept of smart sustainable cities. It also helped map current national and international initiatives in this area, and identify key challenges and opportunities at the local level. During the Forum, the various standards, indicators and methodologies implemented to assess the performance of cities were examined, along with the potential of smart sustainable cities in reinforcing the 2030 Agenda for Sustainable Development.
- A joint ITU-ISO-IEC <u>World Smart City Forum</u> took place on 13 July in Singapore. This
  Forum provided a platform for a range of in-depth discussions on smart city
  development linked to mobility, water, energy, cybersecurity and privacy.
- O TSB together with the Municipality of Montevideo (IMM), the Inter-American Association of Telecommunication Enterprises (ASIET), the Economic Commission for Latin American and the Caribbean (ECLAC), the Basel Convention Regional Centre for the South American Region (CRBAS) and the Development Bank of Latin America (CAF), organized the <a href="mailto:sixth edition of the Green Standards Week">sixth edition of the Green Standards Week</a>, from 5 to 9 September 2016 in Montevideo, Uruguay. The Green Standards Week 2016 was dedicated to the theme of "Shaping Smart Sustainable Cities: Towards Habitat III" and concluded with the Montevideo Declaration.

#### **Energy Efficiency and E-waste (Past Events)**

- o ITU, UNIDO, WIPO, WHO, ECLAC and Basel Convention organized a thematic workshop on "Towards Building Effective Partnerships for Sustainable Management of E-waste" on 5 May 2016 during the WSIS Forum. This event provided an ideal platform for discussions on developing effective international guidelines to deal with e-waste and ensuring that
- TSB and Huawei organized a Forum on "Building a Better Connected World, Making Networks Greener" held in Madrid on 12-13 May 2016. This Forum provided a platform for business representatives and professionals to discuss the latest key technologies and explore future evolution for energy saving in telecom networks.

#### **Future Events (Planned)**

#### **International Standards**

o ITU-T Study Group 5 on Environment and Climate is responsible for studies on methodologies for evaluating ICT effects on climate change and publishing guidelines for using ICTs in an eco-friendly way. Under its environmental mandate SG5 is also responsible for studying design methodologies to reduce ICTs and ewaste's adverse environmental effects, for example, through recycling of ICT facilities and equipment. The following Recommendations and Supplements have been worked on under SG5 from 2015-2016:





- (1) The following Recommendations ITU-T on Smart Sustainable Cities and Climate Change have been approved by ITU-T Study Group 5:
  - Recommendation ITU-T L.1503 (ex L.Cities Adaptation) <u>Use of information and communication technology for climate change adaptation in cities</u>: Through this Recommendation ITU-T, urban stakeholders, including mayors and city planners, are invited to consider novel approaches to sustainability by integrating the use of ICTs in their climate change adaptation strategies and policies. The following are the key steps have been highlighted in this Recommendation: (i) assess climate change risks and vulnerabilities, (ii) develop an action plan, (iii) identify the role of ICTs and infrastructure in the adaption plan (iv) implement adaptation actions and (v) monitor and evaluate adaptation actions using ICT.
  - Recommendation ITU-T L.1502 (ex L.Infrastructure Adaptation) <u>Adapting information and communication technology infrastructure to the effects of climate change</u>: This Recommendation identifies direct and indirect threats of climate change on ICT services and provides options for adaptation and mitigation.
  - Recommendation ITU-T L.1602 (ex L.KPIs-SSC-impact) Key performance indicators related to the sustainability impacts of information and communication technology in smart sustainable cities: This Recommendation gives a general guidance to cities and provide the definitions of key performance indicators (KPIs) related to the sustainability impact of information and communication technology (ICT) in the context of Smart Sustainable Cities (SSC).
  - Recommendation ITU-T L.1601 (ex L.KPIs-SSC-ICT) Key performance indicators related to the use of information and communication technology in smart sustainable cities: This Recommendation ITU-T L.1601 gives a general guidance to cities and provide the definitions of key performance indicators (KPIs) related to the use of information and communication technology (ICT) in the context of Smart Sustainable Cities (SSC).
  - Recommendation ITU-T L.1600 (ex L.KPIs-SSC-overview) Overview of key
    performance indicators in smart sustainable cities: This Recommendation
    gives a general guidance to cities and provide an overview of key
    performance indicators (KPIs) in the context of smart sustainable cities (SSC).
    This Recommendation is being developed with UNECE
  - Supplement 25- ITU-T L.1502 <u>Best practices for infrastructure adaptation to climate change</u>: This Supplement provides general principles and illustrates best practices on how ICT infrastructure can be adapted to cope with the effects of climate change.
  - Supplement 24-ITU-T L.1500 <u>Overview of climate change effects and possible impacts</u>: This Supplement aims to offer a better understanding of climate change effects that could assist in the development of national





- reports and recommendations related to adaptation, as well as be used as a reference to relevant decision makers and other recommendations.
- <u>Supplement 16-ITU-T L1500 Smart water management in cities</u>: This Supplement provides municipalities, decision-makers and interested stakeholders with an overview of the main technical aspects that need to be considered to effectively design and implement smart water management in cities.
- Supplement 15-ITU-T L.1500 Requirements for water sensing and early warning systems: This Supplement provides a general overview of the requirements for water sensing and early warning systems. This Supplement illustrates the different technologies for sensing water quality indicators, in addition to early warning systems.
- (2) The following Recommendation has been consented by SG5:
  - Draft Recommendation ITU-T L.1603 (ex L.KPIs-SSC-SDGs (L.KPI for SSC to reach) Key performance indicators for smart sustainable cities to assess the achievement of sustainable development goals: This Recommendation gives general guidance to cities and provides Key Performance Indicators (KPIs) for Smart Sustainable Cities (SSCs) to help cities achieve Sustainable Development Goals (SDGs).
- (3) The following Recommendation ITU-T on E-waste has been approved by SG5:
  - Recommendation ITU-T L.1102 (ex L.RareMetals-Label) "<u>Use of printed labels for communicating information on rare metals in information and communication technology goods</u>": Recommendation ITU-T L.1102 describes printed label methods to provide information on rare metals contained in information and communication technology (ICT) goods, and includes requirements specified in Recommendations ITU-T L.1100 and ITU-T L.1101 on the disclosure of rare metals information to consumers and recyclers.
- (4) The following Recommendation ITU-T has been consented by SG5:
  - Draft Recommendation ITU-T L.1002 (ex L.UPA portable) "External universal power adapter solutions for portable information and communication technology devices": This Recommendation ITU-T L.1002 defines requirements, and provides guidelines on environmental aspects, of universal power adapter solutions (UPA) designed for use with portable information and communication technology ICT devices.
- (5) The following Recommendation on Energy Efficiency has been consented by SG5:
  - Draft Recommendation ITU-T L.1350 (ex L.RBS assessment) <u>Energy efficiency metrics of base station site</u>: This Recommendation contains basic definitions of energy efficiency metrics, to evaluate the energy efficiency of a base station site including the energy consumption for: " All the telecom equipment inside the base station site."
- (6) The following Recommendations on Energy have been approved by SG5:





- ITU-T L.1302 (ex L. Assessment\_DC) <u>Assessment of energy efficiency on infrastructure in data centre and telecom centre</u>: Recommendation ITU-T L.1302 contains the energy efficiency assessment methodology for data centre and telecom centre, test equipment accuracy requirements, assessment period, assessment conditions and calculation methods.
- (7) Based on its Recommendation and Supplements, SG5 is also working on specific roadmaps to attain the greenhouse gas and e-waste targets stipulated in the Connect 2020 Agenda.
- o ITU-T Study Group 20 on Internet of Things (IoT) and its applications including smart cities and communities (SC&C) is working to address the standardization requirements of Internet of Things (IoT) technologies, with an initial focus on IoT applications in smart cities and communities (SC&C). The following Recommendations and Supplements have been worked on under SG20 from 2015-2016
- (1) The following Recommendations and Supplements on IoT and Smart Cities have been approved by SG20:
  - Recommendation ITU-T Y.4702 (ex Y.IoT-DM-reqts) <u>Common requirements</u>
     and <u>capabilities of device management in the Internet of Things</u>: This
     Recommendation provides the common requirements and capabilities of
     device management in the Internet of Things (IoT). The provided common
     requirements and capabilities are intended to be generally applicable in
     device management application scenarios.
  - Recommendation ITU-T Y.4553 (ex Y.IoT-SPSN, ex F.IoT-SPSN) Requirements
     of smartphone as sink node for IoT applications and services: This
     Recommendation provides common Requirements of a smartphone working
     as a sink node (SPSN) for IoT applications and services.
  - Y Suppl. 32 to ITU-T Y.4000 series (ex Y.Supp.SC-guide to Y.4000 series) <u>Smart sustainable cities: a guide for city leaders</u>: This Supplement helps identify practical steps based on which urban decision makers can envisage and build their very own Smart Sustainable City.
  - Y Suppl. 31 to ITU-T Y.4550 series (ex Y.Supp.SC-buildings to Y.4000 series)
     Smart Sustainable Cities Intelligent sustainable buildings: This Supplement contains the important aspects linked to establishing intelligent sustainable buildings.
  - Y Suppl. 33 to ITU-T Y.4000 series (ex Y.Supp.SC-plan to Y.4000 series) <u>Smart Sustainable Cities Master plan</u>: This Supplement seeks to provide municipalities and interested stakeholders with a general overview of the stages and technical specifications that need to be considered to effectively apply the notion of SSC to their respective cities
  - •
  - Y Suppl. 34 to ITU-T Y.4000 series (ex Y.Supp.SC-stakeholders to Y.4000 series)
     Smart Sustainable Cities Setting the stage for stakeholders' engagement: This





- Supplement is addressed to a broad audience of city decision makers and practitioners involved in the design and implementation of SSC. It is intended to be as general and inclusive as possible, applicable and relevant to any city, regardless of its size or location, in both developed and developing countries.
- Y Suppl. 27 to ITU-T Y.4400 series (ex Y.Supp.framework-arch-SC) <u>Smart Sustainable Cities Setting the framework for an ICT architecture</u>: This Supplement describes the ICT architectural framework of a smart sustainable city and concludes on corresponding architecture views and guides. It is applicable to ICT architecture for Smart Sustainable Cities.
- Y Suppl. 28 to ITU-T Y.4550 series (ex Y.Supp.IMSC to Y.4000 series)- <u>Smart Sustainable Cities -Integrated management</u>: This Supplement proposes an integrated management solution for smart sustainable cities (IMSSC). With IMSSC, the sensors, nodes, and models can function in an organized way.
- Y Suppl. 29 to ITU-T Y.4250 series (ex Y.Supp.MSinfra to Y.4000 series)- Smart Sustainable Cities Multi-service infrastructure in new-development areas:
   This Supplement describes the various infrastructures for a smart sustainable city in a new-development area. The designated infrastructure in this document includes: common physical infrastructure highlighting ICT, ducted and trenched infrastructure below ground, over ground common physical infrastructure, common risers in buildings, etc.
- Y Suppl. 30 to ITU-T Y.4250 series (ex Y.Supp.Overview-SC-infra)- <u>Smart Sustainable Cities Overview of smart sustainable cities infrastructure</u>: This Supplement presents the overview of infrastructure in cities. Generally the city infrastructure can be classified as digital/ICT infrastructure and physical infrastructure.
- ITU-T Y.Suppl.42 to ITU-T Y.4100 series (ex Y.UCS-usecase) "<u>Use cases of User-Centric work Space (UCS) Service</u>": This Supplement to ITU-T Y-series Recommendations provides a description of the UCS concept and its associated enhanced user experience. Also, this Supplement provides use cases of UCS service to illustrate how this service can be implemented.
- (2) The following Recommendations on IoT and Smart Cities have been consented by SG20:
  - Recommendation ITU-T Y.4113 (ex. Y.IoT-network-reqts) "Requirements of the network for the Internet of Things": This Recommendation describes the requirements of the network for the Internet of Things (IoT) that enhance the common requirements of the IoT identified in ITU-T Recommendation Y.2066. The requirements focus on the transport functions of the network, but also cover service support functions. The requirements described in this Recommendation are common requirements for core network, access network and IoT area network. There are a lot of use cases of the IoT with heterogeneous characteristics. Considering the current status of deployments in the IoT market, this Recommendation focuses on the





- requirements of the network for the IoT with smart meters and sensors as devices. Other use cases will be covered in the future revisions of this Recommendation.
- Recommendation ITU-T Y.4451 (ex. Y.IoT-cdn) "Framework of constrained device networking in the IoT environments": This Recommendation specifies the framework of constrained device networking in the Internet of things (IoT) environments in an aspect of the communications of IoT device. This Recommendation describes the concept of constrained device networking in the IoT environments and communication of constrained devices. It also describes network architecture and mechanisms of constrained device networking.
- Recommendation ITU-T Y.4452 (ex. Y.WoO-fw) "<u>Functional framework of Web of Objects</u>": This Recommendation provides the functional framework of Web of Objects (WoO) including the concept, the reference model, functional capabilities and information models.
- Recommendation ITU-T Y.4453 (ex. Y.IoT-ASF) "Adaptive software framework for IoT devices": This Recommendation addresses the concept of the adaptive software framework (ASF), identifies high-level requirements, and provides a reference functional architecture for the IoT devices. The ASF is a framework to manage and control adaptive IoT applications in real-time and dynamic way, and enables optimal QoS performance. The adaptive IoT application is an IoT application where its performance is changed by altering system resource allocation (e.g., the number of CPU cores, GPU utilization, network bandwidth, etc.). Therefore, the ASF can provide optimal applications working on IoT devices. And, the ASF is based on the IoT reference model [ITU-T Y.4000].
- (3) The following Recommendation on IoT and Smart Cities has been determined by SG20:
  - Recommendation ITU-T Y.4454 (ex. Y.SC-platform) "Platform Interoperability for Smart Cities": An interoperable platform of smart city services ensures their correct functioning, as well as efficiency, performance, security and scalability. The platform provides a comprehensive system for smart city management.

#### **Shaping Smart Sustainable Cities Worldwide**

- Since May 2015, TSB has been conducting various smart city pilot projects in various international cities across the globe:
  - Dubai became the world's first city to join ITU's smart city pilot project. By participating in this project, Dubai aims to assess the efficiency and sustainability of its operations using the key performance indicators developed by the ITU. The two-year pilot project is currently ongoing. This pilot project will





- also help evaluate the feasibility of the indicators with the aim of contributing to their international standardization.
- Several other cities (and countries) including Singapore, Valencia, Montevideo, Buenos Aires and Manizales have joined ITU's pilot project.
- O The <u>United for Smart Sustainable Cities (U4SSC)</u> initiative was launched by ITU and UNECE in response to the Sustainable Development Goal 11: "Make cities and human settlements inclusive, safe, resilient and sustainable". Since its inception in May 2016, the U4SSC has been advocating for the inclusion of public policy to encourage the use of ICTs to facilitate and ease the transition to smart sustainable cities. The first U4SSC Meeting was held on 21-22 July 2016 in Geneva and was attend by 70 participants from international organizations, governmental sectors, private sector entities, NGOs and academia. U4SSC currently enjoys the participation and support of 16 UN Agencies.

# **Working Together with the UN System**

- o E-waste:
  - TSB represents ITU in the Step Initiative and participate in its meetings. TSB has been actively contributing to the Step publications and project plans.
  - TSB represents ITU in the PACE Initiative and participate in its meetings and contributes to its publications.
  - TSB represents ITU in Global Partnership on Waste Management (GPWM) and chairs the working on e-waste.
- o Smart Sustainable Cities:
  - ITU and UNECE have been collaborating with 16 other UN Agencies within the U4SSC (please see above for more information).
  - Habitat III:
    - TSB has served as UN Advisor for Habitat II Policy Unit 8 on "Urban Ecology and Resilience" and Habitat III Policy Unit 10 on "Housing Policies".
    - TSB has also served as a Co-Leader for Habitat III Issue Paper 21 on <u>Smart Cities</u> and has contributed to the Issue Paper 17 on <u>Cities and Climate Change and Disaster Risk Management</u>.
    - ITU and UNECE organized a meeting on "Shaping Smart Sustainable Cities for the
      New Urban Agenda" during the European Habitat Conference on 16 March 2016.
      This session analysed how the internationally developed indicators formulated by
      UNECE and ITU will help countries surge forward in the smart sustainable city realm,
      thereby providing all countries with a benchmark for smart sustainable operations.
    - ITU, UNECE and the Habitat III Secretariat organized the <a href="Cross-Cutting Expert Group Meeting on Driving Smart Sustainable Cities Worldwide">Cities Worldwide</a> on 21 July 2016. This EGM was a closed meeting attended by 50 experts. This EGM successfully provided concrete recommendations for integrating the smart sustainable cities approaches in the Draft New Urban Agenda, in particular in its chapters on implementation and follow-up and review. Consequently, the smart city approach found appropriate mention and recognition in the draft of the New Urban Agenda released after the





<u>Habitat III Prepcom 3 (25-27 July 2016) in Surabaya</u>. ICT/technology related aspects have also been included in this draft.

• ITU plans to organize a side-event on smart sustainable cities in collaboration with other UN Agencies at the Habitat III Conference in Quito in October 2016.

## Publications, Reports, Blogs, Webpages and Declarations

### Smart Sustainable Cities, Climate Change and Internet of Things:

- To promote ITU's smart sustainable city agenda, TSB published a blog entry on "A City's Journey Towards Smart Sustainability" prepared the TSB Director, Chaesub Lee. This blog was published in anticipation of the World Smart City Forum, which was co-organized ITU, IEC and ISO in May 2016.
- o Green Standards Week 2015 concluded with the <u>Bahamas Declaration</u> which highlights the importance of tackling uncontrolled urbanization by powering smart sustainable cities, nations and islands. This Declaration calls for the shaping of a global agenda to assist countries, cities, small island developing states (SIDS) in becoming smarter and more sustainable.
- The ITU-T Focus Group on Smart Sustainable Cities (FG-SSC) concluded its work in May 2015. Since its inception in 2013, FG-SSC had acted as an open platform for smart-city stakeholders such as municipalities; academic and research institutes; non-governmental organizations (NGOs); and ICT organizations, industry forums and consortia, to exchange knowledge in the interests of identifying the standardized frameworks needed to support the integration of ICT services in smart cities. The FG-SSC ended with the development of 21 Technical Reports and Specifications on Smart Sustainable City related aspects. A flipbook on "Shaping smarter and more sustainable cities: Striving for sustainable development goals", encompassing all the 21 Technical Reports and Specifications, has been launched by the TSB in January 2016. This flipbook serves as a comprehensive base for smart city knowledge. TSB has published this flipbook with the expectation that it can be utilized by urban leaders to drive smart and sustainable city transitions in keeping with the recently set sustainable development goals (SDGs).
- O TSB contributed to the ITU News Issue No. 2 (2016) on "Building tomorrow's Smart Sustainable Cities". This ITU News Issue contains articles on pathway for smart sustainable cities, infrastructure for new smart sustainable cities, and integrated management for smart sustainable cities, among others. Some of the articles in this edition are based on the FG-SSC Technical Reports and Specifications.
- The <u>Rome Declaration</u> was adopted by the participants of the <u>Forum on "Shaping smarter and more sustainable cities: striving for sustainable development goals"</u> held in Rome from 18-19 May 2016. This Declaration aimed to highlight the potential that smart sustainable cities have in achieving the SDGs. It also advocated for boosting international cooperation ad collaboration on smart city issues between UN agencies, academia, industry and governmental sector.
- TSB also published a flipbook on "<u>Unleashing the potential of the Internet of Things</u>"
   in July 2016, containing the first set of ITU international standards for IoT. This





flipbook was published to assist a wide variety of stakeholders who are interested in enabling the coordinated development of IoT ecosystems.

The Montevideo Declaration was adopted at the Green Standards Week 2016, which took place from 5-9 September 2016. This Declaration highlights the importance of ICTs and smart cities for sustainable urbanization. Additionally, this Declaration also explores the possibility of utilizing smart cities to implement the New Urban Agenda in the future.

#### E-waste and EMF:

- o In 2015, ITU/TSB published a Report on "Monitoring of electromagnetic field levels in Latin America". This Report describes and analyses the implementation of Recommendation ITU-T K.83 "Monitoring of electromagnetic field levels" in the Latin American region. This Report is also available in Spanish.
- o ITU/TSB published a flipbook on "<u>Sustainable management of waste electrical and electronic equipment in Latin America</u>" in May 2016. This flipbook contains a study carried out to determine the current status of e-waste management in Latin America. Additionally, this flipbook also provides guidelines for a roadmap that would ensure that e-waste management is carried out in an environmentally sustainable manner in the region. This flipbook is also available in <u>Spanish</u>.

# Action Line C7: E-Science, (also related to the 2030 Agenda for Sustainable Development)



Related to the SDGs: SDG 1 ( 1.5) , SDG 4 ( 4.7) , SDG 6 (6.1, 6.a) , SDG 7 (7.a) , SDG 13 (13.1, 13.2, 13.3) , SDG 14 (14.a) , SDG 15 (15.9) , SDG 17 ( 17.6, 17.7)



- 220. 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. ITU is running the ITU Academy for trainings on ICT related issues. (https://academy.itu.int/).
- 221. Training on Spectrum management (Spectrum Management Training Programme) has been finalized and the first pilot training was delivered <a href="https://academy.itu.int/index.php?option=com">https://academy.itu.int/index.php?option=com</a> content&view=article&id=102&Itemid=6 41&lang=en
- 222. Cooperation agreements were signed with the University of Prague and AFRALTI (Kenya) for delivering part or the whole training programme.
- 223. Quality of Service Training Programme (QoSTP) is under development (https://academy.itu.int/news/item/1555/)





# Action Line C7: E-Learning (also related to the 2030 Agenda for Sustainable Development)



Related to the SDGs: SDG 4



224. The Action line C7 E Learning Facilitation meeting was held on the 6th of May 2016 as an integral component of the WSIS Forum 2016. The topic of the meeting was "Ensuring Inclusive and Equitable Quality Education and Promoting Lifelong Learning Opportunities

for All". This session explored actions related to supporting SDG 4 'Education' of the Education 2030 agenda, with a focus on supporting innovative strategies for access to quality learning opportunities, including through approaches related to access to knowledge and digital literacy for learners and teachers in the 21st Century. Discussions



focused on e-learning initiatives, the role of openly licensed educational resources (OER) and teacher education for the use of ICT in education. Please read the outcome of the meeting here:

http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016 %E2%80%94ForumTrack-Outcomes.pdf

225. As the lead agent for all ITU capacity building activities, the ITU Academy continues to produce publications as part of its main deliverables. A mobile publication "Skills Development, Lifelong Learning and Mobile Technology" is due for release soon. This publication explores in-depth the full potential of mobiles for learning outside the formal educational system and structures. The publication has 9 chapters, written by a global team of diverse experts, academics and practitioners, carefully chosen for their acknowledged

expertise in particular areas related to mobiles and learning. While discussing the capabilities of mobile devices and opportunities they present in improving access to learning, the 9 chapters of this publication cover among other topics, education aspects of mobile impact, uptake and usage; the basic platform, exploring the growing capabilities and extensibility of mobile devices through applications; as well as challenges and policy options. The summary of the publication will be made available on the ITU



Academy website for download, and the chapter conclusions of this publication are prepared for presentation in regional forums and workshops to facilitate discussions in the area of mobile learning.





The ITU Academy platform has just undergone an upgrade in 2015. This platform allows for single visibility of all ITU training related activities and delivery of online learning. The new themes in the learner management system (Moodle) and in the content management system (Joomla) are inspired by academic institutions platforms to give the learner a good learning environment experience, There are new and improved features such as online payment using debits and credit cards; online registration; smart search engine; smart content repository; personalized learner access, and improved course design and delivery, among others. Guidelines have been prepared to assist users, -mainly Centres of Excellence- to understand the new platform. A training of ITU staff from all the bureaus on the use of the ITU Academy platform will take place in 2016. Sixteen staff members have enrolled for the training.

#### **Action Line C7: E-Business**



Related to the SDGs: SDG 1 (1.4), SDG 2 (2.3), SDG 5 (5.b), SDG 8 (8.3, 8.9, 8.10), SDG 9 (9.3), SDG 17 (17.11)



227. The Action line C7 E Business Facilitation meeting was held on the 2nd of May 2016 as an integral component of the WSIS Forum 2016. The topic of the meeting was "Leveraging ICT to Support the SDG on Trade Growth for Least Developed Countries". This session considered the experience of businesses in Bangladesh, Sri Lanka and Zambia, among others, and discussed ways to better leverage the digital economy to meet



SDG target 17.11 on export growth in LDCs and other developing countries. Please read the outcome of the meeting here: <a href="http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016">http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016</a> %E2%80%94ForumTrack-Outcomes.pdf

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



Related to SDGs: SDG 2, SDG 4 (4.7), SDG 6 (6.b), SDG 8 (8.3, 8.9), SDG 11 (11.4), SDG 12 (12.b)



228. ITU actively facilitates access to and use of ICTs by Indigenous Peoples to contribute to their digital inclusion, social and economic development and preservation of their heritage and cultural legacy through the use of ICTs. In line with this goal ITU Members adopted Plenipotentiary Resolution 184 (Guadalajara, 2010) regarding facilities to provide fellowships to indigenous persons seeking to attend ITU events, workshops, training etc.





- 229. In accordance with the decision of WTDC-02, endorsed by WTDC-06 Resolution 46 within the framework of the Special Initiative "Assistance to Indigenous People" and in line with the WTDC-10 Resolution 68 revised at WTDC-14, with a view to support Member States in addressing special needs of Indigenous People as regards to equitable access, use and knowledge of information communication technology (ICT's), based on the preservation of their heritage and cultural legacy, the BDT developed since 2004 a Capacity building Programme targeting to use the ICTs as a tool to leverage their social and economic community development and to promote, preserve and protect their indigenous culture development.
- 230. To enable the development of this Capacity building Programme BDT included the relevant provisions in the activities of its Operational Plan with a view to support Member States in addressing special requests of Indigenous People developing and delivering dedicated training materials aiming at facilitating though the use and knowledge of information communication technology (ICT's), provision of appropriate skills, and enabling to implement projects that respond to their community needs including the preservation of their heritage and cultural legacy.
- 231. BDT develops activities targeting to achieve the goal of digital inclusion, enabling universal, sustainable and affordable access to ICT's for All, including disadvantaged, marginalized and vulnerable groups, as well as Indigenous People.

Action Line C9: Media (also related to the 2030 Agenda for Sustainable Development)



Related to the SDGs: SDG 5 (5.b), SDG 9 (9.c), SDG 12 (12.8), SDG 16 (16.10)



232. As the Partner for Action line C9 Media, the ITU carries out several projects and activities. The Action line C9 facilitation meeting was held on the 5th of May 2016, as an integral component of the WSIS Forum 2016. The title of the meeting was "Promote Media Freedom and Internet Universality at the Heart of Achieving SDG Target 16.10". Audience and panelists highlighted the achievement of post 2015 WSIS Outcome Document on media related issues, and explored the challenges to operationalize he two proposed indicators of SDG Target safety of journalists, and access to information. Please read the outcome of the meeting here: <a href="http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016/E2%80%94ForumTrack-Outcomes.pdf">http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016/E2%80%94ForumTrack-Outcomes.pdf</a>







- 233. A number of recommendations relevant to providing access to ICTs through terrestrial and satellite radiocommunication and broadcasting infrastructures have been 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.
- 234. Moreover, 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 Next Generation Networks (NGN) to reduce international imbalances affecting the media, particularly as regards infrastructure and technical resources. ITU-T is also working to enhance accessibility features of audio-visual media through the IRG AVA, and has organized two IPTV Application Challenges to promote innovative IPTV applications, and motivate experts across the broad IPTV ecosystem to develop original and creative IPTV applications based on ITU's suite of IPTV Recommendations.
- 235. During WTDC-14 Digital broadcasting has been identified as one of the regional initiatives in several regions, and ITU members have recognized the importance of managing the transition smoothly. ITU, in cooperation with Korea, Japan, and Australia, has provided assistance on Digital Broadcasting Transition with updating Guidelines for roadmap development for world-wide, and developed roadmaps for Afghanistan, Fiji, Indonesia, Lao PDR, Solomon Islands, Vietnam, Vanuatu, Guyana, Gabon, Democratic Republic of the Congo, Equatorial Guinea, Bangladesh, Pakistan, Micronesia, Samoa, Myanmar, Timor-Leste, Kiribati, Tonga, Bhutan and Nauru.
- 236. Also, in cooperation with the Latin-American Development Bank (CAF), ITU is providing support to 8 countries (Bolivia, Dominican Republic, Venezuela, Costa Rica, Panama, Colombia, Paraguay and Jamaica) in the Americas Region and translated the guidelines into Spanish.
- 237. In addition, 5 other countries in Latin-America were assisted within the BDT Operational Plan.





- 238. Case studies on the experiences in digital terrestrial television broadcasting transition for Thailand, Japan and Australia have been prepared. Also a report was prepared on the Interactive Multimedia Services and Pay TV in ASP.
- 239. Several workshops were delivered on the subject together the BDT and the BR all around the world. On 17 June 2015, on the date of the analogue switch-off in UHF bands in Region 1, ITU organized a Symposium on the Digital Broadcasting Transition.
- 240. ITU participated in the EBU (2016 June) and ABU (2015 October) Technical Assembly meetings.
- 241. ITU-ABU organized Pacific Media Partnership Conference 2015: Partnering for Broadcasting, Apia Samoa, 25-27 August 2015, Apia, Samoa (50 participants from 20 countries)
- 242. ITU developed and is maintaining a database for following the transition from analogue to digital terrestrial television broadcasting:
  - http://www.itu.int/en/ITU-D/Spectrum-Broadcasting/Pages/DSO/Default.aspx

# 243. ITU Membership outreach:

ITU-R Outreach activities include the information and assistance to membership, the publication of ITU-R outputs and their dissemination, the organization of, and the participation in, seminars and workshops, and the development and maintenance of communication and promotion tools. The purpose of these activities is to ensure that the outputs produced by the ITU-R Sector (regulations, recommendations, reports and handbooks) are disseminated worldwide and familiar to the ITU membership and to stakeholders of spectrum, and that they form the basis for the formulation of spectrum management policies and decisions and for the use of radiocommunications in general. To carry out these activities, the BR relies on close cooperation with the other Bureaux and Sectors, the ITU regional and area offices and the relevant international organisations and national authorities.

Member States of ITU and Sector Members participate actively in the work of the Radiocommunication Sector. Since its opening to the private sector, the ITU membership represents a cross-section of the industry, from the world's largest manufacturers, carriers, operators and system integrators to small, innovative players of the new information and communication technology field.

#### Current members include:

- 193 ITU Member States, which constitute the Union, set its mandate and contribute to the work of ITU as a whole;
- More than 700 ITU Sector Members (which participate in the work of a defined Sector (R, T or D)) and ITU Associates (which work within the framework of a specific Study Group). These include operating agencies, scientific or industrial organizations, financial and developmental institutions, other entities dealing with telecommunication matters, regional and other international telecommunication, standardization, financial or developmental organizations;





More than 100 academia members.

In its efforts to ensure the widest participation in the enhancement of worldwide communications and that the interests of all stakeholders are taken into consideration, ITU encourages new entities and organizations to join the Union as Sector Members or Associates. In addition, ITU seeks to further develop intellectual cooperation with educational institutions and universities.

#### (d) United Nations Group on the Information Society (UNGIS)

244. UNGIS was endorsed by the CEB in April 2006 and it 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.



- 245. ITU remains the vice-chair and will take over the Chairmanship in 2017.
- 246. At its annual gathering at the WSIS Forum 2016, the United Nations Group on the Information Society (UNGIS) held its 13<sup>th</sup> High-level and Working-Level meetings. During the working-level meeting the annual rolling work plan was prepared and endorsed by the members.
- 247. One of the items for the work-plan follow up is para 12 of Outcome document of the high-level meeting of the General Assembly on the overall review of the implementation of the outcomes of the World Summit on the Information Society, adopted on 16 December 2015. It reads:

"We commit to harnessing the potential of information and communications technologies to achieve the 2030 Agenda for Sustainable Development and other internationally agreed development goals, noting that they can accelerate progress across all 17 Sustainable Development Goals. We accordingly call on all Governments, the private sector, civil society, international organizations, the technical and academic communities and all other relevant stakeholders to integrate information and communications technologies into their approaches to implementing the Goals, and request United Nations entities facilitating the World Summit on the Information Society action lines to review their reporting and work plans to support implementation of the 2030 Agenda."

248. In December 2015, on the occasion of the WSIS+10 High-Level Event the Chief Executive Board, composed by all heads of UN System, has endorsed a Joint Statement reaffirming the important role of information and communications technologies (ICTs) as a critical





enabler for advancing the globally agreed development goals and pledge their collective support for the implementation of the WSIS Outcomes. Please read the <u>Chief Executives</u> Board Joint Statement.

249. ITU continues to provide secretariat support to UNGIS and maintains the official UNGIS webpage www.ungis.org.

#### (e) Measuring the Information Society (Para113-119 of TAIS)

 ITU continues to monitor the development of the digital divide, through appropriate benchmarks and indicators. ITU maintains the World Telecommunication/ICT Indicators Database, which is updated twice a year (in June and in December), disseminated widely and which can be accessed online. To improve data availability and comparability, ITU works closely with its member states, particularly the Ministries in charge of telecommunication, regulatory agencies, and national statistical offices.



- 2. In 2015-16, more than 180 statistical indicators from over 200 economies worldwide were collected through five annual questionnaires. The data were disseminated through the ITU website, online portal, electronic download and USB-key and printed publications such as the 40th edition of the Yearbook of Statistics, and the 20th (June 2016) edition of the World Telecommunication/ICT Indicators database (WTID), available for both Windows and Mac users.
- 3. In June 2016, ITU published the "ITU ICT Facts and Figures 2016" featuring end-2016 estimates for key telecommunication/ICT indicators, including on mobile-cellular subscriptions, Internet use, fixed and mobile broadband services, home ICT access, and more. 2016 marks the year when the international community is embarking on the implementation of the 17 Sustainable Development Goals (SDGs) and their 169 targets. ITU data



inform public and private-sector decision makers, and help ITU accomplish its mission: to make use of the full potential of ICTs for the achievement of the SDGs.

4. ITU is an active member of the Partnership on Measuring ICT for Development and together with UNCTAD and UIS, one of the three members of its Steering Committee. Over the years, the Partnership has grown to a total of 14 partner organizations, with the ILO joining in 2014. In 2014, the Partnership also celebrated its 10th anniversary and at that occasion organized a special event during the WSIS Forum 2015 and the ITU World Telecommunication/ICT Indicators Symposium 2014. The Partnership has been very active

in tracking the progress of the WSIS Targets and has also taken a lead role in increasing awareness about the importance of ICT for development and in international ICT monitoring.



The Partnership has made a concerted effort to highlight the role that ICTs will play in achieving the SDGs and prepared a joint proposal of ICT indicators to help track the SDGs





and targets. In February 2015, this proposal was presented as a background document to the UN Expert Group Meeting on the indicator framework for the post-2015 development agenda. The proposal was also presented during the WSIS Forum 2015, when the Partnership organized a session on the ICT indicators for monitoring the SDGs. In May 2016, the Partnership organized a session during WSIS-2016 that discussed how ICT statistics will allow to track development goals going forward and the possibility of using new data sources to track the SDGs and monitor progress in ICT for development.

- In March 2015, at its 46th session, the United Nations Statistical Commission (UNSC) 5. created an Inter-agency and Expert Group on SDGs (IAEG-SDGs), composed of Member States and including regional and international agencies as observers, to provide a proposal of a global indicator framework (and associated global and universal indicators). In March 2016, at its 47th session, the UNSC agreed on the global indicator framework, which will help monitor progress, identify challenges, and guide policy makers. The data for the 231 indicators included in this framework will be an essential part in the ambitious plan to eliminate poverty and hunger, protect the planet, combat inequalities and build peaceful, just and inclusive societies over the next 15 years. The data will also provide the basis for an annual UN progress report. The Commission agreed that this framework would be a practical starting point and that the indicators included in the framework would require further technical refinements. The framework includes 7 ICT indicators covering 6 targets under Goals 4, 5, 9, and 17. Five of the seven indicators are collected and disseminated by the ITU, namely: Target 4.4: Proportion of youth/adults with ICT skills, by type of skills (ITU); Target 5b: Proportion of individuals who own a mobile telephone, by sex (ITU); Target 9c: Percentage of the population covered by a mobile network, broken down by technology (ITU); Target 17.6: Fixed Internet broadband subscriptions, broken down by speed (ITU); and Target 17.8: Proportion of individuals using the Internet (ITU).
- 6. The Partnership on Measuring ICT for Development presented a report on ICT statistics at the 47th session of the UN Statistical Commission (UNSC) that took place in New York from 7 to 11 March 2016. The UNSC appreciated the report and congratulated the Partnership for the excellent work done and expressed support for the continuation of its activities in particular with respect to a regular review of the core list of ICT indicators; the work on gender and use of ICT; measuring international trade in ICT services and ICT-enabled services; and national coordination of ICT statistics. It further acknowledged the role of ICT as an enabler for achievement of the SDGs and the ICT sector as a major provider of big data, and recommended in that context that the Partnership develops guidance to improve cooperation with the different stakeholders for the purposes of producing high quality and timely ICT statistics and of leveraging the potential benefits of using big data for official statistics. The Commission recommended to increase efforts for strengthening capacity of national statistical systems in producing ICT statistics and requested the Partnership to report back to the Commission in 2018 with a review of the status of official ICT statistics and their integration into the monitoring framework of the 2030 Agenda. It further noted that the Partnership, created to support ICT statistics, may be a useful model for the organization of other partnerships, such as those that are anticipated to emerge in support of the UN World Data Forum, which will be organized under the leadership of the High Level Group on Partnerships, Coordination and Capacity Building for statistics for the 2030 Agenda for Sustainable Development.





- The 6th Meeting of the Expert Group on Telecommunication/ICT Indicators (EGTI) and the 3rd Meeting of the Expert Group on ICT Household Indicators (EGH) took place back-toback in Geneva, in September 2015. The EGH meeting were attended by more than 90 participants, representing national statistical offices, ministries, regulators and international and regional organizations, as well as the private sector. The main topics covered were indicators on barriers to Internet access by households, barriers to Internet use by individuals, barriers to mobile phone ownership, ICT employment and the future work of the EGH. In addition, the meeting highlighted country experiences related to data collection, data verification and data dissemination. The EGTI was attended by 100 participants, including experts from regulators, ministries and national statistical offices from 48 countries, offices from 48 countries, as well as the African Civil Society for the Information Society, the African Telecommunication Union, Analysys Mason, América Móvil, China Mobile, the European Commission, Eurostat, Google, GSMA Intelligence, OECD, Research ICT Africa, UIS, UNCTAD and the Web Foundation. Key topics of the EGTI were Indicators on advanced mobile-broadband technologies (e.g. LTE), the revision of the sub-categories of mobile-broadband subscriptions, the collection of fixed-broadband subscriptions by type of organization, other administrative data sources – such as over-thetop (OTT) service providers – and indicators on m-banking services.
- The 13th World Telecommunication/ICT Indicators Symposium (WTIS) took place at the Grand Prince Hotel, in Hiroshima, Japan, from 30 November to 2 December 2015. The WTIS-2015 was hosted by the Government of Japan. The meeting attracted 566

participants from 87 Member States, 44 public and private organizations (including academia) and other regional and international organizations. WTIS-2015 featured discussions on pertinent topics such as big data from the ICT sector and the data revolution, progress in measuring



the impact of ICT, ICT indicators and the Sustainable Development Goals (SDGs) monitoring framework and measuring ICT innovation, alongside new developments in data visualization. The results of the work of the Expert Group on Telecommunication/ICT Indicators (EGTI) and the Expert Group on Household Indicators (EGH) were presented for adoption by the WTIS-2015.

9. The 2015 edition of the *Measuring the Information Society Report* was launched on 30 November, 2015, on the first day of the World Telecommunication/ICT Indicators Symposium (WTIS) 2015, in Hiroshima, Japan. Parallel launch events took place in Addis Ababa, Brasilia, Cairo, Geneva and Moscow. The MISR features key ICT data and benchmarking tools to measure the information society, including the ICT Development Index (IDI). The 2015 IDI captures the level of ICT developments in 167 economies worldwide and compares progress made since the year 2010. The Report assesses IDI findings at the regional level and highlights countries that rank at the top of the IDI and those



that have improved their position in the overall IDI rankings most dynamically since 2010.





The Report features a review and quantitative assessment of the global ITU goals and targets agreed upon at the 2014 ITU Plenipotentiary Conference and included in the Connect 2020 Agenda. In addition, the Report will show the results of the ICT Price Basket (IPB) and present and analyse fixed- and mobile-broadband price data for around 180 economies. The report also includes a chapter looking into recent developments, opportunities and challenges of the Internet of Things (IoT). For more information on the report, see: <a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/mis2015.aspx">http://www.itu.int/en/ITU-D/Statistics/Pages/publications/mis2015.aspx</a>.

10. The 14th World Telecommunication/ICT Indicators Symposium (WTIS) will take place in Botswana, from 21 to 23 November 2016. It will be hosted by the Government of Botswana and will include a Ministerial Roundtable discussing national initiatives on how to close the

digital divide and to ensure an inclusive information society. The WTIS will also feature an international high-level dialogue on understanding the structural impact of ICTs and see the launch of the 2016 Measuring the Information Society Report (MISR) and the ICT Development Index (IDI). The other sessions of the WTIS 2016 will focus on: big data for monitoring the information society, ICT indicators for disaster risk reduction, and smart data for smart sustainable cities



(SSCs). The results of the work of the Expert Group on Telecommunication/ICT Indicators (EGTI) and the Expert Group on Household indicators (EGH) will be presented for adoption by the WTIS.

11. The 2016 edition of the *Measuring the Information Society Report* will be launched during the <u>World Telecommunication/ICT Indicators Symposium (WTIS) 2016</u>, in Gaborone, Botswana.

The Measuring the Information Society Report, which has been published annually since

2009, features key ICT data and benchmarking tools to measure the information society, including the ICT Development Index (IDI). The IDI 2016 captures the level of ICT developments in 175 economies worldwide and compares progress made since the year 2014. The report assesses IDI findings at the regional level and highlights countries that rank at the top of the IDI and those that have improved their position in the overall IDI rankings most dynamically since 2014. It will also use the findings of the IDI to analyze trends and developments in the digital divide. The report will present 2015 prices for about 160 countries and provide a detailed analysis of mobile-cellular, fixed-broadband and mobile-broadband prices over the period 2008-2015. It will highlight the role of ICTs in achieving the

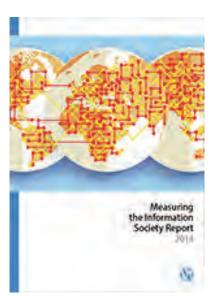


Sustainable Development Goals and present the newly agreed SDG indicator framework, including the ICT indicators. The report will also include a chapter looking into new metrics to measure mobile uptake, and a chapter presenting data analyzing Internet use and uptake.





- 12. In November 2014, the 12th World Telecommunication/ICT Indicators Symposium (WTIS) took place in Tbilisi, Georgia. The meeting attracted around 250 participants from around 80 Member States, 15 public and private organizations (including academia) and other regional and international organizations. The meeting focused on the following main topics: ICT policy and measurement, including the post 2015 development agenda and future priorities for ICT for development (ICT4D) policy; the use of big data for development; the measuring of competition, regulation and affordability of ICT services; data quality in ICT statistics; and open data policies. The meeting also presented progress of the work carried out by the Partnership on Measuring ICT for Development and the results of the work of the Expert Group on Telecommunication/ICT Indicators (EGTI) and the Expert Group on Household indicators (EGH).
- 13. In November 2014, ITU launched the 6th edition of the Measuring the Information Society Report (MISR). The MISR features key ICT data and benchmarking tools to measure the information society, including the ICT Development Index (IDI). The 2014 IDI captures the level of ICT developments in 166 economies worldwide and compares progress made during the last year. The Measuring the Information Society Report 2014 highlights the relationship between ICT development (as measured by the IDI) and the MDGs, a contribution to the ongoing discussions on the potential of ICTs as development enablers. The report includes the results of the ICT Price Basket (IPB) and new mobile-broadband price data for over 140 economies. Price data are analyzed to provide insights into the relationship between affordability and income inequality, competition and regulation. The



report also looks at new ICT data sources for measurement and examines the possible role of big data from the ICT industry for monitoring and development. For more information on the report, see: http://www.itu.int/en/ITU-D/Statistics/Pages/publications/mis2014.aspx

14. The 13th ITU World Telecommunication/ICT Indicators Symposium (WTIS) took place in Hiroshima, Japan, from 30 November to 2 December 2015.

It was hosted by the Government of Japan and included a Ministerial Roundtable discussing ICT as a driver of sustainable



development. The WTIS featured an international high-level dialogue on the topic of future ICT trends, policies and measurement challenges and see the launch of the 2015 Measuring the Information Society Report (MISR) and the ICT Development Index (IDI). The other sessions of the WTIS 2015 were focused on: the data revolution, big data and the ICT industry, ICT and innovation, and the Internet of Things (IoT) and mobile applications as a growing source of development data. The results of the work of the Expert Group on





Telecommunication/ICT Indicators (EGTI) and the Expert Group on Household indicators (EGH) were presented for adoption by the WTIS.

15. The 2015 edition of the Measuring the Information Society Report launched on 30 November, 2015, on the first day of the World Telecommunication/ICT Indicators Symposium (WTIS) 2015, in Hiroshima, Japan. Parallel launch events took place in Addis Ababa, Bangkok, Brasilia, Brussels and Cairo.

The Report, which has been published annually since 2009, features key ICT data and benchmarking tools to measure the information society, including the ICT Development Index (IDI). The IDI 2015 captures the level of ICT developments in 167 economies worldwide and compares progress made since the year 2010. The Report assesses IDI findings at the regional level and highlights countries that rank at the top of the IDI and those that have improved their position in the overall IDI rankings most dynamically



since 2010. The Report features a review and quantitative assessment of the global ITU goals and targets agreed upon at the 2014 ITU Plenipotentiary Conference and included in the Connect 2020 Agenda. In addition, the Report will show the results of the ICT Price Basket (IPB) and present and analyse fixed- and mobile-broadband price data for around 180 economies. The report also includes a chapter looking into recent developments, opportunities and challenges of the Internet of Things (IoT).

(f) Maintaining the WSIS Stocktaking Database (Para 120, Tunis Agenda) and a portal for best practices and success stories (Para 28, Geneva Plan of Action).



- 16. Pursuant to the outcomes of the Tunis Agenda (para.120) ITU continues to work on the WSIS Stocktaking (www.wsis.org/stocktaking) as a valuable tool for assisting the WSIS follow-up, beyond the conclusion of the Tunis phase of the Summit.
- 17. The World Summit on the Information Society (WSIS), which was held in Geneva in 2003 and in Tunis in 2005, drew up an action plan to bridge the digital divide and build an inclusive, people-oriented information society. World leaders committed themselves to regularly review and follow up progress in implementing the action lines outlined in the WSIS Outcomes. The best practices reflected in this process serve as models to be replicated around the world, and encourage stakeholders to move forward towards achieving the WSIS goals.
- 18. Since October 2004, the WSIS Stocktaking Platform has served as a global repository for collecting and reporting on ICT-related projects which implement the WSIS Outcomes. It





has also proved to be an efficient mechanism for sharing best practices towards advancing development goals, a role that will continue to be of value in the post-2015 era.

- 19. The United Nations Economic and Social Council (ECOSOC) resolution 2015/26 "Assessment of the progress made in the implementation of and follow up to the outcomes of the World Summit on the Information Society", that reiterates the importance of sharing best practices at the global level, and, while recognizing excellence in the implementation of the projects and initiatives that further the goals of the World Summit, encourages all stakeholders to nominate their projects for the annual World Summit project prizes, as an integral part of the WSIS Stocktaking process, while noting the report on the WSIS success stories.
- 20. The outcome document of the <u>UNGA High-level Meeting</u> on the overall review of the implementation of the outcomes of WSIS recognized the importance of reporting and sharing of best practices for the implementation of WSIS outcomes by all stakeholders beyond 2015, recognizing the WSIS Forum as a key platform for doing it. In this context, the WSIS Stocktaking process plays a strategic role in supporting WSIS Forum in its endeavor.
- 21. Moreover, the WSIS Overall Review called for close alignment between the WSIS process and the 2030 Agenda for Sustainable Development, highlighting the crosscutting contribution of ICTs to the Sustainable Development Goals. In this context also the WSIS Stocktaking evolves into the unique global process for collection of information on actions carried out in context of WSIS, while underlining their contribution to the implementation of the 2030 Agenda for Sustainable Development.
- 22. As one of the major components of WSIS, the WSIS Stocktaking is a unique global process that has been embraced by the multistakeholder community with the principal role to collect information, share knowledge and experiences and leverage the activities of stakeholders working on the implementation of WSIS outcomes and helping advance SDGs linking them to particular WSIS Action Lines.







- 23. Until 2016, through the WSIS Stocktaking ITU has reviewed more than 8,000 activities from around the world carried out by international organizations, governments, the private sector, civil society and other stakeholders. The WSIS Stocktaking community now comprises of more than 190,000 stakeholders. By identifying trends in implementing the WSIS Outcomes, the WSIS stocktaking process continues to contribute significantly towards building an inclusive Information Society.
- 24. The <u>WSIS Stocktaking Portal</u> is structured around the eleven WSIS action lines and is now linking projects to the newly established seventeen Sustainable Development Goals. This process provides a repository of best practices (maintained by the International Telecommunication Union) for stakeholders seeking updated information on the progress of implementation of WSIS outcomes.
- 25. In 2010, the existing database was upgraded by Web 2.0 adding additional services for the project managers and the WSIS implementation community, and constituting the new WSIS Stocktaking Platform an innovative interface which facilitates searches of all WSIS related activities. All 190.000 stakeholders benefit from sharing interesting case studies, which should undoubtedly facilitate the transfer of knowledge, experiences and models for projects implementation. The WSIS Stocktaking platform helps to create partnerships, provide greater visibility and add value to ICT projects all around the world.





- 26. Redesigned WSIS Stocktaking platform was launched at the end of October 2015, bringing a more interactive interface with several innovative aspects that will be more appealing to the users. The new Stocktaking platform features new questionnaire that reflects the transition from MDG's to Sustainable Development Goals, mirroring impact of freshly submitted ICT projects on SDGs.
- 27. With the year-around ongoing Call for Updates and New Entries, all stakeholders are invited to continue sharing best practices at the WSIS Stocktaking Platform and emphasize how ICT-related initiatives and projects are enabling SDGs.
- 28. Since the WSIS Stocktaking Process was established, eight editions of Global WSIS Stocktaking reports were prepared; each of them included latest information on WSIS related activities contributed by stakeholders. This exercise provided stakeholders with the platform to have an overall picture of and a sharper insight into latest WSIS activities undertaken toward achieving WSIS goals. WSIS Stocktaking Report series are based on the multistakeholder approach and include input from stakeholders from all over the world as well as input from WSIS facilitators and co-facilitators responding to the WSIS regular calls for updates and new entries.

WSIS Stocktaking Report Series: 8 Editions

# 2005 2008 2010 2012 2013 2014 2015







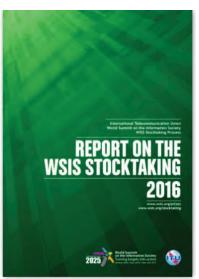








- 29. The eighth report focuses on contributions by stakeholders worldwide to WSIS and Sustainable Development Goals. It emphasizes achievements, highlights trends and draws conclusions consistent with the action lines referenced in the Geneva Plan of Action. This Report provides key findings on emerging trends in the development of the information society, and references major activities being implemented in the eighteen areas covered by the eleven WSIS action lines. Over the years the Report series have come to comprise the database of:
  - exchanges of information on projects
  - sharing of best practices of certain regions
  - initiatives related to the implementation of the 11 WSIS action lines
  - linkages between the 11 action lines and 17 the Sustainable Development Goals (SDGs) linkages that become more and more important over the years.







30. Another major component has emerged since 2012 – WSIS Prizes contest. For the fifth year in a row, the World Summit on the Information Society (WSIS) recognizes outstanding success stories from around the world for their part in building an inclusive information society. Facilitated by ITU in coordination with all WSIS stakeholders, the WSIS Prizes 2016 contest provides a platform to identify and showcase success stories across the WSIS Action Lines defined in the Geneva Plan of Action and Sustainable Development Goals. The WSIS Prizes contest is an integral part of the WSIS stocktaking process set up in 2004 to assist WSIS implementation and follow-up. The contest was held for the first time in 2012, and rapidly gained attention and popularity within the ICT for Development (ICT4D) community.



- 31. The WSIS Prizes contest serves as the platform for identifying and showcasing the success stories across the WSIS Action Lines defined in the Geneva Plan of Action and SDGs. It also provides us with models that can be replicated in the interests of empowering the community at the local level, providing everyone with an opportunity to participate in the contest and, most importantly, recognizing the efforts made by stakeholders to contribute to the development of society and their commitment to achievement of both the WSIS goals and SDGs. The WSIS Prizes contest is an integral part of the WSIS stocktaking process (www.wsis.org/stocktaking) set up in 2004 to assist WSIS implementation and follow-up. The contest was held for the first time in 2012, since when it has rapidly gained recognition and popularity within the ICT for Development (ICT4D) community.
- 32. WSIS Prizes is a unique international contest developed in response to calls from WSIS stakeholders for the creation of an effective mechanism for identifying and recognizing individuals, governments, civil society, local, regional and international agencies, research institutions and private-sector companies having achieved outstanding success in





implementing development-oriented strategies that leverage the power of ICTs as an enabler of the SDGs.

- 33. All stakeholders are continuously urged to encourage their networks to join the WSIS Prizes process, including the multistakeholder consultations at the WSIS Forum, in order to ensure that all features correspond to the real needs of the WSIS implementation process beyond 2015. In the 2016 edition, more than 15,000 stakeholders joined the voting phase thanks to the many campaigns launched by project owners, thereby attracting newcomers to the WSIS process.
- 34. Presented at the WSIS Forum 2015, the <u>WSIS Action Lines SDGs Matrix</u> has received large appreciation by all the WSIS community, which proposed to better explain the potential of ICTs as enablers for sustainable development, by investing the third dimension of the issue: that of reporting ICT success stories to best showcase the possible achievement of SDGs, through the implementation of WSIS Action Lines related projects.
- 35. We are also pleased to announce the launch of a new and innovative interface in the near future, which will facilitate searches of all WSIS related activities. All stakeholders benefit from sharing interesting case studies, which should undoubtedly facilitate the transfer of knowledge, experiences and models for projects implementation. The WSIS platform helps to create partnerships, provide greater visibility and add value to ICT projects all around the world. The many and varied stakeholders who have implemented innovative projects and contributed to the success of the WSIS stocktaking process deserve our sincere gratitude. ITU urges these stakeholders, along with all Member States, international organizations, the private sector and civil society, to continue submitting such contributions in the future.
- 36. International Telecommunication Union remains committed to the World Summit on the Information Society (WSIS) process, and to implementation of the WSIS goals beyond 2015. ITU recognizes and highly appreciates the extremely valuable contributions made by stakeholders to enable the continuation of WSIS monitoring and reporting. We invite you to explore most recent updates and success stories in the WSIS stocktaking process, with more than 8,000 entries in the global database, involving more than 190,000 stakeholders.





## (g) Emergency Telecommunications (Para 91 of TAIS)

#### ITU deploys emergency telecommunication equipment to Sri Lanka

37. ITU deployed emergency telecommunication equipment in response to the government of Sri Lanka request for assistance. Torrential rain caused loss of lives and destruction to infrastructure including telecommunications, power lines and roads. Many communities have been affected and access to the affected areas were limited. The emergency telecommunication equipment provided include satellite phones, satellite broadband terminals and accessories, which are being used to support relief and coordination efforts. (21 May 2016)



#### ITU deploys emergency telecommunication equipment to Ecuador

38. Emergency telecommunications equipment was deployed to Ecuador after the devastation caused by the 7.8 earthquake that struck the country on 26 April 2016. The ITU satellite equipment was delivered directly to the Manabi Province, the most affected area of the coast of Ecuador. The strong quake caused a lot of destruction to infrastructure including telecommunication networks, powerlines and roads. The emergency telecommunication equipment provided include satellite phones, satellite broadband terminals and accessories, which are being used to support search and rescue efforts as well as recovery and reconstruction activities.



#### ITU deploys emergency telecommunication equipment to Fiji

39. ITU deployed emergency telecommunication equipment in response to the Government of Fiji request for assistance. Category-five Cyclone Winston crashed into Fiji Islands on February 20, 2016 bringing winds of over 325km/h, torrential rain and





high sea waves. Tropical Cyclone Winston caused loss of lives and destruction to infrastructure including telecommunications, power lines and roads. Many villages have been destroyed on the island of Koro, North-East of the main island Viti Levu where the capital Suva is located. Damages across the East Division are extensive and access to the area was limited. The emergency telecommunication equipment provided include satellite phones, satellite broadband terminals and accessories, which are being used to support relief and coordination efforts. (22 February 2016)



#### ITU deploys emergency telecommunication equipment to Commonwealth of Dominica

40. ITU deployed emergency telecommunication equipment in response to the Government of Dominica's request for assistance while Tropical Strom Erika lashed at the island causing loss of lives and infrastructure. Heavy rains, severe flooding and landslides wreaked widespread damage across the island in the Lesser Antilles region of the Caribbean Sea. The emergency telecommunication equipment includes satellite phones, Broadband Global Area Networks, solar chargers, laptops and accessories, which are being used to support relief and coordination efforts. (27 August 2015)







# (h) International Internet Connectivity (Para27c.ii and 50d of TAIS)

41. ITU-T Study Group 3 continues to study this matter. BDT is providing 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.



42. ITU Workshop on the establishment of Internet Exchange Points (IXPs) to advance inter-connectivity, 28 September 2015, Geneva, Switzerland.

Paragraph 50 of the Tunis Agenda calls for the establishment of national, regional and subregional Internet exchange points (IXPs) as a strategy for increasing affordable global connectivity, thereby facilitating improved and equitable access for all. This call has been reinforced repeatedly including in Opinion 1 of WTPF 2013 and PP14 Resolutions 101 and 102.

This workshop, co-organized by BDT and TSB, aims to provide insights on the value of IXPs in leveraging the benefits of connectivity through potentially reduced transmission costs, optimized Internet traffic, and improved Quality of Service among others. This workshop I discussed widely accepted best practices for the design, installation and operation of IXPs. Issues concerning peering as an effective way for Internet Service Providers (ISPs) to improve the efficiency of operations and interconnection business relationships were also discussed, including related policy and regulatory challenges.

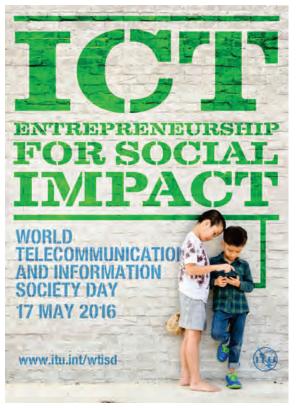
43. ITU-D Study Group 1 Question 1/1 within its work items for the 2014-2017 study period is studying some of the existing resources available, including case studies received, related to the deployment of Internet Exchange Points (IXPs) with an aim to prepare best practice guidelines that may be useful for the Member States. As an example, an empirical study of Kenya and Nigeria assessing the impact of IXPs in these two Sub-Saharan countries has been considered. The Group is examining how IXPs can be used to improve connectivity, how they can improve the quality of Internet services provided and potentially save operators money in connectivity fees. Other contributions to the work of the Group looks at the critical cost and performance benefits of IXPs in countries in the Americas (Argentina, Brazil, Colombia and Ecuador), and how they have been able to advance Internet growth in this region. While the Study Group will compile its final findings for the World Telecommunication Development Conference in 2017, the ITU Membership can take part in the work achieved to date and contribute to the discussions during its regular meetings and using online collaboration tools.





# (i) World Telecommunication and Information Society Day

#### Theme 2016: ICT entrepreneurship for social impact



In 2016, World Telecommunication and Information Society Day (WTISD-2016) will focus on the theme: "ICT entrepreneurship for social impact", in accordance with Resolution 68 and as endorsed by ITU Council 2015.

ICT entrepreneurs and start-ups and small to medium-sized enterprises (SMEs) have a particularly relevant role in ensuring economic growth in a sustainable and inclusive manner. They are involved in the development of innovative ICT-enabled solutions with a unique potential to make a long-lasting impact in global, regional and national economies and as an important source of new jobs, especially for youth, in the current knowledge economy.

The theme for WTISD-16 is **in line with ITU's work** in unlocking the potential of ICTs for young innovators and entrepreneurs, innovative SMEs,

start-ups and technology hubs as drivers of innovative and practical solutions for catalysing progress in achieving international sustainable development goals, with a focus on SMEs from developing countries.

Webcast | Photos | Videos | Press release

#### (j) Bridging the standardization gap (BSG) -

- 44. A **Regional Standardization Forum for Africa** was organized by the ITU from 24 to 25 March 2015 in Dakar, Senegal. This Forum was hosted by the Autorité de Régulation des Télécommunications et des Postes (ARTP) of Senegal and took place at the Radisson Blu Hotel, Dakar.
- 45. The main objectives of the Forum were to provide examples of best practices to developing countries on global standards development, build national standards readiness so that standardization competence of developing countries can be enhanced and facilitate the establishment of a national standardization secretariat to coordinate participation in ITU-T study groups. The Forum will also discuss the standardization activities ongoing in ITU-T study groups which are of interest to the region.





- 46. The ITU organized a Regional Standardization Forum for the Asia-Pacific Region in association with the Telecommunications Technology Association (TTA) at the Millennium Hotel Sirih, Jakarta, Indonesia, from 27 to 28 October 2015. The Ministry of Communications and Information Technology of Indonesia hosted this forum.
- 47. The main objectives of the event are to provide examples of best practices to developing countries on global standards development, build national standards readiness so that standardization competence of developing countries can be enhanced and facilitate the establishment of a national standardization secretariat to coordinate participation in ITU-T study groups. The Forum will also discuss the standardization activities ongoing in ITU-T study groups which are of interest to the region. A half day capacity building session will be conducted on how to fast track the establishment of a national standardization secretariat to coordinate participation in ITU-T study groups.
- 48. At the kind invitation of the Inter-American Telecommunication Commission (CITEL), ITU organized a "Regional Standardization Forum for Americas" on 21 September 2015 at the CITEL Headquarters in Washington D.C., United States. This event was followed by the XXVII Meeting of PCC.I from 22 to 25 September at the same venue.
- 49. The main objectives of the event were to provide examples of best practices to developing countries on global standards development, build national standards readiness so that standardization competence of developing countries can be enhanced and facilitate the establishment of a national standardization secretariat to coordinate participation in ITU-T study groups. The Forum also discussed the standardization activities ongoing in ITU-T study groups which are of interest to the region.

As per Council Resolution 1343, the **Radiocommunication Assembly 2015 (RA-15)** was held in Geneva from 26 to 30 October 2015 with 457 participants representing 96 Administrations and 38 Sector Members and Academia.

RA-15 approved the work programme and Questions of the Radiocommunication Study Groups (see Resolution ITU-R 5, <a href="http://www.itu.int/pub/R-RES-R.5">http://www.itu.int/pub/R-RES-R.5</a>) as well as six draft ITU-R Recommendations and a draft ITU-R Question submitted to the Assembly.

In total, 36 new or revised ITU-R Resolutions were approved, including:

**Resolution ITU-R 55** - ITU-R studies of disaster prediction, detection, mitigation and relief (<a href="http://www.itu.int/pub/R-RES-R.55">http://www.itu.int/pub/R-RES-R.55</a>)

**Resolution ITU-R 65** - Principles for the process of future development of IMT for 2020 and beyond (http://www.itu.int/pub/R-RES-R.65)

**Resolution ITU-R 66** - Studies related to wireless systems and applications for the development of the Internet of Things (IoT) (<a href="https://www.itu.int/pub/R-RES-R.66">http://www.itu.int/pub/R-RES-R.66</a>)

**Resolution ITU-R 67** - Telecommunication/ICT accessibility for persons with disabilities and persons with specific needs (<a href="http://www.itu.int/pub/R-RES-R.67">http://www.itu.int/pub/R-RES-R.67</a>)

**Resolution ITU-R 68** - Improving the dissemination of knowledge concerning the applicable regulatory procedures for small satellites, including nanosatellites and picosatellites. (<a href="http://www.itu.int/pub/R-RES-R.68">http://www.itu.int/pub/R-RES-R.68</a>)





**Resolution ITU-R 69** - Development and deployment of international public telecommunications via satellite in developing countries (<a href="http://www.itu.int/pub/R-RES-R.69">http://www.itu.int/pub/R-RES-R.69</a>).

The decisions of RA-15 of particular relevance to WRC-15 were reported in Document WRC-15/216 (http://www.itu.int/md/R15-WRC15-C-0216/)

#### 50. Free on-line access to ITU-R Publications for bridging the standardization gap

The ITU free online access policy continues to provide a very large dissemination of ITU standards to a broader public, especially in developing countries with financial and technical constraints. This wide outreach via free online access is helping to build the visibility of ITU's mission and mandate and reinforce ITU as a global telecommunication authority.

By Decision 12 (Guadalajara, 2010), PP-10 adopted a free online access policy to include, inter alia, ITU-R Recommendations and Reports. This policy was expanded by Council 2012 Decision 571, revised by Council 2013 and 2014, and confirmed by PP-14 revised Decision 12, which provides free online access for the general public, on a permanent basis, to ITU-R, ITU-T and ITU-D Recommendations and Reports; ITU-R handbooks on radio-frequency spectrum management<sup>1</sup>; ITU publications concerning the use of telecommunications/ICTs for ensuring disaster preparedness, early warning, rescue, mitigation, relief and response; the International Telecommunication Regulations (ITRs); the Radio Regulations; the Rules of Procedure; the basic texts of the Union (Constitution, Convention, General Rules of conferences, assemblies and meetings of the Union, decisions, resolutions and Recommendations); the final acts of plenipotentiary conferences; the final reports of WTDCs; the ITU Council resolutions and decisions; the final acts of world and regional radiocommunication conferences; and the final acts of world conferences on international telecommunications.

#### **ITU-R** Recommendations

As a result of the free online access policy, ITU-R Recommendations have been disseminated worldwide, becoming a universal reference, reaching all audiences, regardless their economic situation. In a 36-month period (January 2013 to December 2015), more than ten million downloads of ITU-R Recommendations from ITU web site were recorded. Table 8.1.4.2-1 summarizes their distribution by year and series. At this time there are 1,155 ITU-R Recommendations in force, hence the average number of downloads is 9,300 per Recommendation.

#### ITU-R Reports

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As ITU-R Recommendations, ITU-R Reports have been disseminated worldwide, becoming a universal reference, reaching all audiences, regardless of their economic situation. In a 36-month period (January 2013 to December 2015), more than 4.5 million downloads of ITU-R Recommendations from ITU web site were recorded. Table 8.1.4.3-1 summarizes their distribution by year and series. At present, there are 410 ITU-R Reports in force, with an average download of 8,000 per Report.

<sup>&</sup>lt;sup>1</sup> These include the ITU-R Handbooks on National Spectrum Management; Computer Aided Techniques for Spectrum Management; and Spectrum Monitoring.





### Navigation and analysis tools for ITU-R electronic publications:

Radio Regulations tools: the Radiocommunication Bureau developed software tools to facilitate the use and analysis of the Radio Regulations which is available for subscription and download since the first quarter of 2016 - <a href="https://www.itu.int/pub/R-REG-RRX">www.itu.int/pub/R-REG-RRX</a>

#### ITU-R documents database search tool

At its 19th meeting, the RAG invited the BR Director to develop a database, within existing budgetary limitations, that would enable ITU-R Recommendations to be searched and filtered by categories such as the radiocommunication service(s) and applicable frequency band. In collaboration with ITU's IS Department, the search tools for ITU-R Recommendations and ITU-R Questions became operational in October 2015, a search tool for the ITU-R Reports became available as a demonstration version in November 2015, and search tools for the ITU-R Resolutions and the Handbooks are expected to be available during the 2nd quarter of 2016.

### (j) Internet Governance Forum

51. ITU actively participated in the 10th IGF in João Pessoa, Brazil, on 10 to 13 November 2015. The ITU Deputy Secretary-General spoke at the Opening Session as well as the Zero Day High-Level Event on An Agenda for Internet Governance Post-2015. ITU participated in various Dynamic Coalition meetings and related workshops/events, including some that are organized or co-organized by ITU, aimed at raising awareness of the various ITU initiatives. ITU was also represented in main sessions on Cybersecurity and Connecting the next Billion. ITU organized a workshop on the Connect 2020 Agenda and an Open Forum on Fostering SMEs in the ICT Sector: the new Global ICT Entrepreneurship Initiative.





# IV. ITU Role in the Overall Review of the Implementation of the Outcomes of the World Summit on the Information Society

# (a) UNGA Overall Review of the Implementation of the WSIS Outcomes

- 52. Paragraph 111 of the Tunis Agenda, endorsed by the General Assembly in resolution 60/252, requested the General Assembly to undertake the overall review of the implementation of the outcomes of the World Summit on the Information Society in 2015. In response, the General Assembly in resolution 68/302, decided that the overall review will be concluded by a two-day high-level meeting of the General Assembly, to be preceded by an intergovernmental process that also takes into account inputs from all relevant stakeholders of the World Summit on the Information Society. Co-Facilitators of the UNGA Overall Review appointed by the President of the UNGA are Ambassador Jānis Mažeiks, Ambassador of Latvia and Ambassador Lana Zaki Nusseibeh, Ambassador of the United Arab Emirates.
- 53. TOR of WSIS Task Force
- 54. ITU contributed to the WSIS Review with the 2015 ITU contribution to WSIS Report and organized the following sessions and meetings:
  - Strengthening the impact of WSIS Action Lines for sustainable development: showcasing best practices, transferring know-how, fostering partnerships, Monday 14 December 2015, 13:15 14:30, UNHQ, Conference Room 11
  - GEM-TECH Awards 2015, Monday 14 December 2015, 18:00 20:00, Civic Hall, New York
  - UNGIS Breakfast Meeting, Tuesday 15 December 2015, 08:00 08:45, WIPO Conference Room, 25 Floor UN Plaza 2, New York
  - Women's Empowerment in the Digital Age: Implementing WSIS Outcomes and Agenda 2030, Tuesday 15 December 2015, 13:00 - 14:30, UNHQ, Conference Room 6
  - Measuring the Information Society: ICT Data for Policy Making and Evaluation, Tuesday 15 December 2015, 15:00 - 16:45, UNHQ, Conference Room A
  - Enabling a Trusted Connected World, Wednesday 16 December 2015, 13:15 -14:30, UNHQ, Conference Room 7
- 55. **ITU** is part of a special Task Force of Representatives of UN Agencies Represented in NY and Supporting the Preparatory Process. ITU is also an active part of a UN Communication Team for UNGA Overall Review (ITU, UNCTAD, UN DPI, UN OPGA, DESA. ITU facilitated the preparation of the CEB Joint Statement on the WSIS Overall Review (content to be coordinated through the UNGIS mechanism). ITU disseminates information on the process to the WSIS implementation community through the WSIS Flash.





56.

# V. Forums, innovative initiatives and future actions

# (a) Forums

#### WSIS Forum 2016 Event and its outcomes:

57. The WSIS Forum 2016 was held from the 2–6 May 2016 at the ITU Headquarters and at the Centre International de Conférences Genève (CICG), in Geneva. This year, the Forum attracted more than 1800 WSIS Stakeholders from more than 150 countries. Several high-level representatives of the wider WSIS Stakeholder community graced the Forum with more than 85 ministers and deputies, several ambassadors, CEOs and Civil Society leaders contributing passionately towards



the programme of the Forum. The highlight of the WSIS Forum was the Prime Minister of Tonga, who graced the event with his presence.

- 58. On—site and remote participation increased tremendously during the WSIS Forum 2016.
- 59. The WSIS Forum, co-organized by ITU, UNESCO, UNDP and UNCTAD, in close collaboration with all WSIS Action Line Facilitators/Co-Facilitators (UNDESA, FAO, UNEP, WHO, UN Women, WIPO, WFP, ILO, WMO, UN, ITC, UPU, UNODC, UNICEF and UN Regional Commissions) has proven to be an efficient mechanism for coordination of multistakeholder implementation activities, information exchange, creation of knowledge, sharing of best practices and continues to provide assistance in developing multistakeholder and public/private partnerships to advance development goals. This forum provided structured opportunities to network, learn and participate in multistakeholder discussions and consultations on WSIS implementation.
- 60. The Chairman of the WSIS Forum 2016 was Mr Daniel Sepulveda, USA who played a keyrole in providing high-level guidance for the Forum and its outcomes.
- 61. At the WSIS Forum 2016, moderated High-Level Policy Sessions of the High-level Track (HLT) took place on the 3rd and 4th of May. During these sessions, moderated Policy Sessions with high-ranking officials of the WSIS Stakeholder community, representing the Government, Private Sector, Civil Society, Academia and International Organizations were held. High-Level Policy Sessions were divided



into sixteen sessions covering fourteen themes. The themes, based on the Geneva Plan of Action with particular focus on the WSIS Action Lines, build on the outcomes of the





United Nations Overall Review and the submissions received during the open consultation process. The high-level track was moderated by High-level Track Facilitators who were nominated by different stakeholder types to represent their respective communities.

62. Building on the open consultation process, more than 150 sessions were held during the WSIS Forum 2016. The overall theme of the WSIS Forum 2016 this year was "WSIS Action Lines: Supporting the Implementation of SDGs". This provided a vibrant atmosphere for facilitation and exchange on a multistakeholder vision



of the WSIS Process. An exhibition space provided the perfect atmosphere to network, learn and share. The commitment and dedication of the WSIS Stakeholders was evident from the outcomes submitted by the session organizers.

63. ITU and the co-organizers thank all WSIS Stakeholders for their commitment and dedication. We look forward to welcoming all WSIS Stakeholders to the WSIS Forum 2017!

Agenda: (Presentations and session recordings)

http://www.itu.int/net4/wsis/forum/2016/Agenda/

Photographs:

https://www.flickr.com/photos/itupictures/collections/72157665388399943/

Videos: https://www.youtube.com/user/WSISProcess

- 64. The outcomes of the WSIS Forum 2016 were presented on the last day, 6th May, and will be submitted to the Commission on Science and Technology (CSTD), the UN General Assembly and ITU Council. They are available for public on the following website: http://www.itu.int/net4/wsis/forum/2016/Outcomes/
- 65. These outcomes are the following: 1) High Level Track Policy Sessions Outcomes; 2) Forum Track Outcome Document; 3) WSIS Action Lines Supporting Implementation of the Sustainable Development Goals (2016); 4) WSIS Forum 2016 and SDG Matrix; 5) WSIS Stocktaking Report 2016 and 6) WSIS Stocktaking Success Stories 2016.

# 1) High-Level Track Policy Sessions Outcomes

Available at:

http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016%E2%80%94HighLevelTrack-Outcomes.pdf





66. Policy Statements were delivered during the High-Level Track (3-4 May 2016) of the WSIS Forum 2016 by high-ranking officials of the WSIS Stakeholder community, representing the Government, Private Sector, Civil Society, Academia and International Organizations. The high-level track consisted of the opening segment, interactive policy dialogues, ministerial round table, and a high-level networking programme. Policy Sessions were moderated by high-level track facilitators and were grouped around different themes identified as important by the WSIS Stakeholders during the open consultation process and the outcomes of the UN General Assembly Overall Review.

# 2) Forum Track Outcome Document

#### Available at:

http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016%E2%80%94ForumTrack-Outcomes.pdf

67. This document provides a summary of more than 150 sessions organized during the Forum Track of the WSIS Forum 2016. Each session shows a direct linkage between the WSIS Action Lines and the respective SDGs (please see the WSIS Forum 2016: WSIS Action Lines and SDGs Matrix). The Forum track is the result of the multistakeholder Open Consultation Process.

# 3) WSIS Action Lines Supporting Implementation of the SDGs

Available at:

http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016%E2%80%94WSISActionLinesSupportingImplementationSDGs.pdf

68. This document has been developed by the WSIS Action Line Facilitators and identifies the key linkages of the Action Line with the SDGs, providing case examples.





# 4) WSIS Forum 2016 and SDG Matrix

Available at:

http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016%E2%80%94WSISActionLinesAndSDGsMatrix.pdf

http://www.itu.int/net4/wsis/forum/2016/Content/documents/outcomes/WSISForum2016%E2%80%94SDGMatrix.pdf

69. This document builds upon the WSIS-SDG Matrix and provides guidance on the outcomes of more than 100 sessions held during the forum, emphasizing linkages between the WSIS Action Lines and SDGs as well as highlighting rational for each linkage that has been established.





# 5) WSIS Stocktaking Report 2016

Available at:

http://www.itu.int/dms\_pub/itu-s/opb/pol/S-POL-WSIS.REP-2016-PDF-E.pdf

- 70. The 2016 edition of the WSIS Stocktaking Report is the continuation of the WSIS Stocktaking Report series. The eighth edition of the WSIS Stocktaking Report was officially released during the World Summit on the Information Society Forum 2016.
- 71. The eighth edition of the WSIS Stocktaking Report Series, focuses on contributions by stakeholders worldwide to WSIS and Sustainable Development Goals. It emphasizes achievements, highlights trends and draws conclusions consistent with the action lines referenced in the Geneva Plan of Action. This Report provides key findings on emerging trends in the development of the information society, and references major activities being implemented in the eighteen areas covered by the eleven WSIS Action Lines.

# 6) WSIS Stocktaking Success Stories 2016

Available at:

http://www.itu.int/dms\_pub/itu-s/opb/pol/S-POL-WSIS.SUCC\_STORIES-2016-PDF-E.pdf

- 72. This report is an annual publication issued in the framework of the contest of WSIS Prizes 2016 (www.wsis.org/prizes) that is open to all stakeholders.
- 73. This report highlights 18 winning projects of the WSIS Prizes 2016 contest that provides a platform for identification and showcasing success stories across the WSIS Action Lines defined in the Geneva Plan of Action. The WSIS Prizes honor outstanding projects that leverage the power of information and communication technology to accelerate achievement of sustainable development goals.





#### WSIS Forum 2017

The annual WSIS Forum is a global multi-stakeholder platform facilitating the implementation of the WSIS Action Lines for advancing sustainable development. The Forum, coorganized by ITU, UNESCO, UNDP and UNCTAD, in close



collaboration with all WSIS Action Line co-/facilitators and other UN organizations (UNDESA, FAO, UNEP, WHO, UN Women, WIPO, WFP, ILO, WMO, ITC, UPU, UNODC, UNICEF and UN Regional Commissions). It provides an opportunity for information exchange, knowledge creation and sharing of best practices, while identifying emerging trends and fostering partnerships, taking into account the evolving Information and Knowledge Societies.

In follow up to the outcomes of the UN General Assembly Overall Review of the Implementation of WSIS Outcomes (Res. A/70/125) and with the adoption of the 2030 Agenda for Sustainable Development (Res. A/70/1), the WSIS Forum is constantly evolving and strengthening the alignment between the WSIS Action Lines and the Sustainable Development Goals.

The WSIS Forum is the only event of its kind where the programme is completely crowdsourced. Therefore, as organizers, ITU, UNESCO, UNCTAD and UNDP, are pleased to announce herewith the Open Consultation Process on thematic aspects and innovations on the format of the WSIS Forum 2017. The process aims at ensuring a participatory and inclusive spirit of the Forum, scheduled to be held from 12-16 June 2017 at ITU in Geneva. This process actively engages governments, civil society, the private sector, academia, technical community and intergovernmental organizations in the preparatory process to ensure broad ownership and further improvements of the Forum.

The Open Consultation Process for the WSIS Forum 2017 is structured in six phases as follows:

Phase I: 1 September 2016: Opening of the Open Consultations Process

- Online presentation of the Open Consultation Process
- Online dialogues on the WSIS Knowledge Communities at www.wsiscommunity.org
- Official submissions to the WSIS Secretariat on the Thematic Aspects and Innovations

on the Format invited at www.wsis.org/forum

Open call for nomination of WSIS Forum 2017
 Multistakeholder High-Level Track Facilitators

Phase II: 12 October 2016: First Physical Meeting (16:30-18:00, ITU Headquarters, Geneva)





Phase III: 14 February 2017: Second Physical Meeting

**Phase IV: 20 February 2017:** Deadline for Submissions of Official Contributions and Binding Requests for Workshops

**Phase V: 14 March 2017:** ITU Headquarters, Geneva: Final Review Meeting of the Open Consultation Process

Phase VI: 10 May 2017: Final Brief on the WSIS Forum 2017

Please note that the dates for the physical meetings in 2017 are indicative and may be changed. Please refer to the <a href="www.wsis.org/forum">www.wsis.org/forum</a> for updates. The Open Consultation Process will include collection of inputs from regional and national WSIS related events. The physical meetings of the Open Consultation Process will benefit from remote participation.

# (b) WSIS Action Lines and SDGs Matrix

- 74. The vital role of ICTs as a catalyst for development is specifically recognized in the new development framework Transforming Our World: The 2030 Agenda for Sustainable Development, which acknowledges that "the spread of information and communication technology and global interconnectedness has great potential to accelerate human progress and to develop knowledge societies, to bridge the digital divide and to develop knowledge societies, as does scientific and technological innovation across areas as diverse as medicine and energy".
- 75. Four targets of the SDGs explicitly recognize the role of ICTs. This applies to the targets on Education and scholarships (4.b) on Gender empowerment (5.b) on Infrastructure for Universal and Affordable access to ICTs and the Internet in the Least Developed Countries (9.c) and more broadly, Goal 17 on Strengthen the means of implementation and revitalizing the global partnership for sustainable development, which calls to enhance the use of enabling technology, in particular ICTs. There are also several references to technology in general throughout the SDGs in which ICTs play an important direct or indirect role.
- 76. ICTs already empower billions of individuals around the world with wide ranging applications cutting across sectoral boundaries in agricultural productivity; population, health and education; transportation; industry, trade and finance; climate change and protection of our environment; as well as for the prevention and management of disasters, among many others.
- 77. Internet, mobile technologies and relevant ICT applications and services unquestionably help strengthen governance; empower people, in particular women and youth; enable





wider exercise of human rights including freedom of expression; foster social inclusion of marginalized groups; open up employment opportunities; promote cultural diversity; expand access to learning and scientific knowledge; and create efficiencies in basic services including energy and water, to name here just a few.

- 78. However, we do need to acknowledge that, although access to advanced technologies has grown at a fast pace, the impressive gains observed during the MDG era are still hampered by existing gaps in access to ICTs— inequalities still persist among and within countries, between urban and rural sectors and among men and women. A major digital divide is still in place, with more people offline than online and particularly poor access in Least Developed Countries (LDCs).
- 79. ITU's latest data reveal that while access to the Internet is approaching saturation levels in the developed world, the Net is only accessible to 35% of people in developing countries. The situation in the 48 UN-designated LDCs is particularly critical, with over 90% of people without any kind of Internet connectivity.
- 80. With the newly adopted 2030 Development Agenda, the WSIS Forum may need to evolve and adapt to strengthening the linkages between the WSIS Action Lines and the Sustainable Development Goals, as well as in light of the outcomes of the UN General Assembly Overall Review of the Implementation of WSIS Outcomes.
- 81. **WSIS SDG Matrix**: The WSIS Action line and SDG matrix was launched during the WSIS Forum 2015. The matrix aims to underline the key role of ICTs in promoting sustainable development, all WSIS Action Line Facilitators, under coordination by ITU, developed this WSIS-SDG Matrix demonstrating the direct links between the WSIS Action Lines and the proposed SDGs. Please see at: <a href="http://www.itu.int/net4/wsis/sdg/">http://www.itu.int/net4/wsis/sdg/</a>

# (c) WSIS Prizes

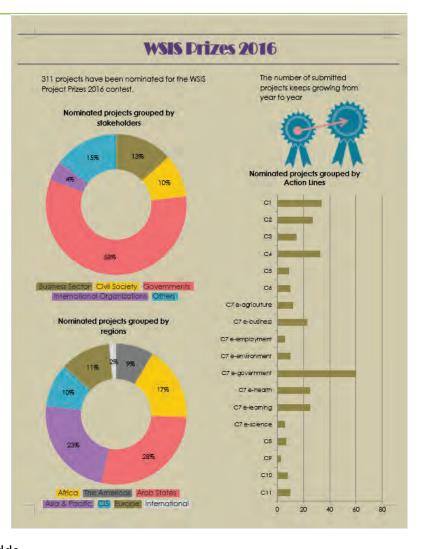


82. Each year, on the occasion of the WSIS Forum, 18 WSIS stakeholders are awarded WSIS Prizes, as a unique mark of global recognition for excellence in the implementation of WSIS outcomes. To this end, 18 projects are selected as the most successful stories worldwide, under each category, to serve as best-practice models to be replicated by other stakeholders interested in information and communication technologies (ICTs) for development. These projects brilliantly demonstrate how established Sustainable Development Goals (SDGs) can be realized in concrete actions and inspire other stakeholders all over the world to follow their success.





83. The WSIS Prizes honour outstanding projects that leverage the power of information and communication technology (ICT) to accelerate socioeconomic development. More than 400 ICT success stories were submitted for the 2016 edition of the prize. Out of 311 nominated projects, 179 projects came from the government sector, 41 from the business sector, 31 from civil society, 14 from international organizations, and 46 from academia and other entities. The eighteen winners of WSIS Prizes were presented with an award at the WSIS Forum 2016, held from 2 to 6 May 2016 in Switzerland. Geneva. addition, seventy runners up were adjudged **'WSIS** Champions', recognizing those who so often work below the radar and against significant odds.



84. In line with the inclusive, multistakeholder character of the WSIS Process, the prizes recognize the outstanding achievements of a wide range of organizations in strengthening implementation of the vision and targets set by the World Summit on the Information Society in 2003 (Phase 1) and 2005 (Phase 2).

This year's 18 winners are:

- Action Line C1 The role of government and all stakeholders in the promotion of ICTs for development
  - **Winner**: Fostering integration of Argentine Academia in the activities of ITU, Ente Nacional de Comunicaciones (ENACOM), Argentina
- Action Line C2 Information and communication infrastructure
   Winner: Data Centres for Government Agencies, National Information
   Technologies JSC, Kazakhstan
- Action Line C3 Access to information and knowledge
   Winner: Connected Homes, Presidential Social Council, Costa Rica





Action Line C4 Capacity building

**Winner**: Smart Online SMEs (S.O.S.) by Thaitrade.com, Department of International Trade Promotion (DITP), Thailand

Action Line C5 Building confidence & security in the use of ICTs
 Winner: Certification Programme for Better ICT Services, Office of Electronic Communications, Poland

• Action Line C6 Enabling environment

**Winner**: Life Long Learning and Employment for People with Disabilities, Ministry of Communications and Information Technology, Egypt

• Action Line C7 *E-government* 

Winner: e-National Judicial System, Ministry of Justice of Turkey, Turkey

Action Line C7 E-business

Winner: ATTA'A System, Atta'a for Helping Charity Organizations, Saudi Arabia

• Action Line C7 *E-learning* 

**Winner**: MexicoX-Platform of Massive Open Online Course (MOOCS), National Digital Strategy, Mexico

• Action Line C7 *E-health* 

Winner: Informatization of the Public Health System, SOFTEL, Cuba

• Action Line C7 E-employment

**Winner**: Technology for Education, Employment, Entrepreneurs, and Economic Development Project, Information and Communications Technology Office, Philippines

• Action Line C7 E-environment

Winner: Asia Pacific Green Data Center Farm, Green Data Center LLP, Malaysia

• Action Line C7 *E-agriculture* 

**Winner**: Harmonized Information of Agriculture, Revenue and Irrigation for a Transformation Agenda – Precision Technology for Agriculture, Centre for Development of Advanced Computing, India

• Action Line C7 *E-science* 

**Winner**: R-package to compute confidence intervals for heritability, reliability, and heterogeneity, Ilia Vekua Institute of Applied Mathematics (VIAM) of Ivane Javakhishvili Tbilisi State University (TSU), Georgia

• Action Line C8 Cultural diversity & identity, linguistic diversity

Winner: Connectivity is Productivity, Bridge Africa, United States of America

• Action Line C9 Media

**Winner**: Youth Women in Community Media and Journalism – the beginning of a new era in rural broadcasting journalism, Bangladesh NGOs Network for Radio and Communication, Bangladesh

• Action Line C10 Ethical dimensions of the Information Society

Winner: EmpoderaLive, Cibervoluntarios Foundation, Spain





Action Line C11 International & regional cooperation
 Winner: ICT Development in Arab Region, ICT Development in Arab Region,
 United Arab Emirates



Detailed descriptions of winning projects are available <u>here</u>. Video interviews and photos of winners along with live and archived event webcasts and transcripts of speeches can be found at <a href="http://groups.itu.int/stocktaking/WSISProjectPrizes.aspx#home">http://groups.itu.int/stocktaking/WSISProjectPrizes.aspx#home</a> or on the main event website at <a href="http://groups.itu.int/stocktaking/wsis.org/forum">www.wsis.org/forum</a>.

85. An innovation in this year's WSIS Prizes contest is the WSIS Prize Champions category,

which recognizes those contenders having emerged from the online voting phase with at least 245 000 votes from the WSIS community. Their projects are among those having received the highest number of votes and having gained the best reviews by the members of the Expert Group. Among the five projects selected in each of the 18 categories, one will be the Winner and the runners-up will be WSIS Prize Champions. The 18 success stories together with the descriptions of the 70 champions' projects thus constitute the body of this report.



















WSIS Prize 2016 Champions Ceremony

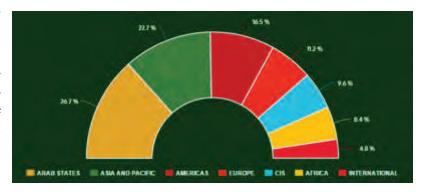
- 86. WSIS Prizes is a unique international contest developed in response to requests from the WSIS stakeholders to create an effective mechanism to evaluate and recognize individuals, governments, civil society, local, regional and international agencies, research institutions and private-sector companies for outstanding success in implementing development oriented strategies that leverage the power of ICTs as an enabler of the development. Building upon the outcomes of the United Nations General Assembly Overall Review on WSIS as well as the 2030 Agenda for Sustainable Development, the WSIS Prizes 2016 reflect close linkages with achieving the Sustainable Development Goals (SDGs).
- 87. The winners of the WSIS Prizes along with the champions form a key part of our global and grassroots community engaged in online and community advocacy. WSIS Prize urges all stakeholders to continue submitting their contributions so that the WSIS Stocktaking process can continue to foster excellence in achieving an inclusive, people-centred information society while advancing environmentally sound and sustainable development. Through strong social media campaign we continue promoting sharing best practices while contributing to the WSIS stocktaking process by submitting projects and initiatives. Our common objective is to inspire and advance sustainable development through the effective use of ICTs.
- 88. Building on the outcomes of the United Nations General Assembly (UNGA) Overall Review on WSIS, as well as on the 2030 Agenda for Sustainable Development, WSIS Prizes 2016 began reflecting on the linkages between the projects and the SDGs. ICTs are enablers for sustainable development, and reporting on ICT success stories to best showcase the possible achievement of SDGs, through the implementation of projects related to the WSIS Action Lines, is the new objective of the WSIS Stocktaking process, including WSIS Prizes.





We invite you learn how ICT projects submitted for WSIS Prizes 2016 are enabling the advancement of the SDGs.

89. With more than 400 ICT success stories submitted for WSIS Prizes 2016 by 31 January 2016 – this year experienced another successful illustration of how the WSIS Prizes contest serves as unique recognition of excellence in the implementation of WSIS



outcomes. While last year's contest was already a record-breaker in terms of the number of projects submitted, the WSIS Prizes 2016 contest has hit a new high with a 15 per cent increase in submissions. Following a comprehensive review of the projects submitted, the ITU Expert Group nominated more than 300 projects and posted them online for public appreciation. The 311 nominated projects break down into 179 projects from the government sector, 41 from the business sector, 31 from civil society, 14 from international organizations and 46 from other entities (mostly academic). As regards regional distribution, 86 projects are from the Arab region, 73 from the Asia and Pacific region, 53 from the Americas region, 36 from the Europe region, 31 from the CIS region and 27 from the Africa region, while five nominated projects come from international organizations.

90. It is critical to highlight the importance of the multistakeholder and bottom-up approach that is the essential philosophy of the WSIS Forum. Stakeholders highly appreciated the multi-stakeholder approach of the contest and highlighted the importance of the continuation of this contest to serve as a mechanism to recognize stakeholders for their efforts on the implementation of WSIS outcomes.

# (d) WSIS Stocktaking Portal

- 91. The WSIS Stocktaking process provides a register of activities, including, projects, programmes, training initiatives, conferences, websites, guidelines, tool-kits, etc., carried out by governments, international organizations, the private sector, civil society and other entities. To that end, in accordance with § 120 of the Tunis Agenda for the Information Society (TAIS) adopted by WSIS, ITU has been maintaining the WSIS Stocktaking Database as a publicly accessible system providing information on ICT-related initiatives and projects with reference to the 11 WSIS action lines (Geneva Plan of Action) and 17 SDGs.
- 92. The WSIS Stocktaking Portal provides a repository of best practices for stakeholders seeking updated information on progress in the implementation of WSIS outcomes (§ 28.e of the Geneva Plan of Action). The WSIS Stocktaking Platform, launched in February 2010, transformed the previous static database into a unique portal to highlight ICT-related projects and initiatives in line with WSIS implementation. The platform offers stakeholders exciting and interactive networking opportunities via Web 2.0 applications.
- 93. Within the framework of the WSIS Stocktaking Platform, all types of stakeholders can benefit from the "global events calendar", "global repository" and "blog" components. It





provides the opportunity for stakeholders to network, create partnerships and add value to projects at the local, national, regional and international levels. The redesigned WSIS Stocktaking Platform was launched at the end of October 2015, introducing a more interactive interface with several innovative aspects that will be more appealing to users. The new stocktaking platform features a new questionnaire that reflects the transition from millennium development goals (MDGs) to SDGs, mirroring the impact of freshly submitted ICT projects on SDGs.

- 94. With the year-round ongoing call for updates and new entries, all stakeholders are invited to continue sharing best practices on the WSIS Stocktaking Platform and emphasize how ICT-related initiatives and projects are enabling SDGs. The direct linkages between the WSIS action lines and the SDGs set out below are crucial to continuing to strengthen the impact of ICTs for sustainable development. Each UN action line facilitator has analysed the connections and relations between their respective action lines and the proposed SDGs and their targets to create a clear and direct linkage and an explicit connection between the key aim of WSIS that of harnessing the potential of ICTs to promote and realize the development goals and the post-2015 development agenda, so as to contribute to realization of the latter. The majority of the projects presented in this report clearly showcase the linkage between their related action lines and the various SDGs and targets.
- 95. At the WSIS Forum 2015, the SDG matrix was extremely well received by the WSIS community, offering as it does a better explanation of the potential of ICTs as enablers for sustainable development. A new component was introduced in the WSIS Stocktaking process in the form of reporting ICT success stories to best showcase the possible achievement of SDGs through the implementation of WSIS action line-related projects. A booklet on Advancing Sustainable Development Through Information and Communication Technologies: WSIS Action Lines Enabling SDGs was produced and is available online for download from the ITU Bookshop.
- 96. The principal role of the WSIS Stocktaking exercise is to leverage the activities of stakeholders working on the implementation of WSIS outcomes and share knowledge and experience of projects by replicating successful models designed to achieve SDGs. The WSIS action lines break down into 18 categories:
  - 1) The role of governments and all stakeholders in the promotion of ICTs for development
  - Information and communication infrastructure
  - 3) Access to knowledge and information
  - 4) Capacity building
  - 5) Building confidence and security in the use of ICTs
  - 6) Enabling environment
  - 7) E-government
  - 8) E-business
  - 9) E-learning
  - 10) E-health
  - 11) E-employment
  - 12) E-environment
  - 13) E-agriculture





- 14) E-science
- 15) Cultural diversity and identity, linguistic diversity and local content
- 16) Media
- 17) Ethical dimension of the information society
- 18) International and regional cooperation

# 17 Sustainable development goals (SDGs):

- Goal 1. End poverty in all its forms everywhere
- Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- Goal 3. Ensure healthy lives and promote well-being for all at all ages
- Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- Goal 5. Achieve gender equality and empower all women and girls
- Goal 6. Ensure availability and sustainable management of water and sanitation for all
- Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation Goal
- 10. Reduce inequality within and among countries
- Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable
- Goal 12. Ensure sustainable consumption and production patterns
- Goal 13. Take urgent action to combat climate change and its impacts
- Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development
- Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
- Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
- Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development
- 97. In addition to international stakeholders, including international organizations and companies, all Member States are invited to gather information at the national level with the involvement of all stakeholders, in order to contribute to the stocktaking process. To this end, we have introduced opportunity for all to use the embeddable interface of the WSIS Stocktaking platform and place it on websites. This will be useful for stakeholders to collect ICT-related projects and initiatives within their communities and it will also contribute to promotion of the WSIS Stocktaking process.
- 98. The International Telecommunication Union (ITU) remains committed to the World Summit on the Information Society (WSIS) process, and to implementation of the WSIS





goals beyond 2015. ITU recognizes and highly appreciates the extremely valuable contributions made by stakeholders to enable the continuation of WSIS monitoring and reporting.

# (e) Hackathons and Knowledge Café

The Knowledge Café: 'Implementing Best Practices and Addressing Challenges', was held on 4th May 2016 in the ITU Montbrillant building. It provided an ideal multistakeholder platform for about 100 WSIS delegates and 2016 WSIS Prize Winners and Champions, enabling active involvement of each and every participant to explore key questions on the data requirements necessary to "take stock" of ICT progress and implement effective policies to achieve the Sustainable Development Goals (SDGs). This collaborative format facilitated brainstorming on trends, challenges and opportunities when using ICTs for development.

The concept of Hackathons was introduced at the WSIS Forum 2016. Two introductory Hackathons were held in collaboration with IEEE on e-Health and CTA on e-agriculture.

- a) Plug and Play: Showcasing ICT Innovations for Sustainable Agri-Food Systems International Telecommunication Union (ITU) and the Technical Centre for Agricultural and Rural Cooperation ACP-EU (CTA)
- b) WSIS Action Lines and SDGs eHealth Data Policy (International Telecommunication Union ITU and the Institute of Electrical and Electronics Engineers IEEE)

# • The Global Cyber Security Agenda (GCA)

99. In May 2007, ITU launched the GCA: a framework for international cooperation in cyber security. The GCA has seven main strategic goals and is built around 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 acts on existing national and regional initiatives to avoid duplication of work and encourage collaboration amongst all relevant partners. Within the overall framework of the cyber security agenda (GCA), ITU along with its partners, are deploying joint services. These services harmonize, at the international level, different national approaches to better prepare countries to face cyber threats and solve cyber-attacks. This is achieved through information sharing, awareness raising and trainings programs. The momentum generated by the GCA and the broad nature of this ITU initiative have resulted in interest from other stakeholders and opportunities for collaboration and cooperation. More on activities under the GCA can be found in the Section on Action Line C5: Building Confidence and Security in the of ICTs. use





# • Connect 2020 Agenda for global telecommunication/ICT development

#### 1. Background

- 1.1. At the 2014 Plenipotentiary Conference (PP-14), ITU Member States adopted Resolution 200 (Busan, 2014): "Connect 2020 Agenda for global telecommunication/ICT development", establishing a set of global targets to be achieved by the whole Union by 2020 in the areas of *growth*, *inclusiveness*, *sustainability*, and *innovation*, *and partnerships* in the telecommunication/ICT sector.
- 1.2. Resolution 200 invites ITU Member States to participate actively in the implementation of the <u>Connect 2020 Agenda</u>; to contribute with national, regional, and international initiatives; to provide data and statistics, as appropriate, to monitor progress towards the achievement of the Connect 2020 goals and targets; and to engage all stakeholders through the promotion of partnerships around the Connect 2020 Agenda.
- 1.3. At PP-14, ITU Member States also adopted Resolution 71 (Rev. Busan, 2014): "Strategic plan for the Union for 2016-2019", which incorporates the Connect 2020 goals and targets into the framework of ITU's strategic plan for the 2016-2019 period.

# 2. Progress for the reporting period

#### Measurement, monitoring and reporting

- 2.1. The four goals of the Connect 2020 Agenda include 17 targets, designed to provide an indication of progress towards the achievement of the goals up to 2020.
- 2.2. The Telecommunication Development Bureau coordinated the collection, provision and dissemination of indicators and statistics that measure and provide comparative analysis for the progress towards achievement of the Connect 2020 Global Telecommunication/ICT Targets. A first review and quantitative assessment of the Connect 2020 Goals and Targets was presented in the "Measuring the Information Society Report 2015<sup>2</sup>", as per the provisions of Res. 200 (Busan, 2014) on the Connect 2020 Agenda. The Report was launched on 30 November, 2015, during the World Telecommunication/ICT Indicators Symposium (WTIS) 2015 in Hiroshima, Japan.
- 2.3. The proposal for the implementation of the roadmaps for the Connect 2020 Environmental Sustainability targets (Targets 3.2 and 3.3 on e-waste and GHG emissions reduction) was developed from May to September 2015. In October 2015, a presentation on the roadmaps for those targets was delivered during the ITU-T Study Group 5 on Environment and Climate Change meeting. The roadmaps were developed in line with Q18/5 (Methodologies for the assessment of environmental impact of ICT) and Q13/5 (Environmental impact reduction including e-waste). Based on the feedback received, a revised version will be presented at the ITU-T Study Group 5 Meeting in Kuala Lumpur, Malaysia (20 to 27 April 2016). The objectives of the roadmaps were also included in Bahamas Declaration during the Green Standards Week in the Bahamas in December 2015, with the support of various other United Nations agencies. The methodology to assess progress towards target 3.2 on e-waste reduction will be based on ITU L.1430. Two expert working groups have been created; one for e-waste and one for GHG emissions. External experts will also be invited to contribute to the subject areas.

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More information and the full report are available at the ITU-D ICT Statistics website (<a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/mis2015.aspx">http://www.itu.int/en/ITU-D/Statistics/Pages/publications/mis2015.aspx</a>)





#### Operationalization of the ITU Strategic Plan 2016-2019

- 2.4. The ITU secretariat contributed to the progress towards the Connect 2020 Agenda through the implementation of the operational plans of the three Sectors and the General Secretariat.
- 2.5. The progress towards the goals of the Union and the contribution of the objectives and outcomes of the work of each Sector and the General Secretariat, are presented in detail in the "Annual Progress Report on the Implementation of the Strategic Plan and Activities of the Union", available online at <a href="itu.int/annual-report-2015">itu.int/annual-report-2015</a> (and presented to the 2016 Session of the ITU Council in <a href="Document C16/35">Document C16/35</a>).

#### Raising awareness on Connect 2020 Agenda

- 2.6. The ITU secretariat focused on raising awareness of the Connect 2020 Agenda among all stakeholders of the ICT ecosystem, building further buy-in of the Connect 2020 targets, improving understanding on the relevance of the framework and further incorporating it in the global agenda.
- 2.7. The Connect 2020 Agenda was integrated into existing ITU events and platforms with dedicated sessions, including a dedicated WSIS Forum 2015 panel and the ITU Telecom World '15 Leadership Summit and Ministerial Roundtable. The *Budapest Call for Action "Accelerating innovation for social impact: mobilizing global entrepreneurship to implement the Connect 2020 Agenda"* was the outcome document of that Ministerial Roundtable session, agreed by Ministers and representatives of the governments of 26 ITU Member States.
- 2.8. The Connect 2020 goals to connect the unconnected, and in particular *Target 1.2* ("Worldwide, 60% of individuals should be using the Internet by 2020") –translating into connecting an additional 1.5 billion people online by 2020, has been highlighted in several events and fora where ITU participated, including, inter alia, the Internet Governance Forum in November 2015 and the Broadband Commission Special Session at the World Economic Forum Annual Meeting at Davos in January 2016 –where several stakeholders issued a joint statement<sup>4</sup> pledging a concerted global effort. The target is aligned with various other global initiatives, including the U.S. State Department "Global Connect", which seeks to bring 1.5 billion people who lack Internet access, online by 2020.
- 2.9. The Connect 2020 Agenda has also been recognized and welcomed by the Resolution of the United Nations General Assembly on the overall review of the implementation of the WSIS Outcomes (A/RES/70/125).

#### 3. Roadmap for 2016

- 3.1. ITU will further advance the implementation of Connect 2020 by the end of the year through:
- a) Measurement, monitoring and reporting: The Connect 2020 Agenda highlights the importance of effective measurement and data analysis to meet the needs of policymakers and practitioners. ITU will continue monitoring and reporting on the Connect 2020 goals and targets through its work on ICT data and statistics and the Measuring the

The document is publicly available at document is publicly available at: http://telecomworld.itu.int/wp-content/uploads/2015/10/call\_to\_action.pdf

Broadband Commission Special Session at the World Economic Forum: 21 January 2016, Davos, Switzerland (<a href="http://broadbandcommission.org/Documents/publications/davos-statement-jan2016-en.pdf">http://broadbandcommission.org/Documents/publications/davos-statement-jan2016-en.pdf</a>)





Information Society Report – as per the provisions of Res. 200 (Busan, 2014). Further work required in specific cases to define measurement methodologies will be continued.

- b) Coordinated implementation of the ITU strategic and operational plans: Ensuring intersector coordination on the cross-sectoral thematic areas covered by the Connect 2020 Agenda goals and targets will ensure maximizing the impact of ITU's work.
- c) Contribution to the 2030 Agenda and the Sustainable Development Goals: ITU will strive to respond proactively and coherently to the needs of its constituents with regards to the 2030 Agenda and the SDGs. Leveraging the Connect 2020 Agenda framework, ITU will be ready to support Member States at regional and national level to set national priorities and support the implementation of effective policies.
- d) Further awareness raising on the Connect 2020 Agenda and the global efforts to connect the unconnected: The ITU secretariat will continue its efforts to integrate Connect 2020 into the existing relevant ITU platforms, national and regional events, promoting active involvement of all stakeholders, and highlighting the importance of the global efforts to connect the unconnected, in support to the implementation of the 2030 Agenda for Sustainable Development.
- e) Accelerate implementation of goals and targets: The analysis of the progress towards Connect 2020 will help ITU and all other stakeholders to focus their priorities during that period to the areas that would need more emphasis to reach the targets. The establishment of partnerships linked to specific actions at regional and national levels where most challenges are faced, would significantly accelerate the achievement of the goals.

# 4. Measurement and reporting status of Connect 2020 goals and targets

Goal / Target	Status
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#### GOAL 1: GROWTH - Enable and foster access to and increased use of telecommunication/ICTs

- Target 1.1: Worldwide, 55% of households should have access to the Internet by 2020
- Target 1.2: Worldwide, 60% of individuals should be using the Internet by 2020
- Target 1.3: Worldwide, telecommunication/ICT should be 40% more affordable by 2020

Assessment included in the Measuring the Information Society Report 2015.

# GOAL 2: INCLUSIVENESS - Bridge the digital divide and provide broadband for all

- Target 2.1.A: In the developing world, 50% of households should have access to the Internet by 2020
- Target 2.1.B: In the least developed countries (LDCs), 15% of households should have access to the Internet by 2020
- Target 2.2.A: In the developing world, 50% of individuals should be using the Internet by 2020
- Target 2.2.B: In the least developed countries (LDCs), 20% of individuals should be using the Internet by 2020
- Target 2.3.A: The affordability gap between developed and developing countries should be reduced by 40% by 2020
- Target 2.3.B: Broadband services should cost no more than 5% of average monthly income in developing countries by 2020
- Target 2.4: Worldwide, 90% of the rural population should be covered by broadband services by 2020

Assessment included in the Measuring the Information Society Report 2015.

For Target 2.5.B the data gathering process started in 2015 and information will be available at the Measuring the Information Society Report 2016 (to be released by the end of 2016).





- Target 2.5.A: Gender equality among Internet users should be reached by 2020
- Target 2.5.B: Enabling environments ensuring accessible telecommunication/ICT for persons with disabilities should be established in all countries by 2020

#### GOAL 3: SUSTAINABILITY - Manage challenges resulting from telecommunication/ICT development

- Target 3.1: Cybersecurity readiness should be improved by 40% by 2020
- Target 3.2: Volume of redundant e-waste to be reduced by 50% by 2020
- Target 3.3: Green House Gas emissions generated by the telecommunication/ICT sector to be decreased per device by 30% by 2020

Target 3.1: Data included in the Measuring the Information Society Report 2015.

Roadmap for Targets 3.2 and 3.3 being developed with ITU membership and in collaboration with relevant organizations.

# GOAL 4: INNOVATION AND PARTNERSHIP – Lead, improve and adapt to the changing telecommunication/ICT environment

- Target 4.1: Telecommunication/ICT environment conducive to innovation
- Target 4.2: Effective partnerships of stakeholders in telecommunication/ICT environment

ITU is working with partners to develop indicators to measure achievement.

# • Broadband Commission for Sustainable Development

- 100. In May 2010, ITU and UNESCO established the Broadband Commission for Digital Development, in response to calls by the UN Secretary-General Mr. Ban Ki-moon to step up efforts by the UN to accelerate progress towards the MDGs. Expanding broadband access in every country will be key to achieve the Sustainable Development Goals (SDGs). The Broadband Commission therefore defines practical ways in which countries at all stages of development can achieve this, in cooperation with the private sector.
- 101. The Broadband Commission is a significant UN inter-agency initiative, innovative private-public partnership and high-profile advocacy group for the benefits of broadband and has succeeded in boosting broadband on the international agenda.
- 102. The Broadband Commission believes that high-speed, high-capacity broadband connectivity to the Internet is essential in modern society, with wide economic and social benefits. It aims to promote the adoption of broadband-friendly practice and policies, so the entire world can take advantage of the benefits. It defines strategies for accelerating broadband roll-out worldwide and examine applications that could see broadband networks improve ICT delivery in healthcare, education, environmental management, safety and across society.
  - The Broadband Commission aims to demonstrate that broadband networks:
  - have the same level of importance as roads and electricity networks; and are basic infrastructure in a modern society;
  - are uniquely powerful tools for achieving the MDGs;





- \* are remarkably cost-effective and can offer impressive rates of return-on-investment (ROI) for both developed and developing economies;
- underpin all industrial sectors and are increasingly the foundation of public services and social progress;
- must be coordinated nationally by governments in partnership with industry, in order to reap the full benefit of these powerful tools.
- The Broadband Commission set 5 Global Broadband Advocacy Targets with the due date of 2015 and 2020:
- Target 1: Making broadband policy universal
- Target 2: Making broadband affordable
- Target 3: Connecting homes to broadband
- Target 4: Getting people online
- ❖ Target 5: Achieving gender equality in access to broadband by 2020
- 103. Commissioners represent governments from around the world, academia, relevant industries, international agencies and development organizations, and are all leaders in their field. The group is co-chaired by H.E. President Paul Kagame of Rwanda and Mr Carlos Slim Helú, President of Carlos Slim Foudation, with ITU Secretary-General Mr Houlin Zhao, and UNESCO Director-General, Ms Irina Bokova, serving as joint Vice-Chairs.
- 104. Every year, the UN Broadband Commission published its annual 'State of Broadband' report to take the pulse of the global broadband industry and to explore progress in connecting everyone on the planet via broadband. In 2016, the Commission issued the 4th edition of its annual report: The State of Broadband 2016: Broadband for Catalyzing Sustainable Development. Released every year in September in New York, it features country-by-country rankings based on access and affordability for over 160 economies worldwide. By issuing these reports, the UN Broadband Commission for Sustainable Development has made a worthy contribution to the debate on how best to expand broadband access and achieve digital inclusion for all. The Commission will continue working with many different stakeholders to achieve digital inclusion for all towards the forthcoming sustainable development goals (SDGs).
- 105. In addition to these reports, the Commission maintains an <u>online portal</u> with a wealth of online resources, country case studies, best practices and regulatory information, as well as the publicly available <u>newsletter</u>. Its work is conducted through thematic working groups which focus on vital policy priorities including health, education, LDCs, climate change, gender, multilingualism and the involvement of youth.
- 106. In 2015-6, the Broadband Commission has convened Working Groups on <u>digital health</u>, <u>demand</u>, <u>platforms and SDGs</u>, and the <u>digital gender divide</u>. These groups are undertaking various workstreams and plan to publish reports and various calls to action in autumn 2016.





- 107. In January 2016, the UN Broadband Commission for Sustainable Development held a Special Session at the annual meeting of the World Economic Forum (WEF) co-organized with the Ministry of Communications and High Technologies of the Republic of Azerbaijan, World Economic Forum and ITU at Davos. This special session estimated that investment of at least US\$450 billion will be required to connect the next 1.5 billion people with Internet.
- 108. In addition to the working group activities, the Broadband Commission, hosts two regular face-to-face meetings each year to solicit feedback from regional constituents, including ministers and regulators, as well as members of the private sector. Broadband Commissioners debate key issues advance the work of the Commission and typically offer expertise and guidance to guest Ministers and VIPs.
- 109. The 2016 Spring Meeting of the Commission was held in Dubai, UAE, in March 2016at the kind invitation of Mr Sunny Varkey, founder of the Varkey Foundation, and Broadband Commissioner, in parallel with the Global Education and Skills Forum (GESF). The meeting discussion included the role of broadband /ICTs in furthering education goals and a discussion of developments to date with regards to its targets.
- 110. The Fall meeting of the Commission will be held in New York, on 18 September 2016 coinciding with the UN General Assembly. The Commission will release its "The State of Broadband 2016" report with a country-by-country snapshot of the state of broadband deployment worldwide and measuring progress towards five key targets: price, household and individual access, government broadband policy and gender, and access to high-speed technology. The report reveals that more than 47% of the world's people are online, with the number of Internet users rising from 3.2 billion in 2015 to nearly 3.5 billion by the end of this year. However, by the end of 2016, 3.9 billion people 53% of the world's population are not using the Internet.

# • m-Powering Development Initiative

- 111. In the past years, mobile communications has seen enormous growth worldwide. The mobile phone now offers the potential of becoming a universal communications tool and going well beyond voice and data to deliver new, sophisticated ICT services to improve people's lives.
- 112. The m-Powering Development Initiative is designed to create a resource and an action plan to deploy ICT services, from m-Health, m-banking, m-Learning, m-Governance to m-Commerce and other m-services. In doing so, it can cut costs and reshape, for the better, public service delivery for many millions of individuals, particularly those living in in remote or rural areas of the world.
- 113. In its first report, the m-Powering Development Initiative has already identified many particular approaches and real-life examples from around the world that could





prospectively be adopted elsewhere. The second report released in 2016 documents the achievements of the Working Groups and details a series of recommendations.

- 114. The Telecommunication Development Bureau is coordinating the Initiative with an Advisory Board of Eminent senior experts drawn from the public and private sectors.
- 115. The objectives of the m-Powering Development Initiative is to:
  - Harness mobile communications for sustainable development.
  - Increase the uptake and usage of mobile services in rural and remote areas.
  - Create an enabling environment to foster mobile services, particularly where there is a social need.
  - Create synergies with existing initiatives and avoid duplication between initiatives.
  - Optimize the use of scarce resources.
  - Encourage partnerships between different stakeholders, and on as large a scale as possible.
- 116. The Third meeting of the Advisory Board was held in October 2015, in Budapest, Hungary on the eve of the ITU Telecom World 2015. The Board reviewed the reports prepared by the m-Powering Working groups and discussed future activities, which will be based on promoting the benefits of mobile technology for sustainable development. The meeting also marked the end of the first cycle of the Advisory Board. The composition of the new Board for the second cycle will be announced soon. The first Meeting of the New Board will be held on 13 November 2016 in Bangkok, Thailand, eve of the ITU Telecom World 2016. The new Board's work will contribute to the successful implementation of the United Nations adopted Sustainable Development Goals (SDGs) under the 2030 Sustainable Development Agenda.
- 117. Under the Initiative, a Policy Forum was organized with the UN Educational, Scientific and Cultural Organization (UNESCO), in March 2016, that brought together ministers of telecommunication/ICT and ministers of education to examine the role that policies and cross-sectoral collaboration can play in fostering innovation and the use of mobile technology and build comprehensive and sustainable strategies for the digital learning revolution.
- 118. A high-level Policy Dialogue on Digital Health was also organized, under the Initiative, with the World Health Organization (WHO), in May 2016, which brought together ministers of telecommunication/ICT and ministers of health for the first time at an inter-ministerial round table to discuss opportunities for the full adoption of Universal Health Coverage.

For more information, please visit:





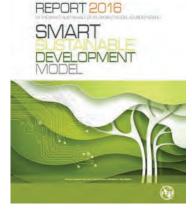




# http://www.itu.int/en/ITU-D/Initiatives/m-Powering/Pages/default.aspx

# • Smart Sustainable Development Model Initiative

119. The number of natural disasters are on the rise. Information and communication technology for disaster management — ICT4DM — can help respond to and recover from the hardship and damage caused to millions of people. At the same time, ICT for development — ICT4D — remains a pressing challenge to enable people and communities to truly participate in the global digital world.



- 120. The Smart Sustainable Development Model Initiative (SSDM) seeks to ensure that information and communication technologies are used for both
  - development and for disaster management with the aim of improving the lives of millions of people across the globe.
- 121. SSDM is both smart and sustainable. Making this approach pro-active, flexible and configured to both uses is "smart", and giving it a roadmap for the future is "sustainable".
- 122. The Telecommunication Development Bureau is coordinating the Initiative with an Advisory Board of Eminent senior experts drawn from the public and private sectors.
- 123. The SSDM approach to ICT4D and ICT4DM is to:
  - Better harness the potential for ICT and its likely future roadmaps in both development and disaster management.
  - Identify, share and transfer best practices in each sector worldwide.
  - Optimize the use of scarce resources.
  - Encourage planning and co-ordination at national and intergovernmental levels for ICT4D and ICT4DM that takes account of dual-use deployments.
  - Encourage stakeholders to work together for sustainable development and to avoid duplication
- 124. The Third Advisory Board Meeting of the Smart Sustainable Development Model (SSDM) Initiative was held on 11 October 2015 in Budapest, Hungary on the eve of the ITU Telecom World 2015. The Advisory Board reviewed the reports prepared by the SSDM Task Forces during the past year. They also discussed future activities, which will be based on promoting the benefits of mobile technology for sustainable development and strengthening the relation between ICT for development (ICT4D) and ICT for disaster management (ICT4DM). The meeting also marked the end of the first cycle of the Advisory Board. The SSDM report which documents the achievements of the Working Groups and details a series of recommendations was released in 2016. The composition of the new Board for the second cycle will be announced soon. The new Board's work will contribute to the successful implementation of the United Nations





adopted Sustainable Development Goals (SDGs) under the 2030 Sustainable Development Agenda.

To find out more about the Initiative or get involved please visit <a href="http://www.itu.int/en/ITU-D/Initiatives/SSDM/Pages/default.aspx">http://www.itu.int/en/ITU-D/Initiatives/SSDM/Pages/default.aspx</a>

# • Girls in ICT Day

# Girls in ICT Day, Instituto Federal de Telecomunicaciones de México (IFT), Mexico



Girls in ICT Day, Girl Child Network, Sierra Leone





**Girls in ICT Day, CISCO** 







Girls in ICT Day, Universal Communications Service Access Fund, Tanzania



Girls in ICT Day, A young girl receives a scholarship check, Jamaica

- 125. In 2016, over 1900 Girls in ICT Day events were organized in 138 countries empowering more than 66,000 girls to understand that they can become ICT creators. Many organizers provided hands-on workshops to teach coding, mobile app development and other digital skills. Tanzania used its Universal Access Fund to support mobile app development, pitching and mentoring for girls while Sri Lanka launched a year-long plan for women's and girls' empowerment. To ensure more women chose ICT careers, Girls in ICT Day events are also designed to highlight the need for strong and committed support from industry; the importance of role models and mentoring opportunities, the need for countries to focus on STEM curricula and adapt STEM studies to today's needs such as teaching coding, to encourage girls and young women to become ICT creators. The #GirlsinICT hashtag reached 54,3M Twitter accounts in 2016 compared to 25.8M in 2015).
- 126. With over 7,200 Girls in ICT events developed in 160 countries in the last 6 years, ITU created a global environment that empowered and encouraged over 240,000 girls and young women to consider careers in the growing field of information and communication technologies (ICTs).

http://girlsinict.org/





# (k) GEM-TECH Awards 2016

- 127. The annual GEM-TECH Awards, jointly organized by ITU and UN Women, celebrate personal or organizational achievements and innovative strategies to advance Gender Equality and Mainstreaming in the area of ICTs. GEM-TECH Awards provides a platform for advancing women's meaningful engagement with ICTs and their role as decision-makers and producers in the technology sector.
- 128. The only international prizes of their kind, GEM-Tech Awards were celebrated in Busan, Rep. of Korea, 2014 and in New York, USA 2015.
- 129. **GEM-TECH Awards 2016** will be tied to the Forum of Telecom World 2016 to be held in Bangkok, Thailand, from 14-17 November considering that it aims at recognizing how to maximize new opportunities by bridging the digital divide including the achievement of gender equality and women's empowerment.
- 130. Nomination period: 18 May 31 July 2016 Please submit your application below: http://goo.gl/forms/enua5GuVue

# (I) Roadmaps for WSIS Action Lines C2, C5, C6

- 131. 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).
- 132. 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. Highlighting the important role of ITU in implementing the WSIS Action likes till 2025, revised resolution 1332 in para 3 under resolves instructs us to do the following with regard to the ROADMAP:
  - 133. updating its WSIS Action Line Roadmaps for C2, C5, and C6 to account for activities underway to also achieve the 2030 Agenda for Sustainable Development;
  - 134. providing input, as appropriate, into the roadmap/work plans of WSIS Action Lines C1, C3, C4, C7, C8, C9 and C11, also related to the 2030 Agenda for Sustainable Development;
- 135. Roadmaps are detailed plans to guide progress towards achieving WSIS goals, also related to the 2030 Agenda for Sustainable Development. 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.

136. 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.

# (m) Communication and Outreach

- 137. WSIS Flash: is a monthly newsletter on WSIS Related news, projects and activities. http://groups.itu.int/stocktaking/WSISFlash.aspx.
- 138. iwrite4WSISForum is a campaign that aims to empower stakeholders to write and report on all WSIS related events and activities, sharing their work and ideas with thousands of WSIS stakeholders online worldwide. This twitter campaign was introduced for effective and far reaching communication for and amongst WSIS Stakeholders. This empowers all the WSIS Stakeholders to become WSIS reporters and tweet information about their projects <a href="http://www.wsis.org/iwrite">http://www.wsis.org/iwrite</a>



and community.

- imeetyouatWSISForum provides all registered onsite participants of the WSIS Forum 2015 with an online social networking community experience. This component of the WSIS Forum has been specially designed for the WSIS Forum 2015 onsite participants www.wsis.org/imeet.
- 140. WSIS Process on Facebook: The WSIS Facebook page gives opportunity to fans to get informed and actively contribute to the page <a href="http://www.facebook.com/WSISprocess">http://www.facebook.com/WSISprocess</a>
- 141. @WSISprocess on Twitter: The WSIS Twitter page gives opportunity to fans to get informed and actively participate at the page <a href="https://twitter.com/WSISprocess">https://twitter.com/WSISprocess</a>\









- 142. WSIS Process on YouTube: WSIS Forum highlights, interviews and all the important WSIS Related Videos are available on the WSIS Forum You Tube site: <a href="http://www.youtube.com/wsisprocess.">http://www.youtube.com/wsisprocess.</a>
- 143. WSIS Process on LinkedIn: WSIS Process has a LinkedIn group: <a href="https://www.linkedin.com/groups/WSIS-Process-World-Summit-on-2599279?gid=2599279&trk=hb">https://www.linkedin.com/groups/WSIS-Process-World-Summit-on-2599279?gid=2599279&trk=hb</a> side g .
- 144. WSIS in ITU News: The ITU News is a media partner of the WSIS Process and regularly publishes WSIS Process related articles in several issues <a href="https://itunews.itu.int/en/">https://itunews.itu.int/en/</a>

# (n) WSIS Fund in Trust

- 145. The WSIS Trust Fund was established in 2011 with the adoption of Plenipotentiary Conference Resolution 140. Council Resolution 1332 as modified by ITU Council in May 2016 takes into account the outcomes of the United Nations General Assembly Overall Review of the Implementation of WSIS Outcomes and the 2030 Agenda for Sustainable Development, and resolves to maintain the fund to support ITU activities to facilitate the implementation of WSIS outcomes, calls for partnerships and strategic alliances, and invites the ITU Membership to make voluntary contributions to the fund.
- 146. Since its creation, information on the WSIS Trust Fund and stakeholder contributions has been reflected at the dedicated website: <a href="www.itu.int/itu-wsis/fund">www.itu.int/itu-wsis/fund</a>. This provides an opportunity to thank all those who have contributed towards the Trust Fund to date for their dedication and commitment towards WSIS Implementation, in particular the WSIS Forum. The outcomes of the WSIS Forum 2016 can be found here: <a href="http://www.itu.int/net4/wsis/forum/2016/Outcomes/">http://www.itu.int/net4/wsis/forum/2016/Outcomes/</a>. Moving towards 2025, and following the multi-stakeholder approach, the WSIS Forum will build upon the outcomes of the WSIS+10 Review and the 2030 Agenda for Sustainable Development.
  - 147. The ITU would like to thank all WSIS Stakeholders who have generously contributed to the WSIS Fund in Trust, the names of all contributors are reflected in the dedicated site of the WSIS Fund in Trust <a href="http://www.itu.int/en/itu-wsis/Pages/WSIS-Fund-in-Trust.aspx">http://www.itu.int/en/itu-wsis/Pages/WSIS-Fund-in-Trust.aspx</a>. We thank Japan, Poland, Rwanda, Saudi Arabia, Switzerland, United Arab Emirates, IFIP, ICANN, ISOC, VimpleCom and Swiss Engineering for their contribution to the WSIS Fund in Trust in 2016 to accelerate the implementation of the WSIS related activities undertaken by ITU.





# **Partners**

# Strategic Partner: Platinum



# **United Arab Emirates**

# Partners for Specific Activities







<u>Japan</u>

Saudi Arabia (Kingdom of)

Switzerland (Confederation of)

# **Contributing Partners**













Poland (Republic of) Rwanda (Republic of) <u>ICANN</u>

<u>IEEE</u>

<u>IFIP</u>

**ISOC** 





# Supporting Partners



148. The call for WSIS Fund in Trust 2017 is now open the invitation to contribute and the WSIS Forum 2017 Packages are available here: <a href="http://www.itu.int/en/itu-wsis/Pages/WSIS-Fund-in-Trust.aspx">http://www.itu.int/en/itu-wsis/Pages/WSIS-Fund-in-Trust.aspx</a>.

# (o) Future Actions

# 1) WSIS Forum 2017 (Open Consultation Process) www.wsis.org/forum

The annual WSIS Forum is a global multi-stakeholder platform facilitating the implementation of the WSIS Action Lines for advancing sustainable development. The Forum, co-organized by ITU, UNESCO, UNDP and UNCTAD, in close collaboration with all WSIS Action Line co-/facilitators and other UN organizations (UNDESA, FAO, UNEP, WHO, UN Women, WIPO, WFP, ILO, WMO, ITC, UPU, UNODC, UNICEF and UN Regional Commissions). It provides an opportunity for information exchange, knowledge creation and sharing of best practices, while identifying emerging trends and fostering partnerships, taking into account the evolving Information and Knowledge Societies.

In follow up to the outcomes of the UN General Assembly Overall Review of the Implementation of WSIS Outcomes (Res. A/70/125) and with the adoption of the 2030 Agenda for Sustainable Development (Res. A/70/1), the WSIS Forum is constantly evolving and strengthening the alignment between the WSIS Action Lines and the Sustainable Development Goals.

The WSIS Forum is the only event of its kind where the programme is completely crowdsourced. Therefore, as organizers, ITU, UNESCO, UNCTAD and UNDP, are pleased to announce herewith the Open Consultation Process on thematic aspects and innovations on the format of the WSIS Forum 2017. The process aims at ensuring a participatory and inclusive spirit of the Forum, scheduled to be held from 12-16 June 2017 at ITU in Geneva. This process actively engages governments, civil society, the private sector, academia, technical community and intergovernmental organizations in the preparatory process to ensure broad ownership and further improvements of the Forum.

The Open Consultation Process for the WSIS Forum 2017 is structured in six phases as follows:

#### **Phase I: 1 September 2016**: Opening of the Open Consultations Process

- Online presentation of the Open Consultation Process
- Online dialogues on the WSIS Knowledge Communities at www.wsiscommunity.org





• Official submissions to the WSIS Secretariat on the Thematic Aspects and Innovations

on the Format invited at www.wsis.org/forum

Open call for nomination of WSIS Forum 2017
 Multistakeholder High-Level Track Facilitators

**Phase II: 12 October 2016:** First Physical Meeting (16:30-18:00, ITU Headquarters, Geneva)

Phase III: 14 February 2017: Second Physical Meeting

**Phase IV: 20 February 2017:** Deadline for Submissions of Official Contributions and Binding Requests for Workshops

**Phase V: 14 March 2017:** ITU Headquarters, Geneva: Final Review Meeting of the Open Consultation Process

Phase VI: 10 May 2017: Final Brief on the WSIS Forum 2017

# 2) WSIS Prize - Phases - <u>www.wsis.org/prizes</u> The contest is organized into five phases:

- The first phase: Submission phase
   September 2016 15 February 2017 (Deadline for last submission: 23:00 Geneva time)
- 2) <u>The second phase</u>: Nomination Phase. Revision of submitted projects by Expert Group that will result with a list of nominated projects
  - 16 February 15 March 2017
- 3) <u>The third phase</u>: Public Online Voting (identification of three projects per category with the highest number of votes)
  - 16 March 15 April 2017 (Deadline for casting last vote: 23:00 Geneva time)
- 4) The fourth phase: Selection of winning projects by the Expert Group that will result with a list of winning projects
  - 16 April 25 April 2016
- 5) The fifth phase: Announcement of winners to the public during WSIS Prize 2017 Ceremony at WSIS Forum 2017, and the release of publication "WSIS Stocktaking: Success Stories 2017", which is a compilation of extended descriptions of the 18 projects and 72 champion projects.
- 3) WSIS Stocktaking: 2016-2017 Call for Update and New Entries by 15 February 2017 www.wsis.org/stocktaking





#### VI. Final conclusions

- 149. The ITU is committed to connecting the world and in its capacity as one of lead facilitating organizations for the WSIS Process in 2016 ITU initiated, facilitated and implemented several activities related to the implementation of the WSIS outcomes. The three ITU sectors, Ragiocommunication (ITU-R), Standardisation (ITU-T), Development (ITU-D), and the General Secretariat played an active role in this process in their respective areas of expertise and brought out the complimentary role between the sectors with reference to WSIS.
- 150. As the leading UN specialized agency focusing on ICTs, ITU has been organizing numerous activities on its own and in partnership, highlighting and prioritizing the importance of multistakeholder collaboration. Participation from the governments, international organizations, civil society, academia 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.
- 151. Building upon the outcomes of the UN Summit on the Sustainable Development and the UNGA Overall Review on the Implementation of the WSIS Outcomes, both held in 2015, the process of alignment of these processes is ongoing and will require strengthened efforts by all stakeholders at all levels national, regional and global in order to ensure that enabling power of ICT is leveraged for achieving the SDGs by 2030.

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