Final Report

World Telecommunication Development Conference (WTDC-17)

Buenos Aires, Argentina, 9-20 October 2017

ITUWTDC BUENOS AIRES 2017 9-20 October

ITU

CELEBRATING 25 YEARS OF ACHIEVEMENTS ITU-D 1992 2017

ITUWTDC
BUENOS AIRES 2017
9-20 October

International Telecommunication Union

FINAL REPORT

WORLD TELECOMMUNICATION DEVELOPMENT CONFERENCE (WTDC-17)

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INTRODUCTION

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1 Background

The seventh World Telecommunication Development Conference (WTDC-17) of the International Telecommunication Union (ITU) was held from 9 to 20 October 2017 in Buenos Aires, Argentina. It attracted 1 368 participants from 134 Member States, 62 ITU-D Sector Members, 10 Academia, several observer entities and the United Nations and its specialized agencies. The list of participants, as well as all contributions made to the conference, can be found on the WTDC-17 website.

World telecommunication development conferences (WTDC) give the membership the opportunity to debate the latest trends in telecommunication/information and communication technology (ICT) development and to establish the priorities of the ITU Telecommunication Development Sector (ITU-D) for the interval between two WTDCs. They also provide the opportunity to compare the initiatives developed at the regional level during the preparatory process and to integrate them into worldwide development efforts and plans. WTDC-17 prepares the way forward for ITU-D and the Telecommunication Development Bureau (BDT) for the period 2020-2023.

The purposes of the conference were to:

- Adopt the Buenos Aires Declaration, highlighting the main conclusions and priorities established by the conference, and reinforcing the political support towards ITU's development mission and strategic objectives.

- Agree on the ITU-D contribution to the strategic plan for ITU for 2020-2023, to be considered at the next plenipotentiary conference to be held in in Dubai, United Arab Emirates, in 2018.

- Adopt the Buenos Aires Action Plan (BaAP), which aligns the work of ITU-D with the strategic objectives of ITU so as to assist countries in harnessing the full benefits of ICTs, and includes, on the basis of the result-based management approach:

  – outputs to fulfil ITU-D's strategic objectives, as well as the corresponding expected results and key performance indicators (KPI);

  – regional initiatives for Africa, the Americas, the Arab States, Asia and the Pacific, the Commonwealth of Independent States (CIS) and Europe, as well as guidelines for their implementation;

  – new and revised resolutions and Recommendations to support fulfilment of the objectives;

  – new and revised Questions to be studied by ITU-D study groups during the next study period.

2 Preparatory process for WTDC-17

In 2016-2017, ITU-D organized a series of six regional preparatory meetings (RPMs) as part of the preparation for the conference, pursuant to WTDC-10 Resolution 31 (Rev. Hyderabad, 2010), as shown in the following table:

Region	Meetings		Chairman	Reports
Africa	Kigali (Rwanda)	6-8 December 2016	Mr Patrick Nyirishema, Director General, Rwanda Utilities Regulatory Authority (RURA), **Rwanda**	Report of the Kigali meeting[1]
Americas	Asunción (Paraguay)	22-24 February 2017	Ms Teresita Palacios, President of the Comisión Nacional de Telecomunicaciones (CONATEL), **Paraguay**	Report of the Asunción meeting[2]
Arab States	Khartoum (Sudan)	30 January – 1 February 2017	Dr Yahia Abdalla Mohamed, Director General of the National Telecommunications Corporation, **Sudan**	Report of the Khartoum meeting[3]
Asia-Pacific	Bali (Indonesia)	21-23 March 2017	Ms Farida Dwi Cahyarini, Secretary General, Ministry of Communication and Information Technology, **Indonesia**	Report of the Bali meeting[4]
CIS	Bishkek (Kyrgyzstan)	9-11 November 2016	Mr Bakyt Sharshembiev, Chairman, State Committee of Information Technologies and Communications, **Kyrgyzstan**	Report of the Bishkek meeting[5]
Europe	Vilnius (Lithuania)	27-28 April 2017	Mr Feliksas Dobrovolskis, Director General, Communications Regulatory Authority, **Lithuania**	Report of the Vilnius meeting[6]

1 https://www.itu.int/md/D14-RPMAFR-C-0025

2 https://www.itu.int/md/D14-RPMAMS-C-0041/en

3 https://www.itu.int/md/D14-RPMARB-C-0046/en

4 https://www.itu.int/md/D14-RPMASP-C-0036/

5 https://www.itu.int/md/D14-RPMCIS-C-0044/en

6 https://www.itu.int/md/D14-RPMEUR-C-0038/

Following the successful organization of the six RPMs for WTDC-17, the chairman and vice-chairmen of each RPM met on 8 May 2017 in Geneva to consider, as required by *resolves* 2 of Resolution 31 (Rev. Hyderabad, 2010), how best to consolidate the outcomes of the RPMs in preparation for WTDC-17. The meeting elected Ms Teresita Palacios from Paraguay as chairman, and adopted the report of the Chairman of the RPM Coordination Meeting to TDAG[7].

The outcome of each RPM followed the same structure and approach: programmes (number, titles and priority areas), regional initiatives (objectives and expected results), study group matters (proposals for new or revised Questions, working methods, structure) and proposals for new or revised resolutions.

As required by *resolves* 3 of Resolution 31 (Rev. Hyderabad, 2010), the last Telecommunication Development Advisory Group (TDAG) meeting of the 2015-2017 cycle (22nd meeting of TDAG) was convened from 9 to 12 May 2017, in order to study, discuss and adopt the consolidated report presenting the outputs of the six regional preparatory meetings in final form, as a basic document to be included, once approved by TDAG, in the report on the application of that resolution for submission to WTDC.

3 Official opening of the conference

The conference opened with a welcoming video message by **Mr António Guterres**, **United Nations Secretary-General**, who highlighted the role that information and communication technologies (ICTs) play in achieving the Sustainable Development Goals (SDGs). He said that the remarkable advances of the past years have shown us how these technologies have empowered

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[7] https://www.itu.int/md/D14-TDAG22-170509-TD-0002/

people and transformed lives for the better. In his message, Mr Guterres stressed the need to bridge the digital divide and to do more to protect society from cyberattacks and to address the implications for labour markets, global security, and indeed the fabric of our societies. "Information and communication technologies can help us on each and every Sustainable Development Goal. I look forward to working with you to consider the way forward and to harness this great power for the benefit of all."

His Holiness Pope Francis, in a message delivered by His Eminence Monsignor Emil Paul Tscherrig, expressed his "ardent hope" that the discussions at WTDC-17 would explore ways in which ICTs can help to "promote the dignity of every person, especially in the poorest and most marginalized sectors of society." In his message, Pope Francis encouraged conference participants that, as they reflect on communication technologies and the contribution these technologies make to social and economic development, they should deepen their commitment to "constructive forms of communications that reject prejudice towards others and foster a culture of helping all of us to view the world around us with realism and trust."

Mr Brahima Sanou, **Director of the ITU Telecommunication Development Bureau**, said that, since 1992, the ITU Telecommunication Development Sector (ITU-D) has been supporting countries in their efforts to use telecommunications/ICTs as a catalyst for development. This includes the provision of assistance on infrastructure development, capacity building, cybersecurity, emergency telecommunications and gender mainstreaming, as well as support in creating an enabling environment, addressing the urban-rural digital divide, measuring the information society, and other related topics.

He underlined that the Sustainable Development Goals (SDGs), adopted in 2015, present us with a tremendous opportunity to ensure that ICTs play a central role in people's lives. "The SDGs have broadened our horizons. We are now required not only to provide broadband access to ICT services at a price everyone can afford, but also to make ICTs work for other sectors of the economy such as health, education, agriculture and trade," he said.

He added that "our actions must go beyond the ICT sector to take into account the new ICT ecosystem. For me, and I am sure you will agree, the new ecosystem is about people. It is about the 3.9 billion people still to be connected. It is about us in this room and our families. It is about everyone in the world, regardless of their age, sex, race, religion, national origin or economic status."

He concluded by saying that thanks to the commitment of Member States and Sector Members, ITU-D has become a neutral and strong platform for promoting development while putting a human face on ICTs.

H.E. Mr Marcos Peña, **Chief of Cabinet of Argentina**, stressed that "a better world is a more connected world" and that the "exhilarating revolution and transformation of humanity, which is being driven by communications, must reach every inhabitant of our planet if we are to achieve the Sustainable Development Goals set by the United Nations." He stated that "greater digital inclusion and better access to a wider range of communications for everyone means greater freedom, greater democracy, and greater transparency", and that this can help build a better world.

He noted that Argentina, which is now on a path to growth and transformation, could serve as an example for other countries and for young people seeking a better future for themselves and their families.

He added that technological changes are the tools that will allow us to resolve the problems of humanity, such as poverty, inequality, the challenges posed by climate change, the search for peace and the protection of human rights. Argentina, he said, is committed to seeking ways of reducing activities that all too often exploit technology for evil ends. "We will continue to work together with all nations to improve tools against cyberterrorism, cyberbullying, and any other expression of hatred or violence that seeks to exploit technology," he concluded.

Mr Houlin Zhao, **ITU Secretary-General**, expressed his sincere gratitude to the Argentine Republic and the City of Buenos Aires for hosting WTDC-17, and for showing the world once again that information and communication technologies (ICTs) and sustainable development must go hand in hand.

Mr Zhao said that "we must pursue every avenue to bring more people online. Digital inclusion can only be meaningful and effective if and when everyone feels empowered to use the technology – and when the technology is affordable, attractive and safe."

He added that the theme of WTDC-17 – ICT for Sustainable Development Goals – is very timely because, now more than ever, we need ICTs to drive development and accelerate achievement of the SDG vision to leave no one behind.

"What we achieve here in Buenos Aires in the next two weeks will shape not just the next four years, but the next 13 years – all the way to 2030, the year set by the international community to achieve the SDGs," he added.

H. E. Andrés Ibarra, **Minister of Modernization of Argentina**, said that the fact that the World Telecommunication Development Conference was returning to Argentina after 23 years is a sign of confidence the world is expressing in the new era of the country. He described this as "an era of wisdom, of clear rules of the game and of deeper integration for the generation of investment and growth that are enabling us to progress towards one of our main objectives: a country with zero poverty."

The conference heard from Minister Ibarra how Argentina is developing a strategic digital plan and a strategic agenda that include, *inter alia*, "a digital economy that is modernizing small, medium-sized and large businesses to make them more competitive, providing working tools to entrepreneurs and boosting the skills of national digital industries to ensure their regional and global integration."

Argentina is working to ensure a regulatory framework that stimulates the digital ecosystem, promotes confidence in the digital economy by guaranteeing consumer protection, fosters competition in digital services to ensure the affordability of products and services, protects personal data and safeguards human rights on the Internet.

Through its "National Plan for Digital Inclusion", Argentina aims to bring one million people each year into the digital world. "We cannot conceive of a country developing without the ICT industry," he said, highlighting that Argentina is implementing specific activities to strengthen ICTs.

The full texts of the opening remarks may be found in the annexes section of this report.

4 Conference structure

WTDC-17 adopted the following conference structure at its first plenary meeting.

Meeting of heads of delegation

Terms of reference: In accordance with No. 49 of the General Rules of conferences, assemblies and meetings of the Union, the inaugural meeting of the conference shall be preceded by a meeting of heads of delegation. At this meeting, the heads of delegation shall prepare the agenda for the first plenary meeting and make proposals for the organization, chairmanships and vice-chairmanships of the conference, its committees and, as appropriate, working group(s) of the plenary.

During WTDC, the heads of delegation shall meet to consider the proposals concerning the work programme and the constitution of study groups in particular, and to draw up proposals concerning the designation of chairmen and vice-chairmen of study groups, TDAG and any other groups established by WTDC.

Committee 1: Steering Committee

Terms of reference: To coordinate all matters connected with the smooth execution of work and to plan the order and number of meetings, avoiding overlapping wherever possible in view of the limited number of members of some delegations.

This committee is composed of the chairman and vice-chairmen of the conference, and the chairmen and vice-chairmen of the committees and working group(s) of the plenary.

Committee 2: Budget Control

Terms of reference: To determine the organization and facilities available to the delegates, to examine and approve the accounts for expenditure incurred throughout the duration of the conference and to report to the plenary meeting on the estimated total expenses of the conference, the estimated financial needs of the ITU Telecommunication Development Sector (ITU-D) up to the next world telecommunication development conference (WTDC), as well as the costs entailed by the execution of the decisions taken by the conference.

Committee 3: Objectives

Terms of reference: To review and approve the agenda and make proposals for the organization of work; to review and approve the outputs and outcomes for the objectives; to review and agree on the related study group Questions and related regional initiatives and establish appropriate guidelines for their implementation; to review and agree on relevant resolutions; and to ensure that the output is in accordance with a results-based management approach aiming to improve management effectiveness and accountability.

Committee 4: ITU-D Working Methods

Terms of reference: To review and approve the agenda and make proposals for the organization of work; to examine proposals and contributions relating to cooperation among members; to evaluate the working methods and functioning of the ITU-D study groups and the Telecommunication Development Advisory Group (TDAG); to assess and identify options for maximizing programme delivery and to approve appropriate changes thereto with a view to strengthening the synergies between study group Questions, programmes and regional initiatives; and to submit to the plenary meeting reports, including proposals on the ITU-D working methods for implementation of the ITU-D work programme, on the basis of TDAG and study group reports submitted to the conference and the proposals of ITU Member States, ITU-D Sector Members and Academia.

Committee 5: Editorial Committee

Terms of reference: To perfect the wording of texts arising from WTDC deliberations, such as resolutions, without altering the sense and substance, and align the texts in the official languages of the Union, with a view to their submission for approval to the plenary meetings.

Working Group of the Plenary: ITU-D strategic plan and WTDC Declaration

Terms of reference: To draw up a draft WTDC Declaration and the ITU-D input to the Union's strategic plan to be adopted at the next plenipotentiary conference.

Explanatory note

In accordance with No. 63 of the General Rules of conferences, assemblies and meetings of the Union, the plenary meeting of WTDC may set up committees to consider matters referred to the conference.

5 Presiding officers of WTDC-17

Following adoption of the conference structure at its first plenary meeting, WTDC-17 elected the following officers:

Chairman of the conference:	Mr Oscar Martín González (Argentina)	
Vice-chairmen of the conference:	Dr Sam Kundishora (Zimbabwe)	
	Mr Jeferson Fued Nacif (Brazil)	
	Mr Nasser Al Marzouqi (United Arab Emirates)	
	Mr Charles Punaha (Papua New Guinea)	
	Mr Rashid Ismailov (Russian Federation)	
	Mr Paulius Vaina (Lithuania)	
Committee 1 (Steering Committee)	Composed of the chairman and vice-chairmen of the conference and the chairmen and vice-chairmen of the committees	
Committee 2 (Budget Control Committee)	Chairman:	Ms Helena Fernandes (Mozambique)
	Vice-chairmen:	Mr Santiago Reyes (Canada)
		Mr Façal Bayouli (Tunisia)
		Mr Yoshiaki Nagaya (Japan)
		Mr Nazim Jafarov (Azerbaijan)
		Mr Anders Jonsson (Sweden)

Committee 3 (Objectives)	Chairman:	Dr Ahmad Reza Sharafat (Islamic Republic of Iran)
	Vice-chairmen:	Dr Mustapha Babagana (Nigeria)
		Mr Stephen Bereaux (Bahamas)
		Mr Mustafa Abdelhafiz (Sudan)
		Mr Almaz Tilenbaev (Kyrgyzstan)
		Ms Blanca Gonzalez (Spain)
Committee 4 (ITU-D Working Methods)	Chairman:	Mr Majed Al-Mazyed (Saudi Arabia)
	Vice-chairmen:	Ms Regina Fleur Assoumou (Cote d'Ivoire)
		Mr Enrique Antonio Rosales Osegueda (El Salvador)
		Mr Kishore Babu GSC Yerraballa (India)
		Ms Umida Musaeva (Uzbekistan)
		Mr Dietmar Plesse (Germany)
		Mr Adel Darwish (Bahrein)
Committee 5 (Editorial Committee)	Chairman:	Ms Hassina Laredj (Algeria)
	Vice-chairmen:	Ms Sameera Belal Momen Mohammad (Kuwait)
		Mr Guolei Cai (China)
		Ms Marie Humeau (United Kingdom)
		Prof Vladimir Minkin (Russian Federation)
		Mr Héctor Carrillo Morales (Mexico)
Working Group on ITU-D Strategic Plan and Declaration	Chairman:	Mr Fabio Bigi (Italy)
	Vice-chairmen:	Ms Ingrid Poni (South Africa)
		Ms Khuloud Aldosari (Qatar)
		Ms Eunice Lim (Singapore)
		Ms Sahiba Hasanova (Azerbaijan)

6 High-Level Segment policy statements

During the first three days of the World Telecommunication Development Conference 2017 (WTDC-17) in Buenos Aires, four plenary sessions were dedicated to the High-Level Segment, a special platform for high-ranking officials from the ITU membership to express their views on emerging trends and on matters of strategic importance to the development of the telecommunication and information and communication technology (ICT) sector worldwide.

A total of 53 speakers addressed the conference, including one Deputy Prime Minister, ministers, deputy and vice ministers, ambassadors, chairmen, directors-general, executive directors of regulatory authorities and commissions, and secretaries-general and global executive directors from ITU-D member organizations.

Speakers focused on the conference theme of "ICT for Sustainable Development Goals" (ICT④SDGs). The contribution of ICTs as a cross-cutting sector is crucial for accelerating efforts to attain the SDGs through, for example, e-health, e-education, e-agriculture, e-commerce and e-government.

The spread of ICT and global interconnectedness has great potential for accelerating human progress, bridging the digital divide and developing knowledge societies, according to the 2030 Agenda for Sustainable Development agreed by governments of the world in September 2015.

All speakers acknowledged that the 2030 Sustainable Development Agenda and its SDGs constitute a great opportunity to harness the potential of telecommunications/ICTs to support development and to make sure that no one is left behind. Bringing together the efforts of all stakeholders will be key in delivering sustainable development.

All speakers are listed here in the order in which they spoke, and their policy statements can be found on the conference website at the following address:

https://www.itu.int/en/ITU-D/Conferences/WTDC/WTDC17/Pages/High-Level-Segment.aspx

1) Slovenia – H.E. Mr Boris Koprivnikar, Deputy Prime Minister and Minister of Public Administration.

2) Burkina Faso – H.E. Ms Hadja Fatimata Ouattara-Sanon, Minister of Development of the Digital Economy and Posts.

3) United States – Mr Robert Strayer, Deputy Assistant Secretary for Cyber and International Communications and Information Policy at the U.S. Department of State.

4) Algeria – H.E. Ms Houda Imane Faraoun, Minister of Post, Telecommunications, Technologies and Digitalization.

5) Chad – H.E. Mr Mahamat Allahou Taher, Minister of Posts and Information and Communication Technology.

6) Sudan – H.E. Mr Ibrahim Elmirghani, State Minister of Communications and Information Technology.

7) United Kingdom – H.E. Ambassador Mark Kent, British Ambassador to the Argentine Republic.

8) Saudi Arabia – Mr Majed M. Al-Mazyed, Deputy Governor, Communications and Information Technology Commission.

9) Kazakhstan – H.E. Mr Dauren Abayev, Minister of Information and Communication.

10) Somalia – H.E. Mr Abdi Hassan, Minister of Posts, Telecommunications and Technology.

11) Mali – H.E. Mr Modibo Arouna Touré, Minister of the Digital Economy and Communication.

12) Russian Federation – H.E. Mr Rashid Ismailov, Deputy Minister of Telecom and Mass Communications.

13) Viet Nam – H.E. Dr Phan Tam, Deputy Minister of Information and Communications.

14) Cuba – H.E. Ms Ana Julia Marine López, Deputy Minister of Communication.

15) Japan – H.E. Mr Masahiko Tominaga, Vice-Minister, Internal Affairs and Communications.

16) Poland – H.E. Mr Karol Okoński, Under-Secretary of State, Ministry of Digital Affairs.

17) Bhutan – Mr Karma Penjor, Secretary for the Ministry of Information and Communications.

18) Australia – H.E. Dr Tobias Feakin, Ambassador for Cyber Affairs.

19) Djibouti – H.E. Mr Abdi Youssouf Sougueh, Minister of Communications, Posts and Telecommunications.

20) Republic of Nepal – H.E. Mr Mohan Bahadur Basnet, Minister of Information and Communications.

21) Democratic Republic of the Congo – H.E. Mr Emery Okundji Ndjovu, Minister of Posts, Telecommunications and New Information and Communication Technologies.

22) Bangladesh – H.E. Ms Begum Tarana Halim, State Minister of Posts, Telecommunications and Information Technology.

23) Samoa – H.E. Mr Afamasaga Lepuia'i Rico Tupa'i, Minister of Communications and Information Technology.

24) Ghana – Hon. Ms Ursula Owusu-Ekuful, Minister for Communications.

25) China – H.E. Mr Lihua Liu, Vice Minister of Industry and Information Technology.

26) Azerbaijan – H.E. Mr Elmir Velizadeh, Deputy Minister of Transport, Communications and High Technologies.

27) Thailand – H.E. Mr Pansak Siriruchatapong, Vice Minister of the Digital Economy and Society.

28) South Africa – H.E. Ms Tembisa Ndabeni-Abrahams, Deputy Minister of Telecommunications and Postal Services.

29) Peru – H.E. Dr Carlos Rafael Valdez Velásquez López, Deputy Minister of Communication.

30) Costa Rica – Ms Gabriela Ceciliano López, Head of Office, Vice-Minister for Telecommunications, Ministry of Science, Technology and Telecommunications.

31) Kyrgyzstan – Mr Mederbek Kurmanbekov, Deputy Chairman, State Committee of Information Technologies and Communications.

32) Bahamas – Hon. Ms Pakesia Parker-Edgecombe, Parliamentary Secretary with responsibility for Information and Communications, Office of The Prime Minister.

33) Kuwait – Mr Amer Hayat, Assistant Undersecretary and Chief Market Regulations and Competition, Communication and Information Technology Regulatory Authority.

34) Czech Republic – H.E. Mr Marek Ondrousek, Deputy Minister of Industry and Trade.

35) Switzerland – Mr Philipp Metzger, Director General, Federal Office of Communications.

36) Turkey – Mr Celalettin Dincer, Board Member, Information and Communication Technologies Authority.

37) Brazil – H.E. Ambassador Sérgio Danese, Ambassador of Brazil to the Argentine Republic.

38) Mexico – Mr Luis Fernando Borjón, Director General, Telecommunications Investment Promotion Agency.

39) Jordan – Mr Al-Ansari Almashakbeh, Vice-Chairman, Telecommunications Regulatory Commission.

40) Commonwealth Telecommunications Organisation – Mr Shola Taylor, Secretary General.

41) Intel Corporation – Mr Peter Pitsch, Global Executive Director and Associate General Counsel.

42) Dominican Institute of Telecommunications – Mr Fabricio Gómez Mazara, Member of the Board of Directors.

43) Central African Republic – Mr Charles Zoë Banga, Chargé de Mission for Telecommunications and New Technologies at the Ministry for Posts and Telecommunications, responsible for the Promotion of New Information and Communication Technologies.

44) Rwanda – Mr Patrick Nyirishema, Director General, Rwanda Utilities Regulatory Authority.

45) India – Ms Aruna Sundararajan, Secretary, Department of Telecommunications and Chairman, Telecom Commission.

46) Swaziland – H.E. Mr Dumisani Ndlangamandla, Minister of Information Communications and Technology.

47) Gambia – H.E. Mr Dembe Ali Jawo, Minister of Information and Communication Infrastructure.

48) Zimbabwe – H.E. Mr Supa Collins Mandiwanzira, Minister of Information Communication Technology, Postal and Courier Services.

49) Pakistan – Dr Syed Ismail Shah, Chairman, Pakistan Telecommunication Authority.

50) Côte d'Ivoire – Mr Ahmed Sako, Deputy Chief of Staff, Ministry of Communications, Digital Economy and Posts.

51) Uganda – Mr Godfrey Mutabazi, Executive Director, Uganda Communications Commission.

52) United Arab Emirates – Mr Majed Al Mesmar, Deputy Director General, Telecommunications Regulatory Authority (Telecom Sector).

53) Argentina – Mr Hector Huici, Secretary of Information and Communication Technologies, Ministry of Modernization.

The conference also heard a keynote statement from the Director-General of the World Health Organization (WHO), Dr Tedros Adhanom Ghebreyesus, delivered by a WHO representative in Buenos Aires.

Side events and lightning sessions

Participants shared knowledge and experience in a series of side events and lightning sessions organized on themes such as ICT accessibility; ICT④SDGs in least developed countries, landlocked developing countries and small island developing states; partnering for SDGs; satellites and the SDGs; gender; digital skills for youth employment; academia for ICT④SDGs; accelerating digital transformation; emergency telecommunications; cybersecurity; harnessing ICT4SDG towards knowledge societies; and e-health focusing on ICT for universal health coverage.

25th Anniversary of the ITU Telecommunication Development Sector

Participants commemorated the 25th Anniversary of ITU-D, which was established in 1992 by the Additional Plenipotentiary Conference held in Geneva. Two ministerial roundtables were held to mark this milestone, focusing on the impact of ICTs for the SDGs and the future of the digital economy. High-level discussions at the ministerial and head of regulatory authority level were enriched by contributions from representatives of the private sector, civil society, technical community and academia. This was followed by a Gala event honouring all of the Directors of the Telecommunication Development Bureau (BDT) since 1992 (see Annex on the 25th Anniversary).

7 Telecommunication Development Advisory Group bureau

In application of Resolution 61 (Rev. Dubai, 2014), WTDC-17 adopted the composition of the TDAG bureau and appointed the TDAG chairman and vice-chairmen, as follows:

Chairman:	Ms Roxanne McElvane Webber (United States)
Vice-chairmen:	Ms Regina Fleur Assoumou Bessou (Chairman, Study Group 1) Mr Ahmad Reza Sharafat (Chairman Study Group 2) Mr Christopher Kipkoech Kemei (Kenya) Mr Abdulkarim Ayopo Oloyede (Nigeria) Mr Hugo Darío Miguel (Argentina) Ms Evelyn Katrina Naut Sención (Dominican Republic) Mr Al-Ansari Almashakbeh (Jordan) Mr Tariq Al-Amri (Saudi Arabia) Mr Kishore Babu GSC Yerraballa (India) Mr Nguyen Quy Quyen (Viet Nam) Ms Nurzat Bolzhobekova (Kyrgyz Republic) Mr Arseny Plossky (Russian Federation) Mr Wim Rullens (Netherlands) Ms Blanca Gonzalez (Spain)

8 For the record

1 The Budget Control Committee, in line with its mandate, estimated the costs that would be entailed by the execution of the decisions taken by the conference. In this regard, the Chairman of Committee 2 reminded the delegates that the actions called for in the conference's decisions should be undertaken subject to the availability of financial resources. Full details are provided in the Report of the Budget Control Committee to the plenary (Document WTDC-17/DT/54-E).

2 During the consideration by WTDC-17 of the proposed revisions to several resolutions and of the Buenos Aires Action Plan, several delegations requested that their statement be included in the final report. Accordingly, these can be found in the annexes.

9 Conclusion

The message – one that resonated throughout the conference – was clear: in a world in which information and communication technologies (ICTs) play an increasingly important role in socio-economic development, no one should be left behind, regardless of their circumstances or the remoteness of their place of origin. ICTs were described as a powerful tool that will help achieve each and every single Sustainable Development Goal.

Summarizing the outcomes of the conference in his closing remarks, the Director of the ITU Telecommunication Development Bureau (BDT), Mr Brahima Sanou, said: "The Buenos Aires Declaration we adopted at this WTDC is our vision for the future. It sends a strong message from the ICT community to the world about our contribution to the attainment of the SDGs. The strategic plan we endorsed will strategically guide us to implement the Declaration, while the Buenos Aires Action Plan will shape our daily work. We also adopted five regional initiatives per region that will be cascaded into concrete projects, that I am deeply convinced will make a difference in the lives of people on the ground."

Mr Sanou attributed these achievements to the early preparations and exemplary hospitality and excellent working conditions provided by the authorities of the Argentine Republic, to whom he extended his deepest gratitude. He thanked all delegates for their positive and constructive spirit.

"The decisions taken at WTDC-17 reaffirm the commitment that ICTs have an important and distinct role to play in the attainment of sustainable development, thereby improving the lives of millions of people around the world," commented ITU Secretary-General, Mr Houlin Zhao. "The results have paved the base and the way forward for ITU's work on development for the next four years. Let me congratulate each of you for your marvellous contributions to this success. It is a testament to the spirit of cooperation and of a family that prevailed during the conference."

His remarks highlight a bright future ahead, where "Infrastructure will be strengthened, investment will be increased. Innovation will be developed, and inclusion will be fostered, and better ICT will bring a better life to all without leaving anyone behind."

On behalf of the Secretary-General, Mr Sanou awarded the ITU Medal and Certificate to Mr Oscar M. Gonzalez, Under-Secretary for ICT Regulation in the Ministry of Modernization of Argentina and Chairman of WTDC-17, praising him for his "leadership and profound understanding of ICT business within the United Nations context, his professional management skills and extraordinary personality", all of which contributed to the success of the conference.

Accepting the award, Mr Gonzalez said: "It has been a real honour for me to work with all of you. I feel we have achieved some important outcomes: the Declaration, the strategic plan, the action plan, the reduction from five to four objectives for the Sector, resolutions; and, as we said before, topics which initially seemed quite complex but upon which we were able to reach consensus. We look very positively on this event. There is always space to continue to work and to make progress on all issues."

The full texts of the closing remarks may be found in the annexes section of this report.

PART A

BUENOS AIRES DECLARATION

The World Telecommunication Development Conference (Buenos Aires, 2017), which took place from 9 to 20 October 2017 in Buenos Aires, Argentina, under the theme of "ICT for Sustainable Development Goals" (ICT④SDGs),

recognizing

a) that telecommunications/information and communication technologies (ICTs) are a key tool for implementing the World Summit on the Information Society (WSIS) vision beyond 2015, approved by Resolution 70/125 of the United Nations General Assembly (UNGA), and a key enabler for social, environmental, cultural and economic development; and consequently for accelerating the timely attainment of the Sustainable Development Goals (SDGs) and associated targets set out in UNGA Resolution 70/1: "Transforming our world: the 2030 Agenda for Sustainable Development";

b) that technological change and the new and innovative opportunities provided by telecommunications/ICTs should be accompanied by ambitious decision-making and measures aimed at reducing poverty and inequalities and fostering the protection of our planet, all of which are spheres that are critical to the progress of humankind;

c) that telecommunications/ICTs also play a significant role in various areas such as health, education, agriculture, governance, finance, postal services, transportation, energy, commerce, disaster risk reduction and management, and climate-change mitigation and adaptation, particularly in least developed countries (LDCs), small island developing states (SIDS), landlocked developing countries (LLDCs) and countries with economies in transition;

d) that timely access to modern, secure, affordable and accessible telecommunication/ICT infrastructure, applications and services offers opportunities for boosting productivity and efficiency to end poverty, improving peoples' lives and ensuring that sustainable development becomes a reality in LDCs, SIDS, LLDCs and countries with economies in transition, and across the world;

e) that widespread conformance and interoperability of telecommunication/ICT equipment and systems through the implementation of relevant programmes, policies and decisions can increase market opportunities, competitiveness and reliability as well as encouraging global integration and trade;

f) that telecommunication/ICT services and applications can be life-changing for individuals, communities and societies at large, but they can also entail challenges in building confidence and trust in availability, reliability and security in the use of telecommunications/ICTs;

g) that telecommunication/ICT services and applications, including broadband access technologies, offer enhanced opportunities for interaction among people, for sharing the world's knowledge resources and expertise, for transforming peoples' lives and for contributing to inclusive and sustainable development, which enables digital transformation and socio-economic benefits for all;

h) that, despite all the progress made during past years, the digital divide still remains, and is compounded by disparities and inequalities in access, use and skills between regions, between individual countries and within countries, in particular between urban, rural and underserved areas and between women and men, as well as in the availability of accessible and affordable telecommunications/ICTs, in particular for the empowerment of women and girls, persons with disabilities and other persons with specific needs;

i) that ITU is committed to improving people's lives and making the world a better place through the use of telecommunications/ICTs;

j) that developing telecommunication/ICT infrastructure in rural, remote, underserved and hard-to-access areas and ensuring the availability of affordable and accessible ICTs is a priority, calling for the identification of effective, innovative, affordable and sustainable solutions;

k) that the ITU Telecommunication Development Sector (ITU-D), in accordance with its functions, defined by the ITU Constitution and Convention, is playing a significant role in implementing the relevant parts of the WSIS outcomes, the 2030 Agenda for Sustainable Development and the Connect 2020 Agenda,

therefore declares

1 that ITU-D should adapt and reinforce the existing links between the WSIS action lines and the SDGs and associated targets through the regional initiatives, ITU-D contributions to the ITU strategic plan and the ITU-D action plan, in order to support global development;

2 that universally accessible, secure and affordable telecommunications/ICTs are a fundamental contribution towards achievement of the WSIS action lines and the 2030 Agenda for Sustainable Development and towards the development of the global information society and the digital economy;

3 that innovation is essential in enabling infrastructure deployment and boosting the penetration of high-capacity, high-quality telecommunication/ICT infrastructure and services, especially for rural and remote areas;

4 that exchange of experiences and cooperation among the ITU membership and other interested parties and stakeholders on improving international connectivity should be encouraged, especially for the benefit of LDCs, LLDCs and SIDS;

5 that the use of various telecommunication/ICT systems is essential to ensuring connectivity for all the world's underserved and unserved populations, to meet the needs of governments and citizens in a timely manner;

6 that policy-makers and regulators should continue to promote widespread, affordable access to telecommunications/ICTs, including Internet access, through fair, transparent, stable, predictable, non-discriminatory enabling policies and legal and regulatory environments, including common approaches to conformance and interoperability, while at the same time providing investment incentives at national, regional and international levels;

7 that new and emerging technologies/trends in telecommunications/ICTs should be better harnessed for the purposes of supporting global efforts aimed at further development of the information society;

8 that ITU provides capacity building and tools for effective and efficient spectrum management that is critical for policy-makers, regulators, operators, broadcasters and other relevant parties, given the increasing demands for scarce radio-frequency spectrum and satellite-orbit resources;

9 that increased participation of developing countries in ITU activities to bridge the standardization gap is needed, in order to ensure that they experience the economic benefits associated with technological development, and to better reflect the requirements and interests of developing countries in this area;

10 that, given the crucial role of telecommunications/ICTs in digital transformation and, in particular, in the advancement of the digital economy, it is important to enhance international cooperation on sharing best practice in digital transformation and the development of approaches, regulatory texts, standards and applications for the digital economy;

11 that innovation and evolution in the use of telecommunications/ICTs play, or are capable of playing, a fundamental role in the development of the digital economy, having a transforming effect on individuals, societies and economies throughout the world;

12 that digital literacy and ICT skills, as well as human and institutional capacity in the development, uptake and use of telecommunication/ICT networks, applications and services should be enhanced to ensure inclusive, egalitarian and quality education that would enable all people, in particular women and girls, persons with disabilities and other persons with specific needs, to contribute to knowledge and human development;

13 that measuring the information society and elaborating proper and comparable indicators/statistics, in sex-disaggregated form, as well as analysing ICT trends, are important for both Member States and the private sector, the former being able to identify gaps that need public policy intervention, and the latter to identify and find investment opportunities, and that particular attention should be focused on tools for monitoring the implementation of the 2030 Agenda for Sustainable Development;

14 that an inclusive information society should take into account the needs of women and girls, persons with disabilities and other persons with specific needs, and the needs of children in the use of telecommunications/ICTs;

15 that opportunities provided by telecommunications/ICTs should be fully exploited with the aim of ensuring equitable access to telecommunications/ICTs and to innovations that foster sustainable socio-economic development, poverty alleviation, job creation, gender equality, child online protection, entrepreneurship and the promotion of digital inclusion and empowerment for all;

16 that building an inclusive, development-oriented information society will require an unremitting multistakeholder effort;

17 that building trust, confidence and security in the use of telecommunications/ICTs as well as personal data protection are priorities, with the need for international cooperation and coordination between governments, relevant organizations, private companies and entities in building capacity and exchanging best practices for the development of related public policies and legal, regulatory and technical measures that address, *inter alia*, personal data protection, and that stakeholders should work together to ensure the reliability and security of ICT networks and services;

18 that capacity building, information sharing and other international cooperation should be supported by ITU, particularly with emerging technologies, so that telecommunications/ICTs may play an even more crucial role in disaster management and emergency telecommunications;

19 that cooperation between developed and developing countries as well as among developing countries is encouraged to bridge the digital divide, as this paves the way for technical cooperation, technology and knowledge transfer, joint research activities, sharing best practices and socio-economic development;

20 that the promotion of investment for the development of broadband infrastructure, services and applications contributes to the sustainable and integrated economic growth of peoples, and that in this respect ITU-D must be a key player in the creation of alliances and spaces for cooperation between Member States, the private sector, international funding agencies and other stakeholders;

21 that public and private investment, as well as public-private partnerships and resource mobilization, need to be further strengthened in order to identify and apply innovative technological solutions and financing mechanisms for inclusive and sustainable development;

22 that innovation should be integrated into national policies, initiatives and programmes, with cooperation and partnership between developing countries and between developed and developing countries to facilitate technology and knowledge transfer to promote sustainable development and economic growth;

23 that international cooperation should be continuously enhanced and promoted among the ITU membership and other interested parties and stakeholders in the interest of achieving the SDGs, and in the implementation of the Connect 2020 Agenda through the use of telecommunications/ICTs;

24 that the regions have articulated their specific priorities in a set of regional initiatives, which can be found in the Buenos Aires Action Plan adopted by this conference, and that the implementation of those initiatives deserves high priority on the part of ITU-D.

Accordingly, we, the delegates to the World Telecommunication Development Conference, declare our commitment to accelerate the expansion and use of telecommunication/ICT infrastructure, applications and services for building and further developing the information society and bridging the digital divide, the timely implementation of WSIS action lines (as per UNGA Resolution 70/125) and attainment of the SDGs and associated targets set out in UNGA Resolution 70/1: "Transforming our world: the 2030 Agenda for Sustainable Development".

The World Telecommunication Development Conference calls upon the ITU membership and other interested parties and stakeholders, including those from the United Nations system, to contribute towards the successful implementation of the Buenos Aires Action Plan.

PART B

ITU-D CONTRIBUTION TO THE DRAFT ITU STRATEGIC PLAN

1 Introduction

WTDC-17 endorsed the ITU-D contribution to the ITU strategic plan for 2020-2023 as presented in this document.

2 Structure of the strategic plan for the Union for 2020-2023

The core of the proposed strategic plan for 2020-2023 consists of the following main elements:

– ITU vision, mission and values;

– strategic goals and targets of the Union;

– strategic risk management and mitigation;

– Sector and intersectoral objectives/outcomes/outputs;

– implementation and evaluation.

While the vision, mission, values, goals and targets are set at the level of the Union (see §§ 3, 4 and 5, respectively, hereafter), the Sectors have been called upon to contribute their specific objectives to the strategic plan. A preliminary agreement on definitions has also been reached (see the Glossary in annex).

Outputs have been endorsed as an important component of the strategic plan.

WTDC-17 endorsed this structure of the strategic plan for the Union for 2020-2023.

3 Vision (ITU)

The ITU-wide vision, endorsed by the ITU Plenipotentiary Conference (Busan, 2014), is "An information society, empowered by the interconnected world, where telecommunications/information and communication technologies enable and accelerate social, economic and environmentally sustainable growth and development for everyone."

4 Mission (ITU)

The ITU-wide mission, endorsed by the ITU Plenipotentiary Conference (Busan, 2014), is "To promote, facilitate and foster affordable and universal access to telecommunication/information and communication technology networks, services and applications and their use for social, economic and environmentally sustainable growth and development."

5 Goals (ITU)

The ITU-wide goals, endorsed by the ITU Plenipotentiary Conference (Busan, 2014), are:

1) Growth – Enable and foster access to and increased use of telecommunications/ICTs.

2) Inclusiveness – Bridge the digital divide and provide broadband for all.

3) Sustainability – Manage challenges resulting from telecommunication/ICT development.

4) Innovation and partnership – Lead, improve and adapt to the changing telecommunication/ICT environment.

6 Situational analysis of ITU-D

The situational analysis of ITU-D, endorsed by the ITU Plenipotentiary Conference (Busan, 2014), is reproduced below.

Telecommunications/ICTs are increasingly being recognized by governments around the world as the key engine for economic growth and social development. Furthering development of telecommunications/ICTs around the world has long been at the core of the work of ITU, as a United Nations specialized agency, but has become even more vital over recent years, when technological developments have given telecommunications/ICTs an essential role in every aspect of human lives. Telecommunications/ICTs are not just an end in themselves, but are key enablers of the other sectors.

The progress that has been made since the establishment of the Millennium Development Goals (MDGs) in 2000 and the telecommunication/ICT connectivity targets set by WSIS in 2003 and 2005 has been extremely important. Providing the right conditions is key to fully meeting these goals. The priority shall be the development of infrastructure, in particular for broadband communications, and the provision of telecommunication/ICT applications and services. The enhancement of human capacity building and a robust, predictable, enabling regulatory environment will ensure that technological development is sustainable.

Having regard to the importance of local content and its role in developing the use of broadband, countries with language and cultural barriers should pay adequate attention to ensuring a significant proportion of local content. Therefore, generating local content as an enabler for developing the deployment of broadband services and enhancing broadband penetration, developing e-health, e-learning and e-commerce to satisfy demand for local content and encouraging countries with similar or common culture and language to construct local content could help speed up continuing access to broadband services.

In view of the borderless nature of the cyberspace community, ITU-D acknowledges the importance of international cooperation in enhancing reliability, availability and security in the use of ICTs. Therefore, ITU-D recognizes that there is an urgent need to support countries in developing specific measures in the implementation of their national cybersecurity frameworks, to address the concerns of different stakeholders in this regard and to enable and assist in the sharing of best practices at the global level. Accordingly, ITU will play a key role in facilitating the above-mentioned cooperation.

Among those standing to derive the greatest benefit from telecommunications/ICTs are least developed countries (LDCs), small island developing states (SIDS), landlocked developing countries (LLDCs) and countries with economies in transition, all of which deserve special attention. Emergency telecommunications and gender issues are also priority areas in ITU-D work. Given the magnitude of the task, success will depend on working closely with ITU members and mobilizing resources through public-private partnerships.

There is a need to encourage a culture of innovation in ITU-D. Constantly examining BDT's activities under the lens of how products and services can be more innovative leads to critical consideration of its competitive position among telecommunication/ICT development agencies and provides the motivation to pursue new opportunities for improvement. The growing importance of innovation is recognized worldwide. Innovation is essential if countries and firms are to recover from the global economic downturn and thrive in today's highly competitive and connected global economy. Innovation is a powerful engine for development and for addressing social and economic challenges. Innovative broadband-fuelled services such as m-payments, m-health and m-education can be literally "life-changing" for individuals, communities and societies at large. Access to telecommunications/ICTs can empower hundreds of millions of people in developing countries to directly enhance their own social and economic well-being.

The ITU-D mission is not just about connectivity for connectivity's sake, but is more to aim at seeing innovative uses of telecommunications/ICTs that fundamentally improve people's lives for the better.

7 Objectives (ITU-D)

Reflecting the outcomes of the six regional preparatory meetings (RPMs) that took place in 2016-2017, the following objectives were endorsed by WTDC-17:

1) Coordination: Foster international cooperation and agreement on telecommunication/ICT development issues.

2) Modern and secure telecommunication/ICT infrastructure: Foster the development of infrastructure and services, including building confidence and security in the use of telecommunications/ICTs.

3) Enabling environment: Foster an enabling policy and regulatory environment conducive to sustainable telecommunication/ICT development.

4) Inclusive digital society: Foster the development and use of telecommunications/ICTs and applications to empower people and societies for sustainable development.

8 Objectives and outputs (ITU-D)

Based on the four ITU-D objectives endorsed, and reflecting the outcomes of the six RPMs that took place in 2016-2017, the following outputs were endorsed by WTDC-17:

1) Coordination: Foster international cooperation and agreement on telecommunication/ICT development issues.

   1.1) World Telecommunication Development Conference (WTDC) and WTDC final report

   1.2) Regional preparatory meetings (RPMs) and final report of the RPMs.

   1.3) Telecommunication Development Advisory Group (TDAG) and TDAG reports for the Director of BDT and for WTDC.

   1.4) Study groups and guidelines, recommendations and reports of study groups.

   1.5) Platforms for regional coordination, including regional development forums (RDFs).

   1.6) Implemented telecommunication/ICT development projects and services related to regional initiatives.

2) Modern and secure telecommunication/ICT infrastructure: Foster the development of infrastructure and services, including building confidence and security in the use of telecommunications/ICTs.

2.1) Products and services on telecommunication/ICT infrastructure and services, wireless and fixed broadband, connecting rural and remote areas, improving international connectivity, bridging the digital standardization gap, conformance and interoperability, spectrum management and monitoring and the effective and efficient management and proper use of telecommunication resources, within the mandate of ITU, and the transition to digital broadcasting, such as assessment studies, publications, workshops, guidelines and best practices.

2.2) Products and services for building confidence and security in the use of telecommunications/ICTs, such as reports and publications, and for contributing to the implementation of national and global initiatives.

2.3) Products and services on disaster risk reduction and management and emergency telecommunications, including assistance to enable Member States to address all phases of disaster management, such as early warning, response, relief and restoration of telecommunication networks.

3) Enabling environment: Foster an enabling policy and regulatory environment conducive to sustainable telecommunication/ICT development.

3.1) Products and services on telecommunication/ICT policy and regulation for better international coordination and coherence, such as assessment studies and other publications, and other platforms to exchange information.

3.2) Products and services on telecommunication/ICT statistics and data analysis, such as research reports, collection, harmonization and dissemination of high-quality, internationally comparable statistical data, and forums of discussion.

3.3) Products and services on capacity building and human skills development, including those on international Internet governance, such as online platforms, distance and face-to-face training programmes to enhance practical skills, and shared material, taking into account partnerships with telecommunication/ICT education stakeholders.

3.4) Products and services on telecommunication/ICT innovation, such as knowledge-sharing and assistance, upon request, on developing a national innovation agenda; mechanisms for partnerships; development of projects, studies and telecommunication/ICT innovation policies.

4) Inclusive digital society: Foster the development and use of telecommunications/ICTs and applications to empower people and societies for sustainable development.

4.1) Products and services on concentrated assistance to LDCs, SIDS and LLDCs and countries with economies in transition, to foster the availability and affordability of telecommunications/ICTs.

4.2) Products and services on telecommunication/ICT policies supporting the development of the digital economy, ICT applications and new technologies, such as information sharing and support for their deployment, assessment studies and toolkits.

4.3) Products and services on digital inclusion for girls and women and people with specific needs (elderly, youth, children and indigenous people, among others), such as awareness-raising on digital inclusion strategies, policies and practices, development of digital skills, toolkits and guidelines and forums of discussion to share practices and strategies.

4.4) Products and services on ICT climate-change adaptation and mitigation, such as promotion of strategies and dissemination of best practices on mapping vulnerable areas and developing information systems, metrics and e-waste management.

Figure 1 – Input to the draft strategic plan for 2020-2023

Objectives	**D.1: Coordination: Foster international cooperation and agreement on telecommunication/ICT development issues**	**D.2: Modern and secure telecommunication/ICT infrastructure: Foster the development of infrastructure and services, including building confidence and security in the use of telecommunications/ICTs**	**D.3: Enabling environment: Foster an enabling policy and regulatory environment conducive to sustainable telecommunication/ICT development**	**D.4: Inclusive digital society: Foster the development and use of telecommunications/ICTs and applications to empower people and societies for sustainable development**
Outcomes	**D.1-1:** Enhanced review and increased level of agreement on the draft ITU-D contribution to the draft ITU strategic plan, the WTDC Declaration, and the WTDC action plan. **D.1-2:** Assessment of the implementation of the WTDC action plan and of the WSIS Plan of Action. **D.1-3:** Enhanced knowledge-sharing, dialogue and partnership among the ITU membership on telecommunication/ICT issues. **D.1-4:** Enhanced process and implementation of telecommunication/ICT development projects and regional initiatives. **D.1-5:** Facilitation of agreement to cooperate on telecommunication/ICT development programmes between Member States, and between Member States and other stakeholders in the ICT ecosystem, based on requests from ITU Member States involved.	**D.2-1:** Enhanced capacity of the ITU membership to make available resilient telecommunication/ICT infrastructure and services. **D.2-2:** Strengthened capacity of Member States to effectively share information, find solutions, and respond to threats to cybersecurity, and to develop and implement national strategies and capabilities, including capacity building, encouraging national, regional and international cooperation towards enhanced engagement among Member States and relevant players. **D.2-3:** Strengthened capacity of Member States to use telecommunications/ICTs for disaster risk reduction and management, to ensure availability of emergency telecommunications, and support cooperation in this area.	**D.3-1:** Strengthened capacity of Member States to enhance their policy, legal and regulatory frameworks conducive to development of telecommunications/ICTs. **D.3-2:** Strengthened capacity of Member States to produce high-quality, internationally comparable telecommunication/ICT statistics which reflect developments and trends in telecommunications/ICTs, based on agreed standards and methodologies. **D.3-3:** Improved human and institutional capacity of the ITU membership to tap into the full potential of telecommunications/ICTs. **D.3-4:** Strengthened capacity of the ITU membership to integrate telecommunication/ICT innovation in national development agendas and to develop strategies to promote innovation initiatives, including through public, private and public-private partnerships.	**D.4-1:** Improved access to and use of telecommunications/ICTs in least developed countries (LDCs), small island developing states (SIDS) and landlocked developing countries (LLDCs), and countries with economies in transition. **D.4-2:** Improved capacity of the ITU membership to accelerate economic and social development by leveraging and using new technologies and telecommunication/ICT services and applications. **D.4-3:** Strengthened capacity of the ITU membership to develop strategies, policies and practices for digital inclusion, in particular for the empowerment of women and girls, persons with disabilities and other persons with specific needs. **D.4-4:** Enhanced capacity of the ITU membership to develop telecommunication/ICT strategies and solutions on climate-change adaptation and mitigation and the use of green/renewable energy.

Objectives	D.1: Coordination: Foster international cooperation and agreement on telecommunication/ICT development issues	D.2: Modern and secure telecommunication/ICT infrastructure: Foster the development of infrastructure and services, including building confidence and security in the use of telecommunications/ICTs	D.3: Enabling environment: Foster an enabling policy and regulatory environment conducive to sustainable telecommunication/ICT development	D.4: Inclusive digital society: Foster the development and use of telecommunications/ICTs and applications to empower people and societies for sustainable development
Outputs[1]	**1.1:** World Telecommunication Development Conference (WTDC) and WTDC final report **1.2:** Regional preparatory meetings (RPMs) and final report of the RPMs. **1.3:** Telecommunication Development Advisory Group (TDAG) and TDAG reports for the Director of BDT and for WTDC. **1.4:** Study groups and guidelines, recommendations and reports of study groups. **1.5:** Platforms for regional coordination, including regional development forums (RDFs). **1.6:** Implemented telecommunication/ICT development projects and services related to regional initiatives.	**2.1:** Products and services on telecommunication/ICT infrastructure and services, wireless and fixed broadband, connecting rural and remote areas, improving international connectivity, bridging the digital standardization gap, conformance and interoperability, spectrum management and monitoring and the effective and efficient management and proper use of telecommunication resources, within the mandate of ITU, and the transition to digital broadcasting, such as assessment studies, publications, workshops, guidelines and best practices. **2.2:** Products and services for building confidence and security in the use of telecommunications/ICTs, such as reports and publications, and for contributing to the implementation of national and global initiatives.	**3.1:** Products and services on telecommunication/ICT policy and regulation for better international coordination and coherence, such as assessment studies and other publications, and other platforms to exchange information. **3.2:** Products and services on telecommunication/ICT statistics and data analysis, such as research reports, collection, harmonization and dissemination of high-quality, internationally comparable statistical data, and forums of discussion. **3.3:** Products and services on capacity building and human skills development, including those on international Internet governance, such as online platforms, distance and face-to-face training programmes to enhance practical skills, and shared material, taking into account partnerships with telecommunication/ICT education stakeholders.	**4.1:** Products and services on concentrated assistance to LDCs, SIDS and LLDCs and countries with economies in transition, to foster the availability and affordability of telecommunications/ICTs. **4.2:** Products and services on telecommunication/ICT policies supporting the development of the digital economy, ICT applications and new technologies, such as information sharing and support for their deployment, assessment studies and toolkits. **4.3:** Products and services on digital inclusion for girls and women and people with specific needs (elderly, youth, children and indigenous people, among others), such as awareness-raising on digital inclusion strategies, policies and practices, development of digital skills, toolkits and guidelines and forums of discussion to share practices and strategies.

Objectives	D.1: Coordination: Foster international cooperation and agreement on telecommunication/ICT development issues	D.2: Modern and secure telecommunication/ICT infrastructure: Foster the development of infrastructure and services, including building confidence and security in the use of telecommunications/ICTs	D.3: Enabling environment: Foster an enabling policy and regulatory environment conducive to sustainable telecommunication/ICT development	D.4: Inclusive digital society: Foster the development and use of telecommunications/ICTs and applications to empower people and societies for sustainable development
		2.3: Products and services on disaster risk reduction and management and emergency telecommunications, including assistance to enable Member States to address all phases of disaster management, such as early warning, response, relief and restoration of telecommunication networks.	**3.4:** Products and services on telecommunication/ICT innovation, such as knowledge-sharing and assistance, upon request, on developing a national innovation agenda; mechanisms for partnerships; development of projects, studies and telecommunication/ICT innovation policies.	**4.4:** Products and services on ICT climate-change adaptation and mitigation, such as promotion of strategies and dissemination of best practices on mapping vulnerable areas and developing information systems, metrics and e-waste management.

1 Within the context of the outputs in the ITU-D contribution to the ITU strategic plan, "products and services" refers to activities within the mandate of ITU-D as defined by Article 21 of the ITU Constitution, including, among others, capacity building and dissemination of ITU expertise and knowledge.

9 Outcomes

Outcomes provide an indication of whether an objective is being achieved. Outcomes are usually partly, but not entirely, within the control of the organization. The following outcomes have been endorsed by WTDC-17 for each of the four objectives proposed in section 7 above:

Objective 1 Coordination: Foster international cooperation and agreement on telecommunication/ICT development issues	
Outcomes	**Related output**
Enhanced review and increased level of agreement on the draft ITU-D contribution to the draft ITU strategic plan, the WTDC Declaration and the WTDC action plan.	1.1 1.2 1.5
Assessment of the implementation of the WTDC action plan and of the WSIS Plan of Action	1.3
Enhanced knowledge-sharing, dialogue and partnership among the ITU membership on telecommunication/ICT issues	1.4
Enhanced process and implementation of telecommunication/ICT development projects and regional initiatives	1.6
Facilitation of agreement to cooperate on telecommunication/ICT development programmes between Member States, and between Member States and other stakeholders in the ICT ecosystem, based on requests from ITU Member States involved	1.6

Objective 2

Modern and secure telecommunication/ICT Infrastructure: Foster the development of infrastructure and services, including building confidence and security in the use of telecommunications/ICTs.

Outcomes	Related output
Enhanced capacity of the ITU membership to make available resilient telecommunication/ICT infrastructure and services	2.1
Strengthened capacity of Member States capacity to effectively share information, find solutions, and respond to threats to cybersecurity, and to develop and implement national strategies and capabilities, including capacity building, encouraging national, regional and international cooperation towards enhanced engagement among Member States and relevant players	2.2
Strengthened capacity of Member States to use telecommunications/ ICTs for disaster risk reduction and management, to ensure availability of emergency telecommunications, and support cooperation in this area	2.3

Objective 3 Enabling environment: Foster an enabling policy, and regulatory environment conducive to sustainable telecommunication/ICT development	
Outcomes	**Related output**
Strengthened capacity of Member States to enhance their policy, legal and regulatory frameworks conducive to development of telecommunications/ICTs	3.1
Strengthened capacity of Member States to produce high-quality, internationally comparable telecommunication/ICT statistics which reflect developments and trends in telecommunications/ICTs, based on agreed standards and methodologies	3.2
Improved human and institutional capacity of the ITU membership to tap into the full potential of telecommunications/ICTs	3.3
Strengthened capacity of the ITU membership to integrate telecommunication/ICT innovation in national development agendas and to develop strategies to promote innovation initiatives, including through public, private and public-private partnerships	3.4

Objective 4 Inclusive digital society: Foster the development and use of telecommunications/ICTs and applications to empower people and societies for sustainable development	
Outcomes	**Related output**
Improved access to and use of telecommunications/ICTs in least developed countries (LDCs), small island developing states (SIDS) and landlocked developing countries (LLDCs), and countries with economies in transition	4.1
Improved capacity of the ITU membership to accelerate economic and social development by leveraging and using new technologies and telecommunication/ICT services and applications	4.2
Strengthened capacity of the ITU membership to develop strategies, policies and practices for digital inclusion, in particular for the empowerment of women and girls, persons with disabilities and other persons with specific needs	4.3
Enhanced capacity of the ITU membership to develop telecommunication/ICT strategies and solutions on climate-change adaptation and mitigation and the use of green/renewable energy	4.4

Annex
Glossary of the strategic plan for the Union for 2020-2023

Term	Working Version
Activities	Activities are various actions/services for transforming resources (inputs) into outputs.
Financial plan	The financial plan covers a four-year period and sets up the financial basis from which biennial budgets can be elaborated. The financial plan is elaborated within the context of Decision 5 (Revenue and expenses for the Union) which reflects, *inter alia*, the amount of the contributory unit approved by the Plenipotentiary Conference. It should be aligned with the strategic plan.
Inputs	Inputs are resources, such as financial, human, material and technological resources, used by activities to produce outputs.
Mission	Mission refers to the main overall purposes of the Union, as per the Basic Instruments of ITU.
Objectives	Objectives refer to the specific aims of the Sector and intersectoral activities in a given period.
Operational plan	The operational plan is prepared on a yearly basis by each Bureau in consultation with the relevant advisory group and by the General Secretariat in accordance with the strategic and financial plans. It contains the detailed plan for the subsequent year and a forecast for the following three-year period for each Sector and the General Secretariat. The Council reviews and approves the four-year rolling operational plans.
Outcomes	Outcomes provide an indication as to whether the objective is being achieved. Outcomes are usually partly, but not entirely, within the control of the organization.
Outputs	The outputs are the final tangible results, deliverables, products and services achieved by the Union in the implementation of the operational plans. Outputs are cost objects and are represented in the applicable cost accounting system by internal orders.
Performance indicators	Performance indicators are the criteria used to measure the achievement of outputs or outcomes. These indicators may be qualitative or quantitative.

Term	Working Version
Processes	Set of consistent activities intended to meet an intended objective/goal.
Results-based budgeting (RBB)	Results-based budgeting (RBB) is the programme budget process in which (a) the programme is formulated in order to meet a set of predefined objectives and outcomes; (b) the outcomes justify resource requirements, which are derived from and linked to outputs produced to achieve the outcomes; and (c) actual performance in achieving outcomes is measured by outcome indicators.
Results-based management (RBM)	Results-based management (RBM) is a management approach that directs organizational processes, resources, products and services towards the achievement of measurable results. It provides the management frameworks and tools for strategic planning, risk management, performance monitoring and evaluation and financing activities based on targeted results.
Results framework	A results framework is the strategic management tool used to plan, monitor, evaluate and report within the RBM methodology. It provides the necessary sequence to achieve desired results (results chain) – beginning with inputs, moving through activities and outputs, to outcomes – at the level of Sector and intersectoral objectives, and desired impact – at the level of ITU-wide strategic goals and targets. It explains how results are to be achieved, including causal relationships and underlying assumptions and risks. The results framework reflects strategic level thinking across the entire organization.
Strategic goals	Strategic goals refer to the Union's high-level targets to which the objectives contribute, directly or indirectly. These relate to the whole of ITU.
Strategic plan	The strategic plan defines the strategy of the Union for a four-year period in order to fulfil its mission. It defines strategic goals and objectives and represents the plan of the Union within that period. It is the main instrument embodying the Union's strategic vision. The strategic plan should be implemented within the context of the financial limits established by the Plenipotentiary Conference.

Term	Working Version
Strategic risks	Strategic risks refer to the uncertainties and untapped opportunities that affect an organization's strategy and strategy execution.
Strategic risk management (SRM)	Strategic risk management (SRM) is a management practice that identifies and focuses action on uncertainties and untapped opportunities that affect an organization's ability to deliver on its mission.
Strategic target	Strategic targets are the expected results during the period of the strategic plan; they provide an indication as to whether the goal is being achieved. Targets may not always be achieved for reasons that may be beyond the control of the Union.
Values	ITU's shared and common beliefs that drive its priorities and guide all decision-making processes.
Vision	The better world ITU wants to see.

List of terms in all six official languages

English	Arabic	Chinese	French	Russian	Spanish
Activities	الأنشطة	活动	Activités	Виды деятельности	Actividades
Financial plan	الخطة المالية	财务规划	Plan financier	Финансовый план	Plan Financiero
Inputs	المدخلات	投入，输入意见（取决于上下文）	Contributions	Исходные ресурсы	Insumos
Mission	الرسالة	使命	Mission	Миссия	Misión
Objectives	الأهداف [/الغايات]	部门目标	Objectifs	Задачи	Objetivos
Operational plan	الخطة التشغيلية	运作规划	Plan opérationnel	Оперативный план	Plan Operacional
Outcomes	النتائج	结果	Résultats	Конечные результаты	Resultados
Outputs	النواتج	输出成果	Produits	Намеченные результаты деятельности	Productos
Performance indicators	مؤشرات الأداء	绩效指标	Indicateurs de performance	Показатели деятельности	Indicadores de Rendimiento
Processes	العمليات	进程	Processus	Процессы	Procesos
Results-based budgeting	الميزنة على أساس النتائج	基于结果的预算制定	Budgétisation axée sur les résultats	Составление бюджета, ориентированного на результаты	[Elaboración del] Presupuesto basado en los resultados
Results-based management	الإدارة على أساس النتائج	基于结果的管理	Gestion axée sur les résultats	Управление, ориентированное на результаты	Gestión basada en los resultados
Results framework	إطار النتائج	结果框架	Cadre de présentation des résultats	Структура результатов	Marco de resultados
Strategic goals	الغايات الاستراتيجية	总体战略目标	Buts stratégiques	Стратегические цели	Metas estratégicas
Strategic plan	الخطة الاستراتيجية	战略规划	Plan stratégique	Стратегический план	Plan Estratégico
Strategic risks	المخاطر الاستراتيجية	战略风险	Risques stratégiques	Стратегические риски	Riesgos estratégicos
Strategic risk management	إدارة المخاطر الاستراتيجية	战略风险管理	Gestion des risques stratégiques	Управление стратегическими рисками	Gestión de riesgos estratégicos
Strategic target	المقاصد الاستراتيجية	具体战略目标	Cible stratégique	Стратегический целевой показатель	Finalidad estratégica
Values	القيم	价值/价值观	Valeurs	Ценности	Valores
Vision	الرؤية	愿景	Vision	Концепция	Visión

PART C

BUENOS AIRES ACTION PLAN

Section 1 – Introduction

1 Introduction

The Buenos Aires Action Plan aims to provide a simple, comprehensive but functional instrument for achieving the strategic objectives of the ITU Telecommunication Development Sector (ITU-D), underpinned by agreed outcomes, through the implementation of outputs.

The ITU-D strategic plan includes four objectives and 14 related outcomes. The Buenos Aires Action Plan follows a results-based structure, in which outcomes are identified for the objectives. Outcomes provide an indication as to whether the objective is being achieved.

Outputs are all the products and services ITU-D will develop and deliver to members through the implementation framework agreed in this Buenos Aires Action Plan in order to achieve the related ITU-D strategic objectives, and will be specified in the ITU-D rolling operational plan each year.

The Buenos Aires Action Plan, specifically its programmes, regional initiatives and study group Questions, will further contribute to the implementation of ITU resolutions and Recommendations relevant to the mandate of ITU-D, including the ITU Connect 2020 Agenda, the World Summit on the Information Society (WSIS) action lines and the Sustainable Development Goals (SDGs) and associated targets.

The Buenos Aires Action Plan delineates the ITU-D mandate for the period 2018-2021, and may be updated or modified by the Telecommunication Development Advisory Group (TDAG) to reflect changes in the telecommunication/ information and communication technology (ICT) environment and/or as a result of the performance evaluation to be conducted each year. The Buenos Aires Action Plan structure follows the structure of the strategic plan, so as to ensure a consistent planning hierarchy and linkage across the different planning tools and instruments within ITU (strategic, financial and operational planning).

World Summit on the Information Society, United Nations Sustainable Development Goals and ITU Connect 2020 Agenda, within the context of the Buenos Aires Action Plan

The Buenos Aires Action Plan is designed to provide a mechanism to achieve the objectives of ITU-D, in line with the outcomes of the 2017 World Telecommunication Development Conference (WTDC-17).

ITU-D objectives are part of the ITU strategic plan and are aligned with the role that ITU plays within the framework of WSIS, as well as with the Connect 2020 Agenda endorsed by the ITU membership through Resolution 200 (Rev. Busan, 2014) of the Plenipotentiary Conference.

Furthermore, the ITU strategic plan reaffirms the role of ITU (and consequently ITU-D) as part of the United Nations (UN) system in contributing to a transformative post-2015 development agenda (Annex 1 to Resolution 71 (Rev. Busan, 2014) of the Plenipotentiary Conference).

Also, the WSIS+10 High-Level Event, in its WSIS+10 vision for WSIS beyond 2015, highlights that: "ICTs will play a critical role in achieving the sustainable development goals. Taking into account the ongoing dialogue on the Post-2015 Development Agenda (MDG review process) and the WSIS implementation process, all stakeholders have indicated the necessity of increased interaction between both processes in order to ensure that efforts across the UN system are coherent and coordinated to achieve maximum and sustainable impact".

The interrelationship is therefore clear between WSIS, the UN SDGs and the Connect 2020 Agenda: while they have emanated from different processes within and outside ITU, they share a common goal in achieving sustainable development, leveraging on key enablers such as ICTs.

In this perspective, ITU-D, through implementation of the Buenos Aires Action Plan, supports the processes related to WSIS, the UN SDGs and the Connect 2020 Agenda, and contributes to implementation of the WSIS action lines and achievement of the goals and targets of the UN 2030 Agenda for Sustainable Development and the ITU Connect 2020 Agenda.

In so doing, ITU-D must operate within the mandate handed down by the ITU membership and according to its core competencies and expertise. As mentioned above, the UN system is called upon to engage in inter-agency coordination toward a coherent and more effective joint effort. Moreover, ITU-D and its membership must operate within the framework established by the ITU Council for implementation of the WSIS action lines and SDGs. As established by Council Resolution 1332, the WSIS framework is the foundation through which ITU helps achieve the 2030 Agenda for Sustainable Development.

Both ITU-D and its Telecommunication Development Bureau (BDT) will facilitate the transfer of know-how (e.g. through the ITU-D study groups) and implement programmes and regional initiatives in accordance with this Buenos Aires Action Plan, acting as catalyst and convener, and in so doing will support Member States' efforts towards implementation of the relevant WSIS action lines and the Connect 2020 Agenda in pursuit of attaining the SDGs.

2 Structure of the Buenos Aires Action Plan

The Buenos Aires Action Plan follows a results-based structure, based on the objectives set out in the ITU-D contribution to the ITU strategic plan. It is organized as follows:

For each of the objectives, the following information is provided:

– Title of the objective

– Outcomes and related performance indicators

– Outputs and related implementation frameworks, including, as relevant
  - programmes
  - regional initiatives
  - study group Questions
– References to relevant:
  - resolutions of the Plenipotentiary Conference
  - WTDC resolutions and Recommendations
  - WSIS action lines
  - SDGs and associated targets.

As mentioned above, the Buenos Aires Action Plan is aligned with the goals of the ITU Connect 2020 Agenda, agreed at the ITU Plenipotentiary Conference (Busan, 2014):

- Goal 1: Growth – Enable and foster access to and increased use of telecommunications/ICTs
- Goal 2: Inclusiveness – Bridge the digital divide and provide broadband for all
- Goal 3: Sustainability – Manage challenges resulting from telecommunication/ICT development
- Goal 4: Innovation and partnership – Lead, improve and adapt to the changing telecommunication/ICT environment.

These goals are clearly cross-cutting and permeate almost all activities described in the Buenos Aires Action Plan. As such, no specific reference is made to them in each of the objectives.

ITU-D will implement the outputs (development of product and services) through the programmes, regional initiatives and study group Questions.

These outputs will also contribute to the implementation of relevant WSIS action lines, WTDC resolutions and Recommendations and the SDGs and associated targets. The guidelines in § 4 below will apply to all elements of the implementation framework.

The products and services to be developed by study groups will be defined in the work plan of each study group Question.

3 Definitions of programmes, regional initiatives and study group Questions

3.1 Programmes

Programmes provide a coordination mechanism among all elements of the implementation framework and are responsible for assisting the membership to develop products – such as model policies, regulations, strategies, plans, frameworks, procedures, guidelines, manuals, toolkits and learning-management systems; economic and financial mechanisms; network and frequency planning tools, and spectrum-management tools; conformity assessment and interoperability testing guidance; research and analysis of relevant trends, including through reports, case studies, benchmarks and websites; collection and sharing of relevant best practices and technical standards; data and resource collection and dissemination; database development and development of other online resources, such as learning platforms and portals; and capacity-building materials – and for making these products available for use by members.

In addition, programmes provide services to members, such as capacity building, legal, policy, regulatory and technical advice, platforms to foster cooperation among and exchanges between members and partners on relevant issues, and awareness-raising among members on key issues and trends. The products and services developed by programmes can be for use by members on a national, subregional, regional or global basis.

Programmes should, where possible, be implemented in partnership with other organizations and stakeholders, including Sector Members, Academia, non-governmental organizations, other United Nations agencies and networks, to leverage the impact of the products and services developed thereunder.

3.2 Regional initiatives and other projects

Regional initiatives are intended to address specific telecommunication/ICT priority areas, through partnerships and resource mobilization to implement projects. Under each regional initiative, projects are developed and implemented to meet the region's needs. The products and services to be developed through regional initiatives, in order to achieve related objectives and outcomes under the ITU-D contribution to the ITU strategic plan, will be identified in relevant project documents.

In fulfilling the Union's dual responsibility as a United Nations specialized agency and executing agency for implementing projects under the United Nations development system or other funding arrangements so as to facilitate and enhance telecommunication/ICT development, ITU-D offers, organizes and coordinates technical cooperation assistance through regional initiatives and projects.

3.3 Study group Questions

ITU-D study groups are responsible for developing reports, guidelines and Recommendations based on input received from the membership for review by their members. Information is gathered through surveys, contributions and case studies, 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 the ITU-D membership, to support them in achieving their development goals.

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. Sharing of topics of common interest is carried out through face-to-face meetings, online e-forums and remote participation, in an atmosphere that encourages open debate and exchange of information as well as input from experts on the topics under study. The products to be developed under study group Questions will be defined in the work plan of each study group Question.

4 Implementation framework guidelines

The programmes, regional initiatives, study group Questions, resolutions and Recommendations encompassed in the Buenos Aires Action Plan implementation framework comprise the outputs, or products and services, which BDT develops to support Member States and Sector Members in achieving the objectives of the ITU-D contribution to the ITU strategic plan.

The outputs will also contribute to the implementation of relevant WSIS action lines, assisting efforts to achieve the SDGs and associated targets.

When undertaking actions under programmes, regional initiatives, study group Questions, resolutions and Recommendations, BDT should continue to work in close cooperation with Member States, Sector Members and other stakeholders. Moreover, close coordination should be ensured among all elements of the implementation framework, in order to ensure coherence and consistency, as well as optimizing the utilization of resources.

All elements of the Buenos Aires Action Plan implementation framework should be guided by the following implementation framework guidelines.

4.1 Coordination within ITU

For each relevant element of the Buenos Aires Action Plan outputs, the Director of BDT should liaise with the ITU Radiocommunication Sector (ITU-R), the ITU Telecommunication Standardization Sector (ITU-T) and the General Secretariat, as appropriate and as needed, including through the internal coordination mechanisms established by ITU, such as the ITU intersectoral coordination task forces and the WSIS Task Force.

4.2 Coordination with study groups

Each output identifies relevant study Questions. Actions under programmes, regional initiatives and projects shall, whenever possible, seek close interaction and systematic cooperation with related study group Questions adopted under WTDC Resolution 2 (Rev. Buenos Aires, 2017). Relevant programmes and regional initiatives will provide input to related study Questions, including through written contributions based on the results of implementation of the programmes and regional initiatives, as well as through workshops, seminars and other activities on related topics. Regional directors will provide information to the study Questions on relevant ITU projects in their respective regions. Likewise, the work undertaken under related study Questions will be used by the relevant programmes. ICT accessibility for persons with disabilities and a gender perspective will be incorporated into all relevant study Questions. The work of the study groups will seek to reduce duplication across study Questions.

4.3 Coordination and communication with the ITU-D membership

As ITU is a membership-driven organization, BDT will continue to develop products and services to enhance its membership and membership engagement in ITU-D programmes, regional initiatives, projects, study groups and many other activities. In particular, the ITU-D Sector Membership Portal will continue to be improved to facilitate the dissemination and sharing of information and maximize networking and partnership opportunities.

Promotional activities are key to enhancing awareness and understanding of the work of ITU-D and in keeping the ITU membership, the media and the general public informed about the Sector's activities. Tools include the ITU-D website, new media and various communication products, such as videos, newsletters, information kits, brochures, featured articles and fact-sheets.

"ITU-D Flash", the Sector's newsletter, will continue to be produced and distributed electronically to ITU-D members on a quarterly basis, and success stories on how ITU-D makes a difference in people's lives will continue to be featured on the ITU-D website. Also, BDT will strengthen its presence on social media to promote success stories and activities.

As before, BDT will continue to launch promotional campaigns to promote successful projects. These campaigns may involve the production of leaflets, press releases and web content, as well as the organization of press conferences and panel discussions.

Furthermore, BDT will continue to implement its internal communications strategy to keep staff members informed of the activities of the Sector, through the organization of staff meetings and production of the Director's monthly letter.

4.4 Mainstreaming the empowerment of women and girls and persons with disabilities in all outputs of the Buenos Aires Action Plan

The inclusion of a gender perspective and ICT accessibility for persons with disabilities, including age-related disabilities, should be ensured in the implementation of all relevant outcomes of WTDC-17. Moreover, BDT will ensure that each ITU-D programme, project or activity takes into account the use of telecommunications/ICTs for youth and women's empowerment as well as telecommunication/ICT accessibility for persons with disabilities, including age-related disabilities.

4.5 Partnerships

As previously, BDT will continue to develop partnerships with a wide range of stakeholders, including other United Nations agencies, and endeavour to mobilize resources from funding agencies, international financial institutions, ITU Member States and ITU-D Sector Members and other relevant partners. In executing projects, available local and regional expertise should be taken into account.

Information on partnership activities should continue to be updated on the BDT website, including summaries of BDT projects and of resources generated and expended. Furthermore, BDT will extend its reach towards potential members and partners from academia by proposing activities such as scientific and academic publications in partnership with Member States, Sector Members, Associates and Academia, and other relevant stakeholders.

Buenos Aires Action Plan

Section 2 – Objectives and outputs

Objective 1 – Coordination: Foster international cooperation and agreement on telecommunication/ICT development issues

Outcomes

Outcomes	Performance indicators	Outputs (Products and services)[1]
D.1-1: Enhanced review and increased level of agreement on the draft ITU-D contribution to the draft ITU strategic plan, the WTDC Declaration and the WTDC action plan	– Membership level of understanding and sharing of the ITU-D objectives and outputs – Declaration approved – level of support/agreement	1.1: World Telecommunication Development Conference (WTDC) and WTDC final report. 1.2: Regional preparatory meetings (RPMs) and final report of RPMS. 1.5: Platforms for regional coordination, including regional development forums (RDFs).
D.1-2: Assessment of the implementation of the WTDC action plan and of the WSIS Plan of Action	– Indicators of regional cooperation – Level of consensus	1.3: Telecommunication Development Advisory Group (TDAG) and TDAG reports of for the Director of BDT and for WTDC.

[1] Within the context of the outputs in the ITU-D contribution to the ITU strategic plan, "products and services" refers to activities within the mandate of ITU-D as defined by Article 21 of the ITU Constitution, including, among others, capacity building and dissemination of ITU expertise and knowledge.

Outcomes	Performance indicators	Outputs (Products and services)[1]
D.1-3: Enhanced knowledge-sharing, dialogue and partnership among the ITU membership on telecommunication/ICT issues	– Work programmes undertaken in response to: Resolution 2 (Rev. Buenos Aires, 2017); work assigned by WTDC; ITU-D resolutions addressing specific areas of study through ITU-D study groups – Meetings and documentation for meetings processed in accordance with Resolution 1 (Rev. Buenos Aires, 2017) (and working guidelines) and in accordance with decisions of WTDC	1.4: Study groups and guidelines, recommendations and reports of study groups.
D.1-4: Enhanced process and implementation of telecommunication/ICT development projects and regional initiatives	– Increased use of electronic tools to progress work on the study group work programmes – Number of partnerships signed, and resources mobilized – Number of development projects and projects related to regional initiatives implemented per region – Number of Member States assisted by BDT in implementing projects related to regional initiatives	1.6: Implemented telecommunication/ICT development projects and services related to regional initiatives.

Outcomes	Performance indicators	Outputs (Products and services)[1]
D.1-5: Facilitation of agreement to cooperate on telecommunication/ ICT development programmes between Member States, and between Member States and other stakeholders in the ICT ecosystem, based on requests from ITU Member States involved	– Number of partnerships signed, and resources mobilized – Number of requests from administrations to ITU to facilitate agreements – Number of agreements facilitated by ITU	1.6: Implemented telecommunication/ICT development projects and services related to regional initiatives.

Output 1.1 – World Telecommunication Development Conference (WTDC) and WTDC final report

1 Background and implementation framework

Held every four years, the World Telecommunication Development Conference (WTDC) is a high-level platform for Member States to develop priorities, strategies and action plans to guide the work of ITU-D over the following four-year period. WTDC is a direct service to members that provides the pre-eminent, high-level forum for discussion, information sharing and consensus building on technical and policy issues relating to telecommunication/ICT development. A final report is produced by each WTDC. It includes the following items:

- Declaration
- contribution to the draft ITU strategic plan for the forthcoming relevant time-frame
- action plan
- regional initiatives
- study groups

2 References to Plenipotentiary Conference and WTDC resolutions, WSIS action lines and SDGs

Plenipotentiary Conference and WTDC resolutions and recommendations

The implementation of Decisions 5 and 13 and Resolutions 25, 71, 72, 77, 131, 135, 139, 140, 151, 154, 165, 167 and 200 of the Plenipotentiary Conference and all WTDC resolutions will support Output 1.1, and will contribute to the achievement of Outcome D.1-1.

WSIS action lines

Output 1.1 will support the implementation of WSIS Action Lines C1 and C11, and will contribute to the achievement of Outcome D.1-1.

SDGs and associated targets

Output 1.1 will contribute to the achievement of the following SDGs: 1, 3 (target 3.d), 5, 10, 16 (targets 16.5, 16.6, 16.8) and 17 (targets 17.9, 17.16, 17.17, 17.18, 17.19).

Output 1.2 – Regional preparatory meetings (RPMs) and final report of the RPMs

1 Background and implementation framework

Through Resolution 31 (Rev. Buenos Aires, 2017), WTDC instructs the Director of BDT to organize, within the financial limitations, one regional preparatory meeting per region for each of the six regions (Africa, Americas, Arab States, Asia-Pacific, CIS and Europe), as soon as possible before the last meeting of TDAG and before the next WTDC, avoiding overlap with other relevant ITU-D meetings and making full use of the regional offices to facilitate such conferences or meetings.

Regional preparatory meetings are direct services to members and are organized to achieve greater regional coordination and engage members early on in the WTDC preparatory process. They also seek to identify issues, at the regional level, that need to be addressed to foster the development of telecommunications/ICTs, taking into account the expression of pressing needs facing Member States and Sector Members of the region. An RPM is expected to identify top priority areas, which are essential for the telecommunication/ICT development of countries of the region. A final report is produced by each RPM. It covers the following items:

- identification of priority areas, including the draft WTDC Declaration, draft WTDC contribution to the ITU strategic plan, draft WTDC action plan and study groups;
- topics for ITU-D future work (including working methods and study group Questions) linked to the identified priority areas;
- priority-setting for the regional initiatives;
- identification of regional initiatives for the region.

2 References to Plenipotentiary Conference and WTDC resolutions, WSIS action lines and SDGs

Plenipotentiary Conference and WTDC resolutions and recommendations

The implementation of Decisions 5 and 13 and Resolutions 25, 71, 135, 140, 165, 167 and 200 of the Plenipotentiary Conference and all WTDC resolutions will support Output 1.2, and will contribute to the achievement of Outcome D.1-1.

WSIS action lines

Output 1.2 will support the implementation of WSIS Action Lines C1 and C11, and will contribute to the achievement of Outcome D.1-1.

SDGs and associated targets

Output 1.2 will contribute to achievement of the following SDGs: 1, 3, (target 3.d), 5, 10, 16 (targets 16.5, 16.6, 16.8) and 17 (targets 17.9, 17.16, 17.17, 17.18, 17.19).

Output 1.3 – Telecommunication Development Advisory Group (TDAG) and TDAG reports for the Director of BDT and for WTDC

1 Background and implementation framework

TDAG prepares a report for the Director of BDT indicating action in respect of the following items:

- working procedures;
- cooperation and coordination with the Radiocommunication Sector, the Telecommunication Standardization Sector and the General Secretariat;
- guidelines for the work of study groups;
- progress in the implementation of the programme of work;
- implementation of the operational plan of the preceding period.

Furthermore, TDAG prepares a report for WTDC on the matters assigned to it in accordance with No. 213A of the ITU Convention, and transmits it to the Director for submission to the conference.

Additionally, TDAG may identify priority areas, including in respect of the draft WTDC Declaration, draft WTDC contribution to the ITU strategic plan, draft WTDC action plan and study groups.

2 References to Plenipotentiary Conference and WTDC resolutions, WSIS action lines and SDGs

Plenipotentiary Conference and WTDC resolutions and recommendations

Output 1.3 will support the implementation of Decisions 5 and 13 and Resolutions 25, 71, 135, 140, 151, 154, 165, 167 and 200 of the Plenipotentiary Conference and WTDC Resolutions 9 and 10, and will contribute to the achievement of Outcome D.1-2.

WSIS action lines

Output 1.3 will support the implementation of WSIS Action Lines C1 and C11, and will contribute to the achievement of Outcome D.1-2.

SDGs and associated targets

Output 1.3 will contribute to the achievement of following SDGs: 1, 3 (target 3.d), 5, 10, 16 (targets 16.5, 16.6, 16.8) and 17 (targets 17.9, 17.16, 17.17, 17.18, 17.19).

Output 1.4 – Study groups and guidelines, recommendations and reports of study groups

1 Background and implementation framework

ITU-D study groups enable all Member States, Sector Members, Associates and Academia to share experiences, present ideas, exchange views and achieve consensus on appropriate strategies to address ICT priorities. ITU-D study groups study Questions and are responsible for developing reports, guidelines and recommendations based on input received from the membership. Information is gathered through surveys, contributions and case studies, and is made available for easy access by the membership using content-management and web-publication tools.

Each ITU-D study group prepares a report indicating the progress of work and presents draft new or revised Recommendations for consideration by WTDC.

Pursuant to WTDC Resolution 2 (Rev. Buenos Aires, 2017), the mandate of Study Group 1 is to study the "Enabling environment for the development of telecommunications/ICTs", and of Study Group 2 to study "ICT services and applications for the promotion of sustainable development". The working procedures to be followed by the ITU-D study groups are set out in WTDC Resolution 1 (Rev. Buenos Aires, 2017).

2 References to Plenipotentiary Conference WTDC resolutions, WSIS action lines and SDGs

Plenipotentiary Conference and WTDC resolutions and Recommendations

The implementation of Decisions 5 and 12 and Resolutions 70, 166, 167, 188 and 200 of the Plenipotentiary Conference and WTDC Resolutions 1, 2, 5, 9, 21, 30, 37, 59, 61 and 71 will support Output 1.4, and will contribute to the achievement of Outcome D.1-3.

WSIS action lines

Output 1.4 will support the implementation of WSIS Action Lines C1 and C11, and will contribute to the achievement of Outcome D.1-3.

SDGs and associated targets

Output 1.4 will contribute to achievement of the following SDGs: 1 (target 1.b), 3 (target 3.d), 5, 10, 16 (targets 16.5, 16.6, 16.10) and 17 (targets 17.9, 17.16, 17.17, 17.18).

Output 1.5 – Platforms for regional coordination, including regional development forums (RDFs)

1 Background and implementation framework

Regional development forums (RDFs) provide a mechanism for high-level dialogue between BDT and decision-makers of ITU Member States and Sector Members. They serve as a platform for assessing strategic orientations that may have an impact on BDT's regional work plan between WTDCs. In this context, RDFs will report on the activities of the Buenos Aires Action Plan, with particular emphasis on regional initiatives, in order to get feedback from membership to adjust BDT's work in each region of the world.

2 References to Plenipotentiary Conference and WTDC resolutions, WSIS action lines and SDGs

Plenipotentiary Conference and WTDC resolutions and recommendations

The implementation of all WTDC resolutions will support Output 1.5 and will contribute to the achievement of Outcome D.1-1.

WSIS action lines

Output 1.5 will support the implementation of WSIS Action Lines C1 and C11, and will contribute to the achievement of Outcome D.1-1.

SDGs and associated targets

Output 1.5 will contribute to achievement of the following SDGs: 1, 3 (target 3.d), 5, 10, 16 (targets 16.5, 16.6, 16.8) and 17 (targets 17.9, 17.16, 17.17, 17.18, 17.19).

Output 1.6 – Implemented telecommunication/ICT development projects and services related to regional initiatives

1 Background and Implementation framework

In order to implement the growing volume and variety of telecommunication/ICT development projects and services related to the regional initiatives, it is important for ITU-D to develop and strengthen partnerships to mobilize resources to promote sustainable telecommunication/ICT development.

To this end, partnerships and cooperation with diverse stakeholders, including other United Nations agencies, international and regional organizations, ITU Member States, ITU-D Sector Members, Associates, Academia and other relevant partners, from developed and developing countries[2], are necessary to enhance resource mobilization, to avoid duplication of efforts and to support ITU-D in implementation of the outcomes of WTDC.

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[2] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

Such cooperation will facilitate the development and promotion of the digital economy for all ITU Member States, through the organization of training sessions, workshops, sharing best practices, raising awareness and events with the involvement of stakeholders.

2 References to Plenipotentiary Conference and WTDC resolutions, WSIS action lines and SDGs

Plenipotentiary Conference and WTDC resolutions and Recommendations

The implementation of Resolutions 135, 140 and 200 of the Plenipotentiary Conference and WTDC Resolutions 17, 30, 32, 53 and 71 will support Output 1.6, and will contribute to the achievement of Outcomes D.1-4 and D.1-5.

WSIS action lines

Output 1.6 will support the implementation of WSIS Action Lines C1 and C11, and will contribute to the achievement of Outcomes D.1-4 and D.1-5.

SDGs and associated targets

Output 1.6 will contribute to achievement of the following SDGs: 1 (target 1.a) 17 (targets 17.3, 17.16 and 17.17).

Objective 2 – Modern and secure telecommunication/ICT Infrastructure: Foster the development of infrastructure and services, including building confidence and security in the use of telecommunications/ICTs

Outcomes

Outcomes	Performance indicators	Outputs (Products and services)
D.2-1: Enhanced capacity of the ITU membership to make available resilient telecommunication/ICT infrastructure and services	– Number of guidelines, handbooks, assessment studies and publications finalized on relevant subjects in countries that BDT contributed to developing – Number of users/subscribers accessing the tools on relevant subjects in countries that BDT contributed to developing – Number of experts participating in training, seminars and workshops for the relevant subjects in countries, and their satisfaction, that BDT contributed to developing	2.1: Products and services on telecommunication/ICT infrastructure and services, wireless and fixed broadband, connecting rural and remote areas, improving international connectivity, bridging the digital standardization gap, conformance and interoperability, spectrum management and monitoring and the effective and efficient management and proper use of telecommunication resources, within the mandate of ITU, and the transition to digital broadcasting, such as assessment studies, publications, workshops, guidelines and best practices

Outcomes	Performance indicators	Outputs (Products and services)
D.2-2: Strengthened capacity of Member States to effectively share information, find solutions, and respond to threats to cybersecurity, and to develop and implement national strategies and capabilities, including capacity building, encouraging national, regional and international cooperation towards enhanced engagement among Member States and relevant players	– Number of national cybersecurity strategies implemented in countries that BDT contributed to developing – Number of CERTs that BDT has contributed to establishing – Number of countries where BDT provided technical assistance and improved cybersecurity capability and awareness – Number of cyberattacks repelled by CERTs established with the support of BDT	2.2: Products and services for building confidence and security in the use of telecommunications/ICTs, such as reports and publications, and for contributing to the implementation of national and global initiatives
D.2-3: Strengthened capacity of Member States to use telecommunications/ICTs for disaster risk reduction and management, to ensure availability of emergency telecommunications, and support cooperation in this area	– Number of Member States where BDT assisted with disaster-relief efforts both through provision of equipment and through infrastructure damage assessments in the aftermath of a disaster – Number of Member States that received BDT assistance in the development and establishment of early-warning systems – Number of Member States that received BDT assistance in developing and establishing national emergency telecommunication plans	2.3: Products and services on disaster risk reduction and management, and emergency telecommunications, including assistance to enable Member States to address all phases of disaster management, such as early warning, response, relief and restoration of telecommunication networks

Output 2.1 – Products and services on telecommunication/ICT infrastructure and services, wireless and fixed broadband, connecting rural and remote areas, improving international connectivity, bridging the digital standardization gap, conformance and interoperability, spectrum management and monitoring and the effective and efficient management and proper use of telecommunication resources, within the mandate of ITU, and the transition to digital broadcasting, such as assessment studies, publications, workshops, guidelines and best practices

1 Background

Infrastructure is central for enabling universal, sustainable, ubiquitous and affordable access to ICTs and services for all.

The ICT sector is characterized by rapid technological change, and by convergence of technological platforms for telecommunications, information delivery, broadcasting and computing which are key enablers for the digital economy. The deployment of common broadband, including through fixed and mobile technology and network infrastructures for multiple telecommunication services and applications, and the evolution to all IP-based wireless and wired future networks (NGNs and their evolutions), open up opportunities but also imply significant challenges for developing countries. When referring to communications we include people-to-people, people-to-things and things-to-things communications as well as new or emerging technologies. Also notable is the worldwide transition from analogue to digital broadcasting, enabling more efficient use of spectrum and higher quality audio and video delivery.

2 Implementation framework

Programme: Telecommunication/ICT network infrastructure and services

The objective of this programme is to assist ITU Member States and ITU-D Sector Members and Associates in maximizing the use of new technologies for the development of their information and communication infrastructures and services and building global telecommunication/ICT infrastructure though partnerships, bridging the digital standardization gap, conformance and interoperability and spectrum-management programmes.

Main areas of work include:

Next-generation networks, including ICT networks for smart grids and future networks

The architecture of information and communication infrastructures is continuously changing to accommodate new requirements for a growing number of ICT-enabled services and applications, along with evolution to next-generation networks (NGNs) and further evolutions, for future networks.

Activities will be focused on:

- providing assistance to Member States on deployment and migration of their existing networks to NGNs and further evolutions for future networks;

- assisting countries in planning the introduction and continuous adoption of new network elements and applications;

- assisting countries in the digitization of analogue networks and in applying affordable wired and wireless technologies, including interoperability of ICT infrastructure;

- assisting countries in maximizing the use of new technologies for the development of telecommunication/ICT networks, including smart grid infrastructure and services;

- providing assistance to Member States in the deployment of NGN, fostering, planning and implementation of future networks and further evolutions of smart grids;

- providing assistance to Member States, when requested, to efficiently and effectively manage telephone numbering resources within the mandate of ITU, to facilitate the deployment of emerging technologies.

Broadband networks: Wired and wireless technologies, including International Mobile Telecommunications (IMT), satellite communications and support for the Internet of Things (IoT)

Broadband is critical in the transformation of the traditional economy to the digital economy. The introduction of different broadband technologies will further increase the need for high bandwidth and connectivity. It is therefore important to provide developing countries with an understanding of the different technologies available for broadband using both wired and wireless technologies for terrestrial and satellite telecommunications, including International Mobile Telecommunications (IMT), especially IMT-2020, and also support for the Internet of Things (IoT).

Activities will be focused on:

- providing assistance to developing countries in their medium- to long-term planning for the implementation and development of national ICT broadband network plans, especially for IMT-2020 (5G), and support for IoT services and applications;

- collecting and disseminating information and analyses on the current status of broadband backbone and submarine cables, in order to assist members in network planning, avoiding duplication of efforts and resources and disseminating information on different countries' experiences with the use of different technologies and services; this includes the creation of an online Interactive Transmission Map related to national backbone worldwide connectivity (optical fibres, microwave, submarine cables, satellite earth stations) as well as other key metrics for the ICT sector;

- promoting Internet exchange points (IXPs) as a cost-effective solution to advance connectivity, and supporting ITU members with deployment of/transition to IPv6-based networks and applications, in collaboration with relevant expert organizations;

- collecting and disseminating information, case studies and best practices on the development of the new ecosystem for IoT services and applications.

Rural communications

Rural populations will need to be provided with telephony and broadband access, by connecting remote areas to broadband core networks. Choosing efficient, cost-effective and fast-deployment technologies – whether wired or wireless networks – will improve accessibility and enable participation in the digital economy.

The focus in this area can be summarized as follows:

- providing information on available technologies for access, backhaul and source of power supply to bring telecommunications to rural, unserved and underserved areas, and advising on how to overcome regulatory barriers preventing access to key technologies for rural communications;

- implementing projects on public/community broadband access points focusing on the provision of ICT services and applications through suitable technologies, including satellite, and business models which achieve financial and operational sustainability;

- disseminating information on the latest technologies and best practices through methods such as publications, symposia, seminars and workshops, taking into account the outputs of related ITU-D study group activities.

Bridging the standardization gap

Increasing the knowledge and capacity of developing countries for the effective application/implementation of standards (Recommendations) developed in ITU-T and ITU-R as well as other standards-development organizations, which are fundamental for bridging the standardization gap.

Good and reliable standards help to improve the establishment of a regional and national set of technical requirements, and ultimately contribute to access to safe, interoperable and affordable ICT equipment/systems, thus serving to reduce the digital divide.

The focus in this area will be on:

- promoting and coordinating activities in the regions to support implementation of the relevant standards tailored to developing-country needs;

- organizing, coordinating and providing necessary assistance to the activities of standardization committees in the regions, also through the organization of capacity building events;

- providing the necessary assistance to the regional groups of ITU study groups;

- providing assistance to the regional telecommunication organizations for the setting-up and management of regional standardization bodies.

Conformance and interoperability (C&I)

The availability of high-performance and interoperable products accelerates widespread deployment of infrastructure, technologies and associated services, granting people access to the information society regardless of location or choice of device.

Conformity with international standards and interoperability, i.e. the ability of equipment from different vendors to successfully communicate between them, can help avoid costly market battles over different technologies.

The focus of BDT in this area will be as follows:

- cooperating with international organizations, industry and conformity assessment bodies (CABs) as well as accreditation bodies, considered as a key element for the success of the ITU C&I programme;

- educating technicians, policy-makers and businesses on the importance of C&I procedures and testing, mobilizing the resources required to implement regional and national C&I programmes, in cooperation with other relevant regional and international organizations;

- providing assistance to developing countries in the establishment of national, regional or subregional C&I programmes, and conducting assessment studies for facilitating the establishment of common C&I regimes at national, regional and subregional level through the implementation of mutual recognition agreements/arrangements (MRAs);

- preparing guidelines on this process which outline the technical and human resources required and the international standards to be applied;

- preparing guidelines for identifying, limiting and combating counterfeit, sub-standard and tampered telecommunication/ICT devices;

- collaborating with other ITU Sectors and cooperating with relevant stakeholders to limit the spread of counterfeit products;

- providing capacity-building and training opportunities to developing countries in order to raise awareness of the negative impact of counterfeit devices and mobile device theft, compiling information on best practices and preparing guidelines and methodologies.

International connectivity

Enhancing international connectivity is critical in improving access to the Internet for all ITU Member States, and especially for developing countries. To this end, BDT should facilitate the sharing of best practices and strengthen international cooperation.

Activities will be focused on:

- analysing the current status of and demand for international connectivity in Member States, particularly for least developed countries (LDCs), landlocked developing countries (LLDCs) and small island developing states (SIDS);

- identifying and disseminating best practices to assist Member States in resolving issues related to international connectivity.

Broadcasting

The objective of BDT work in broadcasting is to enable developing countries to achieve smooth migration to and adoption of digital broadcasting, including the transition from analogue to digital broadcasting and digital to digital, and to follow the post-transition activities, such as the introduction of new broadcasting services and allocation of the digital dividend.

In particular, activities will be focused on:

- providing assistance on policy and regulatory frameworks for digital terrestrial broadcasting, including frequency planning and optimization of spectrum use, as well as digital broadcasting guidelines and master plans for the transition from analogue to digital broadcasting and to new broadcasting services and technologies;

- organizing regional meetings between ITU members on the use of spectrum for broadcasting services and other services.

Spectrum management

Wireless technology has great potential to improve our quality of life. Thus, BDT works to strengthen national regulatory bodies in frequency planning and assignment, management and monitoring.

This will involve, in particular:

- continuing to maintain, update and expand the Spectrum Management System for Developing Countries (SMS4DC) software, providing technical assistance and conducting training activities for its deployment and use;

- providing spectrum-management assessments, master plans and recommended action plans for the further development of spectrum-management structures, procedures and tools, including new spectrum-sharing approaches;

- providing assistance on spectrum fee regimes, including direct assistance in the establishment of such regimes; in the harmonization of regional spectrum allocations, including coordination procedures in border areas; and in the optimization and cost-effective use of spectrum-monitoring systems and networks.

Relevant regional initiatives

The following regional initiatives will contribute to Outcome D.2-1, consistent with WTDC Resolution 17 (Rev. Buenos Aires, 2017):

Region
AFR region
AFR2: Promotion of emerging broadband technologies **Objective**: To promote emerging technologies to assist the Africa region in securing the full benefits of high-speed, high-quality broadband. **AFR5: Management and monitoring of the radio-frequency spectrum and transition to digital broadcasting** **Objective**: To assist Member States in ensuring the transition to digital broadcasting and efficient and economical management of the radio spectrum and orbital resources.
AMS region
AMS2: Spectrum management and transition to digital broadcasting **Objective**: To provide assistance to Member States in the transition to digital broadcasting, the use of the digital-dividend frequencies and spectrum management. **AMS3: Deployment of broadband infrastructure, especially in rural and neglected areas, and strengthening of broadband access to services and applications** **Objective**: To provide assistance to Member States in identifying needs and in the development of policies, mechanisms and regulatory initiatives to reduce the digital divide by increasing broadband access and uptake, as a means of achieving the Sustainable Development Goals (SDGs).
ASP region
ASP3: Fostering development of infrastructure to enhance digital connectivity **Objective**: To assist Member States in the development of telecommunication/ information and communication technology (ICT) infrastructure in order to facilitate provision of services and applications on that infrastructure.

CIS region
CIS3: Development and regulation of infocommunication infrastructure to make cities and human settlements inclusive, safe and resilient **Objective**: To assist ITU Member States in the region in developing regulatory instruments and technical solutions aimed at creating an enabling environment for the development of infocommunication infrastructure in cities and human settlements, including the use of smart devices. **CIS5: Fostering innovative solutions and partnership for the implementation of Internet of Things technologies and their interaction in telecommunication networks, including 4G, IMT-2020 and next-generation networks, in the interests of sustainable development** **Objective**: To assist ITU Member States in the region with harmonious transformation of the telecommunication market and transition of telecommunication operators to the provision of innovative services to users, ensuring the stability and enhanced performance of telecommunication networks, including 4G, IMT-2020 and next-generation networks within a context of ubiquitous implementation of the Internet of Things (IoT) concept and technologies.
EUR region
EUR1: Broadband infrastructure, broadcasting and spectrum management **Objective**: To facilitate high-speed connectivity with resilient and synergistic infrastructure development, deployment and sharing, whilst ensuring a trusted and quality user experience.

Study group Questions

The following study group Questions will contribute to Outcome D.2-1:

Study group Questions
Question 1/1: Strategies and policies for the deployment of broadband in developing countries
Question 2/1: Strategies, policies, regulations and methods of migration to and adoption of digital broadcasting and implementation of new services
Question 5/1: Telecommunications/information and communication technologies for rural and remote areas
Question 7/2: Strategies and policies concerning human exposure to electromagnetic fields

3 References to Plenipotentiary Conference and WTDC resolutions, WSIS action lines and SDGs

Plenipotentiary Conference and WTDC resolutions and recommendations

The implementation of Resolutions 32, 33, 34, 64, 101, 123, 125, 126, 127, 130, 131, 135, 137, 139, 140, 159, 160, 161, 176, 177, 180, 188, 193, 197, 199, 200 and 203 of the Plenipotentiary Conference and WTDC Resolutions 9, 10, 11, 15, 17, 18, 20, 21, 30, 37, 43, 47, 52 and 62 will support Output 2.1, and will contribute to the achievement of Outcome D.2-1.

WSIS action lines

Output 2.1 will support the implementation of WSIS Action Lines C1, C2, C3, C9 and C11, and will contribute to the achievement of Outcome D.2-1.

SDGs and associated targets

Output 2.1 will contribute to achievement of the following SDGs: 1 (targets 1.4, 1.5), 3 (targets 3.8, 3.d), 5 (target 5.b), 8 (target 8.2), 9 (targets 9.1, 9.a, 9.c), 10 (target 10.c), 11 (targets 11.5, 11.b), 16 (target 16.10) and 17 (targets 17.6 and 17.7).

Output 2.2 – Products and services for building confidence and security in the use of telecommunications/ICTs, such as reports and publications, and for contributing to the implementation of national and global initiatives

1 Background

Information and communication technologies (ICTs) are integral to the economic and social development of all nations as well as to the development of the information society. Security is an essential element in the operation and use of ICTs, and requires that all users be aware of risk factors and take appropriate action to ensure security in accordance with their specific role.

As the use of ICTs continues to grow, especially with the deployment of emerging technologies such as IoT, addressing cybersecurity challenges and combating the transmission of spam, including malware/spyware, continue to be a priority among members. During the last four years, ITU-D has continued to work in this area.

Thus, BDT has undertaken many activities offering development assistance to members and encouraging cooperation among members, while under Question 3/2 products and materials were formulated to support countries in developing national cybersecurity capabilities, to convene experts and to contribute to ongoing information sharing on best practices. The Question also identified key areas of common concern as well as gaps, based on contributions to a compendium and a survey, respectively.

2 Implementation framework

Programme: Cybersecurity

The main purpose of this programme is to support the ITU membership, in particular developing countries, in building trust and confidence in the use of ICTs.

Cybersecurity efforts should take into account the global, transnational nature of cyberthreats.

The programme should seek in all cases to collaborate within ITU, in particular with ITU-D Question 3/2 and with ITU-T Study Group 17, as well as with all relevant organizations and stakeholders involved in building trust and confidence in the use of ICTs.

To this end, calling upon the breadth of the community in order to realize broad partnerships will be one of the main enablers for achieving the programme's purpose.

The programme will:

- support ITU Member States in the development of their national and/or regional cybersecurity strategies, taking into account the need to appropriately address emerging cybersecurity challenges caused by the deployment of new technologies;

- facilitate Member States' access to resources produced by other relevant international organizations when developing national legislation to combat cybercrime;

- support ITU Member States in the development of their national and/or regional cybersecurity strategies and in their national and regional efforts to build capacity in this area, in collaboration with each another, as well as with relevant stakeholders, consistent with the national legislations of Member States;

- assist ITU Member States in establishing national cybersecurity capabilities, such as computer incident response teams (CIRTs)/computer security incident response teams (CSIRTs)/computer emergency response teams (CERTs), to identify, manage and respond to cyberthreats, and participate in cooperation mechanisms at the regional and international level;

- organize cyberdrills at national and regional level, to strengthen institutional cooperation and coordination among the key actors and stakeholders;

- establish a culture of cybersecurity by sharing good practices, including those collected through the Global Cybersecurity Index (GCI) and through the work under the relevant study Question;

- support Member States in raising cybersecurity awareness, building their cybersecurity capacity and improving their cybersecurity posture;

- contribute to worldwide efforts in cybersecurity capacity building;

- contribute to the implementation of ongoing and future ITU initiatives to build confidence and to combat cyberthreats, including ITU's Child Online Protection initiative, with the support provided by the ITU membership as active partners/contributors;

- encourage Member States to participate actively in the work of the relevant study Question, sharing their best practices in building confidence and security in the use of telecommunications/ICTs, and to take advantage of all resources and material produced under the Question and under other relevant ITU work or initiatives, including ITU-T study groups;
- collect and disseminate information regarding regulatory policies developed and/or implemented by national telecommunication regulatory authorities in order to build confidence and security in the use of telecommunications/ICTs.

Relevant regional initiatives

The following regional initiatives will contribute to Outcome D.2-2, consistent with WTDC Resolution 17 (Rev. Buenos Aires, 2017):

Region
AFR region
AFR3: Building trust and security in the use of telecommunications/information and communication technology **Objective**: To assist Member States in developing and implementing policies and strategies, standards and mechanisms to enhance the security of information systems and networks, ensure interoperability of digital technologies, protect data and people and guarantee digital trust. To protect information and communication technology (ICT) and its applications.
ARB region
ARB2: Confidence and security in the use of telecommunications/information and communication technologies **Objective**: To promote confidence and security in the use of telecommunications/ information and communication technologies (ICTs), child online protection (COP) and combating all forms of cyberthreat, including the misuse of telecommunications/ICTs.
ASP region
ASP5: Contributing to a secure and resilient environment **Objective**: To assist Member States to develop and maintain secure, trusted and resilient networks and services, and to address challenges related to climate change and disaster management.

CIS region
CIS3: Development and regulation of infocommunication infrastructure to make cities and human settlements inclusive, safe and resilient **Objective**: To assist ITU Member States in the region in developing regulatory instruments and technical solutions aimed at creating an enabling environment for the development of infocommunication infrastructure in cities and human settlements, including the use of smart devices.
EUR region
EUR4: Enhancing trust and confidence in the use of ICTs **Objective**: To support the deployment of resilient infrastructure and secure services allowing all citizens, especially children, to use information and communication technologies (ICTs) in their daily lives with confidence.

Study group Questions

The following study group Questions will contribute to Outcome D.2-2:

Study group 2 Questions
Question 3/2: Securing information and communication networks: Best practices for developing a culture of cybersecurity

3 References to Plenipotentiary Conference and WTDC resolutions, WSIS action lines and SDGs

Plenipotentiary Conference and WTDC resolutions and recommendations

The implementation of Resolutions 71, 101, 130, 174 and 179 of the Plenipotentiary Conference and WTDC Resolutions 17, 21, 30, 32, 45, 52, 67, 69, COM3-1 and 80 will support Output 2.2, and will contribute to the achievement of Outcome D.2-2.

WSIS action lines

Output 2.2 will support the implementation of WSIS Action Line C5, and will contribute to the achievement of Outcome D.2-2.

SDGs and associated targets

Output 2.2 will contribute to achievement of the following SDGs: 4, 9, 11, 16 and 17 (target 17.6).

Output 2.3 – Products and services on disaster risk reduction and management and emergency telecommunications, including assistance to enable Member States to address all phases of disaster management, such as early warning, response, relief and restoration of telecommunication networks

1 Background

Countries throughout the world are experiencing increased numbers of natural and man-made disasters, with a disproportionate impact on developing countries. Least developed countries (LDCs), small island developing states (SIDS) and landlocked developing countries (LLDCs) are particularly vulnerable to the impact that disasters can have on their economies and infrastructures, and such countries often lack the capacity to respond to disasters.

The critical importance of using telecommunications/ICTs to respond to these devastating phenomena is widely recognized.

Because of the role telecommunications/ICTs play in all phases of a disaster – preparedness, response, rehabilitation/recovery – it is important to develop disaster telecommunication preparedness plans and strategies, taking account also of the need for resilient and redundant infrastructures and systems as part of disaster risk reduction and early warning.

In line with WTDC Resolution 34 (Rev. Buenos Aires, 2017), many countries have benefited from the work accomplished under this outcome. In the preparedness phase, ITU partners with countries and Sector Members to implement early-warning systems in the most affected areas.

Disasters often extend beyond the borders of a State, and effective disaster management may involve the deployment of efforts by more than one country in order to prevent loss of human lives and regional crisis. Prior coordination and collaboration before disasters among disaster-management experts, including governments, the private sector, international organizations, academia and non-governmental organizations, increase the probability of saving human lives when rescue operations are conducted and thereby mitigate the consequences of a disaster.

Member States should take account of a diverse range of telecommunication/ICT solutions that are appropriate and commonly available for disaster response and mitigation, including those provided by amateur radio services and satellite and terrestrial network services/facilities, and by machine-to-machine (M2M)/Internet of Things (IoT)-based technological solutions, taking into account persons with disabilities and other persons with specific needs.

2 Implementation framework

Programme: Disaster risk reduction and management, and emergency telecommunications

The programme will benefit the Member States in various ways:

- providing assistance to countries in the development of national disaster management, including emergency telecommunication plans; and enabling Member States to address all phases of a disaster, such as early warning, response, relief and restoration of telecommunication networks;

- promoting the organization of simulations and training sessions to ensure proper preparedness capabilities are in place within each Member State;

- building the capacity of Member States to help strengthen and expand telecommunication/ICT-based initiatives for early warning, safety confirmation and assistance with the provision of medical (e-health) and humanitarian assistance in disasters and emergencies;

- promoting best practices for the incorporation of disaster-resilient features in telecommunication networks and infrastructure, as well as for conducting post-disaster damage assessments and reconstruction and rehabilitation of telecommunication infrastructure;

- making telecommunication/ICT-based solutions, including wireless and satellite-based technologies, temporarily available to members, in coordination with the UN humanitarian communications entities, in order to establish basic communications during disasters and emergencies for the coordination of humanitarian work during the reconstruction process;

- promoting the use of advanced telecommunication/ICT and related solutions, in order to empower early-warning systems and disaster risk reduction and management;

- promoting regional and international cooperation for easy access to, and sharing of, information for disaster management, and exploring modalities to enable the participation of all countries with economies in transition;

- promoting technical cooperation and enhancing the capacity of countries, particularly LDCs, SIDS and LLDCs, to utilize ICT tools;

- identifying best practices for the use of active and passive space-based sensing systems for the purpose of disaster prediction, detection and mitigation;

- in cooperation with the other ITU Sectors and other relevant stakeholders, contributing to the implementation of WSIS Action Line C7 and thereby the achievement of SDG 13 in the 2030 Agenda for Sustainable Development.

Relevant regional initiatives

The following regional initiatives will contribute to Outcome D.2-3, consistent with WTDC Resolution 17 (Rev. Buenos Aires, 2017):

Region
AMS region
AMS1: Disaster risk reduction and management communications **Objective**: To provide assistance to Member States during all phases of disaster risk reduction, i.e. early warning, disaster response and relief and rehabilitation of telecommunication networks, particularly in small island developing states (SIDS) and the least developed countries (LDCs).
ARB region
ARB1: Environment, climate change and emergency telecommunications **Objective**: To raise awareness of and provide support in respect of major challenges in the field of environment, climate change and emergency telecommunications, establish regulatory frameworks, and take necessary measures to address the challenges in this field.
ASP region
ASP5: Contributing to a secure and resilient environment **Objective**: To assist Member States to develop and maintain secure, trusted and resilient networks and services, and to address challenges related to climate change and disaster management.

Study group Questions

The following study group Questions will contribute to Outcome D.2-3:

Study group 2 Questions
Question 5/2: Utilizing telecommunications/information and communication technologies for disaster risk reduction and management

3 References to Plenipotentiary Conference and WTDC resolutions, WSIS action lines and SDGs

Plenipotentiary Conference and WTDC resolutions and recommendations

The implementation of Resolutions 36, 136 and 202 of the Plenipotentiary Conference and WTDC Resolution 34 will support Output 2.3, and will contribute to the achievement of Outcome D.2-3.

WSIS action lines

Output 2.3 will support the implementation of WSIS Action Lines C2 and C7, and will contribute to the achievement of Outcome D.2-3.

SDGs and associated targets

Output 2.3 will contribute to achievement of the following SDGs: 1 (target 1.5), 3 (target 3.9), 5 (target 5b), 11 (target 11b) and 13 (targets 13.1, 13.2, 13.3).

Objective 3 – Enabling environment: Foster an enabling policy and regulatory environment conducive to sustainable telecommunication/ICT development

Outcomes

Outcomes	Performance indicators	Outputs (Products and services)
D.3-1: Strengthened capacity of Member States to enhance their policy, legal and regulatory frameworks conducive to development of telecommunications/ICTs	– Timely release of the annual questionnaires to Member States (on regulation, economics and finance) and of data on the Policy, Regulation, Economics and Finance (PREF) knowledge centre and the ICT Eye database – Number of publications, best-practice guidelines, online resources and toolkits developed and released on ICT policy and regulation as well as on economics and finance, and number of website views/downloads of regulatory and policy data and publications and information on the ICT Eye online platform – Number of participants in the Global Symposium for Regulators, in regional regulatory and economic forums and workshops, and in strategic dialogues on topical regulatory and policy issues, and satisfaction rates of participants	3.1: Products and services on telecommunication/ICT policy and regulation for better international coordination and coherence, such as assessment studies and other publications, and other platforms to exchange information

Outcomes	Performance indicators	Outputs (Products and services)
D.3-2: Strengthened capacity of Member States to produce high-quality, internationally comparable telecommunication/ICT statistics which reflect developments and trends in telecommunications/ ICTs, based on agreed standards and methodologies	– Timely release of ITU World Telecommunication/ICT Indicators (WTI) database – Number of data points and indicators available in the WTI database	3.2: Products and services on telecommunication/ICT statistics and data analysis, such as research reports, collection, harmonization and dissemination of high-quality, internationally comparable statistical data, and forums of discussion
D.3-3: Improved human and institutional capacity of the ITU membership to tap into the full potential of telecommunications/ICTs	– Number and level of individuals trained – Number of participants who pass the training assessment – Number of participants who are satisfied with the training – Number of high-level training programmes developed – Number of trainings carried out that relate to regional initiatives	3.3: Products and services on capacity building and human skills development, including those on international Internet governance, such as online platforms, distance and face-to-face training programmes to enhance practical skills, and shared material, taking into account partnerships with telecommunication/ICT education stakeholders

Outcomes	Performance indicators	Outputs (Products and services)
D.3-4: Strengthened capacity of the ITU membership to integrate telecommunication/ICT innovation in national development agendas and to develop strategies to promote innovation initiatives, including through public, private and public-private partnerships	– Number of initiatives (e.g. with guidelines and recommendations, DIY toolkits, etc.) and grassroots projects strengthening innovation ecosystems for Member States. – Number of new partnerships with key stakeholders that foster innovation ecosystems – Number of partnerships, initiatives and projects translated into action for the membership	3.4: Products and services on telecommunication/ ICT innovation, such as knowledge-sharing and assistance, upon request, on developing a national innovation agenda; mechanisms for partnerships; development of projects, studies and telecommunication/ ICT innovation policies

Output 3.1 – Products and services on telecommunication/ICT policy and regulation for better international coordination and coherence, such as assessment studies and other publications, and other platforms to exchange information

1 Background

In evolving towards a digital economy, an enabling environment for ICTs is increasingly recognized as critical for social and economic growth and competitiveness of countries. The ICT sector and the surrounding ecosystem is evolving rapidly and there is an even greater need for inclusive dialogue, cooperation and collaboration, including with other sectors where ICTs are bringing value. A sound and clear policy and regulatory environment that also considers the needs of other sectors is required to ensure that all can benefit from ICT services.

2 Implementation framework

Programme: Policy and regulatory framework

This programme aims to support the ITU membership in creating enabling legal, policy and regulatory environments conducive to the development of telecommunications/ICTs in a digital economy, in strengthening communication and collaboration with other sectors such as those dealing with health, education, energy, transport, agriculture and finance to leverage the cross-sectoral nature of ICTs for economic and social development, and in ensuring that everyone can benefit from ICTs by building sound policy and regulatory frameworks.

The programme seeks to benefit from extensive collaboration within ITU, in particular with ITU-D Study Groups 1 and 2, ITU-R study groups, and ITU-T study groups, as well as with all relevant organizations where ICTs have an impact and bring value.

To this end, providing up-to-date regulatory and policy data, research and analysis and holding an inclusive dialogue with the wider ICT community and across the sectors, with broad partnerships, will be one of the main enablers to achieve the programme's purpose.

The programme will:

- provide ITU members with the tools to keep abreast of current developments with regard to policy, legal and regulatory frameworks as well as market developments in the ICT sector and the digital economies it enables;

- support ITU Member States in defining, elaborating, implementing and reviewing transparent, coherent and forward-looking strategies and policy, legal and regulatory frameworks as well as in moving towards evidence-based decision-making at the national and regional level, in order to implement meaningful solutions and reforms to stimulate competition, investment and innovation, and foster global, regional and national ICT markets, ensuring affordable access for all to ICTs and the digital economy;

- provide tools and platforms to ITU-D Sector Members for an inclusive dialogue and enhanced cooperation among national and regional regulators, policy-makers and other telecommunication/ICT stakeholders as well as with other sectors of the economy on topical policy, legal, regulatory and market issues to help countries achieve a more inclusive information society and raise national awareness about the importance of an enabling environment to allow digital empowerment and inclusion in a smart connected society;
- provide institutional and human capacity building and technical assistance to ITU-D Sector Members on topical policy, legal and regulatory issues, as well as economic and financial issues and market developments;
- convene a global forum for discussing global trends in regulation for ITU-D Sector Members and other national and international stakeholders, through organization of the Global Symposium for Regulators (GSR);
- develop, analyse and disseminate reports, studies and benchmarking tools for monitoring the evolution of the telecommunication/ICT economic and regulatory environment, as well as identify best practices and provide country assistance, when requested and according to the national regulatory framework.

Relevant regional initiatives

The following regional initiatives will contribute to Outcome D.3-1, consistent with WTDC Resolution 17 (Rev. Buenos Aires 2017):

Region
AFR region
AFR3: Building trust and security in the use of telecommunications/information and communication technology **Objective**: To assist Member States in developing and implementing policies and strategies, standards and mechanisms to enhance the security of information systems and networks, ensure interoperability of digital technologies, protect data and people and guarantee digital trust. To protect information and communication technology (ICT) and its applications.

AMS region

AMS3: Deployment of broadband infrastructure, especially in rural and neglected areas, and strengthening of broadband access to services and applications

Objective: To provide assistance to Member States in identifying needs and in the development of policies, mechanisms and regulatory initiatives to reduce the digital divide by increasing broadband access and uptake, as a means of achieving the Sustainable Development Goals (SDGs).

AMS5: Development of the digital economy, smart cities and communities and the Internet of Things, promoting innovation

Objective: To assist Member States in developing national and regional policies to boost the digital economy, smart cities and communities (SCC) and the Internet of Things (IoT).

ARB region

ARB3: Digital financial inclusion

Objective: To support and enable access to and use of digital financial services, using telecommunications and information technology, and achieve high levels of digital financial inclusion.

ASP region

ASP2: Harnessing information and communication technologies to support the digital economy and an inclusive digital society

Objective: To assist Member States in utilizing information and communication technologies (ICTs) to reap the benefits of the digital economy and in addressing the human and technical capacity challenges for bridging the digital divide.

ASP4: Enabling policy and regulatory environments

Objective: To assist Member States in developing appropriate policy and regulatory frameworks, fostering innovation, enhancing skills, increasing information sharing and strengthening regulatory cooperation, thereby contributing to a supportive regulatory environment for all stakeholders.

CIS region

CIS3: Development and regulation of infocommunication infrastructure to make cities and human settlements inclusive, safe and resilient

Objective: To assist ITU Member States in the region in developing regulatory instruments and technical solutions aimed at creating an enabling environment for the development of infocommunication infrastructure in cities and human settlements, including the use of smart devices.

EUR region
EUR1: Broadband infrastructure, broadcasting and spectrum management **Objective**: To facilitate high-speed connectivity with resilient and synergistic infrastructure development, deployment and sharing, whilst ensuring a trusted and quality user experience.

Study group Questions

The following study group Questions will contribute to Outcome D.3-1:

Study group 1 Questions
Question 1/1: Strategies and policies for the deployment of broadband in developing countries
Question 3/1: Emerging technologies, including cloud computing, m-services and OTTs: Challenges and opportunities, economic and policy impact for developing countries
Question 4/1: Economic policies and methods of determining the costs of services related to national telecommunication/information and communication technology networks, including next-generation networks
Question 6/1: Consumer information, protection and rights: Laws, regulation, economic bases, consumer networks

3 References to Plenipotentiary Conference and WTDC resolutions, WSIS action lines and SDGs

Plenipotentiary Conference and WTDC resolutions and recommendations

The implementation of Resolutions 21, 22, 102, 135, 138, 139, 174, 188, 191, 195, 196 and 201 of the Plenipotentiary Conference and WTDC Resolutions 8, 17, 22, 23, 30, 37, 48, 64, 71, 77, 78, 79, and 85 and Recommendations ITU-D 15 and ITU-D 16 will support Output 3.1, and will contribute to the achievement of Outcome D.3-1.

WSIS action lines

Output 3.1 will support the implementation of WSIS Action Line C6, and will contribute to the achievement of Outcome D.3-1.

SDGs and associated targets

Output 3.1 will contribute to the achievement of the following SDGs: 2 (target 2.a), 4 (target 4.4), 5 (target 5.b), 8 (targets 8.2, 8.3), 9 (targets 9.1, 9.c), 10 (target 10.3), 11 (targets 11.3, 11.b), 16 (targets 16.3, 16.6, 16.7, 16.10, 16.b) and 17 (targets 17.6, 17.14, 17.16).

Output 3.2 – Products and services on telecommunication/ICT statistics and data analysis, such as research reports, collection, harmonization and dissemination of high-quality, internationally comparable statistical data, and forums of discussion

1 Background

With the growing recognition of ICTs as a driver for sustainable development, and as more and more people join the global information society and high-speed communication networks become an indispensable infrastructure, the tracking and measurement of developments in telecommunications/ICTs remain as relevant as ever. ITU is recognized all over the world as the main source of internationally comparable data and statistics on telecommunications/ICTs. The statistical standards, definitions and methodologies developed by ITU are widely used by countries in their production of telecommunication/ICT statistics. Reliable, comprehensive and comparable statistics are indispensable for identifying progress and gaps, tracking information-society developments at the national and global levels and supporting government and industry in making informed and strategic decisions to ensure equal access, use and impact of telecommunications/ICTs. They are indispensable for monitoring progress towards achievement of global development goals, such as the SDGs, the WSIS action lines, and the ITU strategic goals set out in the Connect 2020 Agenda.

While the availability of comparable telecommunication/ICT statistics has considerably improved in recent years, major data gaps remain, in particular in developing countries, and in covering important areas such as measuring broadband speed and quality, international Internet bandwidth, investment and revenue in the ICT sector, household access to ICTs, individuals' use of ICTs, gender equality in access to and use of ICTs and access to ICTs by young and old people and by persons with disabilities. Countries are therefore encouraged to produce high-quality data based on internationally agreed standards, definitions and methodologies, including in those areas where data gaps remain and areas which illustrate, *inter alia*, national digital divides as well as the efforts made through various programmes to close the gap, showing as far as possible the social and economic impact.

2 Implementation framework

Programme: ICT data and statistics

The main objective of the programme on data and statistics is to support the ITU membership in taking informed policy and strategic decisions based on high-quality, internationally comparable ICT statistics and data analysis.

The programme on ICT data and statistics will ensure that ITU maintains its global leadership as the main source of international ICT data and statistics, taking into consideration new and emerging trends. This will be done by delivering the following services and products:

- collecting, harmonizing and disseminating data and official statistics on the information society, disaggregated by sex and age and other characteristics relevant in national contexts, using a variety of data sources and dissemination tools, such as the World Telecommunication/ICT Indicators (WTI) database, the ICT Eye ITU online portal, the UN data portal and others;

- identifying new and emerging data sources, including those related to big data and the Internet of Things and e-commerce, and exploring the feasibility of using such data for producing new indicators or improving existing ones;

- analysing telecommunication/ICT trends and producing regional and global research reports, such as the Measuring the Information Society Report as well as statistical and analytical briefs;

- benchmarking information-society developments and clarifying the magnitude of the digital divide (using tools such as the ICT Development Index and the ICT Price Basket) and measuring the impact of ICTs on sustainable development and the gender digital divide;

- developing international standards, definitions and methodologies on telecommunication/ICT statistics, in close cooperation with other regional and international organizations, in particular the members of the Partnership on Measuring ICT for Development, for consideration by the United Nations Statistical Commission;

- providing a global forum for discussing information-society measurements for ITU members and other national and international stakeholders, through organization of the World Telecommunication/ICT Indicators Symposium (WTIS) and its related statistical expert groups;

- encouraging Member States to bring together different stakeholders from government, academia and civil society in raising national awareness about the importance of the production and dissemination of high-quality data for policy purposes;

- contributing to the monitoring of internationally agreed goals and targets, including the SDGs, the WSIS action lines and the targets included in the ITU strategic plan and the Connect 2020 Agenda, and developing related measurement frameworks;

- maintaining a leading role in the global Partnership on Measuring ICT for Development and its relevant task groups;

- providing capacity building and technical assistance to Member States for the collection of ICT statistics, in particular by means of national surveys, through the delivery of training workshops and the production of methodological manuals and handbooks.

Relevant regional initiatives

There are no regional initiatives directly related to Outcome D.3-2.

Study group Questions

There are no study group Questions related to Outcome D.3-2.

3 References to Plenipotentiary Conference and WTDC resolutions, WSIS action lines and SDGs

Plenipotentiary Conference and WTDC resolutions and recommendations

The implementation of Resolutions 70, 131, 179 and 200 of the Plenipotentiary Conference and WTDC Resolutions 8, 30, 37 and 55 will support Output 3.2, and will contribute to the achievement of Outcome D.3-2.

WSIS action lines

ICT statistics are relevant to monitoring the implementation of all WSIS action lines of the Geneva Plan of Action, and are referred to in §§ 112-119 of the Tunis Agenda for the Information Society, as well as § 70 of the outcome document of the high-level meeting of the United Nations General Assembly on the overall review of the implementation of WSIS outcomes.

SDGs and associated targets

ICT statistics are relevant to monitoring the implementation of all SDGs, and are referred to in §§ 48, 57, 74-76 and 83 of the 2030 Agenda for Sustainable Development.

Output 3.3 – Products and services on capacity building and human skills development, including those on international Internet governance, such as online platforms, distance and face-to-face training programmes to enhance practical skills, and shared material, taking into account partnerships with telecommunication/ICT education stakeholders

1 Background

Capacity building continues to be a cross-cutting issue that informs and augments ITU-D's overall mission. ICT-based education and training aimed at enhancing human potential to leverage ICTs and improve individual livelihoods are particularly fundamental for developing countries. This will help them to improve skills and enable them to establish and develop their national digital strategies for sustainable development. Therefore, research undertakings and development of specialized training programmes in priority areas for the membership are required.

Furthermore, telecommunications/ICTs need to be incorporated into education and human resources development for all groups. This requires cooperation and partnerships between countries and broad stakeholder participation. The partnerships should bring together, among others, academia, experienced professionals and experts as well as organizations and other stakeholders with relevant expertise in human skills development and digital literacy activities.

2 Implementation framework

Programme: Capacity building and human skills development

The programme seeks to elaborate necessary institutional capacity-building and human skills development policies, strategies and guidelines in telecommunications/ICT, and deliver them to members, especially in developing countries, in order to assist them in enhancing and strengthening their human and institutional capacity and setting up national programmes. It will raise awareness among governmental and private-sector decision-makers on the importance of capacity building and human skills development. The programme will also undertake necessary steps in order to develop standards for ITU human skills development activities.

The programme will implement a wide scope of human skills development interventions. Emphasis is given to training as a core capacity-building and human skills development tool for enhancing the capacity of ITU-D members, especially in developing countries, to apply telecommunications/ICTs effectively. Under this programme, online learning and face-to-face learning opportunities (both synchronous and asynchronous), as well as blended solutions, will be provided for all stakeholders who would like to enhance their professional knowledge and skills. Delivering and promoting "train the trainer" activities to support telecommunication/ICT instructional and institutional sustainability will also play an important role in implementation of the programme.

The programme will:

- continue to encourage the establishment of cooperative multistakeholder partnerships with all stakeholders specializing in ICT education, training and development activities, including those which facilitate the use of local languages;

- continue to engage qualified and experienced experts from academia, the private sector and government as well as international organizations in order to build human and institutional capacity and facilitate their involvement in capacity-building activities;

- continue the development of high-level training materials undertaken in collaboration with ITU subject-matter experts, partners from academia, research institutions and other organizations, who will ensure their quality control;

- ensure that the ITU Academy portal and related services are continually enhanced, and also support the development of documented administrative and technical procedures to ensure quality control of materials made available on the ITU Academy portal, as well as enabling the provision of training resources and materials for sharing and recycling with all stakeholders through the ITU Academy portal;

- continue to promote and support the centres of excellence network and Internet training centres as important and indispensable components of ITU activities towards human skills development;

- taking into account demonstrated value in terms of providing practical skills and hands-on learning, continue to organize knowledge-sharing platforms – forums for discussions on the impact and use of telecommunications/ICTs for education, lifelong learning, human skills development and other capacity-building components which will also be important sources of information exchange, sharing of best practices and consensus building that bring together ITU-D members and other national and international stakeholders as well as periodic regional and global meetings, workshops and seminars;

- promote and support research on and analysis of the latest sector trends and priorities, through regular surveys and data collection, avoiding duplication with the other ITU Sectors, and also taking into consideration the regional initiatives as the materialization of the priorities of each region, so as to help identify needs of the membership and provide required solutions;

- promote linkages between educational institutions and the ICT sector to ensure that graduates are better matched with sector needs;

- strengthen the ability of developing countries to engage fully in existing Internet governance forums in collaboration, as appropriate, with the relevant organizations.

All these capacity-building products and services will assist the membership at global, regional, subregional or national level. They will also contribute to the implementation of relevant activities and projects.

Relevant regional initiatives

The following regional initiatives will contribute to Outcome D.3-3, consistent with WTDC Resolution 17 (Rev. Buenos Aires, 2017):

Region
AFR region
AFR1: Building digital economies and fostering innovation in Africa **Objective**: To build digital economies and foster innovation in Africa. Countries in the Africa region are in need of interventions that would help them transform into digital economies. It is necessary that ITU assist Member States in the Africa region to reap the full benefits of the digital economy by addressing the emerging policy and regulatory challenges. In line with growing digital economies, information and communication technology (ICT)-based innovations, which have demonstrated their potential to contribute to the socio-economic development of countries, are also growing. ITU is called upon to support Member States in the Africa region to build more effective ICT-based innovation ecosystems.

AFR2: Promotion of emerging broadband technologies

Objective: Promoting the creation of emerging technologies to assist the Africa region in securing the full benefits of high-speed, high-quality broadband.

AFR4: Strengthening human and institutional capacity building

Objective: To strengthen human and institutional capacity building in the Africa region. Countries in the Africa region are in dire need of human and institutional capacity-building interventions that would help them transform society as a whole in preparation for the emerging digital socio-economic environment. The Africa region therefore seeks ITU's assistance in enhancing the region's capacity to effect this transformation. Although some training institutions in Africa that provide information and communication technology (ICT)-related training and capacity building to the membership already exist, there may be a need to enhance their capacities.

AFR5: Management and monitoring of the radio-frequency spectrum and transition to digital broadcasting

Objective: To assist Member States in ensuring the transition to digital broadcasting and efficient and economical management of the radio spectrum and orbital resources.

AMS region

AMS2: Spectrum management and transition to digital broadcasting

Objective: To provide assistance to Member States in the transition to digital broadcasting, the use of the digital-dividend frequencies and spectrum management.

ARB region

ARB1: Environment, climate change and emergency telecommunications

Objective: To raise awareness of and provide support in respect of major challenges in the field of environment, climate change and emergency telecommunications, establish regulatory frameworks, and take necessary measures to address the challenges in this field.

ARB2: Confidence and security in the use of telecommunications/information and communication technologies

Objective: To promote confidence and security in the use of telecommunications/ information and communication technologies (ICTs), child online protection (COP) and combating all forms of cyberthreat, including the misuse of telecommunications/ICTs.

ARB4: Internet of Things, smart cities and big data

Objective: To raise and spread awareness of the importance of future challenges in the era of the Internet of Things (IoT) and big data, and how to address such challenges; establish regulatory frameworks and take measures to help cope with the rapid changes in the field of telecommunications and information technology; and work to ensure the transition to smart cities and communities (SCCs).

ARB5: Innovation and entrepreneurship

Objective: To build capacities and raise awareness concerning the culture of innovation and entrepreneurship, in particular for youth and women's empowerment, with the aim of harnessing telecommunication/information and communication technology (ICT) tools to launch projects and undertake economic activities that focus on job creation.

ASP region

ASP1: Addressing special needs of least developed countries, small island developing states, including Pacific island countries, and landlocked developing countries

Objective: To provide special assistance to least developed countries (LDCs), small island developing states (SIDS), including Pacific island countries, and landlocked developing countries (LLDCs) in order to meet their priority telecommunication/information and communication technology (ICT) requirements.

ASP2: Harnessing information and communication technologies to support the digital economy and an inclusive digital society

Objective: To assist Member States in utilizing information and communication technologies (ICTs) to reap the benefits of the digital economy and in addressing the human and technical capacity challenges for bridging the digital divide.

ASP3: Fostering development of infrastructure to enhance digital connectivity

Objective: To assist Member States in the development of telecommunication/information and communication technology (ICT) infrastructure in order to facilitate provision of services and applications on that infrastructure.

ASP4: Enabling policy and regulatory environments

Objective: To assist Member States in developing appropriate policy and regulatory frameworks, fostering innovation, enhancing skills, increasing information sharing and strengthening regulatory cooperation, thereby contributing to a supportive regulatory environment for all stakeholders.

CIS region

CIS1: Development of e-health to ensure healthy lives and promote well-being for all, at all ages

Objective: To assist the ITU Member States in the region with the development of regulatory texts, technical solutions and specialized training programmes in the field of e-health (including telemedicine), with the aim of providing the public with improved medical services through the use of infocommunications.

CIS2: Use of telecommunications/information and communication technology to ensure inclusive, equitable, quality and safe education, including the enhancement of women's knowledge of information and communication technologies and e-government

Objective: To provide ITU Member States in the region with centralized consultative and technical assistance in the various aspects of the use of telecommunications/information and communication technology (ICT) in education, as well as in regard to raising the level of people's ICT literacy, in the interests of human capacity development and of ensuring gender and social equality.

CIS3: Development and regulation of infocommunication infrastructure to make cities and human settlements inclusive, safe and resilient

Objective: To assist ITU Member States in the region in developing regulatory instruments and technical solutions aimed at creating an enabling environment for the development of infocommunication infrastructure in cities and human settlements, including the use of smart devices.

CIS4: Monitoring the ecological status and the presence and rational use of natural resources

Objective: To assist ITU Member States in the region in monitoring the ecological status and the presence and rational use of natural resources.

CIS5: Fostering innovative solutions and partnership for the implementation of Internet of Things technologies and their interaction in telecommunication networks, including 4G, IMT-2020 and next-generation networks, in the interests of sustainable development

Objective: To assist ITU Member States in the region with harmonious transformation of the telecommunication market and transition of telecommunication operators to the provision of innovative services to users, ensuring the stability and enhanced performance of telecommunication networks, including 4G, IMT-2020 and next-generation networks within a context of ubiquitous implementation of the Internet of Things (IoT) concept and technologies.

EUR region
EUR1: Broadband infrastructure, broadcasting and spectrum management
Objective: To facilitate high-speed connectivity with resilient and synergistic infrastructure development, deployment and sharing, whilst ensuring a trusted and quality user experience.
EUR2: A citizen-centric approach to building services for national administrations
Objective: To facilitate the development of transformative and paperless citizen-centric services that are accessible and available to all members of society.
EUR3: Accessibility, affordability and skills development for all to ensure digital inclusion and sustainable development
Objective: To bridge the digital divide and equip all groups of society, including persons with disabilities and specific needs, to take advantage of information and communication technology (ICT), by enabling capacity building in digital skills.
EUR5: Information and communication technology-centric innovation ecosystems
Objective: To enhance entrepreneurship and establish a sustainable culture of innovation through concrete strategic actions using information and communication technology (ICT) as an enabler, building on the existing regional initiative in Europe on entrepreneurship, innovation and youth.

Study group Questions

There are no study group Questions specific to capacity building.

3 References to Plenipotentiary Conference and WTDC resolutions, WSIS action lines and SDGs

Plenipotentiary Conference and WTDC resolutions and recommendations

The implementation of Resolutions 25, 71, 72, 137, 139, 140, 169, 176, 188, 189, 197, 199 and 202 of the Plenipotentiary Conference and WTDC Resolutions 11, 17, 37, 38, 40, 48, 55, 56, 58, 67 and 73 will support Output 3.3, and will contribute to the achievement of Outcome D.3-3.

WSIS action lines

Output 3.3 will support the implementation of WSIS Action Line C4, and will contribute to the achievement of Outcome D.3-3.

SDGs and associated targets

Output 3.3 will contribute to achievement of the following SDGs: 1 (target 1.b), 2 (target 2.3), 3 (targets 3.7, 3.b, 3.d), 4 (targets 4.4, 4.7), 5 (targets 5.5, 5.b), 6 (target 6.a), 12 (targets 12.7, 12.8, 12.a, 12.b), 13 (targets 13.2, 13.3, 13.b), 14 (target 14.a), 16 (target 16.a) and 17 (targets 17.9, 17.18).

Output 3.4 – Products and services on telecommunication/ICT innovation, such as knowledge-sharing and assistance, upon request, on developing a national innovation agenda; mechanisms for partnerships; development of projects, studies and telecommunication/ICT innovation policies

1 Background

Innovation has been recognized as a powerful engine for development to address social and economic challenges and navigate global challenges for policy-makers and citizens alike. Innovation is also essential to accelerating digital transformation and fosters sustainable growth for the digital economy.

2 Implementation framework

Programme: Innovation

This programme is to support the ITU-D membership in fostering digital transformation through ICT entrepreneurship and increased ICT innovation in the ICT ecosystem, while encouraging the empowerment of grassroots key stakeholders and creating new opportunities for them in the telecommunication/ICT sector. There is also need to continue building a culture of innovation in the ITU-D membership in order to foster ICT entrepreneurship, ICT SMEs and start-up creation and scale-up.

The programme will identify new policy-coherent (e.g. bottom-up and demand-driven) approaches to telecommunication/ICT innovation, based on best practices, to be integrated into national development agendas, in order to identify needs and deliver initiatives and projects with the new approaches.

The programme can be delivered via such activities as:

- developing updated telecommunication/ICT policies with new pillars based on innovation and entrepreneurship, and bridging gaps in the ecosystem with concrete activities (e.g. linking global ecosystems, fostering local ecosystems);

- developing high-impact projects from the various stakeholder groups with new approaches (e.g. innovative bottom-up in an ICT-centric innovation ecosystem);

- creating mechanisms to foster new partnerships and initiatives that support the scale-up of ICT-centric innovation activities (e.g. innovative partnership facilitation for funding of projects, and/or new instruments other than traditional project funding and delivery mechanisms, etc.);

- developing mechanisms to reach, engage, support and nurture ICT-centric innovation ecosystems with diverse stakeholder groups;

- disseminating information, conducting studies and providing assistance, upon request, on developing a national ICT-centric innovation agenda, including mechanisms for partnerships (e.g. project funding, memorandum of understanding or new instruments), especially between small and medium-sized service providers;

- undertaking ecosystem mapping exercises to coordinate efforts and create new projects and activities, by facilitating cooperation between existing actors and by highlighting gaps in the ecosystem that exert a high impact on stakeholders;

- providing a regional platform for strengthening regional cooperation between ICT-centric innovation ecosystems, through the holding of regional innovation forums;

- supporting Member States, in particular developing countries, in raising awareness about digital innovation ecosystems and related new technological trends as well as best practices that influence digital transformation.

Relevant regional initiatives

The following regional initiatives will contribute to Outcome D.3-4, consistent with WTDC Resolution 17 (Rev. Buenos Aires 2017):

Region
AFR region
AFR1: Building digital economies and fostering innovation in Africa **Objective**: To build digital economies and foster innovation in Africa. Countries in the Africa region are in need of interventions that would help them transform into digital economies. It is necessary that ITU assist Member States in the Africa region to reap the full benefits of the digital economy by addressing the emerging policy and regulatory challenges. In line with growing digital economies, information and communication technology (ICT)-based innovations, which have demonstrated their potential to contribute to the socio-economic development of countries, are also growing. ITU is called upon to support Member States in the Africa region to build more effective ICT-based innovation ecosystems.
AMS region
AMS5: Development of the digital economy, smart cities and communities and the Internet of Things, promoting innovation **Objective**: To assist Member States in developing national and regional policies to boost the digital economy, smart cities and communities (SCC) and the Internet of Things (IoT).

ARB region

ARB5: Innovation and entrepreneurship

Objective: To build capacities and raise awareness concerning the culture of innovation and entrepreneurship, in particular for youth and women's empowerment, with the aim of harnessing telecommunication/information and communication technology (ICT) tools to launch projects and undertake economic activities that focus on job creation.

ASP region

ASP4: Enabling policy and regulatory environments

Objective: To assist Member States in developing appropriate policy and regulatory frameworks, fostering innovation, enhancing skills, increasing information sharing and strengthening regulatory cooperation, thereby contributing to a supportive regulatory environment for all stakeholders.

CIS region

CIS3: Development and regulation of infocommunication infrastructure to make cities and human settlements inclusive, safe and resilient

Objective: To assist ITU Member States in the region in developing regulatory instruments and technical solutions aimed at creating an enabling environment for the development of infocommunication infrastructure in cities and human settlements, including the use of smart devices.

CIS5: Fostering innovative solutions and partnership for the implementation of Internet of Things technologies and their interaction in telecommunication networks, including 4G, IMT-2020 and next-generation networks, in the interests of sustainable development

Objective: To assist ITU Member States in the region with harmonious transformation of the telecommunication market and transition of telecommunication operators to the provision of innovative services to users, ensuring the stability and enhanced performance of telecommunication networks, including 4G, IMT-2020 and next-generation networks within a context of ubiquitous implementation of the Internet of Things (IoT) concept and technologies.

EUR region

EUR5: Information and communication technology-centric innovation ecosystems

Objective: To enhance entrepreneurship and establish a sustainable culture of innovation through concrete strategic actions using information and communication technology (ICT) as an enabler, building on the existing regional initiative in Europe on entrepreneurship, innovation and youth.

Study group Questions

The following study group Questions will contribute to Outcome D.3-4:

Study group 2 Questions
Question 1/2: Creating smart cities and society: Employing information and communication technologies for sustainable social and economic development

3 References to Plenipotentiary Conference and WTDC resolutions, WSIS action lines and SDGs

Plenipotentiary Conference and WTDC resolutions and recommendations

The implementation of Resolution 200 of the Plenipotentiary Conference and WTDC Resolutions 17, 30, 71, 76 and COM3-2 will support Output 3.4, and will contribute to the achievement of Outcome D.3-4.

WSIS action lines

Output 3.4 will support the implementation of WSIS Action Lines C1, C2, C3, C4, C5, C6, C7 and C11, and will contribute to the achievement of Outcome D.3-4.

SDGs and associated targets

Output 3.4 will contribute to achievement of the following SDGs: 1 (targets 1.1, 1.2, 1.4, 1.a, 1.b), 2 (target 2.a), 3 (targets 3.8, 3.a, 3.b), 4 (targets 4.1, 4.3, 4.4, 4.5, 4.6, 4.7, 4.a), 5 (targets 5.1, 5.5, 5.a, 5.b, 5.c), 9 (targets 9.a, 9.b), 12 (target 12.7), 16 (targets 16.7, 16.8, 16.10, 16.b) and 17 (targets 17.3, 17.6, 17.7, 17.8, 17.16 and 17.17).

Objective 4 – Inclusive digital society: Foster the development and use of telecommunications/ICTs and applications to empower people and societies for sustainable development

Outcomes

Outcomes	Performance indicators	Outputs (Products and services)
D.4-1: Improved access to and use of telecommunications/ ICTs in least developed countries (LDCs), small island developing states (SIDS) and landlocked developing countries (LLDCs), and countries with economies in transition	– Number of countries receiving concentrated assistance following BDT actions, with improved telecommunication/ICT connectivity, availability and affordability – Number of countries receiving assistance following BDT actions, including number of fellowships requested and number of fellowships awarded	4.1: Products and services on concentrated assistance to LDCs, SIDS and LLDCs and countries with economies in transition, to foster the availability and affordability of telecommunications/ICTs
D.4-2: Improved capacity of the ITU membership to accelerate economic and social development by leveraging and using new technologies and telecommunication/ICT services and applications	– Number of toolkits published and downloaded for the development of national sectoral digital strategies – Number of telecommunications/ICTs for development best-practice reports published – Number of telecommunications/ICTs for development events/workshops/seminars assisting developing countries with the challenges that their people and societies must overcome, and respective number of participants	4.2: Products and services on telecommunication/ICT policies supporting the development of the digital economy, ICT applications and new technologies, such as information sharing and support for their deployment, assessment studies and toolkits

Outcomes	Performance indicators	Outputs (Products and services)
D.4-3: Strengthened capacity of the ITU membership to develop strategies, policies and practices for digital inclusion, in particular for the empowerment of women and girls, persons with disabilities and other persons with specific needs	– Number of digital inclusion resources developed and/or made available to members, including publications, policies, strategies, guidelines, good practices, case studies, training materials, online resources and toolkits, and number of website views of ITU-D digital inclusion websites – Number of members aware of, trained in or advised on digital inclusion policies, strategies and guidelines	4.3: Products and services on digital inclusion for girls and women and people with specific needs (elderly, youth, children and indigenous people, among others), such as awareness-raising on digital inclusion strategies, policies and practices, development of digital skills, toolkits and guidelines and forums of discussion to share practices and strategies
D.4-4: Enhanced capacity of the ITU membership to develop telecommunication/ICT strategies and solutions on climate-change adaptation and mitigation and the use of green/renewable energy	– Number of Member States assisted by BDT for increasing awareness of the impact of climate change and promoting the use of telecommunications/ICTs to mitigate its negative effects – Number of Member States assisted by BDT in developing their climate-change strategies, policy and legislative frameworks	4.4: Products and services on ICT climate-change adaptation and mitigation, such as promotion of strategies and dissemination of best practices on mapping vulnerable areas and developing information systems, metrics and e-waste management

Outcomes	Performance indicators	Outputs (Products and services)
	– Number of Member States assisted by BDT in developing e-waste strategy, policy and regulatory frameworks	

Output 4.1 – Products and services on concentrated assistance to LDCs, SIDS and LLDCs and countries with economies in transition, to foster the availability and affordability of telecommunications/ICTs

1 Background

WTDC Resolution 16 (Rev. Buenos Aires, 2017) and Resolution 30 (Rev. Busan, 2014) of the Plenipotentiary Conference, on special measures for LDCs, SIDS, LLDCs and countries with economies in transition, which highlight the role of telecommunications/ICTs as enablers of national socio-economic development, provide BDT with a mandate to pay special attention to these categories of countries through concentrated assistance.

ITU assistance to the LDCs goes back to 1971, when the Union accorded special assistance to LDCs through the implementation of relevant plenipotentiary conference resolutions. In 2002, direct assistance to LDCs was delivered for the first time to a small group of countries on a biennial basis.

Output 4.1 will deliver targeted and highly differentiated assistance to countries with specific needs, including LDCs, SIDS, LLDCs and countries with economies in transition, in a number of priority areas.

2 Implementation framework

Programme: Concentrated assistance to LDCs, SIDS, LLDCs and countries with economies in transition

This programme will provide concentrated assistance to LDCs, SIDS, LLDCs for achieving internationally agreed goals, such as the Sendai Framework for Disaster Risk Reduction, the WSIS action lines, and the 2030 Agenda for Sustainable Development.

The programme will:

- provide quality and timely delivery of assistance for the general socio-economic development of countries in special need through telecommunications/ICTs, focusing on their specific needs for the development of broadband infrastructure, including, among others, availability and affordability of transport to international connectivity and telecommunication/ICT applications, cybersecurity, policy and regulatory frameworks, human skills development and digital literacy;

- share guidelines and best practices on topics of interest among LDCs, SIDS and LLDCs, and facilitate forums to increase awareness on telecommunication/ICT trends;

- assist LDCs, SIDS and LLDCs in assessing their needs to identify challenges and critical areas of telecommunication/ICT development, and provide development assistance;

- promote inclusive and universal access to telecommunications/ICTs, and provide skills-development and capacity-building assistance in disaster prediction, preparedness, adaptation, monitoring and mitigation to LDCs, SIDS, LLDCs and economies in transition, based on their priority needs;

- assist these categories of countries in achieving internationally agreed goals, such as the WSIS action lines and the 2030 Agenda for Sustainable Development, the Sendai Framework for Disaster Risk Reduction, the Istanbul Programme of Action for LDCs, the Samoa Pathway for SIDS and the Vienna Programme of Action for LLDCs;

- engage with the Technology Bank[3] to strengthen LDCs' innovation and technology capabilities, including facilitating technology transfer in the ICT field.

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[3] (1) On 23 December 2016, the United Nations General Assembly (UNGA) in New York officially established the Technology Bank for Least Developed Countries. The 2011 Istanbul Programme of Action called for the establishment of a technology bank and a science, technology and innovation supporting mechanism dedicated to LDCs (the "Technology Bank"), a long-standing priority of the LDCs confirmed in the 2015 Addis Ababa Action Agenda and in Sustainable Development Goal 17.

(2) Outcome document of the UNGA high-level meeting on the overall review of the WSIS outcomes, UNGA Resolution 70/125, paragraph 30: "All efforts should be deployed to reduce the price of information and communications technologies and broadband access, bearing in mind that deliberate interventions, including through research and development and technology transfer on mutually agreed terms, may be necessary to spur lower-cost connectivity options."

(3) Addis Ababa Action Agenda of the third International Conference on Financing for Development:

"G. Science, technology, innovation and capacity building

114. The creation, development and diffusion of new innovations and technologies and associated know-how, including the transfer of technology on mutually agreed terms, are powerful drivers of economic growth and sustainable development. However, we note with concern the persistent "digital divide" and the uneven innovative capacity, connectivity and access to technology, including information and communications technology, within and between countries."

Relevant regional initiatives

The following regional initiatives will contribute to Outcome D.4-1, consistent with WTDC Resolution 17 (Rev. Buenos Aires, 2017):

Region
AMS region
AMS1: Disaster risk reduction and management communications **Objective**: To provide assistance to Member States during all phases of disaster risk reduction, i.e. early warning, disaster response and relief and rehabilitation of telecommunication networks, particularly in small island developing states (SIDS) and the least developed countries (LDCs).
AMS3: Deployment of broadband infrastructure, especially in rural and neglected areas, and strengthening of broadband access to services and applications **Objective**: To provide assistance to Member States in identifying needs and in the development of policies, mechanisms and regulatory initiatives to reduce the digital divide by increasing broadband access and uptake, as a means of achieving the Sustainable Development Goals (SDGs).
ASP region
ASP1: Addressing special needs of least developed countries, small island developing states, including Pacific island countries, and landlocked developing countries **Objective**: To provide special assistance to least developed countries (LDCs), small island developing states (SIDS), including Pacific island countries, and landlocked developing countries (LLDCs) in order to meet their priority telecommunication/information and communication technology (ICT) requirements.

Study group Questions

There are no study group Questions related to Outcome D.4-1.

3 References to Plenipotentiary Conference and WTDC resolutions, WSIS action lines, SDGs and other relevant references

Plenipotentiary Conference and WTDC resolutions and recommendations

The implementation of Resolutions 30, 34 and 139 of the Plenipotentiary Conference and WTDC Resolutions 5, 16, 25 and 37 will support Output 4.1, and will contribute to the achievement of Outcome D.4-1.

WSIS action lines

Output 4.1 will support the implementation of WSIS Action Lines C2, C6 and C7, and will contribute to the achievement of Outcome D.4-1.

SDGs and associated targets

Output 4.1 will contribute to achievement of the following SDGs: 1 (targets 1.4, 1.5), 3 (target 3.9), 7 (target 7.b), 8 (target 8a), 9 (targets 9a, 9b, 9c), 11 (target 11.5), 13 (target 13b) and 17 (targets 17.8 and 17.18).

Other

Output 4.1 will also contribute to achievement of Priority 2 (b) Energy and communications technology infrastructure, Objectives (c) and (d), of the Vienna Programme of Action for LLDCs; the Istanbul Programme of Action for LDCs; and the Samoa Pathway for SIDS.

Output 4.2 – Products and services on telecommunication/ICT policies supporting the development of the digital economy, ICT applications and new technologies, such as information sharing and support for their deployment, assessment studies and toolkits

1 Background

Telecommunications/ICTs, and particularly mobile technology, hold the most transformative power of our time. They have the capacity to connect even the most isolated communities to sources of information and services that can have a direct impact on their livelihoods and quality of life. Services delivered via telecommunication/ICT networks, phones and Internet are critical to generating social impact in different aspects of life.

Despite the rapid expansion of telecommunication and mobile technologies, the digital revolution still remains out of reach for many people around the world. Many of the digital innovations have not yet achieved an economically sustainable scale, and are accessible only to a fragment of those who need them most.

In light of the continued relevance of the WSIS action lines, as well as the adoption of the new Sustainable Development Goals (SDGs), mainstreaming digital innovations in all sectors is unavoidable if we are to achieve those goals by 2030. All people should have affordable access through smart devices to key information and life-enhancing services critical for sustainable development.

This would require much more than just infrastructure – extending access must be accompanied by the availability of relevant telecommunication/ICT applications and services to extend access to, in particular, digital education, healthcare, agriculture, energy and financial and commercial services.

2 Implementation framework

Programme: Telecommunication/ICT services and ICT applications

The main purpose of this programme is to support the ITU membership, in collaboration and partnership with other United Nations organizations and the private sector, in fostering the use of telecommunications/ICTs in the various facets of information-society development, in particular in underserved and rural areas, and for sustainable development and attaining the United Nations SDGs and implementing the WSIS action lines.

The programme will:

- support the development of national strategic planning frameworks fostering the digital economy, and associated toolkits for selected ICT applications and services, in close collaboration with relevant UN specialized agencies and programmes and through other international and public, private or public-private partnerships with organizations having expertise in these domains; these frameworks and toolkits will facilitate the elaboration of national sectoral e-strategies/digital strategies and build capacity among the ITU membership to articulate national visions, objectives, strategies, action plans and performance indicators to support the implementation of large-scale ICT applications and services that leverage existing infrastructure more effectively, all of which will result in effective harnessing of ICTs to better serve socio-economic development;

- support the deployment of ICT/mobile applications in order to improve the delivery of value-added services in high-potential areas like e-health, including mobile health, education, agriculture, governance, energy, mobile payment, etc., and to demonstrate and introduce the most suitable ICT utilization and applications to solve the existing challenges in sustainable development, whereby the programme will act as a catalyst by launching appropriate partnership platforms – involving public and private partners – in order to foster the deployment of innovative ICT applications;

- conduct detailed studies and facilitate the sharing of knowledge and best practices on various ICT applications, particularly using broadband, mobile communication, open source and new technology advances and innovations;

- collect best practices in addressing the challenges of assessing the benefits of big data, and facilitate the sharing of knowledge and best practices on various inclusion techniques/technologies.

Relevant regional initiatives

The following regional initiatives will contribute to Outcome D.4-2, consistent with WTDC Resolution 17 (Rev. Buenos Aires, 2017):

Region
AFR region
AFR1: Building digital economies and fostering innovation in Africa **Objective**: To build digital economies and foster innovation in Africa. Countries in the Africa region are in need of interventions that would help them transform into digital economies. It is necessary that ITU assist Member States in the Africa region to reap the full benefits of the digital economy by addressing the emerging policy and regulatory challenges. In line with growing digital economies, information and communication technology (ICT)-based innovations, which have demonstrated their potential to contribute to the socio-economic development of countries, are also growing. ITU is called upon to support Member States in the Africa region to build more effective ICT-based innovation ecosystems.
AFR2: Promotion of emerging broadband technologies **Objective**: To promote emerging technologies to assist the Africa region in securing the full benefits of high-speed, high-quality broadband. **AFR3: Building trust and security in the use of telecommunications/information and communication technology** **Objective**: To assist Member States in developing and implementing policies and strategies, standards and mechanisms to enhance the security of information systems and networks, ensure interoperability of digital technologies, protect data and people and guarantee digital trust. To protect information and communication technology (ICT) and its applications.

AMS region

AMS3: Deployment of broadband infrastructure, especially in rural and neglected areas, and strengthening of broadband access to services and applications

Objective: To provide assistance to Member States in identifying needs and in the development of policies, mechanisms and regulatory initiatives to reduce the digital divide by increasing broadband access and uptake, as a means of achieving the Sustainable Development Goals (SDGs).

AMS4: Accessibility and affordability for an inclusive and sustainable Americas region

Objective: To provide assistance to Member States in ensuring the affordability of telecommunication/information and communication technology (ICT) services in order to build an information society for all and ensure accessibility of telecommunications/ICTs for persons with disabilities and others in vulnerable situations.

AMS5: Development of the digital economy, smart cities and communities and the Internet of Things, promoting innovation

Objective: To assist Member States in developing national and regional policies to boost the digital economy, smart cities and communities (SCC) and the Internet of Things (IoT).

ARB region

ARB3: Digital financial inclusion

Objective: To support and enable access to and use of digital financial services, using telecommunications and information technology, and achieve high levels of digital financial inclusion.

ARB4: Internet of Things, smart cities and big data

Objective: To raise and spread awareness of the importance of future challenges in the era of the Internet of Things (IoT) and big data, and how to address such challenges; establish regulatory frameworks and take measures to help cope with the rapid changes in the field of telecommunications and information technology; and work to ensure the transition to smart cities and communities (SCCs).

ASP region

ASP2: Harnessing information and communication technologies to support the digital economy and an inclusive digital society

Objective: To assist Member States in utilizing information and communication technologies (ICTs) to reap the benefits of the digital economy and in addressing the human and technical capacity challenges for bridging the digital divide.

CIS region
CIS1: Development of e-health to ensure healthy lives and promote well-being for all, at all ages **Objective**: To assist the ITU Member States in the region with the development of regulatory texts, technical solutions and specialized training programmes in the field of e-health (including telemedicine), with the aim of providing the public with improved medical services through the use of infocommunications. **CIS2: Use of telecommunications/information and communication technology to ensure inclusive, equitable, quality and safe education, including the enhancement of women's knowledge of information and communication technologies and e-government** **Objective**: To provide ITU Member States in the region with centralized consultative and technical assistance in the various aspects of the use of telecommunications/information and communication technology (ICT) in education, as well as in regard to raising the level of people's ICT literacy, in the interests of human capacity development and of ensuring gender and social equality.
EUR region
EUR2: A citizen-centric approach to building services for national administrations **Objective**: To facilitate the development of transformative and paperless citizen-centric services that are accessible and available to all members of the society. **EUR5: Information and communication technology-centric innovation ecosystems** **Objective**: To enhance entrepreneurship and establish a sustainable culture of innovation through concrete strategic actions using information and communication technology (ICT) as an enabler, building on the existing regional initiative in Europe on entrepreneurship, innovation and youth.

Study group Questions

The following study group Questions will contribute to Outcome D.4-2:

Study Group 2 Questions
Question 1/2: Creating smart cities and society: Employing ICTs for sustainable social and economic development
Question 2/2: Telecommunications/information and communication technologies for e-health

3 References to Plenipotentiary Conference and WTDC resolutions, WSIS action lines and SDGs

Plenipotentiary Conference and WTDC resolutions and recommendations

The implementation of Resolution 139, 183 and 201 of the Plenipotentiary Conference and WTDC Resolutions 17, 21, 30, 32, 37, 52, 53 and COM3-2, will support Output 4.2, and will contribute to the achievement of Outcome D.4-2.

WSIS action lines

Output 4.2 will support the implementation of WSIS Action Line C7, and will contribute to the achievement of Outcome D.4-2.

SDGs and associated targets

Output 4.2 will contribute to achievement of the following SDGs: 2 (targets 2.1, 2.3, 2.4, 2.5), 3 (targets 3.1, 3.2, 3.4, 3.5, 3.6, 3.a, 3.7), 4 (targets 4.1, 4.3, 4.4, 4.5, 4.c), 6 (targets 6.1, 6.4, 6.5), 7 (targets 7.1, 7.2, 7.3) and 11 (targets 11.2, 11.6).

Output 4.3 – Products and services on digital inclusion for girls and women and people with specific needs (elderly, youth, children and indigenous people, among others), such as awareness-raising on digital inclusion strategies, policies and practices, development of digital skills, toolkits and guidelines and forums of discussion to share practices and strategies

1 Background

Digital inclusion means ensuring the accessibility of telecommunications/ICTs and the use of telecommunications/ICTs for social and economic development, especially for people with specific needs. Despite the increasing deployment of telecommunication/ICT networks, equipment, services and applications, many people remain excluded from the information society. In particular, there is a gender digital divide. Fewer women and girls have access to and use telecommunications/ICTs than men and boys, and even fewer women and girls are ICT creators and leaders. Furthermore, telecommunications/ICTs are not

exploited to promote the economic and social development of women and girls, persons with disabilities, including age-related disabilities, youth, children and indigenous peoples, who have specific needs that must be addressed to enable them to use and leverage telecommunications/ICTs.

2 Implementation framework

Programme: Digital inclusion for empowering women and girls, persons with disabilities and other people with specific needs[4]

This programme aims to promote digital inclusion by supporting members in providing training on a range of digital skills, from digital and web literacy to more advanced telecommunication/ICT skills. Ideally, youth and children develop these skills where they are incorporated into national education plans and where schools are connected to the Internet, equipped with ICTs and staffed by teachers trained to impart such skills. However, these skills can also be developed outside the formal school context, including through public, private and social entrepreneurship community and national skills development programmes, as well as through self-paced online and mobile learning opportunities.

Once equipped with telecommunication/ICT skills, people with specific needs can harness the power of telecommunications/ICTs for their empowerment, including employment, entrepreneurship and lifelong learning. This is especially timely in the face of global youth unemployment and the gender divide in telecommunication/ICT skills development. Women and girls can be empowered to participate fully in the digital economy, which both addresses their safety needs and promotes their accession to leadership and decision-making positions.

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4 People with specific needs are indigenous peoples, persons with disabilities, including age-related disabilities, youth, women and girls.

In addition to skills provision, persons with disabilities, including age-related disabilities, require accessible telecommunications/ICTs in which barriers to their use have been removed. Legal, policy, regulatory and business practices can be implemented to ensure that accessible telecommunications/ICTs are widely available and affordable for persons with disabilities in ITU Member States.

Digital inclusion of all people for social and economic development requires comprehensive national digital inclusion policies, strategies and guidelines, including for digital skills development, updated telecommunication/ICT policy, regulatory, universal access/service and other frameworks, as well as national broadband plans that promote accessibility and the digital inclusion of people with specific needs.

This programme will:

- raise awareness among members of the need for and importance of promoting digital inclusion, including awareness of the need to deploy resources to overcome the gender digital divide, and facilitate forums of discussion to share practices and empowerment strategies;

- conduct research on effective digital inclusion practices and trends and share findings with members;

- develop digital skills training materials and/or promote partnerships to share existing digital skills training materials with members for use in their community and national digital skills development programmes;

- develop digital inclusion policies, strategies and guidelines, advise members and provide training to members on digital inclusion policies, strategies and guidelines, including on accessible telecommunications/ICTs for persons with disabilities and aging populations and the development of telecommunications/ICTs in indigenous communities;

- provide policy and strategy advice on measures to bridge the gender digital divide, including education and skills development for empowering women and girls and creating conditions for employment prospects for women and girls in entrepreneurship, leadership and decision-making positions, in close collaboration with Member States, Sector Members, Academia, international organizations and other relevant stakeholders.

Relevant regional initiatives

The following regional initiatives will contribute to Outcome D.4-3, consistent with WTDC Resolution 17 (Rev. Buenos Aires, 2017):

Region
AFR region
AFR1: Building digital economies and fostering innovation in Africa **Objective**: To build digital economies and foster innovation in Africa. Countries in the Africa region are in need of interventions that would help them transform into digital economies. It is necessary that ITU assist Member States in the Africa region to reap the full benefits of the digital economy by addressing the emerging policy and regulatory challenges. In line with growing digital economies, information and communication technology (ICT)-based innovations, which have demonstrated their potential to contribute to the socio-economic development of countries, are also growing. ITU is called upon to support Member States in the Africa region to build more effective ICT-based innovation ecosystems.
AFR2: Promotion of emerging broadband technologies **Objective**: To promote emerging technologies to assist the Africa region in securing the full benefits of high-speed, high-quality broadband.

AFR4: Strengthening human and institutional capacity building

To strengthen human and institutional capacity building in the Africa region. Countries in the Africa region are in dire need of human and institutional capacity-building interventions that would help them transform society as a whole in preparation for the emerging digital socio-economic environment. The Africa region therefore seeks ITU's assistance in enhancing the region's capacity to effect this transformation. Although some training institutions in Africa that provide information and communication technology (ICT)-related training and capacity building to the membership already exist, there may be a need to enhance their capacities.

AMS region

AMS4: Accessibility and affordability for an inclusive and sustainable Americas region

Objective: To provide assistance to Member States in ensuring the affordability of telecommunication/ICT services in order to build an information society for all and ensure the accessibility of telecommunications/ICTs for persons with disabilities and others in vulnerable situations.

AMS5: Development of the digital economy, smart cities and communities and the Internet of Things, promoting innovation

Objective: To assist Member States in developing national and regional policies to boost the digital economy, smart cities and communities (SCC) and the Internet of Things (IoT).

ARB region

ARB5: Innovation and entrepreneurship

Objective: To build capacities and raise awareness concerning the culture of innovation and entrepreneurship, in particular for youth and women's empowerment, with the aim of harnessing telecommunication/information and communication technology (ICT) tools to launch projects and undertake economic activities that focus on job creation.

ASP region

ASP2: Harnessing information and communication technologies to support the digital economy and an inclusive digital society

Objective: To assist Member States in utilizing information and communication technologies (ICTs) to reap the benefits of the digital economy and in addressing the human and technical capacity challenges for bridging the digital divide.

ASP3: Fostering development of infrastructure to enhance digital connectivity **Objective**: To assist Member States in the development of telecommunication/ information and communication technology (ICT) infrastructure in order to facilitate provision of services and applications on that infrastructure.
CIS region
CIS2: Use of telecommunications/information and communication technology to ensure inclusive, equitable, quality and safe education, including the enhancement of women's knowledge of information and communication technologies and e-government **Objective**: To provide ITU Member States in the region with centralized consultative and technical assistance in the various aspects of the use of telecommunications/information and communication technology (ICT) in education, as well as in regard to raising the level of people's ICT literacy, in the interests of human capacity development and of ensuring gender and social equality.
EUR region
EUR3: Accessibility, affordability and skills development for all to ensure digital inclusion and sustainable development **Objective**: To bridge the digital divide and equip all groups of society, including persons with disabilities and specific needs, to take advantage of information and communication technology (ICT), by enabling capacity building in digital skills.

Study group Questions

The following study group Questions will contribute to Outcome D.4-3:

Study group 1 Questions
Question 7/1: Access to telecommunication/information and communication technology services by persons with disabilities and other persons with specific needs

3 References to Plenipotentiary Conference and WTDC Resolutions, WSIS action lines and SDGs

Plenipotentiary Conference and WTDC resolutions and recommendations

The implementation of Resolutions 70, 175, 184 and 198 of the Plenipotentiary Conference and WTDC Resolutions 11, 17, 21, 30, 37, 46, 52, 55, 58 and 76 will support Output 4.3, and will contribute to the achievement of Outcome D.4-3:

WSIS action lines

Output 4.3 will support the implementation of WSIS Action Lines C1, C2, C3, C4, C6, C7, C8 and C9, and will contribute to the achievement of Outcome D.4-3.

SDGs and associated targets

Output 4.3 will contribute to achievement of the following SDGs: 4 (targets 4.3, 4.4, 4.5), 5 (targets 5.5, 5b), 8 (targets 8.2, 8.3, 8.5, 8.6, 8b), 10 (target 10.2) and 17 (target 17.17).

Output 4.4 – Products and services on ICT climate-change adaptation and mitigation, such as promotion of strategies and dissemination of best practices on mapping vulnerable areas and developing information systems, metrics and e-waste management

1 Background

Output 4.4 is in line with WTDC Resolution 34 (Rev. Buenos Aires, 2017), on the role of telecommunications/ICTs in disaster preparedness, early warning, rescue, mitigation, relief and response, which notes the importance for humankind of ITU publications relating to this area of activity; and Resolution 182 (Rev. Busan, 2014) of the Plenipotentiary Conference, on the role of telecommunications/ICTs in regard to climate change and the protection of the environment.

2 Implementation framework

Programme: Climate-change adaptation and mitigation

This programme will assist Member States, in particular LDCs, SIDS, LLDCs and countries with economies in transition, to:

- improve the use of telecommunications/ICTs, including information systems, to reduce the impact of climate change through the development of information systems, assessments and observations;
- enhance their capacity by formulating comprehensive strategies and measures for providing assistance to developing countries on the use of telecommunications/ICTs to help mitigate and respond to the devastating effects of climate change;
- promote strategies and dissemination of best practices on using telecommunications/ICTs to map areas vulnerable to effects of climate change;
- adopt metrics and common standards for evaluating the environmental impact of the use of telecommunications/ICTs, as well as the positive contribution telecommunications/ICTs can make to the broader economy, including the adoption of metrics to measure the impact of climate change;
- facilitate their participation in bilateral, regional and global research, assessments, monitoring and mapping of climate impacts, and in the development of response strategies;
- take into account the impact of e-energy use and e-waste when evaluating the contributions of telecommunications/ICTs to greenhouse gas (GHG) emissions;
- develop e-waste policies;
- develop standards-based monitoring and early-warning systems linked to national and regional networks.

Relevant regional initiatives

The following regional initiatives will contribute to Outcome D.4-4, consistent with WTDC Resolution 17 (Rev. Buenos Aires, 2017):

Region
AMS region
AMS1: Disaster risk reduction and management communications **Objective**: To provide assistance to Member States during all phases of disaster risk reduction, i.e. early warning, disaster response and relief and rehabilitation of telecommunication networks, particularly in small island developing states (SIDS) and the least developed countries (LDCs). **AMS5: Development of the digital economy, smart cities and communities and the Internet of Things (IoT), promoting innovation** **Objective**: To assist Member States in developing national and regional policies to boost the digital economy, smart cities and communities (SCC) and the Internet of Things (IoT).
ARB region
ARB1: Environment, climate change and emergency telecommunications **Objective**: To raise awareness of and provide support in respect of major challenges in the field of environment, climate change and emergency telecommunications, establish regulatory frameworks, and take necessary measures to address the challenges in this field.
ASP region
ASP5: Contributing to a secure and resilient environment **Objective**: To assist Member States to develop and maintain secure, trusted and resilient networks and services, and to address challenges related to climate change and disaster management.
CIS region
CIS4: Monitoring the ecological status and the presence and rational use of natural resources **Objective**: To assist ITU Member States in the region in monitoring the ecological status and the presence and rational use of natural resources.

Study group Questions

The following study group Questions will contribute to Outcome D.4-4:

Study group 2 Questions
Question 6/2: Information and communication technologies and the environment

3 References to Plenipotentiary Conference and WTDC resolutions, WSIS action lines and SDGs

Plenipotentiary Conference and WTDC resolutions and recommendations

The implementation of Resolution 182 of the Plenipotentiary Conference and WTDC Resolutions 34 and 66 will support Output 4.4, and will contribute to the achievement of Outcome D.4-4.

WSIS action lines

Output 4.4 will support the implementation of WSIS Action Line C7, and will contribute to the achievement of Outcome D.4-4.

SDGs and associated targets

Output 4.4 will contribute to achievement of the following SDGs: 3 (target 3.9), 5 (target 5b), 11 (target 11b), 12 (targets 12.4 and 12.5), and 13 (targets 13.1, 13.2 and 13.3).

REGIONAL INITIATIVES

Buenos Aires Action Plan

Section 3 – Regional initiatives

AFRICA REGIONAL INITIATIVES

AFR1: Building digital economies and fostering innovation in Africa

Objective: To build digital economies and foster innovation in Africa. Countries in the Africa region are in need of interventions that would help them transform into digital economies. It is necessary that ITU assist Member States in the Africa region to reap the full benefits of the digital economy by addressing the emerging policy and regulatory challenges. In line with growing digital economies, information and communication technology (ICT)-based innovations, which have demonstrated their potential to contribute to the socio-economic development of countries, are also growing. ITU is called upon to support Member States in the Africa region to build more effective ICT-based innovation ecosystems.

Expected results

1) Assistance in the development of national digital economy strategies focusing on enabling policies and regulations that can enhance the use of digital technologies.

2) Assistance in the development of digital inclusion strategies, policies, regulatory frameworks and guidelines specifically targeted at achieving social and financial inclusion through improving digital literacy and access.

3) Assistance in developing action plans with digital key performance indicators (KPIs) encompassing the adoption of e-applications geared to sustainable development in various aspects of African economies.

4) Assistance in the adoption and implementation of relevant standards that are targeted at addressing challenges of interoperability stemming from the disruptive and transformative spread of digital innovation.

5) Support for improving Member States' capability to create effective innovation policy interventions in all stages of innovation.

6) Help in designing models for financing the ICT ecosystem in Africa, and identification of partnership opportunities to establish sustainable innovation frameworks.

7) Support for capacity building, especially in the area of intellectual property protection as a fundamental pillar for innovation.

8) Assistance in the development and operationalization of frameworks for manufacturing of ICT goods in Africa resulting from innovative work.

AFR2: Promotion of emerging broadband technologies

Objective: To promote emerging technologies to assist the Africa region in securing the full benefits of high-speed, high-quality broadband.

Expected results

1) Assistance in the development of national and regional strategic plans, focusing on enabling policies and regulations addressing high-speed, high-quality broadband networks in the region.

2) Providing support that will enable the sharing of best practices on financing models as well as the identification of partnership opportunities to enhance high-speed, high-quality broadband.

3) Assistance in promoting the harmonization of subregional broadband plans so as to ensure equitable access to high-speed, high-quality broadband for all.

4) Assistance with human capacity development resources, through training programmes, workshops and such like, to exchange expertise and to provide persons with disabilities with the platform to participate in and benefit from the emergence of new broadband technologies.

5) Provision of support that will enable the promotion, coordination and establishment of Internet exchange points (IXPs) at the national, subregional and regional levels for better bandwidth control.

6) Assistance in extending the regional and continental backbone initiative to ensure the resilience of submarine cables.

AFR3: Building trust and security in the use of telecommunications/information and communication technology

Objective: To assist Member States in developing and implementing policies and strategies, standards and mechanisms to enhance the security of information systems and networks, ensure interoperability of digital technologies, protect data and people and guarantee digital trust. To protect information and communication technology (ICT) and its applications.

Expected results

1) Ensuring that the goal of the Connect 2020 Agenda to raise cybersecurity readiness by 40 per cent is achieved by 2020.

2) Assistance to Member States in assessing and adapting legislative and regulatory frameworks, making better use of the report on the ITU Global Cybersecurity Index (GCI).

3) Encouraging the development of a global framework for collaboration and awareness at regional and subregional levels for the development of a global culture of cybersecurity and to help consumers better understand and protect against risks.

4) Assistance in educating consumers on e-commerce and mobile transactions and informing them about the financial legislation governing electronic transactions and mobile-payment systems.

5) Promoting the establishment of institutional and organizational mechanisms at the national and regional levels to facilitate the effective implementation of cybersecurity strategies.

6) Developing measures to protect consumers, children and other vulnerable persons when using ICTs.

7) Raising awareness of cyberthreats, cybersecurity measures and quality of service in the use of ICTs.

8) Adoption of measures for the protection of privacy and personal data.

9) Assistance in the establishment of appropriate structures (data centres, Internet exchange points (IXPs), etc.) for the development of cybersecurity and the fight against cybercrime, and in promoting the setting up of computer incident response teams (CIRTs) at the national and regional levels.

10) Developing a harmonized strategy to enhance information security and combat spam and cyberthreats.

AFR4: Strengthening human and institutional capacity building

Objective: To strengthen human and institutional capacity building in the Africa region. Countries in the Africa region are in dire need of human and institutional capacity-building interventions that would help them transform society as a whole in preparation for the emerging digital socio-economic environment. The Africa region therefore seeks ITU's assistance in enhancing the region's capacity to effect this transformation. Although some training institutions in Africa that provide information and communication technology (ICT)-related training and capacity building to the membership already exist, there may be a need to enhance their capacities.

Expected results

1) Assistance in undertaking a comprehensive assessment of the institutional and human capacity development environment in the Africa region.

2) Assistance in the establishment of a long-term and responsive regional institutional and human capacity development strategy that takes into account relevant Sustainable Development Goals (SDGs) in respect of such areas as inclusiveness, emerging ICT issues, etc.

3) Possible assistance to enhance various institutional and human capacity development aspects, including:

   a) enhancing the existing centres of excellence and other capacity-building centres in the region;

   b) developing Member States' capability to promote accessibility in order to ensure improved specialized skills development to meet the ICT needs of persons with disabilities and thus enhance their use of Internet applications.

4) Continued provision of and increased access to training resources within ITU for Member States in the Africa region.

AFR5: Management and monitoring of the radio-frequency spectrum and transition to digital broadcasting

Objective: To assist Member States in ensuring the transition to digital broadcasting and efficient and economical management of the radio spectrum and orbital resources.

Expected results

1) Assistance in the implementation of a post-migration action plan that supports the development of new services offering the best technical and economic conditions in terms of accessibility; in the definition of conditions for the allocation and use of the "digital dividend" to support the development of broadband services; and in capacity building, including sharing knowledge and experiences in satellite service regulation, with emphasis on satellite filing and coordination.

2) Assistance in elaborating financing models to ensure the necessary investments for the transition from analogue to digital.

3) Assistance to countries for the establishment of a sustainable ecosystem for the production and monetization of local content and channels.

4) Support for the development of spectrum-management plans at national, regional and global levels, including for the transition to digital broadcasting.

5) Assistance in the use of tools to help developing countries improve international frequency coordination of terrestrial services in border areas.

6) Conducting studies and developing comparative criteria and guidelines on the political and economic aspects of the assignment and use of the radio spectrum, taking into account WTDC Resolution 9 (Rev. Buenos Aires, 2017).

AMERICAS REGIONAL INITIATIVES

AMS1: Disaster risk reduction and management communications

Objective: To provide assistance to Member States during all phases of disaster risk reduction, i.e. early warning, disaster response and relief and rehabilitation of telecommunication networks, particularly in small island developing states (SIDS) and the least developed countries (LDCs).

Expected results

1) Identification of suitable technologies to be used for disaster risk reduction communications, and development of implementation feasibility studies and studies on conformance and interoperability with other technologies and services based on IP technology for emergency telecommunications.

2) Implementation of national and subregional early-warning systems, as well as emergency response and recovery, and identification of critical infrastructure, with special focus on SIDS and LDCs, considering the influence of climate change.

3) Assistance for the development of appropriate policy, regulatory and legislative frameworks, as well as protocols and inter-agency procedures on communications for disaster risk reduction at the national and regional level.

4) Regional meetings and workshops to share experiences and best practices on telecommunications/information and communication technologies (ICTs) for preventive measures for disaster risk reduction and emergency response, maximizing resources, creating more innovative and effective programmes and coordinating actions in border areas for the Americas region.

5) Temporary availability of equipment for emergency and recovery communications in the Americas region, at the initial stage of a disaster intervention, as part of ITU cooperation in cases of emergency.

AMS2: Spectrum management and transition to digital broadcasting

Objective: To provide assistance to Member States in the transition to digital broadcasting, the use of the digital-dividend frequencies and spectrum management.

Expected results

1) Capacity building in spectrum management, digital broadcasting technologies and the use of the digital dividend and new broadcasting services and applications, providing assistance in using tools to support developing countries in improving international coordination of terrestrial services in border areas.

2) Support for the elaboration of spectrum-management plans at the national and regional levels, including the transition to digital broadcasting and the promotion of policies for the use of spectrum in underserved areas.

3) Elaboration of studies, indicators and guidelines on aspects of the assignment and use of radio-frequency spectrum, with a view, *inter alia*, to facilitating the use of spectrum for international mobile telecommunications (IMT) and the harmonization of spectrum use among countries in the region, taking into account WTDC Resolution 9 (Rev. Buenos Aires, 2017).

4) Assistance to countries in the promotion of inclusive strategies related to the digitization of broadcasting services, including the availability of affordable digital broadcast receivers, and communication strategies to educate and to promote consumer awareness.

5) Assistance in national and regional planning for the use of frequencies released by the transition to digital broadcasting and the deployment of new technologies for broadcasting services.

AMS3: Deployment of broadband infrastructure, especially in rural and neglected areas, and strengthening of broadband access to services and applications

Objective: To provide assistance to Member States in identifying needs and in the development of policies, mechanisms and regulatory initiatives to reduce the digital divide by increasing broadband access and uptake, as a means of achieving the Sustainable Development Goals (SDGs).

Expected results

1) Assistance in the development of a situational study on the deployment of broadband infrastructure for fixed and mobile services and spectrum use that will enable administrations to identify needs and opportunities, especially of rural and neglected areas, taking into account specific subregional characteristics.

2) Assistance for the implementation or improvement of national broadband coverage plans, including support to educational institutions, advanced networks, research centres, cooperatives and non-profit organizations that provide telecommunication services, especially in rural, remote and underserved areas, taking into account mechanisms for access to spectrum and high-speed networks and fostering an enabling environment to promote investment in networks.

3) Establishment of metrics and methodologies for measuring the condition of broadband services, leveraging public and private investment, public-private partnerships and the participation of small and non-profit operators, especially in landlocked developing countries (LLDCs) and small island developing states (SIDS).

4) Assistance for the implementation of plans that promote access to information and communication technologies (ICTs) in municipalities, through the concept of digital/smart cities, and in public social service institutions, as well as increased access to and use of ICTs by the public, especially in rural and underserved areas, to foster access to social services.

5) Consolidation and dissemination of information, including through meetings and workshops, about standards and conformance and interoperability, and exchange of best practices related to the deployment and operation of broadband networks, especially in rural areas, and connectivity, with emphasis on least developed countries (LDCs), LLDCs and SIDS.

AMS4: Accessibility and affordability for an inclusive and sustainable Americas region

Objective: To provide assistance to Member States in ensuring the affordability of telecommunication/information and communication technology (ICT) services in order to build an information society for all and ensure accessibility of telecommunications/ICTs for persons with disabilities and others in vulnerable situations.

Expected results

1) Assistance in developing guidelines and public policies to promote efficiency in the provision and accessibility of telecommunication/ICT services, especially mobile and emergency services, also considering, but not restricted to, the use of audiovisual accessibility tools.

2) Assistance for the implementation of recommendations to help improve the affordability of broadband, analysing the different factors, and recommendations on actions for promoting the development and management, as appropriate, of national, subregional and regional Internet exchange points (IXPs), subject to national decision, and related to policy and regulatory aspects for enabling the implementation of agreements and alliances on IXPs, in addition to recommendations to improve the availability of transport to international submarine fibre-optic network connection points, especially for landlocked developing countries (LLDCs) and small island developing states (SIDS).

3) Studies monitoring affordability levels in countries, disaggregated by socio-economic variables and taking into account specific and vulnerable populations, for inclusion in the broadband plans, policies, strategies, actions and goals for these population groups, as well as recommendations based on studies of policies and initiatives that enable price reduction of telecommunication/ICT services, broadband deployment and efficient use of spectrum.

4) Recommended policies that facilitate an enabling environment to ensure that everyone enjoys the full benefit of telecommunication/ICT access and use, through the implementation of local/national ICT projects to eliminate disparities in education at all levels and in professional training, the development of platforms to provide communication and relay services for persons with disabilities, the development of accessible websites for government programmes, services and information, and the implementation of e-government services and other services.

5) Recommendations on actions for the promotion of cooperation and information sharing on all topics related to public and regulatory policies that will serve to improve the affordability of telecommunication services and broadband.

AMS5: Development of the digital economy, smart cities and communities and the Internet of Things, promoting innovation

Objective: To assist Member States in developing national and regional policies to boost the digital economy, smart cities and communities (SCC) and the Internet of Things (IoT).

Expected results

1) Provision of assistance to Member States in the elaboration of information and communication technology (ICT) policies to promote the development of the digital economy in the region, leveraging new technologies to foster development and promotion of appropriate solutions.

2) Meetings and workshops on the impact of the digital economy in the region, in collaboration with other relevant organizations.

3) Elaboration of recommendations to promote the creation of innovation centres, including educational innovation, and projects that contribute to the ICT industry, with emphasis on start-ups, small and medium-sized enterprises (SMEs) and young entrepreneurs, and with special focus on women, among others.

4) Identification of partners/alliances to strengthen innovation based on ICT and the funding of projects and initiatives for the development of the digital economy, SCC and IoT, building coalitions and multistakeholder alliances prioritizing young entrepreneurs.

5) Promotion of strategies and dissemination of best practices on the appropriate management of e-waste.

ARAB STATES REGIONAL INITIATIVES

ARB1: Environment, climate change and emergency telecommunications

Objective: To raise awareness of and provide support in respect of major challenges in the field of environment, climate change and emergency telecommunications, establish regulatory frameworks, and take necessary measures to address the challenges in this field.

Expected results

Assisting countries to:

1) issue policy guidelines, regulatory and technical frameworks and necessary measures, providing them with information to meet their needs pertaining to this initiative, specifically in the area of exposure to electromagnetic fields (EMF), emergency telecommunications and the management of electronic waste.

2) launch training programmes on emergency telecommunications and the adverse effects of exposure to EMF and e-waste, find appropriate solutions to deal with these issues and formulate a model for making use of e-waste in a manner that supports development.

3) develop information and communication technology (ICT) applications on the basis of which awareness campaigns and programmes can be launched concerning the risks of exposure to EMF and the recycling and processing of e-waste.

ARB2: Confidence and security in the use of telecommunications/information and communication technologies

Objective: To promote confidence and security in the use of telecommunications/ information and communication technologies (ICTs), child online protection (COP) and combating all forms of cyberthreat, including the misuse of telecommunications/ICTs.

Expected results

Assisting countries to:

1) issue policy guidelines, regulatory and technical frameworks and necessary measures, providing them with information to meet their needs pertaining to this initiative, specifically in the area of COP and combating all forms of cyberthreat;

2) continue to sharpen awareness of the strategies to be followed in regard to the technical research and educational materials that are to be provided to and used in the teaching of Arab university students, in order to build confidence and security in the use of telecommunications/ICTs;

3) protect Arab children and young people from offensive and harmful content on the Internet, particularly by helping to enact laws, legislation and strategies in this area and by raising the awareness of children and young people of the risks through awareness campaigns, workshops and training programmes, and making use of the Arab Regional Cybersecurity Centre;

4) develop ICT applications to help protect children online and combat all forms of cyberthreat, in collaboration with relevant bodies;

5) organize training courses and seminars on protecting critical telecommunication/ICT infrastructure;

6) prepare training programmes and provide experts to specialized academic institutions to educate and instruct university students and academics in building confidence in the use of telecommunications/ICTs and exchanging experience in this regard;

7) establish national computer incident response teams (CIRTs) in the Arab region, with optimum coordination among them and between them and CIRTs in the other regions.

ARB3: Digital financial inclusion

Objective: To support and enable access to and use of digital financial services, using telecommunications and information technology, and achieve high levels of digital financial inclusion.

Expected results

Assisting countries to:

1) prepare studies to evaluate the status of digital financial inclusion and determine needs at national and regional levels, and to benefit from international experience and best practices, while clarifying the link between financial inclusion, financial stability, financial integration and consumer protection;

2) raise awareness of the concept, practice and benefits of digital financial inclusion, in addition to presenting the dimensions of digital financial services in terms of ensuring and facilitating access to all financial services, and how to use them, as well as the quality of services, confidence, security and reliability;

3) provide advisory and technical support and the necessary training programmes to foster coordination between ICT service regulators and providers, on the one hand, and financial service regulators and providers, on the other, so as to achieve integration and convergence between the two sectors;

4) develop guiding regulatory and legal frameworks to stimulate and encourage the adoption of digital financial inclusion and establish public-private sector partnerships to ensure the protection of user privacy and data confidentiality and promote confidence and security in digital financial services;

5) attract financial and technical support from donor and funding entities and regional and international stakeholders to help achieve the objective and results of this initiative, at the request of those Arab States that so wish.

ARB4: Internet of Things, smart cities and big data

Objective: To raise and spread awareness of the importance of future challenges in the era of the Internet of Things (IoT) and big data, and how to address such challenges; establish regulatory frameworks and take measures to help cope with the rapid changes in the field of telecommunications and information technology; and work to ensure the transition to smart cities and communities (SCCs).

Expected results

Assisting countries to:

1) formulate strategic and operational plans and regulatory frameworks to cope with IoT and big data technology and formulate a roadmap for the Arab region for the transition to SCCs by developing the telecommunication infrastructure to deliver the broadband services to support their various applications and services;

2) promote technical cooperation and the exchange of expertise between the Arab countries in the area of IoT, big data and SCCs, study the impact thereof, whether positive or negative, and take advantage of global experience;

3) organize a high-level forum on IoT and big data to discuss the main challenges, such as security, privacy and system compatibility, and the most prominent solutions, including digital object architecture; invite experts from industry to address the forum, and hold a side meeting on the fringes of the forum with industry and the private sector;

4) get access to key studies, research and expertise on IoT and smart cities, including big data for Arab States, on a page devoted to the initiative on the website of the Arab Regional Office, and help those Arab States that so wish to obtain advice in this area;

5) build Arab capacities in the use of big data as a supplementary or alternative method and low-cost resource for measuring Sustainable Development Goal (SDG) indicators, while enhancing the capacities of stakeholders to implement and analyse big data to measure key development indicators;

6) construct secure infrastructures to store the enormous amounts of data needed to create a smart environment;

7) identify and make use of existing centres of excellence and research and study centres in the Arab States to provide experts and expertise in the areas of the initiative; enter into cooperative partnerships and agreements to help raise the level of availability of broadband services in the Arab States; and use IoT and big data for development, formulate smart city indicators and measure progress on a regular basis.

ARB5: Innovation and entrepreneurship

Objective: To build capacities and raise awareness concerning the culture of innovation and entrepreneurship, in particular for youth and women's empowerment, with the aim of harnessing telecommunication/information and communication technology (ICT) tools to launch projects and undertake economic activities that focus on job creation.

Expected results

Assisting countries to:

1) formulate national and regional mechanisms and strategies to stimulate and enrich the culture of innovation in telecommunications/ICT in the region, including relevant best practice;

2) while creating centres of creativity and new institutions, encourage and develop the role of existing institutions and incubator programmes that support micro, small and medium-sized enterprises (MSMEs) in the telecommunication/ICT field to enable young people to set up their own enterprises, and take advantage of best practice in this area;

3) train young people of both genders to take advantage of ICTs to promote the culture of innovation and entrepreneurship;

4) stimulate young people and students to be creative and innovative in developing Arabic-language applications;

5) develop innovative ways of holding regional meetings, workshops and conferences electronically;

6) strengthen and build the capacity of human resources and help to coordinate among training centres, research centres, incubators, institutions and institutes, while encouraging the exchange of expertise at regional and international levels.

ASIA-PACIFIC REGIONAL INITIATIVES

ASP1: Addressing special needs of least developed countries, small island developing states, including Pacific island countries, and landlocked developing countries

Objective: To provide special assistance to least developed countries (LDCs), small island developing states (SIDS), including Pacific island countries, and landlocked developing countries (LLDCs) in order to meet their priority telecommunication/information and communication technology (ICT) requirements.

Expected results

1) Development of policy and regulatory frameworks for broadband infrastructure, ICT applications and cybersecurity, taking into account the special needs of LDCs, SIDS and LLDCs, and strengthening of human capacity to address future policy and regulatory challenges.

2) Promotion of universal access to telecommunications/ICTs in LDCs, SIDS, and LLDCs.

3) Assistance to LDCs, SIDS and LLDCs in adopting telecommunication/ICT applications in disaster management, relating to disaster prediction, preparedness, adaptation, monitoring, mitigation, response, rehabilitation and recovery of telecommunication/ICT networks based on their priority needs.

4) Assistance to LDCs, SIDS and LLDCs in their efforts to achieve internationally agreed goals, such as the 2030 Agenda for Sustainable Development, the Sendai Framework for Disaster Risk Reduction, the Istanbul Programme of Action for LDCs, the Samoa Pathway for SIDS and the Vienna Programme of Action for LLDCs.

ASP2: Harnessing information and communication technologies to support the digital economy and an inclusive digital society

Objective: To assist Member States in utilizing information and communication technologies (ICTs) to reap the benefits of the digital economy and in addressing the human and technical capacity challenges for bridging the digital divide.

Expected results

1) Planning and elaboration of national strategic frameworks on the digital economy as well as associated toolkits for selected ICT applications and services.

2) Establishment and annual updating of a repository of all work done within ITU relating to the digital economy since the World Telecommunication Development Conference (Dubai, 2014).

3) Development of policies, strategies and guidelines for practical implementation, including for the Internet of Things (IoT) and smart cities.

4) Deployment of ICT/mobile applications to improve the delivery of value-added services in sectors such as health, education, agriculture, governance, energy, financial services and e-commerce.

5) Identification, collation and sharing of knowledge, best practices and case studies on various telecommunication/ICT applications.

6) Development of cross-sectoral national digital skills programmes for inclusiveness, especially for women, youth, the elderly and persons with specific needs.

ASP3: Fostering development of infrastructure to enhance digital connectivity

Objective: To assist Member States in the development of telecommunication/information and communication technology (ICT) infrastructure in order to facilitate provision of services and applications on that infrastructure.

Expected results

1) Migration/transition of analogue networks to digital networks, application of affordable wired and wireless technologies (including interoperability of ICT infrastructure), and optimized use of the digital dividend

2) Maximized use of new and emerging technologies for the development of telecommunication/ICT networks, including 5G and smart grid infrastructure and services

3) Strengthening of capacity to develop and implement national broadband plans in order to provide broadband access to unserved and underserved areas (including support for study of the status of national broadband networks and international connectivity), to promote affordable access, especially for youth, women, indigenous peoples and children, to select appropriate technologies, to develop and use universal service funds effectively, and to develop financially and operationally sustainable business models

4) Promotion of Internet exchange points (IXPs) as a long-term solution to advance connectivity, deployment of IPv6-based networks and applications, and progress in the transition from IPv4 to IPv6

5) Strengthening of the capacity to implement conformance and interoperability (C&I) procedures and testing and to plan resources for C&I programmes, and facilitation of the establishment of common regional and subregional C&I regimes (including the adoption and implementation of mutual recognition arrangements)

6) Attention to spectrum-management issues, including radio-frequency planning, new spectrum-sharing approaches, harmonized spectrum allocation and spectrum monitoring systems, and support for preparations for world radiocommunication conferences (WRCs) and implementation of their outcomes

7) Building of skills for the development and use of satellite telecommunications

8) Strengthening of cooperation with international/regional organizations to enhance regional ICT connectivity, such as the Asia-Pacific Information Superhighway (AP-IS).

ASP4: Enabling policy and regulatory environments

Objective: To assist Member States in developing appropriate policy and regulatory frameworks, fostering innovation, enhancing skills, increasing information sharing and strengthening regulatory cooperation, thereby contributing to a supportive regulatory environment for all stakeholders.

Expected results

1) Sharing of information on developments in policy, legal and regulatory frameworks as well as market developments in the information and communication technology (ICT) sector and the digital economies it enables

2) Development, implementation and review of strategies, policies and legal and regulatory frameworks, including for next-generation universal service obligation (USO), consumer protection, transformation of small and medium-sized enterprises (SMEs) to digital enterprises, and innovation and entrepreneurship

3) Encouraging inclusive dialogues and strengthening cooperation among national and regional regulators, policy-makers and other telecommunication/ICT stakeholders, as well as with other sectors of the economy, on topical policy, legal, regulatory and market issues

4) Strengthening institutional, human and technical capacity on topical policy, legal and regulatory issues, as well as on economic and financial issues and market developments

5) Improved awareness of policy and regulatory frameworks relating to data privacy and cross-border data

6) Development of strategic frameworks to support research and development activities in ICT in developing countries.

ASP5: Contributing to a secure and resilient environment

Objective: To assist Member States to develop and maintain secure, trusted and resilient networks and services, and to address challenges related to climate change and disaster management.

Expected results

1) Compilation of national and/or regional cybersecurity strategies, establishment of national cybersecurity capabilities such as computer incident response teams (CIRTs), and sharing of good practices, through the Global Cybersecurity Index (GCI), to nurture a culture of cybersecurity

2) Strengthening of institutional cooperation and coordination among the key actors and stakeholders at the national, regional and global level (including through organizing cyberdrills) and of the capacity to address issues related to cybersecurity

3) Development of national emergency telecommunication plans and ICT-based initiatives for providing medical (e-health) and humanitarian assistance in disasters and emergencies

4) Incorporation of disaster-resilient features in telecommunication networks and infrastructure, and development of ICT-based solutions (including wireless and satellite-based technologies) to enhance network resilience

5) Development of standards-based monitoring and early-warning systems linked to national and regional networks, and enhanced use of active and passive space-based sensing systems for disaster prediction, detection and mitigation

6) Formulation of comprehensive strategies and measures to help mitigate and respond to the devastating effects of climate change, including e-waste policy.

CIS REGIONAL INITIATIVES

CIS1: Development of e-health to ensure healthy lives and promote well-being for all, at all ages

Objective: To assist the ITU Member States in the region with the development of regulatory texts, technical solutions and specialized training programmes in the field of e-health (including telemedicine), with the aim of providing the public with improved medical services through the use of infocommunications.

Expected results

1) Provision of more complete information to the representatives of telecommunication administrations, government healthcare authorities, medical institutions and the private sector regarding the current legal/regulatory and organizational/technical frameworks in the area of e-health.

2) Establishment of pilot telemedicine stations with a guaranteed electricity supply derived from solar energy.

3) Development of technical solutions in the field of e-health, including telemedicine, the processing of digital medical data, personalized medical-service records, the electronic outpatient card, the electronic patient health record, and so on.

4) Recommendations on the application of modern technical solutions in the design of e-health systems, including telemedicine networks.

5) Courses focusing on the training of medical students, and enhancing the skills of practising medical staff, in the use of ICTs in healthcare, including telemedicine, as well as courses for IT specialists on the maintenance of medical information systems.

CIS2: Use of telecommunications/information and communication technology to ensure inclusive, equitable, quality and safe education, including the enhancement of women's knowledge of information and communication technologies and e-government

Objective: To provide ITU Member States in the region with centralized consultative and technical assistance in the various aspects of the use of telecommunications/information and communication technology (ICT) in education, as well as in regard to raising the level of people's ICT literacy, in the interests of human capacity development and of ensuring gender and social equality.

Expected results

1) Provision of consultative and technical support to representatives of educational establishments with regard to current progress in the use of telecommunications/ICTs in education.

2) Establishment of training centres for enhancing women's knowledge of ICTs and e-government.

3) Development of educational technologies and methods using telecommunications/ICTs.

4) Development of systems for providing pupils, parents and teachers with information on the safe use of Internet resources.

5) Further training courses, training sessions and seminars on introducing telecommunications/ICTs into education and human capacity development, including in rural areas, and also for persons with disabilities.

CIS3: Development and regulation of infocommunication infrastructure to make cities and human settlements inclusive, safe and resilient

Objective: To assist ITU Member States in the region in developing regulatory instruments and technical solutions aimed at creating an enabling environment for the development of infocommunication infrastructure in cities and human settlements, including the use of smart devices.

Expected results

1) Recommendations on the development of infocommunication infrastructure, including the use of telecommunications and other connective media to support and facilitate the sustainable development of smart cities in developing countries.

2) Recommendations on development of the regulatory and legal framework governing the process of building and servicing infocommunication infrastructure in facilities of diverse ownership, including the use of smart devices for developing urban infrastructure.

3) Implementation of pilot projects for the introduction of smart devices in the interests of road-traffic safety, control of street lighting, energy saving, water-supply management, etc.

4) Greater awareness on the part of telecommunication administrations, regulatory bodies and telecommunication equipment developers, manufacturers and suppliers as to the strategies to be adopted for the construction of smart cities and implementation of the smart city vision in the CIS countries.

5) Further training courses, training sessions and seminars on the infrastructure of cities and human settlements.

CIS4: Monitoring the ecological status and the presence and rational use of natural resources

Objective: To assist ITU Member States in the region in monitoring the ecological status and the presence and rational use of natural resources.

Expected results

1) Development of information systems to support decision-making in regard to monitoring of the ecological status and the presence and rational use of natural resources, including the creation of a spatial data infrastructure.

2) Creation of repositories of metadata relating to the results of studies on the ecological status of the region's natural resources.

3) Providing the governmental authorities responsible for the conservation of natural resources with high-quality, well-organized and harmonized spatial information for use in analysing and forecasting the state of the environment.

4) Further training courses, training sessions and seminars on monitoring the ecological status and the presence and rational use of natural resources.

CIS5: Fostering innovative solutions and partnership for the implementation of Internet of Things technologies and their interaction in telecommunication networks, including 4G, IMT-2020 and next-generation networks, in the interests of sustainable development

Objective: To assist ITU Member States in the region with harmonious transformation of the telecommunication market and transition of telecommunication operators to the provision of innovative services to users, ensuring the stability and enhanced performance of telecommunication networks, including 4G, IMT-2020 and next-generation networks (hereinafter "telecommunication networks") within a context of ubiquitous implementation of the Internet of Things (IoT) concept and technologies.

Expected results

1) Development of recommendations on the use of modern technologies and advanced concepts for the operation of the telecommunication market, including principles for telecommunication network interworking, tariff-setting for services, numbering, addressing and identification, as well as issues relating to service quality, security and reliability and traffic management, including aspects of net neutrality.

2) Increased interoperability among telecommunication networks, services and devices through implementation of the IoT concept, including the industrial IoT.

3) Help in ensuring the required level of confidence and security when implementing the large-scale transformation of telecommunication networks within the context of introduction of the IoT concept, including the industrial IoT.

4) Establishment of a single toolkit and a set of specifications for the testing of devices, telecommunication networks and their components within the framework of the IoT concept, including the industrial IoT, on the basis of regional laboratories.

5) Development of recommendations relating to the establishment and operation of regional IoT laboratories, in the interests of sustainable development.

EUROPE REGIONAL INITIATIVES

EUR1: Broadband infrastructure, broadcasting and spectrum management

Objective: To facilitate high-speed connectivity with resilient and synergistic infrastructure development, deployment and sharing, whilst ensuring a trusted and quality user experience.

Expected results

Assistance to the countries in need in the following:

1) development of plans (national and regional) and feasibility studies for the deployment of ubiquitous resilient high-speed connectivity, including 5G/IMT-2020 and digital broadcasting deployment, with all relevant components including legislation, standards, organizational set-up, capacity building and cooperation mechanisms, as needed;

2) sharing of guidelines on collaborative regulation between the telecommunication sector and other synergistic sectors such as energy, railway and transportation;

3) assessment of dynamics, challenges and opportunities in respect of the roll-out of diverse broadband technologies across Europe in the context of the creation of ubiquitous resilient high-speed broadband infrastructure;

4) sharing of best practices and case studies in cable TV, digital broadcasting, 5G experience, early-use cases and trends in next-generation access network roll-out;

5) mapping of ubiquitous infrastructure and services, fostering harmonization of approaches across the region and taking into account infrastructure-sharing approaches applied by countries;

6) establishment of quality-of-service systems and consumer-protection frameworks;

7) development of plans for information and communication technology (ICT) for sustainable energy covering different types of ICT applications and innovations.

EUR2: A citizen-centric approach to building services for national administrations

Objective: To facilitate the development of transformative and paperless citizen-centric services that are accessible and available to all members of society.

Expected results

Assistance to the countries in the following:

1) creation of an experience- and knowledge-exchange platform between countries;

2) development of technical and service infrastructure (data centres, networks, secure gateways, authentication, interoperability, standards and metadata) as well as capacity building within the national administrations and institutions;

3) fostering the development of and increase in types of online transactional services, including applications for administration-to-administration (A2A) and administration-to-customer (A2C) services;

4) building the capacities necessary for accelerating the process of national and regional digitization;

5) raising public trust through security enhancements in e-government services, digitization processes and awareness-raising campaigns, including promotion of application-based solutions for e-government by national administrations and other institutions;

6) identification of key horizontal factors for the successful implementation of e-government services and digitization, such as secure and accessible digital identification, tools for data analysis, integrating workflow solutions, approach to re-use of data, and fostering their development.

EUR3: Accessibility, affordability and skills development for all to ensure digital inclusion and sustainable development

Objective: To bridge the digital divide and equip all groups of society, including persons with disabilities and specific needs, to take advantage of information and communication technology (ICT), by enabling capacity building in digital skills.

Expected results

Assistance to the countries in need in the following:

1) strengthening and supporting regional cooperation and engagement of all relevant stakeholders, in line with the European Accessibility Act, in the development and implementation of ICT accessibility policies and solutions in the European region;

2) raising awareness and promoting relevant guidelines on public policies, including exchanging knowledge and sharing good practices on ICT accessibility products and services for persons with disabilities and specific needs, through meetings and workshops, including a regional conference which could be called "Accessible Europe – Information and communication for all";

3) developing regional and in-country capacity through relevant web accessibility training to ensure that government websites and related services are available and accessible to all citizens, including persons with disabilities and specific needs;

4) developing regional and in-country capacity to promote and deliver to relevant stakeholders training courses in ICT accessibility, including training on public procurement, as a tool to improve the inclusion of persons with disabilities and specific needs in education, employment, and economic and social life;

5) encouraging regional cooperation between research centres and academia in speech technologies, in order to improve these technologies to overcome disabilities;

6) raising awareness about accessibility possibilities of TV and video programming on digital platforms, and implementing appropriate solutions;

7) encouraging the implementation, and related measurement of progress, of regional and national ICT activities and projects aiming to eliminate disparities in the use of and access to ICTs for websites of public institutions and government education programmes, services and information;

8) encouraging the implementation of digital content in education;

9) developing regional and in-country capacity building on coding and computer programming tools that will be available to all, including persons with disabilities and specific needs;

10) promoting digital literacy, digital skills and e-education, and implementing accessible ICTs in e-education.

EUR4: Enhancing trust and confidence in the use of information and communication technologies

Objective: To support the deployment of resilient infrastructure and secure services allowing all citizens, especially children, to use information and communication technologies (ICTs) in their daily lives with confidence.

Expected results

Assistance to the countries in need in the following:

1) providing regional platforms and tools for building human capacities (awareness and expert training) to enhance trust and confidence in the use of ICTs;

2) sharing country and regional best practices and case studies and conducting surveys on enhancing confidence and trust in the use of ICTs;

3) elaboration or review of national cybersecurity strategies;

4) setting up or improving the capabilities of national computer security incident response teams (CSIRTs) and the corresponding networks to support these CSIRTs in cooperating with each other;

5) conducting simulation exercises such as cyberdrills at national and regional level in cooperation with international and regional organizations, and assisting countries in developing tools through synergies and resource optimization.

EUR5: Information and communication technology-centric innovation ecosystems

Objective: To enhance entrepreneurship and establish a sustainable culture of innovation through concrete strategic actions using information and communication technology (ICT) as an enabler, building on the existing regional initiative in Europe on entrepreneurship, innovation and youth.

Expected results

Assistance to the countries in need in the following:

1) initiating a review of the data collected, analysing the current situation and proposing effective recommendations to use ICT as an innovation enabler

2) undertaking ecosystem mapping exercises to coordinate efforts and to create new projects and activities, by facilitating cooperation between existing actors and by highlighting gaps in the ecosystem which have a high impact on stakeholders

3) developing human capacity through the identification and provision of practical skills needed in order to support innovative industries

4) identifying sustainable funding models to support the innovation ecosystems

5) sharing country and regional best practices and case studies on all aspects of ICT as a driver of innovation

6) providing a regional platform for strengthening regional cooperation between ICT-centric innovation ecosystems, through the holding of regional innovation forums.

RESOLUTIONS

AND

RECOMMENDATIONS

Buenos Aires Action Plan

Section 4 – Resolutions and Recommendations

RESOLUTION 1 (Rev. Buenos Aires, 2017)

Rules of procedure of the ITU Telecommunication Development Sector

The World Telecommunication Development Conference (Buenos Aires, 2017),

considering

a) that the functions, duties and organization of the ITU Telecommunication Development Sector (ITU-D) are described in Articles 21, 22 and 23 of the ITU Constitution and Articles 16, 17, 17A, and 20 of the ITU Convention;

b) the General Rules of conferences, assemblies and meetings of the Union adopted by the Plenipotentiary Conference, and Resolution 165 (Guadalajara, 2010) of the Plenipotentiary Conference, on deadlines for the submission of proposals and procedures for the registration of participants for conferences and assemblies of the Union;

c) Resolution 72 (Rev. Busan, 2014) of the Plenipotentiary Conference, on linking strategic, financial and operational planning in ITU,

considering also

a) that ITU-D shall work, among others, through telecommunication development study groups, the Telecommunication Development Advisory Group (TDAG) and regional and world meetings organized within the framework of the Sector's action plan;

b) that, in accordance with No. 207A of the Convention, the World Telecommunication Development Conference (WTDC) is authorized to adopt the working methods and procedures for the management of the Sector's activities in accordance with No. 145A of the Constitution;

c) that, in accordance with decisions of the Plenipotentiary Conference, ITU conferences and assemblies shall, in principle, be held in the last quarter of the year, and not in the same year,

resolves

that, for ITU-D, the general provisions of the Convention referred to in *considering b)* and *considering also b)* should be supplemented by the provisions of this resolution and its annexes, bearing in mind that, in the case of inconsistency, the Constitution, the Convention and the General Rules of conferences, assemblies and meetings of the Union (in that order) shall prevail over this resolution.

SECTION 1 – World Telecommunication Development Conference

1.1 The World Telecommunication Development Conference (WTDC), in undertaking the duties assigned to it in Article 22 of the ITU Constitution, Article 16 of the ITU Convention and the General Rules of conferences, assemblies and meetings of the Union, shall conduct the work of each conference by setting up committees and one or more groups to address organization, work programme, budget control and editorial matters, and to consider other specific matters if required.

1.2 It shall establish a steering committee, presided over by the chairman of the conference, and composed of the vice-chairmen of the conference and the chairmen and vice-chairmen of the committees and any group(s) created by the conference.

1.3 WTDC shall establish a budget control committee and an editorial committee, the tasks and responsibilities of which are set out in the General Rules of conferences, assemblies and meetings of the Union (General Rules, Nos 69-74):

a) The Budget Control Committee, *inter alia*, examines the estimated total expenses of the conference and estimates the financial needs of the ITU Telecommunication Development Sector (ITU-D) up to the next WTDC and the costs to ITU-D and ITU as a whole entailed by the execution of the decisions of the conference.

b) The Editorial Committee perfects the wording of texts arising from WTDC deliberations, such as resolutions, without altering their sense and substance, and aligns the texts in the official languages of the Union.

1.4 In addition to the steering, budget control and editorial committees, the two following committees are set up:

a) The Committee on Working Methods of ITU-D, the terms of reference of which are to examine proposals and contributions relating to cooperation among members; to evaluate the working methods and functioning of the ITU-D study groups and the Telecommunication Development Advisory Group (TDAG); to assess and identify options for maximizing programme delivery and to approve appropriate changes thereto with a view to strengthening the synergies between study group Questions, programmes and regional initiatives; and to submit to the plenary meeting reports, on the basis of the proposals of ITU Member States, ITU-D Sector Members and Academia, considering TDAG and study group reports submitted to the conference.

b) The Committee on Objectives, the terms of reference of which are to review and approve the outputs and outcomes for the objectives; to review and agree on the related study group Questions and regional initiatives and establish appropriate guidelines for their implementation; to review and agree on relevant resolutions; and to ensure that the output is in accordance with a results-based management approach aiming to improve management effectiveness and accountability.

1.5 The plenary meeting of a WTDC may set up other committees or groups that meet to address specific matters, if required, in accordance with No. 63 of the General Rules of conferences, assemblies and meetings of the Union. The terms of reference should be contained in the establishing resolution.

1.6 All committees and groups referred to in §§ 1.2 to 1.5 above shall normally cease to exist with the closing of WTDC except, if required and subject to the approval of the conference and within the budgetary limits, the Editorial Committee. The Editorial Committee may therefore hold meetings after the closing of WTDC to complete its tasks as assigned by the conference.

1.7 Prior to the inaugural meeting of WTDC, in accordance with No. 49 of the General Rules of conferences, assemblies and meetings of the Union, the heads of delegation shall meet to prepare the agenda for the first plenary meeting and make proposals for the organization of the conference, including proposals for chairmanships and vice-chairmanships of WTDC, its committees and groups.

1.8 The programme of work of WTDC shall be designed to provide adequate time for consideration of the important administrative and organizational aspects of ITU-D. As a general rule:

1.8.1 WTDC shall consider reports from the Director of the Telecommunication Development Bureau (BDT) and, pursuant to No. 208 of the Convention, shall establish work programmes and guidelines for defining telecommunication development questions and priorities and shall provide direction and guidance for the ITU-D work programme. It shall decide on the need to maintain, terminate or establish study groups, allocate to each of them the Questions to be studied and, taking into account consideration by the heads of delegation, appoint the chairmen and vice-chairmen of study groups, of TDAG and of any other groups it has established, taking account of Article 20 of the Convention. The study group chairmen themselves shall, during the conference, be at the disposal of WTDC to provide information on matters relating to the study group they chair.

1.8.2 WTDC shall establish a declaration, a plan of action, including programmes and regional initiatives, ITU-D's contribution to the draft ITU strategic plan, ITU-D study group Questions, as well as resolutions and Recommendations.

1.9 A WTDC may express its opinion relating to the duration or agenda of a future WTDC.

1.10 During WTDC, the heads of delegation shall meet:

a) to consider the proposals concerning the work programme and the constitution of study groups in particular;

b) to draw up proposals concerning the designation of chairmen and vice-chairmen of study groups, TDAG and any other groups established by WTDC (see section 3).

1.11 In those cases indicated in § 1.8.1, a WTDC may be asked to consider the approval of one or more new or revised Recommendations and deletion of Recommendations. The report of any study group(s) or TDAG proposing such action should include information on why such action is proposed.

1.12 Voting

Should there be a need for a vote at WTDC, the vote will be conducted according to the relevant sections of the Constitution, Convention and General Rules of conferences, assemblies and meetings of the Union.

1.13 In accordance with No. 213A of the Convention and Resolution 24 (Rev. Buenos Aires, 2017), WTDC may assign specific matters within its competence to TDAG to act on its behalf, indicating the recommended action on those matters.

1.14 TDAG shall report to the next WTDC on progress in matters that may be included in agendas of future WTDCs as well as on the progress of ITU-D studies in response to requests made by previous conferences.

SECTION 2 – Documentation of ITU-D

2.1 General principles

In §§ 2.1.1 and 2.1.2 below, the term "texts" is used for the ITU Telecommunication Development Sector (ITU-D) Declaration, action plan, objectives, programmes, resolutions, decisions, Questions, Recommendations, regional initiatives, reports, handbooks and other documents, as defined in §§ 2.2 to 2.10.

2.1.1 Presentation of texts

2.1.1.1 Texts should be as brief as possible, taking account of the necessary content, and should relate directly to the objective, resolution or Question/topic or part of the objective, resolution, Question/topic being studied.

2.1.1.2 Each text may include a reference to related texts and, where appropriate, to relevant provisions of the Basic Texts of the Union, without any interpretation, qualification or suggestion of change.

2.1.1.3 Texts shall be presented showing their number, their title and an indication of the year of their initial approval, where appropriate, and the year of approval of revisions.

2.1.1.4 Annexes to any of these texts should be considered as having equivalent status.

2.1.2 Publication of texts

2.1.2.1 All texts shall be published in electronic form as soon as possible after approval and may also be made available in paper form according to the publication policy of ITU.

2.1.2.2 The approved WTDC Declaration, action plan, objectives, programmes, resolutions, decisions and Questions, Recommendations and output reports (if a report exceeds 50 pages, § 2.4.1 applies) will be published by ITU in the official languages of the Union as soon as practicable. Other texts will be published, as soon as possible, in English only or in the six official languages of the Union, depending on the decision of the relevant group.

2.2 ITU-D Declaration

2.2.1 Definition

Statement of the main outcomes and priorities established by the World Telecommunication Development Conference (WTDC). The Declaration is usually named after the conference venue.

2.2.2 Approval

WTDC shall examine and approve a WTDC Declaration based on proposals by Member States and ITU-D Sector Members, taking into account suggestions by the Telecommunication Development Advisory Group (TDAG), new trends in the development of telecommunications/ICT and emerging issues, particularly in developing countries[1].

2.3 ITU-D action plan

2.3.1 Definition

A comprehensive package that will promote the equitable and sustainable development of telecommunication/ICT networks and services. It consists of study group Questions, programmes and regional initiatives that intend to address the specific needs of the regions. The action plan is usually named after the conference venue.

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

2.3.2 Approval

WTDC shall examine and approve a WTDC action plan based on proposals by Member States and ITU-D Sector Members, taking into account suggestions by TDAG and paying special attention to the needs of developing countries.

2.4 ITU-D objectives/programmes

2.4.1 Definition

Key elements of the action plan, constituting components of the toolkit BDT uses when solicited by Member States and ITU-D Sector Members to support their efforts to build the information society for all. In the implementation of objectives/programmes, account should be taken of the resolutions, decisions, Recommendations and reports emanating from WTDC.

2.4.2 Approval

WTDC shall examine and approve new objectives/programmes proposed by Member States and ITU-D Sector Members.

2.5 Regional initiatives

2.5.1 Definition

Regional initiatives are intended to address specific telecommunication/ICT priority areas, through partnerships and resource mobilization to implement projects that are part of the action plan.

2.5.2 Approval

WTDC shall examine and approve new regional initiatives proposed by Member States and ITU-D Sector Members.

2.6 ITU-D resolutions/decisions

2.6.1 Definition

A WTDC text containing provisions on the organization, working methods and programmes of ITU-D and Questions/topics to be studied.

2.6.2 Approval

WTDC shall examine and may approve revised or new resolutions/decisions proposed by Member States and ITU-D Sector Members, taking into account suggestions by TDAG.

2.6.3 Deletion

WTDC may delete resolutions/decisions based on proposals from Member States and ITU-D Sector Members, taking into account suggestions by TDAG.

2.7 ITU-D Questions

2.7.1 Definition

Description of an area of work to be studied, normally leading to the production of new or revised Recommendations, guidelines, handbooks or reports.

2.7.2 Adoption and approval

The procedures for adopting and approving Questions are set out in section 5 of this resolution.

2.7.3 Deletion

The procedure for deleting Questions is set out in section 6 of this resolution.

2.8 ITU-D Recommendations

2.8.1 Definition

An answer to a Question, part of a Question, or a resolution, for the organization of the work of ITU-D, which, within the scope of existing knowledge and the research carried out by study groups and adopted in accordance with established procedures, may provide guidance on technical, organizational, tariff-related and operational matters, including working methods, may describe a preferred method or proposed solution for undertaking a specific task, or may recommend procedures for specific applications. These Recommendations should be sufficient to serve as a basis for international cooperation.

2.8.2 Adoption and approval

The procedures for adopting and approving Recommendations are set out in section 7 of this resolution.

2.8.3 Deletion

The procedure for deleting Recommendations is set out in section 8 of this resolution.

2.9 ITU-D reports

2.9.1 Definition

A technical, operational or procedural statement, prepared by a study group on a given subject related to a current Question or resolution. Several types of reports are defined in § 12 of section 3. An output report represents the principal results of a study and should be considered and approved by the relevant study group.

2.9.2 Approval

Each study group may approve revised or new output reports, preferably by consensus.

2.9.3 Deletion

Each study group may delete an ITU-D output report, preferably by consensus.

2.10 ITU-D handbooks

2.10.1 Definition

A text which provides a statement of the current knowledge, the present position of studies or good operating or technical practice, in certain aspects of telecommunications/ICT, paying particular attention to the requirements of developing countries.

2.10.2 Approval

Each study group may approve revised or new handbooks, preferably by consensus. The study group may authorize its relevant working party to approve handbooks.

2.11 ITU-D guidelines

2.11.1 Definition

Guidelines present a range of options that reflect the written contributions, discussion, research, analysis, ideas and experience of study group participants. The goal is to produce a menu of choices to assist the ITU membership and others to deliver a robust communications sector capable of accelerating the achievement of national and international goals for social and economic development. The membership and others are encouraged to apply those guidelines that are agreeable and suitable for their individual circumstances. Best-practice guidelines are not mandatory, and while thorough consideration of the full range of guidelines is encouraged, inapplicable or otherwise unsuitable suggestions need not be employed.

2.11.2 Approval

Each study group may approve revised or new guidelines, preferably by consensus.

SECTION 3 – Study groups and their relevant groups

3 Classification of study groups and their relevant groups

3.1 The World Telecommunication Development Conference (WTDC) establishes study groups, each studying telecommunication/ICT matters of interest to the developing countries in particular, including the issues referred to in No. 211 of the ITU Convention. Study groups shall observe strictly Nos 214, 215, 215A and 215B of the Convention.

3.2 To facilitate their work, the study groups may set up working parties, rapporteur groups and joint rapporteur groups (JRG) or intersector rapporteur groups (IRG) to deal with specific Questions or parts of thereof, including with the participation of other ITU Sectors.

3.3 Where appropriate, regional groups may be set up within the study groups to study Questions or problems the specific nature of which makes it desirable that they be studied within the framework of one or more regions of the Union.

3.4 The establishment of regional groups should not give rise to duplication of work being carried out at the global level by the corresponding study groups, their relevant groups or any other groups established pursuant to No. 209A of the Convention.

3.5 A JRG may be established for Questions requiring the participation of experts from more than one study group. An IRG could be established when all study groups concerned agree to the creation of the group. Unless otherwise specified, the working methods of IRGs and JRGs should be identical to those of rapporteur groups. At the time a JRG is established, its terms of reference, reporting lines and final decision-making authority should be clearly identified.

3.6 The procedures for establishing the ICG and IRG when organizing and conducting work in these groups are set out in WTDC Resolution 59.[2]

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[2] Note by the secretariat: For details on the procedures of the other Sectors, see also the relevant resolutions from the Radiocommunication Assembly (RA) and the World Telecommunication Standardization Assembly (WTSA), with references to RA Resolutions ITU-R 6, ITU-R 7 and WTSA Resolution 18.

3.7 A rapporteur group, JRG or IRG shall submit draft deliverables as indicated in its relevant terms of reference to its lead study group**.** Working parties prepare draft reports, guidelines and other texts for consideration by the study groups. To limit the resource impact on the ITU Telecommunication Development Sector (ITU-D), Member States, Sector Members, Associates and Academia, a study group shall establish, preferably by consensus, and maintain only the minimum number of working parties.

4 Chairmen and vice-chairmen

4.1 Appointment of chairmen and vice-chairmen by WTDC shall be primarily based upon proven competence both in matters considered by the study group concerned and in terms of the management skills required, taking into account the need to promote gender balance in leadership positions and equitable geographical distribution, in particular promoting the participation of developing countries through Member States and ITU-D Sector Members.

4.2 Within the mandate set out by WTDC Resolution 2, study group chairmen shall be responsible for establishing an appropriate structure to distribute the work, after consulting with study group vice-chairmen. The study group chairmen shall perform the duties required of them within their study groups or within joint coordination activities.

4.3 The mandate of the vice-chairmen shall be to assist the chairman in matters relating to the management of the study group, including substitution for the chairman at official ITU meetings or replacement of the chairman should he or she be unable to continue with study group duties. Each vice-chairman should be assigned specific functions by the chairman, after consultation with the study group vice-chairmen, including to assist the chairman and study groups as they produce the outputs called for by WTDC, including as indicated in § 5.6 below**.**

4.4 Study group vice-chairmen may in turn be selected as chairmen of working parties, JRGs or IRGs, or as rapporteurs, with the sole limitation that they may not occupy more than two posts at the same time in the study period.

4.5 The appointment of vice-chairmen is limited to two candidates from each region, taking into account WTDC Resolution 61 (Rev. Dubai, 2014) and Resolution 70 (Rev. Busan, 2014) of the Plenipotentiary Conference to ensure equitable geographical distribution among the six regions[3].

4.6 In order to ensure equitable distribution of the tasks and to achieve greater involvement by the vice-chairmen in the management and work of the study groups, and in the work of TDAG, vice-chairmen should be considered first to assume the leadership role of any new or existing activity, including working party chairmanships within the ITU-D study groups.

4.7 Study group chairmen should participate in WTDC and in TDAG to represent the study groups.

5 Rapporteurs

5.1 Rapporteurs are appointed by a study group in order to progress the study of a Question based on contributions received and to develop new and revised reports, opinions and Recommendations. A rapporteur shall have responsibility for only one Question.

5.2 Rapporteurs of an IRG are appointed in accordance with WTDC Resolution 59.

5.3 Because of the nature of the studies, rapporteur appointments should be based both on expertise in the subject to be studied and on the ability to coordinate the work. Elements of the expected work carried out by the rapporteurs are described in Annex 5 to this resolution.

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[3] Africa, Americas, Arab States, Asia and the Pacific, Commonwealth of Independent States, Europe.

5.4 Clear terms of reference for the work of the rapporteur, including expected results and deliverables as specified in §§ 12.1 to 12.5 below, should be added to the corresponding Question, by the study group, as required.

5.5 One rapporteur and one or more vice-rapporteurs are appointed, as appropriate, by a study group for each Question. Exceptionally, co-rapporteurs may also be appointed where, for example, this would balance the workload and facilitate optimum results. One of the vice-rapporteurs shall take over the chairmanship when the rapporteur is not available. This also includes the case of rapporteurs who are no longer representing the Member State or ITU-D Sector Member which nominated them as participant in accordance with § 8.1 below. Vice-rapporteurs may be representatives from Member States, ITU-D Sector Members, Associates or Academia[4]. When a vice-rapporteur is called upon to replace a rapporteur for the rest of the study period, a new vice-rapporteur may be appointed.

5.6 For all contributions that meet the deadline for translation as specified in § 13.2.2, rapporteurs, with assistance from all vice-rapporteurs, shall prepare, publish, and place on the meeting agenda a contribution that compiles all lessons learned and suggested best practices submitted to the meeting. To prepare this contribution, rapporteurs shall use information included in box 2 of the contribution template, as provided in Annex 2 referenced in § 17.4.

6 Powers of the study groups

6.1 Each study group may develop draft new or revised Recommendations based on contributions received during the study period for approval either by WTDC or pursuant to section 7 below. Recommendations approved in accordance with either procedure shall have the same status.

6.2 Each study group may also adopt draft Questions in accordance with the procedure described in § 18.2 and section 19.

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[4] The latter include colleges, institutes, universities and associated research institutions interested in telecommunication/ICT development.

6.3 In addition to the above, each study group shall be competent to approve guidelines, reports and handbooks.

6.4 In cases where the implementation of the results obtained is through activities of the Telecommunication Development Bureau (BDT), such as workshops, regional meetings, or surveys, these activities should be reflected in the annual operational plan and conducted in coordination with the relevant study Question.

6.5 In the cases where the terms of reference of a rapporteur group are completed prior to the end of the study period, the study group should issue guidelines, reports, best practices and Recommendations promptly for review by the membership.

6.6 Workshops, seminars or other events for exchanging information with invited experts from outside the ITU membership on key topics and issues may be held during or around study group meetings.

7 Meetings

7.1 The study groups and their relevant groups shall normally meet at ITU headquarters.

7.2 Study groups and their relevant groups may meet outside Geneva if invited by Member States, ITU-D Sector Members, or organizations other than administrations pursuant to Article 19 of the Convention (hereafter called other authorized entities and organizations) authorized in this respect by a Member State of the Union, having regard to facilitating the attendance of developing countries. Such invitations shall normally be considered only if they are submitted to WTDC, to the Telecommunication Development Advisory Group (TDAG) or to an ITU-D study group meeting. If such invitations cannot be submitted to any of these meetings, the decision to accept the invitation rests with the Director of BDT in consultation with the chairman of the study group concerned. They may be finally accepted after consultation with the Director if they are compatible with the resources allocated to ITU-D by the ITU Council and the objectives, responsibility and mandates of the study groups.

7.3 Regional and subregional meetings offer a valuable opportunity for information exchange and for the development of management and technical experience and expertise. Every opportunity should be taken to provide additional opportunities for experts (study group participants) from developing countries to gain experience by participating in regional and subregional meetings which deal with study group work. To this end, invitations to regional and subregional meetings organized on topics dealt with by study groups should be extended to participants of the rapporteur groups, working parties or JRGs concerned.

7.4 The invitations referred to in § 7.2 above shall be issued and accepted, and the corresponding meetings outside Geneva organized, only if the conditions laid down in Resolution 5 (Kyoto, 1994) of the Plenipotentiary Conference and Council Decision 304 are met. Invitations to hold meetings of the study groups or their relevant groups away from Geneva shall be accompanied by a statement indicating the host's agreement to defray the additional expenditure involved and that it will provide at least adequate premises and the necessary furniture and equipment free of charge, except that in the case of developing countries, equipment need not necessarily be provided free of charge by the host government, if the government so requests.

7.5 Relevant groups of study groups may benefit from meetings held via teleconference, having regard to the possibilities of developing countries and their ability to participate by teleconference, or other alternative arrangements, rather than at ITU headquarters or in a region. A request by a rapporteur for such a meeting should be submitted to and approved by the parent study group.

7.6 The dates, place and agenda for meetings of relevant groups shall be agreed by the parent study group.

7.7 Should an invitation be cancelled for any reason, it shall be proposed that the meeting be convened in Geneva, in principle on the date originally planned.

8 Participation in meetings

8.1 Member States, ITU-D Sector Members, Associates, Academia and other entities and organizations authorized to participate in ITU-D activities shall be represented, in the study groups and subordinate groups in whose work they wish to take part, by participants registered by name and chosen by them as representatives to make an effective contribution to the study of the Questions entrusted to those study groups. The chairman of a meeting may, in accordance with No. 248A of Article 20 of the Convention, invite individual experts, as appropriate, to present their specific point of view at one or more meetings, without the experts taking part in the decision-making process and without giving the expert the right to participate in any other meetings to which a specific invitation by the chairman has not been extended. Experts may present reports and submissions for information at the request of the chairmen of meetings; they may also participate in relevant discussions.

8.2 Informal roundtable discussions, seminars or illustrative workshops associated with each study Question featuring such experts and others are encouraged within the allocated resources in the financial plan and biennial budget, taking into account the provisions of WTDC Resolution 40 (Rev. Buenos Aires, 2017) on capacity building, to allow for coordinated effort between the activities of the Question and other work carried out by BDT.

Lessons learned and suggested best practices from these activities shall be recorded in a report prepared by the rapporteur group for its consideration and submitted as a contribution to the corresponding study group. Lessons learned and suggested best practices recorded from workshops shall also be added to the website for any relevant ITU-D study Question in accordance with § 14.4 below.

8.3 The Director of BDT shall keep up to date a list of the Member States, ITU-D Sector Members, Associates, Academia and other authorized entities and organizations participating in each study group.

8.4 To the extent possible and practicable, study groups and their relevant groups shall endeavour to use remote participation technologies as part of efforts to encourage and enable broader participation in the work of the study groups by all Member States, ITU-D Sector Members, Associates and Academia, especially for persons with specific needs, such as persons with disabilities.

8.5 The rapporteur of each study Question shall coordinate and keep up to date a list of focal points from Member States, ITU-D Sector Members, Associates and Academia in order to facilitate the communication and exchange of information on specific matters in the context of study.

9 Frequency of meetings

9.1 The study groups shall in principle meet at least once a year during the interval between two WTDCs, preferably in the second half of the year so that working parties and rapporteur groups associated therewith may meet in the first half of the year to prepare the necessary reports and submit them to the parent study group. However, additional meetings may take place with the approval of the Director of BDT, having regard to the priorities laid down by the preceding WTDC and the resources of ITU-D.

9.2 Working parties and their associated rapporteur groups shall in principle meet twice a year, at least in the period between two WTDCs, one of the meetings being held in conjunction with the parent study group. However, additional meetings may be held with the consent of the parent study group and with the approval of the Director, having regard to the priorities laid down by the preceding WTDC and the resources of ITU-D.

9.3 Working parties should preferably meet back to back (organizing partly overlapping meetings or meeting immediately one after the other), although a working party may meet individually if the need arises or if the holding of a meeting is desirable (e.g. in association with seminars).

9.4 To ensure the best possible use of the resources of ITU-D and of those participating in its work, the Director, in collaboration with the study group chairmen, shall establish and publish a timetable of meetings not later than three months before the first meeting of the calendar year, including those held by study group management teams. The timetable shall take account of such factors as the capacity of the ITU conference services, document requirements for meetings and the need for close coordination with the activities of the other Sectors and other international or regional organizations.

9.5 In establishing the timetable of each meeting, to the extent possible, meeting sessions on Questions from the same working party shall not take place in parallel, in order to allow participants to attend the meetings on related Questions. On the other hand, if within the allocated resources of the budget as approved by the Council and the financial plan as approved by the Plenipotentiary Conference, sessions on Questions from different working parties, when deemed necessary by the management team, may be held in parallel, to allow sufficient time for each Question to develop its work and to extend the time allocated for Questions with a higher number of contributions.

9.6 When formulating a timetable for meetings in accordance with § 9.4, the Director, in cooperation with the study group chairmen, should make every possible effort, as far as practicable, in order that the planned period for meetings not be scheduled during a period which is considered a major religious period by a Member State.

9.7 In the establishment of the work plan, the timetable of meetings must take into account the time required for participating Member States, ITU-D Sector Members, Associates, Academia and other authorized entities and organizations to prepare contributions and documentation.

9.8 All study groups shall meet sufficiently in advance of WTDC in order to enable the final reports and draft Recommendations to be disseminated within the required deadlines.

10 Establishment of work plans and preparation of meetings

10.1 After each WTDC, a work plan shall be proposed by each study group chairman and rapporteurs, with the assistance of BDT. The work programmes shall take account of the programme of activities and priorities and they should be connected to the resolutions and Recommendations adopted by WTDC. The work programmes may organize the work of a specific study Question around sub-topics to be addressed sequentially during the study cycle, provided such sub-topics are within the terms of reference of the study Question. As an informational resource to support the development of the work plans, the Director of BDT shall, through the appropriate BDT staff, prepare information about all ITU projects relevant to the particular study Question or issue, including those being implemented by the regional offices and in the other Sectors. This information should be provided in a contribution to the study group chairmen and rapporteurs prior to the development of their work plans so as to allow them to take full advantage of new, existing and ongoing ITU work that could contribute to the study of their Questions.

10.2 Relevant study group chairmen, working party chairmen and rapporteurs shall establish a work plan for their study Question stating clearly the outputs planned to be developed and the time-frame by which they are expected to be delivered. The implementation of the work plan will, however, depend to a large extent on the contributions received from Member States, ITU-D Sector Members, Associates and Academia, other authorized entities and organizations and BDT, as well as on the opinions expressed by participants in the meetings. Outputs include those specified in §§ 6.1 to 6.6 above.

10.3 A circular with an agenda of the meeting, a draft work plan and a list of the Questions to be studied shall be prepared by BDT with the help of the chairman of the study group concerned.

10.4 The circular must include details about any study group management team meeting and must reach the ITU-D members and other authorized entities and organizations participating in the work of the study group/working party concerned at least three months before the opening of the meeting.

10.5 Details on registration, including a link to the online registration form, shall be included in the circular so that the representatives of the entities concerned can announce their intention to participate in the meeting. The form shall contain the names and addresses of intended participants and an indication of the languages required by participants. The form shall be submitted no less than 45 calendar days prior to the opening of the meeting, in order to secure interpretation and translation of documents in the requested languages.

11 Study group management teams

11.1 Each ITU-D study group has a management team composed of the chairman and vice-chairmen of the study group, the chairmen and vice-chairmen of working parties and the rapporteurs and vice-rapporteurs. The management team is encouraged to assist the chairman in managing the study group, for example in the responsibilities for liaison activities, cooperation and collaboration with other organizations, forums, etc. outside ITU, and promotion of the related study group activities.

11.2 Study group management teams should maintain contact among themselves and with BDT by electronic means to the extent practicable. Appropriate liaison meetings should be arranged, as necessary, with study group chairmen from the other Sectors.

11.3 The ITU-D study group management team should meet prior to the meeting of the study group, in order to properly organize the coming meeting, including the review and approval of a time-management plan. To support these meetings and identify any efficiencies, the Director of BDT shall, through the appropriate BDT staff (e.g. directors of regional offices, focal points), provide information to study group rapporteurs on all relevant existing and planned ITU projects, including those being implemented by the regional offices and in the other Sectors. The ITU-D study group management team may, when necessary, meet remotely.

11.4 A joint management team will be established, chaired by the Director, composed of the ITU-D study group management teams and the chairman of TDAG. The joint management team should meet during the annual meeting of the study groups, as required.

11.5 The role of the joint management team of the ITU-D study groups is to:

a) advise BDT management on the estimation of the budget requirements of the study groups;

b) coordinate issues common to study groups;

c) prepare joint proposals to TDAG or other relevant bodies in ITU-D as required;

d) finalize the dates of subsequent study group meetings;

e) deal with any other issue that may arise.

12 Preparation of reports

12.1 Reports of the study group's work can be of four major types:

a) Meeting reports

b) Progress reports

c) Output reports

d) Chairman's report to WTDC.

12.2 Meeting reports

12.2.1 Prepared by the study group chairman or the working party chairman, assisted by BDT, meeting reports shall contain a summary of the outcome of the work. They must also indicate items which require further study at the next meeting or a recommendation for conclusion or completion of the work of a study Question or consolidation with another Question. The reports should also include reference to contributions and/or meeting documents, the main results (including Recommendations and guidelines), directives for future work (including referral of output reports to BDT for incorporation into relevant BDT programme activities as appropriate), planned meetings of working parties, if any, rapporteur groups and joint rapporteur groups, and liaison statements endorsed at the study group level.

12.2.2 The rapporteur, assisted by vice-rapporteurs, shall prepare meeting reports. These reports shall contain a summary of the outcomes of the work. They must also clarify items requiring further study at a subsequent meeting. They should indicate the contributions to the meeting and/or documents, key outcomes, directives for future action and meetings planned on the Question concerned, and liaison statements endorsed at the study group level.

12.2.3 The report of a study group's first meeting in the study period shall include a list of the chairmen and vice-chairmen of working parties and/or rapporteur groups, if any, and of any other groups that may have been created, and of the rapporteur and vice-rapporteurs appointed. This list shall be updated, as required, in subsequent reports.

12.3 Progress reports

12.3.1 The following list of items is suggested for inclusion in progress reports:

a) brief summary of the status and draft outline of the output report and all other output documents as specified in §§ 6.1 to 6.6 above;

b) conclusions or titles of reports or Recommendations to be endorsed;

c) status of work with reference to the work plan, including baseline document, if available;

d) draft new or revised reports, guidelines or Recommendations, or reference to source documents containing the Recommendations;

e) draft liaison statements in response to or requesting action by other study groups or organizations;

f) reference to normal or delayed contributions considered part of the assigned study and a summary of contributions considered;

g) reference to submissions received in response to liaison statements from other organizations;

h) major issues remaining for resolution and draft agenda of future approved meetings, if any;

i) reference to the list of attendees at meetings held since the last progress report;

j) reference to the list of normal contributions or temporary documents containing the reports of all working party and rapporteur group meetings since the last progress report.

12.3.2 The progress report may make reference to meeting reports in order to avoid duplication of information.

12.3.3 Progress reports by working parties and rapporteur groups shall be submitted to the study group for approval. Progress reports on the work of the IRGs shall be submitted for consideration and approval to the study groups of the Sectors that established the IRGs.

12.4 Output reports

12.4.1 Such reports represent the expected deliverable, i.e. the principal results of a study. The items to be covered are indicated in the expected output of the Question concerned in accordance with the action plan adopted by WTDC. Such reports shall normally be limited to a maximum of 50 pages, including annexes and appendices, with relevant electronic references as needed. When reports exceed the 50-page limit, and after consultation with the study group chairman concerned, annexes and appendices may be included without translation when they are considered of particular relevance and provided that the body of the report is within the 50-page limit. All reports shall be translated up to the number of pages agreed upon in the terms of reference for a Question, to the extent possible and within the available budget.

12.4.2 To help maximize the use of study group final output reports, study groups may place final output reports and associated annexes in an online library accessible from the ITU-D homepage as well as the study group document registry, until the study group decides that they have become outdated. Study group outputs should be incorporated into BDT programme and regional office activities and form part of the implementation of ITU-D strategic objectives.

12.4.3 To help ascertain the extent to which the ITU-D membership, and in particular developing countries, benefit from the outputs of studies, it would be useful for study group chairmen, with the help of the working party chairmen and Question rapporteurs, to prepare a joint survey to be sent to the membership at least six months before the end of the study period. The results of the joint survey will be analysed and submitted to the meetings of the study groups and TDAG before being transmitted to the next WTDC. They will serve to prepare for the next study period.

12.4.4 To assess the extent to which an issue generates interest among the ITU-D membership, in particular developing countries, statistics should be provided on the contributions presented by each rapporteur group or study group meeting, broken down by country or by region.

12.5 Chairman's reports to WTDC

12.5.1 The chairman's report of each study group to WTDC shall be the responsibility of the chairman of the study group concerned, with the assistance of BDT, and shall include:

a) a summary of the results achieved by the study group during the study period in question, describing the work of the study group, the number of contributions on the Questions under study, and the outcome achieved, including discussion of the ITU-D strategic objectives that are linked to the study group's activities;

b) reference to any new or revised Recommendations approved by correspondence by Member States during the study period;

c) reference to any Recommendations deleted during the study period;

d) reference to the text of any Recommendations submitted to WTDC for approval;

e) a list of any new or revised Questions proposed for study during the next study period;

f) a list of any Questions proposed for deletion, if any;

g) summary of collaboration between the programmes and regional offices in undertaking the activities of the study group.

12.5.2 The preparation of Recommendations should follow the general practice of the Union. Examples include the Recommendations and resolutions of WTDCs. A Recommendation should stand alone. Information may be annexed to the Recommendations, in order to accomplish this. A template Recommendation is set out in Annex 1 to this resolution.

SECTION 4 – Submission, processing and presentation of contributions

13 Submission of contributions

13.1 Contributions to a world telecommunication development conference (WTDC) should be submitted not later than 30 calendar days before the opening of a WTDC, and in any event the submission deadline for all contributions to WTDC shall be no later than 14 calendar days before the opening of the conference to allow for their timely translation and thorough consideration by delegations. The Telecommunication Development Bureau (BDT) shall immediately publish all contributions submitted to WTDC in their original language(s) on the WTDC website, even before their translation into the other official languages of the Union. All contributions shall be published not less than seven calendar days before WTDC.

13.2 The submission of contributions to the meetings of the Telecommunication Development Advisory Group (TDAG), the study groups and their relevant groups shall be as follows:

13.2.1 Each contribution should clearly indicate the Question, resolution or topic and the group for which it is intended, and be accompanied by the details of a contact person as may be needed to clarify the contribution.

13.2.2 Contributions must be received not later than 45 days before a meeting if they are to be translated for the meeting. Beyond this 45-day deadline, the contributor may submit the document in the original language and in any official language into which it may have been translated by the author. Contributions that do not meet this 45-day deadline but are received at least 12 days before the opening of the meeting shall be published but not translated.

13.2.3 Member States, ITU Telecommunication Development Sector (ITU-D) Sector Members, Associates, Academia, other authorized entities and organizations and the chairmen and vice-chairmen of study groups, working parties or their relevant groups should submit their contributions to current ITU-D studies to the Director of BDT using the official templates made available online and included in Annex 2 to this resolution.

13.2.4 Such contributions should, *inter alia*, deal with the results of experience gained in telecommunication development, describe case studies and/or contain proposals for promoting balanced worldwide and regional telecommunication development.

13.2.5 In order to facilitate the study of certain Questions, BDT may submit consolidated documents relevant to the Question or the results of case studies, including information on existing programme and regional office activities. Such documents will be treated as contributions.

13.2.6 In principle, documents submitted to the study groups as contributions should not exceed five pages. For existing texts, cross-references should be used instead of repeating material *in extenso*. Information material can be placed in annexes or provided on request as an information document. An example of the template for the submission of contributions is set out in Annex 2 to this resolution.

13.2.7 Member States, ITU-D Sector Members, Associates and Academia are invited to include specific lessons learned and suggested best practices, as appropriate, when submitting contributions to the meetings of the study groups, TDAG and other relevant ITU-D groups. The contribution template in Annex 2 to this resolution contains a designated section for this purpose. Lessons learned and suggested best practices submitted in the appropriate box of the contribution template shall be published in accordance with § 14.4 below.

13.2.8 Contributions should be submitted to BDT using the online template in order to fast-track their processing by minimizing the need for reformatting, without any modification to the content of the text. Any contribution submitted by participants shall be immediately transmitted by BDT to the chairman of the study group and to the rapporteur in accordance with § 16.1.

13.2.9 The collaboration between members of study groups and their relevant groups should be, as far as possible, by electronic means. BDT should provide all study group members with appropriate access to electronic documentation for their work, and promote the provision of appropriate systems and facilities to support the conduct of study group work by electronic means in all the official languages of ITU.

14 Processing of contributions

Input to study group, working party or rapporteur group meetings may be of three types:

a) Contributions for action (documents included on the meeting agenda for discussion)

b) Contributions for information (information documents not included on the meeting agenda or discussed at the meeting)

c) Liaison statements.

14.1 Contributions for action

14.1.1 All contributions for action received 45 calendar days before a study group/working party meeting or a block of rapporteur group meetings shall be translated and published not less than seven calendar days before the said meeting. Beyond this 45-day deadline, the contributor may submit the document in the original language and in any official language into which it may have been translated by the author.

14.1.2 After consultation with the chairman of the study group/working party or rapporteur group concerned, it may be agreed to accept contributions for action that exceed the page-limit of five pages. In such cases, it may be agreed to publish a summary, which shall be drawn up by the author of the contribution.

14.1.3 All contributions received less than 45 calendar days but at least 12 calendar days before a study group/working party meeting or a block of rapporteur group meetings shall be published but not translated. The secretariat shall publish these delayed contributions as soon as possible and not later than three working days after receipt.

14.1.4 Contributions received by the Director of BDT less than 12 calendar days before a meeting shall not be entered on the agenda. They shall not be distributed but held for the next meeting. Exceptionally, contributions judged to be of extreme importance and urgency might be admitted by the chairman, in consultation with the Director, in derogation to the above deadlines, provided that these contributions are available to participants at the opening of the meeting. For such late contributions, no commitment can be made by the secretariat to ensure the document will be available at the opening of the meeting in all the required languages.

14.1.5 No contributions for action shall be accepted after the opening of the meeting.

14.1.6 The Director should insist that authors follow the rules established for the presentation and form of documents set out in this resolution and annexes and the timing given therein. A reminder should be sent out by the Director whenever appropriate. The Director, with the agreement of the study group chairman, may return to the author any document that does not comply with the general directives set out in this resolution so that it may be brought into line with those directives.

14.2 Contributions for information

14.2.1 Contributions submitted to the meeting for information are those which do not require any specific action under the agenda (e.g. descriptive documents submitted by Member States, Sector Members, Associates, Academia or duly authorized entities and organizations, general policy statements, etc.), as well as other documents considered by the study group chairman and/or the rapporteur, in consultation with the author, as being for information. They should be published in the original language only (and in any other official language into which they may have been translated by the author) and appear under a separate numbering scheme from the contributions submitted for action.

14.2.2 Information documents considered to be of extreme importance may be translated after the meeting if requested by more than 50 per cent of the participants at the meeting, within the budgetary limit.

14.2.3 The secretariat shall prepare a list of information documents that provides summaries of the documents. This list shall be available in all the official languages.

14.3 Liaison statements

Liaison statements are requests for actions or information from other study groups, ITU Sectors, other United Nations agencies, other relevant organizations, or documents that provide a response to a request for coordination from these entities. Liaison statements shall be approved by the chairman of the study group/working party concerned before their transmission to the destination entity. Incoming liaison statements shall not be translated. A template for liaison statements is set out in Annex 4 to this resolution.

14.4 Publication of lessons learned and suggested best practices

BDT shall revise the website for each ITU-D study Question to include a section for lessons learned and suggested best practices relating to each study Question. It shall update the website for each ITU-D study Question to include all lessons learned and suggested best practices received as part of contributions for action or for information/background in accordance with §§ 5.6, 8.2 and 13.2.7 above. The compiled lessons learned and suggested best practices published on the website for each ITU-D study Question are intended to function as a continually-updated information resource.

15 Other documents

15.1 Background documents

Reference documents containing only background information relating to issues addressed at the meeting (data, statistics, detailed reports of other organizations, etc.) should be available upon request in the original language only and, if available, also in electronic format.

15.2 Temporary documents

Temporary documents are documents produced during the meeting to assist in the development of the work.

16 Electronic access

16.1 BDT will post all input and output documents (e.g. contributions, draft Recommendations, liaison statements and reports) as soon as electronic versions of these documents are available.

16.2 A website dedicated to the study groups and their relevant groups shall be constantly updated to include all input and output documents as well as information related to each of the meetings. While the website of the study groups shall be in six languages, those of specific meetings shall be in the languages of the meeting concerned as per § 10.5.

16.3 It must be ensured that the website dedicated to the study groups is available in the six languages of the Union on an equal footing and constantly updated.

16.4 The website shall enable users of the TIES system to have real-time access to temporary and draft documents.

17 Presentation of contributions

17.1 Contributions for action shall be relevant to the Question or the subject under discussion as agreed by the chairman, the rapporteur for the Question, the coordinator of the study group and the author. Contributions must be clear and concise. Documents that are not directly related to the Questions under study should not be submitted.

17.2 Articles that have been or are to be published in the press should not be submitted to ITU-D, unless they relate directly to Questions under study, and in this case should be fully attributed to their source, including, if possible, the relevant webpage address.

17.3 Contributions that include passages of an unduly commercial nature shall be deleted by the Director of BDT in agreement with the chairman; the author of the contribution shall be advised of any such deletions.

17.4 The cover page of a contribution shall indicate the relevant Question(s), agenda item, date, source (originating country and/or organization, address, telephone number and e-mail address of the author or contact person of the submitting entity), and the title of the contribution. Indication should also be made as to whether the document is a contribution for action or for information and the action required, if any. As specified in Annex 2 to this resolution, an abstract should be provided containing (i) a summary of the contribution, and (ii) lessons learned and suggested best practices (if deemed appropriate by the contribution author). A template is set out in Annex 2 to this resolution.

17.5 If existing text needs to be revised, the number of the original contribution shall be indicated and revision marks (track changes) shall be used in the original document.

17.6 Contributions submitted to the meeting for information only (see § 14.2) should include a summary prepared by the author. When summaries have not been provided by authors, BDT shall, to the extent possible, prepare such summaries.

SECTION 5 – Proposal, adoption and approval of new and revised Questions

18 Proposal of new and revised Questions

18.1 Proposed new Questions for the ITU Telecommunication Development Sector (ITU-D) shall be submitted at least two months prior to a world telecommunication development conference (WTDC) by Member States, ITU-D Sector Members and Academia authorized to participate in the activities of the Sector.

18.2 However, an ITU-D study group may also propose new or revised Questions at the initiative of a member of that study group if there is consensus on the subject. These proposals shall be treated in accordance with sections 18 and 19 of this resolution.

18.3 Each proposed Question should state the reasons for the proposal, the precise objective of the tasks to be performed, the urgency of the study and any contacts to be established with the other two Sectors and/or other international or regional bodies. Authors of Questions should use the online template for the submission of new and revised Questions based on the outline found in Annex 3 to this resolution, in order to ensure that all relevant information is included.

19 Adoption and approval of new and revised Questions by WTDC

19.1 Before a WTDC, the Telecommunication Development Advisory Group (TDAG) shall meet to examine proposed new Questions and, if necessary, recommend amendments to take account of ITU-D's general development policy objectives and associated priorities, and to review the reports of the ITU regional preparatory meetings for WTDC.

19.2 At least one month before a WTDC, the Director of the Telecommunication Development Bureau (BDT) shall communicate to Member States, ITU-D Sector Members and Academia a list of the Questions proposed for consideration at WTDC, together with any changes recommended by TDAG, and make these available on the ITU website along with the results of surveys referred to in § 12.4.3 above.

19.3 The proposed Questions may be approved by WTDC in accordance with the General Rules of conferences, assemblies and meetings of the Union.

19.4 WTDC is recommended to approve a limited number of Questions/subjects per study period and per study group, preferably not more than five.

20 Adoption and approval of proposed new and revised Questions between two WTDCs

20.1 Between two WTDCs, the ITU-D membership and other duly authorized entities and organizations participating in ITU-D activities may submit proposed new and revised Questions to the study group concerned.

20.2 Each proposed new and revised Question should be based on the template referred to in § 17.4 above.

20.3 If the study group concerned agrees, preferably by consensus, to study the proposed new and revised Question and some Member States, Sector Members or other duly authorized entities and organizations (normally at least four) have committed themselves to supporting the work (e.g. by contributions, provision of rapporteurs or editors and/or hosting of meetings), it shall address the draft text thereof to TDAG with all the necessary information.

20.4 After adoption by TDAG, the Member States can approve new or revised Question(s) by correspondence in accordance with §§ 20.5-20.8 below.

20.5 The Director of BDT, within one month of the adoption of a draft new or revised Question by TDAG, shall the circulate the new or revised Question(s) to Member States, and shall request that they indicate whether or not they approve the proposal within two months.

20.6 If two or more Member States object, the draft new or revised Question will be referred back to the study group for further consideration. If there are less than two objections, the draft new or revised Question shall be approved.

20.7 Those Member States that indicate disapproval are requested to provide their reasons and indicate the possible changes that would facilitate further study of the Question.

20.8 Notification of the result will be given in a circular, and TDAG will be informed by a report from the Director. In addition, the Director shall publish a list of new or revised Questions whenever appropriate, but at least once by the middle of a study period.

SECTION 6 – Deletion of Questions

21 Introduction

Study groups may decide to delete Questions. In each individual case, it has to decide which of the following procedures is the most appropriate.

21.1 Deletion of a Question by WTDC

Upon agreement by the study group, the chairman shall include the request to delete a Question in the report to the World Telecommunication Development Conference (WTDC), for decision.

21.2 Deletion of a Question between WTDCs

21.2.1 A study group meeting may agree, by consensus among its participants, to delete a Question, e.g. because work has been terminated. Member States, Sector Members and Academia shall be notified of the decision by circular, including an explanatory summary of the reasons for the deletion. If a simple majority of the Member States having replied has no objection to the deletion within two months, the deletion comes into force. Otherwise the issue is referred back to the study group.

21.2.2 Those Member States that indicate disapproval are invited to provide their reasons and to indicate the possible changes that would facilitate further study of the Question.

21.2.3 Notification of the result will be given in a circular, and the Telecommunication Development Advisory Group (TDAG) will be informed by a report from the Director of the Telecommunication Development Bureau (BDT). In addition, the Director shall publish a list of deleted Questions whenever appropriate, but at least once by the middle of a study period.

SECTION 7– Approval of new or revised Recommendations

22 Introduction

After adoption at a study group meeting, Member States can approve Recommendations, either by correspondence or at a world telecommunication development conference (WTDC).

22.1 When the study of a Question has reached a mature state resulting in a draft new or revised Recommendation, the approval process to be followed is in two stages:

– adoption by the study group concerned (see § 22.3);

– approval by the Member States (see § 22.4).

The same process shall be used for the deletion of existing Recommendations.

22.2 In the interest of stability, revision of a Recommendation should not normally be considered for approval within two years, unless the proposed revision complements rather than changes the agreement reached in the previous version.

22.3 Adoption of a new or revised Recommendation by a study group

22.3.1 A study group may consider and adopt draft new or revised Recommendations, when the draft texts have been prepared and made available in all the official languages four weeks in advance of the study group meeting.

22.3.2 A working party or rapporteur group or any other group which feels that its draft new or revised Recommendation(s) is (are) sufficiently mature can send the text to the study group chairman to start the adoption procedure in accordance with § 22.3.3 below.

22.3.3 Upon request of the study group chairman, the Director of the Telecommunication Development Bureau (BDT) shall explicitly indicate, in a circular, the intention to seek approval of new or revised Recommendations under this procedure for adoption at a study group meeting. The circular shall include the specific intent of the proposal in summarized form. Reference shall be provided to the document where the text of the draft new or revised Recommendation may be found. This information shall be distributed to all Member States and ITU Telecommunication Development Sector (ITU-D) Sector Members and should be sent by the Director so that it shall be received, so far as practicable, at least two months before the meeting.

22.3.4 Adoption of a draft new or revised Recommendation must be unopposed by any Member State present at the study group meeting.

22.3.5 A Member State objecting to the adoption shall inform the Director and the chairman of the study group of the reasons for objection, and, when the objection cannot be resolved, the Director shall make reasons available to the next meeting of the study group and its relevant working party.

22.3.6 If there is an objection to the text that cannot be resolved and there is no other study group meeting scheduled before WTDC, the chairman of the study group shall forward the text to WTDC.

22.4 Approval of new or revised Recommendations by Member States

22.4.1 When a draft new or revised Recommendation has been adopted by a study group, the text shall be submitted for approval by Member States.

22.4.2 Approval of new or revised Recommendations may be sought:

– at a WTDC;

– by consultation of the Member States as soon as the relevant study group has adopted the text.

22.4.3 At the study group meeting during which a draft is adopted, the study group shall decide to submit the draft new or revised Recommendation for approval, either at the next WTDC or by consultation of the Member States.

22.4.4 When it is decided to submit a draft to WTDC, the study group chairman shall inform and request the Director to take the necessary action to ensure that it is included in the agenda of the conference.

22.4.5 When it is decided to submit a draft for approval by consultation, the conditions and procedures hereafter will apply.

22.4.5.1 At the study group meeting, the decision of the delegations to apply this approval procedure must also be unopposed by any Member State present.

22.4.5.2 Exceptionally, but only during the study group meeting, delegations may request more time to consider their positions, while explaining the reasons. Unless advised of formal opposition, with reasons given, from any of these delegations within a period of one month after the last day of the meeting, the approval process by consultation shall continue. In this case, the draft shall be submitted to the next WTDC for consideration.

22.4.5.3 For the application of the approval procedure by consultation, within one month of the adoption of a draft new or revised Recommendation by a study group, the Director shall request Member States to indicate within three months whether they approve or do not approve the proposal. This request shall be accompanied by the complete final text, in the official languages, of the proposed new or revised Recommendation.

22.4.5.4 The Director shall also advise ITU-D Sector Members participating in the work of the relevant study group under the provisions of Article 19 of the ITU Convention that Member States are being asked to respond to a consultation on a proposed new or revised Recommendation, but only Member States are entitled to respond. This advice should be accompanied by the complete final texts, for information only.

22.4.5.5 If 70 per cent or more of the replies from Member States indicate approval, the proposal shall be accepted. If the proposal is not accepted, it shall be referred back to the study group.

22.4.5.6 Any comments received along with responses to the consultation shall be collected by the Director and submitted to the study group for consideration.

22.4.5.7 Those Member States which indicate that they do not approve are requested to state their reasons and to participate in the future consideration by the study group and its relevant groups.

22.4.5.8 The Director shall promptly notify, by circular, the results of the above consultation approval procedure.

22.4.5.9 Should minor, purely editorial amendments or correction of evident oversights or inconsistencies in the text as presented for approval be necessary, the Director may correct these with the approval of the chairman of the relevant study group.

22.4.5.10 ITU shall publish the approved new or revised Recommendations in the official languages as soon as practicable.

23 Reservations

If a delegation elects not to oppose the approval of a Recommendation but wishes to enter reservations on one or more aspects, such reservations shall be mentioned in a concise note appended to the text of the Recommendation concerned.

SECTION 8 – Deletion of Recommendations

24.1 Each study group is encouraged to review the maintained Recommendations and, if they are found to be no longer necessary, should propose their deletion.

24.2 The deletion of existing Recommendations shall follow a two-stage process:

– agreement to the deletion by a study group if no delegation representing a Member State attending the meeting opposes the deletion;

– following this agreement to delete, approval by Member States, by consultation (applying the procedure in §22.4.5).

24.3 The World Telecommunication Development Conference (WTDC) may also delete existing Recommendations based on proposals by the membership.

SECTION 9 – Support to the study groups and their relevant groups

25 The Director of the Telecommunication Development Bureau (BDT) should ensure that, within the limits of existing budgetary resources, the study groups and their relevant groups have appropriate support to conduct their work programmes as outlined in the terms of reference and as envisioned by the work plan for ITU-D. In particular, support may be provided in the following forms:

a) appropriate administrative and professional staff support from BDT and the other two Bureaux and the General Secretariat, as appropriate;

b) contracting of outside expertise, as necessary;

c) coordination with relevant regional and subregional organizations.

SECTION 10 – Other groups

26 As far as applicable, the same rules of procedure as for study groups in this resolution should also apply to other groups referred to in Nos. 209A and 209B of the ITU Convention and their meetings, for example with respect to the submission of contributions. However, these groups shall not adopt Questions nor deal with Recommendations.

SECTION 11 – Telecommunication Development Advisory Group

27 In accordance with No. 215C of the ITU Convention, the Telecommunication Development Advisory Group (TDAG) shall be open to representatives of administrations of Member States and representatives of ITU Telecommunication Development Sector (ITU-D) Sector Members and to chairmen and vice-chairmen of the study groups and other groups, and will act through the Director of the Telecommunication Development Bureau (BDT). Academia may participate in accordance with Resolution 169 (Rev. Busan, 2014) of the Plenipotentiary Conference. Resolution 24 of the World Telecommunication Development Conference (WTDC) also assigned to TDAG several specific matters between two consecutive WTDCs including, among others: review the relationship between the ITU-D objectives outlined in the strategic plan for the Union and the budgetary appropriations available for activities, particularly programmes and regional initiatives, with a view to recommending any measures necessary to ensure the efficient and effective delivery of the principal products and services (outputs) of the Sector; review the implementation of the rolling four-year operational plan for ITU-D and provide guidance to BDT on the elaboration of the draft ITU-D operational plan to be approved by the following ITU Council session; etc.

28 In accordance with WTDC Resolution 61 (Rev. Dubai, 2014), WTDC shall appoint the TDAG bureau, comprising the chairman and the vice-chairmen of TDAG. The chairmen of ITU-D study groups are members of the TDAG bureau.

29 In accordance with Annex 2 to WTDC Resolution 61 (Rev. Dubai, 2014), in appointing the chairman and the vice-chairmen, particular consideration shall be given to the requirements of competence and the need to promote gender balance in leadership positions and equitable geographical distribution, and to the need to promote more efficient participation by developing countries.

30 In accordance with No. 213A of the Convention, a WTDC may assign specific matters within its competence to TDAG, indicating the recommended action on those matters. WTDC should assure itself that the specific matters assigned to TDAG do not require financial expenses exceeding the ITU-D budget. The report on TDAG activity on the fulfilment of specific functions shall be submitted to the next WTDC. Such assignment shall terminate when the following WTDC meets, although WTDC may decide to extend it for a designated period.

31 TDAG shall hold regular scheduled meetings, included in the ITU-D timetable of meetings. The Director, in cooperation with the TDAG chairman, should make every possible effort, as far as practicable, in order that the planned period for meetings not be scheduled during a period which is considered a major religious period by a Member State.

32 Physical meetings should take place at least once a year. The timing of meetings should be such as to allow TDAG to effectively review the draft operational plan before its adoption and implementation. TDAG meetings should not take place in conjunction with the study group meetings. Meetings of the advisory groups of the three Sectors of the Union should preferably be held consecutively whenever possible.

33 In the interest of minimizing the length and costs of the meetings, the chairman of TDAG should collaborate with the Director in making appropriate advance preparation, for example by identifying the major issues for discussion.

34 In general, the same rules of procedure as for study groups in this resolution should also apply to TDAG and its meetings, for example in respect of the submission of contributions. However, at the discretion of the chairman, written proposals may be submitted during the TDAG meeting, provided they are based on ongoing discussions taking place during the meeting and are intended to assist in resolving conflicting views which exist during the meeting.

35 The TDAG bureau should maintain contact among themselves and with BDT by electronic means to the extent practicable and meet not less than once per year, including one meeting prior to the meeting of TDAG, in order to properly organize the coming meeting, including the review and approval of a time-management plan.

36 In order to facilitate its task, TDAG may complement these working procedures with additional or revised procedures. It can establish other groups to study a particular topic, where appropriate, as provided in WTDC Resolution 24 (Rev. Dubai, 2014) and within existing financial resources.

37 After each TDAG meeting, a concise summary of conclusions shall be drawn up by the secretariat, in collaboration with the TDAG chairman, to be distributed in accordance with normal ITU-D procedures. It should contain only TDAG proposals, recommendations and conclusions in respect to the above items.

38 In accordance with No. 215JA of the Convention, at its last meeting prior to WTDC, TDAG shall prepare a report for WTDC. This report should summarize TDAG's activities on the matters assigned to it by WTDC, including its work to facilitate linkages to the strategic plan of the Union and the four-year rolling operational plan for ITU-D, and offer advice on allocation of work, proposals on ITU-D working methods, strategies and relations with other relevant bodies inside and outside ITU, as appropriate. Likewise, it shall provide advice on the implementation of regional actions, initiatives and projects. This report shall be transmitted to the Director for submission to the conference.

39 In addition to other duties, the TDAG vice-chairmen should engage with their respective regional and area offices, and with the membership in their region, as appropriate, in order to follow the progress of regional initiatives.

SECTION 12 – Regional and world meetings of the Sector

40 In general, the same working methods as found in this resolution, and in particular those relating to the submission and processing of contributions, apply, *mutatis mutandis*, to other regional and world meetings of the Sector, with the exception of those referred to in Article 22 of the ITU Constitution and Article 16 of the ITU Convention.

ANNEX 1 TO RESOLUTION 1 (Rev. Buenos Aires, 2017)

Template for drafting Recommendations

The ITU Telecommunication Development Sector (ITU-D) (*general terminology applicable to all Recommendations*),

The World Telecommunication Development Conference (*terminology only applicable to Recommendations approved at a WTDC*),

considering

This section should contain various general background references giving the reasons for the study. The references should normally refer to ITU documents and/or resolutions.

recognizing

This section should contain specific factual background statements such as "the sovereign right of each Member State" or studies which have formed a basis for the work.

taking into account

This section should detail other factors that have to be considered, such as national laws and regulations, regional policy decisions and other applicable global issues.

noting

This section should indicate generally accepted items or information that support the Recommendation.

convinced

This section should contain details of factors that form the basis of the Recommendation. These could include objectives of government regulatory policy, choice of financing sources, ensuring fair competition, etc.

recommends

This section should contain a general sentence, leading into detailed action points:

specific action point

specific action point

specific action point

etc.

Note that the above list of *action verbs* is not exhaustive. Other *action verbs* may be used when appropriate. Existing Recommendations provide examples.

ANNEX 2 TO RESOLUTION 1 (Rev. Buenos Aires, 2017)

Template for submission of contributions for action/for information[5]

Venue and date of meeting	**Document No./Study Group No.-E** **Date** **Original language** **FOR ACTION** (Place on the agenda) **FOR INFORMATION** (For reference only; not to be placed on the agenda or discussed) Indicate which is appropriate

QUESTION:

SOURCE:

TITLE:

Revision to previous contribution (Yes/No)
If yes, please indicate the document number
Any changes in a previous text should be indicated with revision marks (track changes)

Action required
Please indicate what is expected from the meeting (for contributions submitted for action only)

Abstract

Include here a summary of a few lines outlining your contribution

Include here lessons learned and suggested best practices (if appropriate)

Start your document on the following page
(maximum 4 pages)

Contact: Name of author submitting the contribution:
Phone number:
E-mail:

[5] This model outlines the information to be submitted and the format of the contribution. The contribution is, however, submitted through an online template.

ANNEX 3 TO RESOLUTION 1 (Rev. Buenos Aires, 2017)

Template for proposed Questions and issues for study and consideration by ITU-D

* *Information in italics describes the information which should be provided by the author under each heading.*

Title of Question or issue (the title replaces this heading)

1 Statement of the situation or problem *(the notes follow these headings)*

* *Provide an overall general description of the situation or problem which is proposed for study, with specific focus on:*

– *the implications for developing countries and LDCs;*

– *gender perspective; and*

– *how a solution will benefit these countries. Indicate why the problem or situation warrants study at this time.*

2 Question or issue for study

* *State the Question or issue that is proposed for study, expressed as clearly as possible. The tasks should be tightly focused.*

3 Expected output

* *Provide a detailed description of the expected output of the study. This should include a general indication of the organizational level or status of those who are expected to use and to benefit from the output. Outputs may include a set of actions, activities, work and work products specific to the work of the study Question, including those undertaken pursuant to programmes and regional initiatives that are relevant to the work of the Question (e.g. documented best practices, guidelines, workshops, capacity-building events, seminars, etc.). More specifically, study outputs may promote gender equality and greater access by women to communications technologies and as well as to employment, health and education.*

4 Timing

* Indicate the required timing for all outputs, noting that the urgency of the output, including the annual output report, will influence both the method used to carry out the study and the depth and breadth of the study. Outputs and the work of a Question may be completed in less than the four-year study cycle.

5 Proposers/sponsors

* *Identify by organization and contact point those proposing and supporting the study.*

6 Sources of input

* *Indicate what types of organizations are expected to provide contributions to further the work, e.g. Member States, ITU-D Sector Members, Associates, Academia, other UN agencies, regional groups, other ITU Sectors, BDT focal points, as appropriate, etc.*

* *Also include any other information, including potentially useful resources, such as expert organizations or stakeholders, that will be helpful to those responsible for carrying out the study.*

7 Target audience

* *Indicate expected types of target audience, by noting all relevant points on the matrix which follows:*

Target audience	Developed countries	Developing countries*
Telecom policy-makers	*	*
Telecom regulators	*	*
Service providers/operators	*	*
Manufacturers	*	*
ITU-D programme	*	*

* These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

Where appropriate, please provide explanatory notes as to why certain matrix points were included or excluded.

a) Target audience – Who specifically will use the output

* *Indicate as precisely as possible which individuals/groups/regions within the target organizations will use the output. In addition, indicate as precisely as possible which ITU-D programmes, regional initiatives and strategic objectives the work of the study Question could/will be relevant to, and how the results of the work of the study Question can/could be used to fulfil the objectives of those relevant programmes, regional initiatives and strategic objectives.*

b) Proposed methods for the implementation of the results

* *In the author's opinion, how should the results of this work best be distributed to and used by the target audience and the specified relevant programmes and/or regional offices.*

8 Proposed methods of handling the Question or issue

a) How?

* *Indicate the suggested handling of the proposed Question or issue*

1) Within a study group:

– Question (over a multi-year study period) ☐

2) Within regular BDT activity (*indicate which programmes, activities,* projects*, etc. will be involved in the work of the study Question*):

– Programmes ☐

– Projects ☐

– Expert consultants ☐

– Regional offices ☐

3) In other ways – *describe* (e.g. regional, within other organizations with expertise, jointly with other *organizations*, etc.) ☐

b) Why?

* *Explain why you selected the alternative under a) above.*

9 Coordination and collaboration

* *Include, inter alia, the requirements for coordination of the study with all of:*

– regular ITU-D activities (including those of the regional offices);

– other study group Questions or issues;

– regional organizations, as appropriate;

– work in progress in the other ITU Sectors;

– expert organizations or stakeholders, as appropriate.

* *The Director shall, through the appropriate BDT staff (e.g. regional directors, focal points), provide information to rapporteurs on all relevant ITU projects in the regions. This information should be provided to the meetings of the rapporteurs when work of the programmes and regional offices is in the planning stages and when it is completed.*

* *Identify which programmes, regional initiatives and strategic objectives are related to the work of the Question and list specific expectations for collaboration with the programmes and regional offices.*

10 BDT programme link

* *Note the programme and regional initiatives of the action plan that would best contribute to, help facilitate and make use of the outputs and results of this Question, and list specific expectations for collaboration with the programmes and regional offices.*

11 Other relevant information

* *Include any other information that will be helpful in establishing how this Question or issue should best be studied, and on what schedule.*

ANNEX 4 TO RESOLUTION 1 (Rev. Buenos Aires, 2017)

Template for liaison statements

Information to be included in the liaison statement:

1) List the appropriate Question numbers of the originating and destination study groups.

2) Identify the study group or rapporteur group meeting at which the liaison was prepared.

3) Include a concise and clear subject. If this is in reply to a liaison statement, make this clear, e.g. "Reply to the liaison statement from (*source and date*) concerning...".

4) Identify the study group(s), if known, or other organizations to which sent.

NOTE – Can be sent to more than one organization.

5) Indicate the level of approval of such liaison statement, e.g. study group, or state that the liaison statement has been agreed at a rapporteur group meeting.

6) Indicate if the liaison statement is sent for action or comments, or for information only.

NOTE – If sent to more than one organization, indicate this for each one.

7) If action is requested, indicate the date by which a reply is required.

8) Include the name and address of the contact person.

NOTE – The text of the liaison statement should be concise and clear using a minimum of jargon.

NOTE – Liaison statements among ITU-D groups should be discouraged and problems should be solved through informal contacts.

Example of a liaison statement:

QUESTIONS: A/1 of ITU-D Study Group 1 and B/2 of ITU-D Study Group 2

SOURCE: Chairman of ITU-D Study Group X or Chairman of Working Party Y

MEETING: Geneva, September 2018

SUBJECT: Request for information/comments by [deadline when it is an outgoing liaison statement] – Reply to liaison statement from ITU-R/ITU-T WP 1/4

CONTACT: Name of chairman of the study group or chairman of the working party, or rapporteur for Question [number]
Tel./fax/e-mail

ANNEX 5 TO RESOLUTION 1 (Rev. Buenos Aires, 2017)

Rapporteur's checklist

1 Establish a work plan in consultation with the vice-rapporteurs or relevant working parties. The work plan should be reviewed periodically by the relevant working party and study group and contain the following:

– list of tasks to be completed;

– target dates for milestones in consideration of annual output reports;

– results anticipated, including titles of output documents and annual output reports;

– liaison required with other groups, and schedules for liaisons, if known;

– proposed meeting(s) of rapporteur group and estimated dates, with request for interpretation, if any.

2 Adopt work methods appropriate to the group. Use of electronic document handling (EDH), electronic and facsimile mail to exchange views is strongly encouraged.

3 Act as chairman at all meetings of the relevant Question. If special meetings on the Question are necessary, give appropriate advance notice.

4 Delegate portions of the work to vice-rapporteurs or other collaborators, depending on the workload.

5 Keep the working party and study group management team regularly informed of the work progress. In case no progress can be reported on a given Question between two study group meetings, the rapporteur should nevertheless submit a report indicating the possible reasons for the lack of progress. To allow the chairman and BDT to take the necessary steps for the work to be done on the Question, reports should be submitted at least two months before the study group meeting.

6 Keep the study group informed of the progress of work through reports to study group meetings. The reports should be in the template of white contributions (when substantial progress has been made such as completion of draft Recommendations or a report) or temporary documents.

7 The progress report mentioned in §§ 12.1 and 12.3 above should, as far as applicable, comply with the format given in those sections of this resolution.

8 Ensure that liaison statements are submitted as soon as possible after all meetings, with copies to the study group chairmen and BDT. Liaison statements must contain the information described on the *Template for liaison statements* in Annex 4 to this resolution. BDT may provide assistance in distributing the liaison statements.

9 Oversee the quality of texts up to and including the final text submitted for approval.

RESOLUTION 2 (Rev. Buenos Aires, 2017)

Establishment of study groups

The World Telecommunication Development Conference (Buenos Aires, 2017),

considering

a) that the mandate for each study group needs to be clearly defined, in order to avoid duplication between study groups and other groups of the ITU Telecommunication Development Sector (ITU-D) established pursuant to No. 209A of the ITU Convention and to ensure the coherence of the overall work programme of the Sector as provided for in Article 16 of the Convention;

b) that, for carrying out the studies entrusted to ITU-D, it is appropriate to set up study groups, as provided for in Article 17 of the Convention, to deal with specific task-oriented telecommunication questions of priority to developing countries, taking into consideration the ITU strategic plan and goals, and prepare relevant outputs in the form of reports, guidelines and/or Recommendations for the development of telecommunications/information and communication technologies (ICTs);

c) the need as far as possible to avoid duplication between studies undertaken by ITU-D and those carried out by the other two Sectors of the Union;

d) the successful results of the studies under the Questions adopted by the World Telecommunication Development Conference (Dubai, 2014) and assigned to the two study groups,

resolves

1 to create within the Sector two study groups, with a clear responsibility and mandates as set out in Annex 1 to this resolution;

2 that each study group and their relevant groups will study the Questions adopted by this conference and assigned to it in accordance with the structure shown in Annex 2 to this resolution, and those adopted between two world telecommunication development conferences (WTDCs) in accordance with the provisions of Resolution 1 (Rev. Buenos Aires, 2017) of this conference;

3 that the organization of the study groups should lead to increased synergy, transparency and efficiency with minimal overlap between study Questions;

4 that the study group Questions and Telecommunication Development Bureau (BDT) programmes should be directly linked in order to enhance awareness and use of the BDT programmes and the study group output documents, so that the study groups and the BDT programmes benefit from each other's activities, resources and expertise, and jointly contribute to the achievement of ITU-D objectives;

5 that the study groups should make use of the relevant outputs of the other two Sectors and the General Secretariat;

6 that the study groups may also consider other ITU materials relevant to their mandates, as appropriate;

7 that each Question will consider all aspects related to the topic, objectives, expected output and WTDC action plan in line with the related programme;

8 that the study groups will be managed by the chairmen and vice-chairmen as shown in Annex 3 to this resolution.

ANNEX 1 TO RESOLUTION 2 (Rev. Buenos Aires, 2017)

Scope of ITU-D study groups

1 Study Group 1

Enabling environment for the development of telecommunications/ information and communication technologies

– National telecommunication/ICT policy, regulatory, technical and strategy development which best enables countries to benefit from the impetus of telecommunications/ICTs, including infrastructure supportive of broadband services, cloud computing, network functions virtualization (NFV), consumer protection and future networks as an engine for sustainable growth

– Economic policies and methods of determining costs of services related to national telecommunications/ICTs, including facilitating the implementation of the digital economy

– Access to telecommunications/ICTs for rural and remote areas

– National policies, regulations and strategies for providing access to telecommunications/ICTs in rural and remote areas

– Access to telecommunication/ICT services by persons with disabilities and other persons with specific needs

– Migration and adoption of digital broadcasting and implementation of new services.

2 Study Group 2

Information and communication technology services and applications for the promotion of sustainable development

– Services and applications supported by telecommunications/ICTs

– Building confidence and security in the use of ICTs.

– The use of telecommunications/ICTs in monitoring and mitigating the impact of climate change, particularly on developing countries.

– Combating counterfeit telecommunication/ICT devices and combating theft of mobile telecommunication devices.

– Implementation of conformance and interoperability testing for telecommunication/ICT devices and equipment.

– Human exposure to electromagnetic fields and safe disposal of electronic waste.

ANNEX 2 TO RESOLUTION 2 (Rev. Buenos Aires, 2017)

Questions assigned by the World Telecommunication Development Conference to ITU-D study groups

Study Group 1

– **Question 1/1**: Strategies and policies for the deployment of broadband in developing countries

– **Question 2/1**: Strategies, policies, regulations and methods of migration to and adoption of digital broadcasting and implementation of new services

– **Question 3/1**: Emerging technologies, including cloud computing, m-services and OTTs: Challenges and opportunities, economic and policy impact for developing countries

– **Question 4/1**: Economic policies and methods of determining the costs of services related to national telecommunication/information and communication technology networks, including next-generation networks

– **Question 5/1**: Telecommunications/information and communication technologies for rural and remote areas

– **Question 6/1**: Consumer information, protection and rights: Laws, regulation, economic bases, consumer networks

– **Question 7/1**: Access to telecommunication/information and communication technology services by persons with disabilities and other persons with specific needs

Study Group 2

– **Question 1/2**: Creating smart cities and society: Employing information and communication technologies for sustainable social and economic development

– **Question 2/2**: Telecommunications/information and communication technologies for e-health

– **Question 3/2**: Securing information and communication networks: Best practices for developing a culture of cybersecurity

– **Question 4/2**: Assistance to developing countries for implementing conformance and interoperability programmes and combating counterfeit information and communication technology equipment and theft of mobile devices

– **Question 5/2**: Utilizing telecommunications/information and communication technologies for disaster risk reduction and management

– **Question 6/2**: information and communication technologies and the environment

– **Question 7/2**: Strategies and policies concerning human exposure to electromagnetic fields

ANNEX 3 TO RESOLUTION 2 (Rev. Buenos Aires, 2017)

List of chairmen and vice-chairmen

Study Group 1

Chairman: Ms Regina Fleur Assoumou Bessou (Côte d'Ivoire)

Vice-chairmen:
Mr Peter Ngwan Mbengie (Cameroon)
Mr Amah Vinyo Capo (Togo)
Mr Roberto Mitsuake Hirayama (Brazil)
Mr Víctor Antonio Martínez Sánchez (Paraguay)
Mr Ahmed Abdel Aziz Gad (Egypt)
Ms Sameera Belal Momen Mohammad (Kuwait)
Mr Yasuhiko Kawasumi (Japan)
Mr Sangwon Ko (Republic of Korea)
Mr Almaz Tilenbaev (Kyrgyzstan)
Mr Vadym Kaptur (Ukraine)
Ms Amela Odobasic (Bosnia and Herzegovina)
Mr Krisztián Stefanics (Hungary)

Study Group 2

Chairman: Mr Ahmad Reza Sharafat (Islamic Republic of Iran)

Vice-chairmen:
Mr Roland Yaw Kudozia (Ghana)
Mr Henry Chukwudumeme Nkemadu (Nigeria)
Ms Celina Delgado Castellón (Nicaragua)
Ms Nora Abdalla Hassan Basher (Sudan)
Mr Nasser Al Marzouqi (United Arab Emirates)
Ms Ke Wang (China)
Mr Ananda Raj Khanal (Republic of Nepal)
Mr Yakov Gass (Russian Federation)
Mr Tolibjon Oltinovich Mirzakulov (Uzbekistan)
Mr Filipe Miguel Antunes Batista (Portugal)
Mr Dominique Würges (France)

RESOLUTION 5 (Rev. Buenos Aires, 2017)

Enhanced participation by developing countries[1] in the activities of the Union

The World Telecommunication Development Conference (Buenos Aires, 2017),

considering

a) Resolutions 25 and 123 (Rev. Busan, 2014) of the Plenipotentiary Conference, on strengthening the ITU regional presence and bridging the standardization gap between developing and developed countries;

b) Resolution 30 (Rev. Busan, 2014) of the Plenipotentiary Conference, on special measures for the least developed countries (LDCs), small island developing states (SIDS), landlocked developing countries (LLDCs) and countries with economies in transition;

c) Resolutions 166, 167, 169 and 170 (Rev. Busan, 2014) of the Plenipotentiary Conference, to encourage and facilitate the participation of developing countries and their Sector Members and academia in the activities of the Union;

d) Resolution 135 (Rev. Busan, 2014) of the Plenipotentiary Conference, on the role of ITU in the development of telecommunications/information and communication technologies (ICTs), in providing technical assistance and advice to developing countries and in implementing relevant national, regional and interregional projects;

e) Resolution 198 (Busan, 2014) of the Plenipotentiary Conference, on empowerment of youth through telecommunications/ICTs;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

f) Resolution ITU-R 7 (Rev. Geneva, 2015) of the Radiocommunication Assembly, on telecommunication development including liaison and collaboration with the ITU Telecommunication Development Sector (ITU-D);

g) Resolutions 54 (Rev. Hammamet, 2016) and 59 and 74 (Rev. Dubai, 2012) of the World Telecommunication Standardization Assembly (WTSA), on the need to improve the participation of developing countries and their Sector Members in the work of the ITU Telecommunication Standardization Sector (ITU-T),

recognizing

a) the multifarious difficulties encountered by the developing countries, in particular LDCs, SIDS, LLDCs and countries with economies in transition, as well as countries under stringent budgetary restrictions, in ensuring their effective and efficient participation in the work of ITU-D and the study groups;

b) that harmonious and balanced development of the worldwide telecommunication network is of mutual advantage to the developed and the developing countries;

c) the need to identify a mechanism for developing countries to participate in and contribute to the work of the ITU-D study groups;

d) the importance of bringing the work of the ITU-D study groups closer to developing countries, especially in those cases where it is not possible to establish a physical presence;

e) that limited resources and experience of attendants from developing countries remain a challenge for enhancing their effective participation in ITU activities;

f) the encouraging results attained through the remote participation pilot test undertaken in the last study period by the Telecommunication Development Bureau (BDT),

convinced

a) of the need to enhance the effective participation and attendance of developing countries in the work of ITU;

b) of the integrating role the ITU regional and area offices may take on in this task,

resolves to instruct the Director of the Telecommunication Development Bureau

1 to ensure that ITU-D study group meetings and forums/seminars/workshops are held, to the extent practicable, and within the available financial limits, outside Geneva, limiting their deliberations to subjects stipulated in their agendas and reflecting the actual needs and priorities of the developing countries;

2 to ensure that ITU-D, including the Telecommunication Development Advisory Group (TDAG), at both the headquarters and regional level, participates in the preparation and implementation of world telecommunication policy forums, and invites the study groups to participate therein,

further instructs the Director of the Telecommunication Development Bureau

1 in close collaboration with the Directors of the Radiocommunication and Telecommunication Standardization Bureaux, to consider and implement the best ways and means to assist developing countries in preparing for and participating actively in the work of the three Sectors, and notably in the Sector advisory groups, assemblies and conferences and in the study groups of relevance to developing countries, particularly in relation to the work of the ITU-T study groups, in line with the resolutions mentioned under *considering* above;

2 to conduct studies on how to increase the participation of developing countries and of Sector Members and other telecommunication players from developing countries in the work of ITU-D;

3 to extend, within the financial limitations and taking into account other possible sources of financing, the granting of fellowships to participants from developing countries attending study group meetings, the advisory groups of all three Sectors and other important meetings, including conference preparatory meetings, combining, wherever applicable, attendance at more than one successive event;

4 to assist developing countries in the preparation of and participation in ITU meetings and conferences as well as those of regional organizations, through training programmes on preparatory process, meeting leadership skills, meeting structures, formalities and how to improve participation and contribute to the meetings;

5 to continue promoting remote participation and meetings and electronic working methods so as to encourage and facilitate the full participation of developing countries in the work of ITU-D,

invites the Director of the Radiocommunication Bureau and the Director of the Telecommunication Standardization Bureau

to encourage meetings to be held outside Geneva where this will facilitate greater participation of local experts from countries and regions distant from Geneva,

invites Member States, Sector Members and Associates

1 to participate or increase their participation in the activities of the Union based on procedures approved under Resolutions 169 and 170 (Rev. Busan, 2014);

2 subject to the relevant provisions of the ITU Constitution and Convention, to consider the appointment of candidates to chairmanships and vice-chairmanships of the Sector advisory groups, study groups and other groups, based on an equitable distribution method approved under Resolution 166 (Rev. Busan, 2014);

3 to strengthen their cooperation with the ITU regional offices in relation to implementation of this resolution,

requests the Secretary-General

to report to the Plenipotentiary Conference on the expected financial implications of the implementation of this resolution, proposing also other possible sources of financing,

invites the Plenipotentiary Conference

1 to give the necessary attention to implementation of this resolution when establishing the basis for the budget and related financial limits;

2 when adopting the financial plan of the Union, to provide the necessary funds to BDT in order to facilitate the wider attendance and participation of developing countries in the activities of ITU-D.

RESOLUTION 8 (Rev. Buenos Aires, 2017)

Collection and dissemination of information and statistics

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 8 (Rev. Dubai, 2014) of the World Telecommunication Development Conference;

b) Resolution 131 (Rev. Busan, 2014) of the Plenipotentiary Conference, on measuring information and communication technologies (ICTs) to build an integrating and inclusive information society,

considering

a) that the ITU Telecommunication Development Sector (ITU-D), as the main source of international information and statistics on telecommunications/ICTs, performs a key role in the collection, coordination, exchange and analysis of information;

b) the importance of the existing Telecommunication Development Bureau (BDT) databases, in particular the World Telecommunication/ICT Indicators (WTI) database and the regulatory database;

c) the usefulness of analytical reports published by ITU-D, such as the World Telecommunication/ICT Development Report, the Measuring the Information Society Report and the Trends in Telecommunication Reform report, the Global Cybersecurity Index and Cyberwellness Profiles report and other reports;

d) the need to collect and disseminate information and statistics for follow-up on and monitoring of the United Nations 2030 Agenda for Sustainable Development;

e) the cross-cutting nature of ICTs as a strategic component in achieving all the goals in the 2030 Agenda for Sustainable Development;

f) that, despite all the efforts made, the world divide in Internet use by men and women has widened, especially in least developed countries (LDCs), therefore making it necessary to enhance statistics and their dissemination disaggregated by gender that would make it possible to address public policies at the national level;

g) that numerous regional and international organizations make use of and rely upon the statistics prepared and published by the Union in their indicators and reports;

h) that the 2017 session of ITU Council instructed the Secretary-General to grant all Member States the right of free electronic access to ITU publications relating to statistics and indicators,

considering further

a) that the ICT sector at the national level is reforming at an incredible pace;

b) that policy approaches vary and countries can benefit from the experiences of others,

recognizing

a) that, by acting as a clearing house for the exchange of information and statistics, BDT will be able to assist Member States in developing informed national policies;

b) that the countries must participate actively in this endeavour in order to make it successful;

c) that § 116 of the Tunis Agenda for the Information Society stresses that all indices and indicators must take into account different levels of development and national circumstances, bearing in mind that statistics need to be improved in a collaborative, cost-effective and non-duplicative fashion;

d) that § 70 of the outcome document of the high-level meeting of the United Nations General Assembly (UNGA) on the overall review of the implementation of the outcomes of the World Summit on the Information Society (WSIS) (UNGA Resolution 70/125) has called for further quantitative data to support evidence-based decision-making, as well as for the inclusion of ICT statistics in national strategies for the development of statistics and in regional statistical work programmes,

e) that ICT indicators and statistics are key elements for drawing up evidence-based public policies,

f) the importance of the World Telecommunication/ICT Indicators Symposium (WTIS),

recognizing further

a) that ICT statistics are extremely useful for the work of the study groups and in assisting ITU to monitor and evaluate ICT developments and measure the digital divide;

b) the new responsibilities to be held by ITU-D in relation to this subject, pursuant to the Tunis Agenda, in particular §§ 112 to 120 thereof, as well as the WSIS-SDG Matrix which makes it possible to connect the WSIS action lines with the Sustainable Development Goals (SDGs);

c) the targets of SDG 9 (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation) and SDG 5 (Achieve gender equality and empower all women and girls) of the 2030 Agenda,

resolves to instruct the Director of the Telecommunication Development Bureau

1 to continue to support this activity by providing adequate resources and according it the necessary priority;

2 to continue to work closely with Member States for the sharing of best practices concerning policy and national ICT strategies, including the development of statistics and their dissemination, and considering gender, age and any other information relevant to the development of national public policies;

3 to continue to survey countries and produce world and regional analytical reports which highlight country lessons and experiences, in particular on:

- trends in the telecommunication sector, such as adapting to new technologies, digital economy, etc.;
- world telecommunication developments at regional and international level;
- trends in tariff policies, in collaboration with the ITU Telecommunication Standardization Sector;
- the use of ICTs to achieve the SDGs;

4 to rely primarily on official data provided by Member States based on internationally recognized methodologies; only in the absence of such information may other sources be used, after informing the Member States concerned in advance of the other sources used to obtain the information;

5 to establish and collect community connectivity indicators and to participate in the development of core indicators to measure efforts to build the information society and, in so doing, to illustrate the scale of the digital divide and the efforts of developing countries[1] to close the gap;

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[1] These include least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

6 to monitor the development and improvement of methodologies relevant to indicators and methods of data collection, through consultation with, and inviting contributions from, Member States, particularly by means of the Expert Group on ICT Household Indicators (EGH) and the Expert Group on Telecommunication/ICT Indicators (EGTI) and the World Telecommunication/ ICT Indicators Symposium (WTIS), coordinated by BDT;

7 to continue to convene WTIS on an annual basis, to seek to ensure that it does not conflict with any major events, conferences or assemblies of the Union and, as far as possible, to hold it in each of the regions in turn;

8 to continue to convene regular meetings of the expert groups on telecommunication/ICT indicators, in view of their importance;

9 to review, revise and further develop benchmarking, including through consultation and inviting contributions from Member States and experts, and ensure that ICT indicators, the ICT Development Index (IDI) and the ICT Price Basket reflect the real development of the ICT sector, taking into consideration different levels of development and national circumstances as well as ICT trends, in application of the WSIS outcomes;

10 to encourage countries to collect statistical indicators and information for follow-up on the 2030 Agenda for Sustainable Development and to illustrate national digital divides as well as the efforts made through various programmes to close the gap, showing, as much as possible, the impact on gender issues, children and adolescents, as well as the elderly, persons with disabilities and different social sectors;

11 to strengthen ITU-D's role in the Partnership on Measuring ICT for Development by acting as a member of the steering committee and through active participation in discussions and activities geared to achieving the partnership's main objectives;

12 to provide statistics and regulatory information on the ITU-D website, and to establish appropriate mechanisms and modalities for countries which do not have electronic access to obtain this information;

13 to encourage Member States to bring together different stakeholders in government, academia and civil society in raising national awareness about the importance of the production and dissemination of globally comparable high-quality data for policy purposes;

14 to provide technical assistance to the Member States for the collection of ICT statistics, in particular by means of national surveys, and for the development of national databases containing statistics and regulatory policy information;

15 to develop training material and conduct specialized training courses on ICT statistics for the information society in developing countries, favouring collaboration with members of the Partnership on Measuring ICT for Development when necessary, including the United Nations Statistics Division (UNSD), the regional commissions of the United Nations, and the Organisation for Economic Co-operation and Development (OECD);

16 to unify existing information and statistical databases on the BDT website so as to respond to the objectives stated in §§ 113, 114, 115, 116, 117 and 118 of the Tunis Agenda, and to play a primary role in relation to §§ 119 and 120;

17 to assist countries with indigenous populations in developing indicators to evaluate the impact of ICTs on indigenous peoples that enable the achievement of the objectives set forth in § C8 of the Geneva Plan of Action;

18 to continue to cooperate with the relevant international bodies, in particular UNSD, the regional commissions of the United Nations, and other international and regional organizations, such as OECD, involved in the collection and dissemination of ICT-related information and statistics;

19 to organize regional workshops on statistics in cooperation, when required, with relevant regional and international organizations, with the aim of spreading awareness about ways and means of collecting data and statistics, particularly for developing countries;

20 to consult regularly, and seek contributions from, Member States as to the definition of indicators and methodologies for data collection, in particular by means of the Expert Group on ICT Household Indicators (EGH) and the Expert Group on Telecommunication/ICT Indicators (EGTI) coordinated by BDT;

21 to encourage and support Member States in the setting up of national centres for statistics on the information society and in the advancement of existing centres;

22 to post in a timely manner all reports and publications relating to the statistics and indicators published by ITU-D, particularly those relating to the statistics and indicators which rely on data submitted by Member States, on the website of the Union, making them easy to identify and access,

invites Member States and Sector Members

1 to participate actively in this endeavour by providing the statistics and information solicited, including statistics disaggregated by gender, as appropriate, and by engaging actively in discussions on ICT indicators and data-collection methodologies through contributions, in particular by means of the Expert Group on ICT Household Indicators (EGH) and the Expert Group on Telecommunication/ICT Indicators (EGTI) coordinated by BDT, including contributions for the review, revision and further development of benchmarking of ICT indicators and the ICT Development Index (IDI) and the ICT Price Basket;

2 to establish national systems or strategies for strengthening the consolidation of statistical information related to telecommunications/ICTs;

3 to establish institutional mechanisms to promote and coordinate the compilation and dissemination of ICT information and statistics to monitor implementation of the SDGs at the national level;

4 to establish mechanisms for effective national coordination in order to mobilize and guarantee the quality of statistical data produced by various national stakeholders;

5 to contribute with experiences of policies that have a positive impact on ICT indicators;

6 to strive to harmonize their domestic statistical data-collection systems with the methods used at the international level,

encourages

donor agencies and relevant United Nations agencies to cooperate in providing relevant support and information on their activities.

RESOLUTION 9 (Rev. Buenos Aires, 2017)

Participation of countries, particularly developing countries, in spectrum management

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

Nos. 120 to 129 of the ITU Constitution,

considering

a) that the continuing growth in demand for spectrum, from both existing and new radiocommunication applications and systems, places ever greater requirements on a scarce resource;

b) that, because of the investment in equipment and infrastructures, major changes in the existing use of the spectrum are often difficult to achieve, except in the long term;

c) that the needs of society and the marketplace drive the development of new technologies to find new solutions to address development problems;

d) that national strategies should take into account international commitments under the Radio Regulations;

e) that it is recommended that national strategies should also take into account global changes in telecommunications/information and communication technologies (ICTs) and developments in technology;

f) that increased spectrum access may be facilitated through technical innovation and greater sharing capabilities;

g) that, based on its mandate, the ITU Radiocommunication Sector (ITU-R) is well placed to provide worldwide information on radiocommunication technology and spectrum utilization trends;

h) that world radicommunication conferences (WRCs) take many decisions that have a very significant economic and social impact on national spectrum-management strategies;

i) that some countries, particularly developing countries[1], have some difficulties in implementing the outcomes of WRCs;

j) that the ITU Telecommunication Development Sector (ITU-D) is well placed to facilitate the participation of developing countries in ITU-R activities, and, for those developing countries that so request, to distribute to them the results of particular ITU-R activities;

k) that such information would assist spectrum managers in developing countries to develop their own national medium- or long-term strategies;

l) that such information would enable developing countries to benefit from sharing studies and other technical studies in ITU-R, including frequency sharing methodologies;

m) that, within spectrum management, one of the most pressing concerns of many developing countries, including least developed countries, small island developing states, landlocked developing countries and countries with economies in transition, is the difficulty of elaborating methods for the calculation of fees for use of the radio-frequency spectrum;

n) that regional, bilateral or multilateral agreements could be a basis for fostering cooperation in the field of the radio-frequency spectrum;

o) that spectrum redeployment[2] could accommodate the increasing demand for new and existing radiocommunication applications;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

[2] As noted in Recommendation ITU-R SM.1603, redeployment is also referred to as refarming.

p) that spectrum monitoring includes effective use of spectrum-monitoring facilities to support the spectrum-management process, the evaluation of spectrum utilization for the purpose of spectrum planning, the provision of technical support for frequency allocation and assignment and the resolution of cases of harmful interference;

q) the need to disseminate best practices in spectrum management in order to make broadband access more available and affordable to lower-income populations, especially to bridge the digital divide in developing countries;

r) that, while short-term courses on spectrum management are being conducted by universities and other training institutions, there are few comprehensive courses on spectrum management, and that the Spectrum Management Training Programme (SMTP) of the ITU Academy and centres of excellence will continue to be very helpful to developing countries;

s) that in accordance with Resolution ITU-R 22 (Rev. Geneva, 2015) of the Radiocommunication Assembly (RA), personnel involved in spectrum management from developing countries are particularly invited to participate in spectrum-management studies of ITU-R Study Group 1,

recognizing

a) that it is the sovereign right of every State to manage spectrum use within its territories;

b) that ITU-D's specific functions include providing information and advice on possible policy and structural options, promoting the development, expansion and operation of telecommunication networks and services, taking into account the activities of other relevant bodies, by reinforcing capabilities for human resources development, planning, management, resource mobilization, and research and development, and assisting the implementation of best practices and guidelines;

c) that there is a strong need for the active participation of developing countries in ITU activities, as expressed in Resolution 123 (Rev. Busan, 2014) of the Plenipotentiary Conference, Resolution 5 (Rev. Buenos Aires, 2017) of this conference, Resolution ITU-R 7 (Rev. Geneva, 2015) of RA and Resolution 44 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly, which may be represented individually and through regional groups;

d) that it is important to take into consideration the ongoing work in ITU-R and ITU-D, and the need to avoid duplication of effort;

e) the successful cooperation between ITU-R and ITU-D to assist developing countries in spectrum management, effective use of radio-frequency spectrum and dissemination of best practices;

f) the considerable support given by the Telecommunication Development Bureau (BDT) in the compilation of documents and other relevant outputs, supporting developing countries;

g) the successful development of the Spectrum Fees Database (SF Database) and the initial compilation of guidelines[3] and national experiences to assist administrations in extracting information from the SF Database for use in the preparation of fee-calculation models that suit their national requirements;

h) that, in connection with the ITU-R Handbook on National Spectrum Management and Report ITU-R SM.2012, additional guidelines have been compiled offering various national approaches to spectrum-management fees for spectrum use;

i) that there is significant activity across multiple ITU-R study groups to address spectrum sharing, which may have implications for national spectrum management and which may be of particular interest to developing countries;

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[3] Here, "guidelines" refers to a range of options that may be used by ITU Member States in their domestic spectrum-management activities.

j) that ITU-R continues to update Recommendation ITU-R SM.1603, which provides guidelines for spectrum redeployment;

k) that the ITU-R Handbook on Spectrum Monitoring provides guidelines for the installation and operation of spectrum-monitoring infrastructures and the implementation of spectrum monitoring, while Recommendation ITU-R SM.1139 prescribes administrative and procedural requirements for international monitoring systems,

resolves to instruct the Director of the Telecommunication Development Bureau, in close consultation with the Director of the Radiocommunication Bureau

1 to collect pertinent information and prepare, over the period between world telecommunication development conferences, appropriate documents and other relevant outputs, that are responsive to the specific needs of developing countries (including, but not limited to, the examples given in Annex 1 to this resolution and membership input to the ITU-D study groups), on national technical, economic, regulatory and financial approaches to, and challenges of, spectrum management and spectrum monitoring, taking into account ITU-R Recommendations, reports, handbooks and other outputs from ITU-R;

2 to continue the development of the SF Database, including methods for spectrum valuation and methods for pricing, incorporating national experiences, and to provide additional guidelines and national experiences, based on contributions from administrations;

3 to update the information available in national frequency allocation tables and make the Resolution 9 and ICT Eye portals complementary;

4 to compile national experiences, in order to prepare the documents identified in *resolves* 1, on the use of shared spectrum, different tools for spectrum management that allow for greater flexibility, efficiency and both economic and social benefits, as well as the economic aspects of spectrum management, including mechanisms to stimulate affordable and accessible services to low-income users;

5 to continue organizing capacity-building programmes to meet the needs of Member States, especially developing countries, for assistance in developing spectrum-management capabilities, particularly concerning new technologies;

6 to continue to assist Member States, in particular developing countries, in the implementation of the outcomes of WRCs, and to organize presentations on issues of interest for developing countries through seminars and workshops,

instructs the Director of the Telecommunication Development Bureau

1 to continue to provide the support described in recognizing *f)* above;

2 to encourage Member States from developing countries, at national and/or regional level, to provide ITU-R and ITU-D with a list of their needs, national experiences and/or special requirements with respect to national spectrum management, to which the Director should endeavour to respond, and an example of which is given in Annex 1 to this resolution;

3 to encourage Member States to continue to provide ITU-R and ITU-D with practical examples of their experiences of using the SF Database, national trends in spectrum management, spectrum redeployment and the installation and operation of spectrum-monitoring systems;

4 to provide annual reports to the Telecommunication Development Advisory Group on the implementation of this resolution,

invites the Director of the Radiocommunication Bureau

to ensure that ITU-R continues the collaboration with ITU-D in the implementation of this resolution,

invites the membership of the ITU Telecommunication Development Sector

1 to contribute to the work of ITU-D by providing national experiences regarding spectrum sharing, national uses of different tools for spectrum management, including various licensing and authorization schemes, as well as economic and social benefits and challenges;

2 to contribute actively to the implementation of this resolution.

ANNEX 1 TO RESOLUTION 9 (Rev. Buenos Aires, 2017)

Examples of specific needs of developing countries in spectrum management

The main types of technical assistance which developing countries expect from ITU are as follows:

1 Assistance in raising the awareness of national policy-makers as to the importance of effective spectrum management for a country's economic and social development

With the restructuring of the telecommunication sector, the emergence of competition, high demand for frequencies from operators, disaster mitigation and relief operations and the need to combat climate change, effective spectrum management has become indispensable for States. ITU should play a key role in raising the awareness of policy-makers by organizing special seminars designed specifically for them. To this end:

- In view of how important the regulators have become, ITU might include them in its regular distribution list for circulars providing information about the different education programmes and modules organized by the Union.
- ITU should include dedicated spectrum-management modules in the programmes of meetings (colloquiums, seminars) bringing together regulators and ministries responsible for spectrum management, with private-sector involvement.
- Within the limits of available resources, ITU should make fellowships available for least developed countries' participation at those meetings.

2 Training and dissemination of available ITU documentation

Spectrum management must be in accordance with the provisions of the Radio Regulations, regional agreements to which administrations are parties, and national regulations. Spectrum managers must be able to provide frequency users with relevant information.

Developing countries would like to have access to ITU-R and ITU-D documentation, which must be available in the six official languages of the Union.

Developing countries would also like to see suitable training (either on-site or remotely) provided in the form of specialized ITU seminars, in order to help frequency managers gain a thorough knowledge of ITU-R Recommendations, reports and handbooks, which are constantly updated.

Through its regional offices, ITU could set up an effective system to provide frequency managers with real-time information on existing and future publications.

Specialized courses on spectrum management, access to radio-frequency resources and the preparatory process for WRCs will be very helpful for developing countries.

3 Assistance in developing methodologies for establishing national tables of frequency allocations and spectrum redeployment

Tables of frequency allocations form the mainstay of spectrum management; they identify the services provided and their category of use. ITU could encourage administrations to make available national frequency allocation tables to the public and stakeholders and facilitate administrations' access to information available in other countries, in particular by developing links between its website and the websites of administrations which have produced national tables of frequency allocations available to the public, allowing developing countries to obtain information on national allocations in a rapid and timely fashion. ITU-R and ITU-D could also compile guidelines for the development of the above-mentioned tables. Spectrum redeployment is sometimes necessary to allow the introduction of new radiocommunication applications. ITU could provide support in this regard by compiling guidelines for the implementation of spectrum redeployment, on the basis of practical experience of administrations and based on Recommendation ITU-R SM.1603 – Spectrum redeployment as a method of national spectrum management.

In certain circumstances, BDT could make available the assistance of its experts for the development of national tables of frequency allocations and for the planning and implementation of spectrum redeployments, at the request of the countries concerned.

To the extent possible, ITU-D should incorporate appropriate issues into its regional seminars on spectrum management.

4 Assistance in setting up computerized frequency management and monitoring systems

These systems facilitate routine spectrum-management tasks. They must be capable of taking local features into account. The establishment of operational structures also enables the smooth execution of administrative tasks, frequency allocation, spectrum analysis and monitoring. According to the specific features of individual countries, ITU can provide expert help in identifying the technical means, operational procedures and human resources needed for effective spectrum management. The ITU-R Handbook on Computer Aided Techniques for Spectrum Management and the ITU-R Handbook on Spectrum Monitoring may provide technical guidelines for setting up the above-mentioned systems.

ITU should improve the Spectrum Management System for Developing Countries (SMS4DC) software (including its availability in the other official languages), and ensure the necessary assistance and training in the implementation of the software in administrations' daily spectrum-management activities.

ITU should provide expert advice to administrations of developing countries and facilitate participation of developing countries in regional or international spectrum-monitoring activities, as necessary. ITU should also provide encouragement and assistance to administrations in setting up regional spectrum-monitoring systems, if required.

5 Economic and financial aspects of spectrum management

ITU-D and ITU-R could, together, provide examples of:

a) reference frameworks for management accounting;

b) guidelines for the implementation of management accounting, which could be very useful for calculating the administrative costs of spectrum management referred to in *recognizing g)* of this resolution;

c) guidelines on the methods used for spectrum valuation.

ITU could further develop the mechanism set up under *resolves* 2 of this resolution in order to enable developing countries to:

– learn more about practices in other administrations, which could be useful for defining spectrum fee policies tailored to each country's specific situation;

– identify financial resources to be allocated to the operational and investment budgets for spectrum management.

6 Assistance with preparations for world radiocommunication conferences (WRC) and with follow-up and implementation of WRC decisions

The submission of joint proposals is a way of guaranteeing that regional needs are taken into account. Alongside regional organizations, ITU could give impetus to the establishment and running of regional and subregional preparatory structures for WRCs.

With support from regional and subregional organizations, the Radiocommunication Bureau could communicate the broad outlines of decisions taken by the conferences, and thereby contribute to establishing a follow-up mechanism for such decisions at national and regional level.

7 Assistance with participation in the work of the relevant ITU-R study groups and their working parties

The ITU-R study groups play a key role in the drafting of Recommendations which affect the entire radiocommunication community. It is essential that developing countries participate in study group work in order to ensure that their specific features are taken into account. For effective participation of those countries, ITU could – through its field offices – assist in running a subregional network organized around coordinators responsible for the Questions under study within ITU-R, as well as by providing financial assistance in order for the coordinators to participate in meetings of the relevant ITU-R study groups. The designated coordinators for the different regions should also assist in meeting the desired needs.

8 Transition to digital terrestrial television broadcasting

Most of the developing countries are currently undergoing the transition from analogue to digital terrestrial television broadcasting. There is thus a need for assistance in many topics, including frequency planning, service scenarios and technology selection, which all in turn affect spectral efficiency and the resulting digital dividend.

9 Assistance in identifying the most efficient ways to utilize the digital dividend

Developing countries, upon completing digital switchover, will have some portions of a very valuable spectrum freed, which are known as the digital dividend. Different discussions are being conducted on how to optimally reallocate, and enable more efficient use of, the relevant part of these bands. In order to maximize both economic and social impacts, it will be appropriate to consider including potential use cases and best practices in ITU's library, and to hold regular international and regional workshops on that subject.

10 Emerging technologies and approaches in using spectrum

With the ongoing demand for high data rates, there is pressure on the limited spectrum resource. Developing countries need to be aware of emerging technologies and approaches in using spectrum which are intended to improve spectrum efficiency and cost-effectiveness, through training, seminars and national experiences. Some examples include:

– dynamic spectrum sharing (DSS);

– use of satellite and high altitude platform systems for the provision of services in remote and inaccessible areas;

– Internet of things (IoT);

– IMT-2020;

– short-range devices.

11 Innovative ways of spectrum licensing

As part of smart government, public services are increasingly being offered over mobile and online platforms. The process of spectrum licensing can also be automated, and the process of receiving requests for spectrum use and licensing can be made available online and on smart devices. Innovative ways of spectrum licensing such as light licensing and authorized shared access/licensed shared access could have potential to improve the efficiency of spectrum utilization. Training and national experiences can be offered to the developing countries in order for them to benefit from the experience of countries that have deployed such systems.

12 Assistance with interference caused by devices in derogation of national spectrum allocations

Radiocommunication devices are required to operate in accordance with the Radio Regulations, national regulations and the Table of Frequency Allocations in order to avoid harmful interference. As spectrum allocations can vary among countries, radiocommunication devices manufactured to operate in one country can cause harmful interference if used in another country in specific bands allocated to different services.

In this regard, the popularity of small-size radiocommunication devices, their potential growth, and the lack of technical knowledge on the part of their users will pose an increasing challenge for national spectrum regulators.

13 Assistance in resolving seasonal interference caused by anomalous propagation of radiowaves

Coastal areas of nations, and island nations, especially small island nations, experience seasonal cross-border interference to their mobile networks due to anomalous propagation of radiowaves. This interference becomes very critical if both countries are using different frequency planning in the same frequency band. This issue continues to pose challenges to national spectrum-management authorities.

RESOLUTION 10 (Rev. Hyderabad, 2010)

Financial support for national spectrum-management programmes

The World Telecommunication Development Conference (Hyderabad, 2010),

recalling

Resolution 10 (Rev. Doha, 2006) of the World Telecommunication Development Conference (WTDC),

considering

a) that we are currently witnessing the accelerated implementation and globalization of different radiocommunication services, and the emergence of new efficient radio applications;

b) that guaranteeing successful development of radiocommunications and implementation of these new applications calls for the availability of appropriate interference-free frequency bands, at the national, regional and international levels, in accordance with the Radio Regulations and Recommendations and resolutions of the ITU Radiocommunication Sector (ITU-R);

c) the outputs from the second phase of the World Summit on the Information Society (WSIS), particularly § 96 of the Tunis Agenda for the Information Society pertaining to the role of ITU in taking steps to ensure the rational, efficient and economic use of, and equitable access to, the radio-frequency spectrum by all countries;

d) that the provision of frequency bands and more efficient use of the spectrum, at the national, regional and international levels, depend on the establishment and implementation of relevant national spectrum-management, including radio-monitoring, programmes to prevent interference;

e) that efficient national spectrum-management programmes are essential to the liberalization of radiocommunications and the privatization of some radiocommunication services and to promoting competition, realizing that such programmes are not available in some developing countries[1];

f) that several countries are switching off their analogue television transmissions and migrating to digital broadcasting technologies, freeing a range of radio frequencies currently used for analogue television;

g) that spectrum can be used for efforts to bridge the digital divide,

recognizing

a) the importance of implementing spectrum-management programmes in ensuring effective development of radiocommunications and the role played by radiocommunications in developing a country's economy, and that such programmes are sometimes not given the necessary priority;

b) that national and international finance organizations frequently accord much more priority to supporting the implementation of telecommunication (including radiocommunication) systems than to the implementation of national spectrum-management programmes;

c) the success achieved in the implementation of Resolution 9 "Participation of countries, particularly developing countries, in spectrum management" since it was first adopted at WTDC (Valletta, 1998),

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

resolves

1 to continue to invite national and international finance organizations to pay more attention to giving substantial financial support, including through favourable credit arrangements, to national spectrum-management – including radio-monitoring – programmes and training therein for those countries that lack appropriate spectrum-management programmes, as a prerequisite for efficient spectrum utilization, the successful development of radio services and the implementation of new and promising applications, including global ones, at the national, regional and international levels;

2 to continue to invite the Telecommunication Development Bureau (BDT) to provide, in its budget, for the holding of an annual meeting to study the question of national spectrum management, in full coordination with the Radiocommunication Bureau (BR), within the activities of Programme 1, at the regional and international levels;

3 to invite BDT to follow up development of the national spectrum-management system for developing countries (SMS4DC), in cooperation with BR and ITU-R Study Group 1;

4 to invite BDT to evaluate the possibility of: i) studying optimal ways of phasing out analogue TV in developing countries, and ii) better utilizing the phased-out analogue TV frequencies,

requests the Telecommunication Development Bureau

to bring this resolution to the attention of relevant international and regional financing and development organizations,

invites the Director of the Radiocommunication Bureau

to continue the cooperation with BDT in developing the national spectrum-management system for developing countries (SMS4DC), and training therein,

invites ITU-R Study Groups 5 and 6

to continue the cooperation with ITU-D Study Group 2, providing information on the current and future use of the spectrum with the phased-out analogue TV frequencies and reporting how the developed and developing countries are using or planning to use the digital dividend.

RESOLUTION 11 (Rev. Buenos Aires, 2017)

Telecommunication/information and communication technology services in rural, isolated and poorly served areas and indigenous communities

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 20 (Rev. Buenos Aires, 2017) of this conference, on non-discriminatory access to modern telecommunication/information and communication technology (ICT) facilities, services and related applications;

b) Resolution 46 (Rev. Buenos Aires, 2017) of this conference, on assistance to indigenous peoples and communities through ICT;

c) Resolution 69 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly, on non-discriminatory access and use of Internet resources and telecommunications/ICTs;

d) Resolution 135 (Rev. Busan, 2014) of the Plenipotentiary Conference, on ITU's role in the development of telecommunications/ICTs, in providing technical assistance and advice to developing countries[1] and in implementing relevant national, regional and interregional projects;

e) Resolution 137 (Rev. Busan, 2014) of the Plenipotentiary Conference, on next-generation network deployment in developing countries;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

f) Recommendation ITU-D 20 (Dubai, 2014), recommending that the world's governments and regulators take policy and regulatory measures to accelerate the development of telecommunications/ICTs/broadband in their rural and remote areas through specific policy and regulatory interventions/initiatives;

g) Recommendation ITU-D 19 (Dubai, 2014), recommending that, in planning infrastructure development in rural and remote areas, it is important to assess all available technologies in the market, taking into consideration the regulatory environment, geographical conditions, climate, costs (capital expenditure and operational expenditure), maintainability, operability, sustainability, etc., based on the results of the site survey and community needs,

considering

a) that all world telecommunication development conferences have reaffirmed the important and urgent need to provide access to basic telecommunication/ICT services for everyone, and particularly for developing countries, in order to provide coverage in rural and isolated areas which lack this service, and in indigenous communities;

b) the outputs of the first and second phases of the World Summit on the Information Society in relation to the importance of ensuring telecommunication/ICT services in those areas and communities;

c) that broadband-satellite communication and terrestrial radio services in turn offer fast, reliable and cost-effective communication options characterized by high connection density both in urban areas and in rural and remote areas,

noting

a) that a clear correlation between the availability of universal telecommunication/ICT services and environmental, cultural, economic and social development has been firmly established;

b) the importance of achieving telecommunication/ICT infrastructure development in developing countries, which helps to enhance access to services, particularly in rural, isolated or unserved and underserved areas, and in indigenous communities,

taking into account

the fact that future networks are potential tools for resolving the new and complex issues facing the telecommunication sector, and that deployment of future networks and standardization activities are of great importance for developing countries, especially for their rural regions in which the greater part of their populations live,

recognizing

a) that spectacular progress has been made in many developing countries through universal access to telecommunication/ICT services in rural, isolated and poorly served areas countrywide and in indigenous communities, thereby demonstrating the economic and technical feasibility of projects to provide this type of service;

b) that, in many areas and some developing countries, there is convincing evidence of the overall profitability of telecommunication/ICT services in rural, isolated and poorly served areas, and in indigenous communities,

recognizing further

a) that there are several state-of-the-art technologies which may help to facilitate the provision of telecommunication/ICT services, in particular broadband technologies, to rural, isolated and poorly served areas and indigenous communities;

b) that access to telecommunication/ICT services in rural, isolated and poorly served areas and indigenous communities can only be achieved through judicious choice of appropriate technological options (terrestrial and satellite) allowing access to and maintenance of good quality and economical services;

c) that Study Group 2 of the ITU Telecommunication Development Sector (ITU-D), in the course of its study of Question 10-3/2 in previous study periods, collected numerous case studies relating to rural projects and projects serving isolated areas and indigenous communities, that these case studies include the preparation, design and implementation of such projects, and that they represent an important reference to be used as lessons for successful projects covering many situations;

d) that, under Question 5/1 (Telecommunications/ICTs for rural and remote areas) of ITU-D Study Group 1, existing challenges for the development of telecommunications/ICTs in rural and remote areas were examined, among which the most noteworthy are the high costs of installation and operation, the lack of energy supply, the absence of technical staff, geographic characteristics, and ICT literacy, among others, and the various methods that can help solve these challenges were also identified and examined,

resolves

1 to invite ITU-D Study Group 1 to continue its studies under Question 5/1 (Telecommunications/ICTs for remote and rural areas), on the best means for providing access to telecommunication/ICT services in rural, isolated and poorly served areas and indigenous communities, in terms of universal access, rural telecommunication programmes, regulatory framework, financial resources and commercial approach, taking into account the aims of this resolution,

2 to instruct the Director of the Telecommunication Development Bureau (BDT) to submit reports to ITU-D Study Group 1 on BDT's experience in this area and, in particular, the lessons learned from the projects it has implemented and the seminars and training programmes it is conducting to meet the needs of rural areas and indigenous communities,

instructs the Director of the Telecommunication Development Bureau, in collaboration with the Director of the Radiocommunication Bureau and the Director of the Telecommunication Standardization Bureau

1 to continue supporting the studies undertaken in response to this resolution;

2 to promote further the use of all appropriate means of telecommunication/ICT to facilitate effective development and implementation of telecommunication/ICT services in rural, isolated and poorly served areas and indigenous communities of the world through the relevant programmes;

3 to continue efforts to promote the optimum use by developing countries of all available new telecommunication/ICT services provided by satellite and terrestrial systems to serve these areas and communities;

4 to coordinate efforts on supporting governments for the development of telecommunication/ICT services in rural, isolated and poorly served areas and indigenous communities;

5 to provide assistance to Member States so they can identify and develop policies, mechanisms and regulatory initiatives to reduce the digital divide by promoting the deployment and adoption of broadband;

6 to consolidate and disseminate information through seminars, workshops and online spaces such as webinars to exchange national experiences on the roll-out and operation of broadband networks in rural, isolated and poorly served areas and indigenous communities, with special emphasis on landlocked developing countries and small island developing states.

RESOLUTION 15 (Rev. Buenos Aires, 2017)

Applied research and transfer of technology

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) the Tunis Commitment of the World Summit on the Information Society (WSIS), recognizing the principles of universal, non-discriminatory, equitable and affordable access to information and communication technology (ICT) for all nations and all persons everywhere (see §§ 15, 18 and 19);

b) Resolution 64 (Rev. Busan, 2014) of the Plenipotentiary Conference, on non-discriminatory access to modern telecommunication/ICT facilities, services and applications, including applied research and transfer of technology, and e-meetings, on mutually agreed terms,

recognizing

a) that many countries would benefit from technology transfer in a wide range of fields;

b) that joint ventures can be effective means of technology transfer;

c) that seminars and training conducted by various countries as well as by international and regional organizations have contributed to the transfer of technology, and hence to the development of ICT networks in the region;

d) that providers of ICT equipment and services are important partners in ensuring the flow of technology to developing countries[1] and that they are ready to enter freely into such arrangements;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

e) that applied research is a promising activity for developing countries;

f) that a great number of engineers originally from developing countries contribute to applied research in developed countries;

g) that research institutes in developed countries have substantial human and material resources compared to developing countries;

h) that a relationship of partnership and cooperation between applied research centres and laboratories improves technology transfer,

resolves

1 that, based on agreement among parties concerned, transfer of technology in the area of telecommunications/ICT, which is of benefit to developing countries, should be enhanced as much as possible, in respect of conventional technology as well as new technologies and services;

2 that developing and developed countries should continue to cooperate through exchanges of experts, the organization of seminars, specialized workshops and meetings, networking of telecommunication applied research institutions by means of teleconferencing, etc.;

3 that recipient countries should systematically and fully utilize technology transfers in their countries,

instructs the Director of the Telecommunication Development Bureau, in collaboration with the Director of the Radiocommunication Bureau and the Director of the Telecommunication Standardization Bureau

in cooperation with international, regional and subregional organizations concerned, taking into account the documents adopted by the first and second phases of WSIS:

1 to continue to hold specialized seminars, workshops or training in the field of telecommunications/ICTs in order to raise the technological level in developing countries;

2 to continue to promote the exchange of information among international organizations, donor countries and recipient countries on transfer of technology, by assisting them in setting up cooperative networks between telecommunication research institutes in developing countries and developed countries;

3 to assist in the elaboration of terms of reference guaranteeing technology transfer;

4 to continue to develop handbooks in the area of technology transfer;

5 to ensure that these handbooks are disseminated to developing countries and that users are properly initiated in their use;

6 to encourage the organization of specialized workshops in developing countries by research institutes from developed countries;

7 to give financial support to research institutes in developing countries so as to enable them to attend well-known research meetings and workshops within available resources;

8 to establish a model contract for use by research institutes specifying partnership arrangements between them;

9 to encourage the admission of academic institutions, universities and their associated research establishments in the work of the ITU Telecommunication Development Sector as Sector Members or Associates, at a reduced level of financial contribution, particularly academic institutions of developing countries,

invites developing countries

1 to continue establishing new ICT research projects and to submit them to existing applied research institutes in order to facilitate cooperation with other research institutes in developed countries;

2 to participate in the activities of standards development organizations,

invites telecommunication equipment and service providers

pursuant to the Geneva Declaration of Principles of the first phase of WSIS and the Tunis Commitment of the second phase, to make relevant new technologies and know-how available to their customers in developing countries on a voluntary basis and/or in accordance with sound commercial principles,

appeals to international organizations and donor countries

to assist the developing countries in exploring ways and means of improving technology transfer and developing ICT applied research centres and laboratories, including technical and financial assistance.

RESOLUTION 16 (Rev. Buenos Aires, 2017)

Special actions and measures for the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition

The World Telecommunication Development Conference (Buenos, Aires, 2017),

recalling

a) United Nations resolutions concerning programmes for least developed countries (LDCs), small island developing states (SIDS), landlocked developing countries (LLDCs), and countries with economies in transition;

b) Resolution 68/198 of the United Nations General Assembly (UNGA), on information and communication technologies (ICT) for development;

c) UNGA Resolution 68/220, on science, technology and innovation for development;

d) UNGA Resolution 70/1, on transforming our world: the 2030 Agenda for Sustainable Development;

e) UNGA Resolution 70/125, on the 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 (WSIS),

considering

a) Resolution 30 (Rev. Busan, 2014) of the Plenipotentiary Conference, on special measures for LDCs, SIDS, LLDCs and countries with economies in transition;

b) Resolution 135 (Rev. Busan, 2014) of the Plenipotentiary Conference, on ITU's role in the development of telecommunications/ICTs, in providing technical assistance and advice to developing countries and in implementing relevant national, regional and interregional projects,

recognizing

that telecommunications/ICTs are a key tool for implementing the WSIS vision beyond 2015 and a key enabler for social, environmental, cultural and economic development, and consequently for accelerating the timely attainment of the Sustainable Development Goals (SDGs) and associated targets,

noting

a) Resolution 1 (Dubai, 2012) of the World Conference on International Telecommunications, on special measures for LLDCs and SIDS for access to international optical fibre networks;

b) the striking imbalance in telecommunication/ICT development between these countries (LDCs, SIDS, LLDCs and countries with economies in transition) and other countries, the persistence of which exacerbates the digital divide;

c) that these countries and countries in special need are vulnerable to extreme levels of devastation resulting from natural disasters and lack the capacity to respond effectively to these calamities;

d) the existence of countries which owing to geographical and political conditions have limited access to terrestrial and marine international cable systems,

appreciating

the special measures taken for the benefit of these countries in the form of concentrated assistance provided under the Doha Action Plan,

still concerned

a) that, despite all the measures taken so far, the telecommunication networks in many of these countries remain in a very poor state of development in urban, semi-urban and rural areas;

b) that the geographical situation of SIDS and LLDCs is an obstacle to the establishment of international telecommunication network connectivity with these countries;

c) that multilateral and bilateral flows of technical assistance and investment finance to these countries are constantly declining;

d) that to date there are many countries in this category;

e) with the low level of resources allocated to the special programme for these countries,

aware

that improved telecommunication networks in these countries will constitute a major driver underpinning their social and economic recovery and their development, and an opportunity for them to establish their information societies, and will be a tool for developing the digital economy,

resolves

to endorse the new priority areas for the next four years, the associated programme of action for these countries and its implementation strategy,

instructs the Director of the Telecommunication Development Bureau

1 to continue to review the state of telecommunication/ICT services in LDCs, SIDS, LLDCs and countries with economies in transition, so identified by the United Nations and needing special measures for the development of telecommunications/ICTs, and to identify areas of critical weakness requiring priority action;

2 to continue submitting to the ITU Council concrete measures intended to bring about genuine improvements and effective assistance to these countries, from the Special Voluntary Programme for Technical Cooperation, the Union's own resources and other sources of finance;

3 to implement fully a programme of assistance for these countries as contained in the Buenos Aires Action Plan;

4 to give priority to requests received from these countries in implementing other Telecommunication Development Bureau (BDT) programmes of assistance to developing countries[1] that are intended to improve and provide effective assistance to these countries;

5 to pay special attention to suburban and rural telecommunication/ICT development in these countries, with a view to achieving universal access to telecommunication and information technology services;

6 to continue to work towards providing the necessary administrative and operational structure for identifying the needs of these countries and for proper administration of the resources appropriated for LDCs, SIDS, LLDCs and countries with economies in transition;

7 to report annually on this matter to the Council,

requests the Secretary-General

1 to request the forthcoming Plenipotentiary Conference (Dubai, 2018) to provide the necessary budget for these countries with a view to enabling BDT to undertake essential and programmed activities for them;

2 to continue enhancing the assistance provided to these countries through other resources, and in particular through unconditional voluntary contributions and appropriate partnerships, as well as any surplus income from world and regional telecommunication exhibitions and forums;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

3 to propose new and innovative measures capable of generating additional funds to be used for telecommunication/ICT development in these countries, in order to benefit from the possibilities afforded by financial mechanisms in facing the challenges of utilizing ICT for development purposes, as stated in the Tunis Agenda for the Information Society,

calls upon governments of least developed countries, small island developing states, landlocked developing countries and countries with economies in transition

1 to continue to accord higher priority to ICT development as well as disaster response and risk reduction planning, and to adopt measures, policies and national strategies that are conducive to bringing about faster development of telecommunications/ICTs in their countries, such as sector liberalization and the introduction of new technologies;

2 in selecting technical cooperation activities financed by bilateral and multilateral sources, to continue to accord high priority to telecommunication/ICT activities and projects;

3 to accord priority to the development of ICTs in national development plans,

calls upon other Member States and Sector Members

to establish partnerships with these countries, either directly or through BDT, in order to bring increased investment into the ICT sector and to stimulate the modernization, affordability and expansion of networks, including access to international optical fibre networks, in these countries in a bold attempt to reduce the digital divide and to achieve the ultimate goal of universal access in line with the Geneva Plan of Action, the Tunis Commitment, the Tunis Agenda, the World Summit on the Information Society vision beyond 2015 and the 2030 Agenda for Sustainable Development.

RESOLUTION 17 (Rev. Buenos Aires, 2017)

Implementation of and cooperation on regionally approved regional initiatives at the national, regional, interregional and global levels[1]

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 34 (Rev. Busan, 2014) of the Plenipotentiary Conference, on assistance and support to countries in special need for rebuilding their telecommunication sector;

b) Resolution 135 (Rev. Busan 2014) of the Plenipotentiary Conference, on ITU's role in the development of telecommunications/information and communication technologies (ICTs), in providing technical assistance and advice to developing countries[2] and in implementing relevant national, regional and interregional projects;

c) Resolution 157 (Rev. Busan, 2014) of the Plenipotentiary Conference, on strengthening of the project execution function in ITU;

d) Resolution 21 (Rev. Buenos Aires, 2017) of this conference, on coordination and collaboration with regional organizations;

e) Resolution 32 (Rev. Hyderabad, 2010) of the World Telecommunication Development Conference (WTDC), on international and regional cooperation on regional initiatives;

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[1] An initiative shall take the form of an all-embracing heading under which a number of projects can be included, leaving it to each region to define these.

[2] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

f) the mechanism for cooperation at regional and international level to implement the outputs of the World Summit on the Information Society (WSIS) as set out in §§ 101 a), b) and c), 102 a), b) and c), 103, 107 and 108 of the Tunis Agenda for the Information Society,

considering

a) that telecommunications/ICTs are one of the most vital elements for the growth of national economies and protection of the environment;

b) that, in order to achieve the objectives of the developing countries, new policy approaches may be required to meet the challenges of growth, in both qualitative and quantitative terms;

c) that developing countries are increasingly experiencing the need for knowledge of fast-developing technologies and the associated policy and strategic issues;

d) that the ITU Telecommunication Development Sector (ITU-D) is an appropriate platform for the exchange of experiences and best practices on development of the telecommunication/ICT sector;

e) the vital importance of cooperation among Member States, ITU-D Sector Members and Associates for the implementation of regional initiatives;

f) the satisfactory and encouraging results achieved by projects which have received international cooperation support under an initiative of the Telecommunication Development Bureau (BDT);

g) that telecommunication networks and services for sustainable development are an essential element for national development and improving the social, economic, financial and cultural situation of Member States;

h) the need to coordinate and harmonize efforts to develop telecommunication infrastructure at the national, regional, interregional and global levels;

i) that the leadership of the ITU Member States is needed to outline a unified national vision of a connected society that is comprehensive of all stakeholders;

j) the commitment of the ITU Member States to promote access to ICTs at affordable prices, paying special attention to the least favoured segments;

k) the importance of the telecommunication/ICT sector and its contribution to the achievement of the United Nations Sustainable Development Goals (SDGs),

recognizing

a) that developing countries and countries participating in regional initiatives are at different stages of development;

b) that, given the resources at the disposal of developing countries, it is an important task for ITU, as the United Nations specialized agency on telecommunications, to help these countries meet the requirements cited in *considering c)* above;

c) the need, therefore, to exchange experiences on telecommunication development at regional, interregional and global level in order to support these countries;

d) that ITU and regional organizations share common beliefs that close cooperation can promote regional telecommunications/ICTs in order to support these countries;

e) that there is a continued need for ITU to cooperate more closely with regional organizations, including regional organizations of regulators, in order to support these countries,

taking into account

a) the vital importance of telecommunication development initiatives endorsed by all regional development conferences, and by the preparatory meetings preceding this conference;

b) that there is a lack of funding from the United Nations Development Programme (UNDP) and other international financial institutions, impeding the implementation of such initiatives;

c) the achievements of the Connect the World initiatives promoted by ITU-D;

d) the satisfactory and encouraging results achieved by activities of this kind, which have helped cooperation in the creation of telecommunication networks,

noting

a) that the ITU-D centres of excellence (CoE) training significantly assists the developing countries with knowledge-based requirements;

b) that the relevant regional organizations play a prominent and important role in supporting the developing countries in areas such as regional cooperation and technical assistance activities;

c) the development of cooperation and technical assistance activities among regional and subregional organizations of regulators,

resolves

1 that BDT should continue cooperation with the ITU regional offices to identify possible ways and means of implementing the regionally approved initiatives at the national, regional, interregional and global levels, making the utmost use of available BDT resources, its annual budget and surplus income from ITU-TELECOM events, in particular by means of equitable budget allotments for each region;

2 that BDT continue to actively assist the developing countries in elaborating and implementing these regional initiatives, which are specified in section 3 of the Buenos Aires Action Plan;

3 that the budget allocation for the implementation of the regional initiatives be individualized in the budget of the Sector to be executed by BDT, discriminating between funds for ongoing projects and funds for new projects, divided by region;

4 that Member States should consider contributing in kind and/or in cash to the budget foreseen for implementation of these initiatives and the realization of other projects foreseen within the framework of these initiatives at the national, regional, interregional and global levels;

5 that BDT continue to actively conclude partnerships with Member States, ITU-D Sector Members, financial institutions and international organizations in order to sponsor implementation activities for these initiatives;

6 that BDT should assist in the implementation of these initiatives at the national, regional, interregional and global levels, integrating as far as possible those initiatives that have the same content or objectives, taking into consideration the Buenos Aires Action Plan;

7 that BDT, through the ITU regional offices, shall compile all the experiences accumulated during the implementation of regional initiatives in each region, and make them available to other regions in order to identify synergies and similarities that will make it possible to make better use of available resources, using the portal for project implementation, in the six official languages of the Union;

8 that BDT make information available on initiatives successfully implemented by each of the regions (outcomes, stakeholders, financial resources used, and so on), so as to capitalize on the experience and leverage the outcomes, which might be replicated in order to save time and resources when setting up and designing projects in the other regions, using the portal for the execution of projects in the six official languages of the Union;

9 that BDT should strengthen its relations with regional and subregional regulatory organizations in different networks, through ongoing cooperation to stimulate the mutual exchange of experience and assistance with the implementation of these regional initiatives;

10 that BDT should take all necessary steps to encourage exchanges of experience between developing countries, especially in the area of ICTs;

11 that BDT also channel the accumulated experience on regional initiatives through the regional offices, and make information available to Member States on implementation, outcomes, stakeholders, financial resources used and so forth;

12 that ITU-D should strengthen its relations with regional and subregional telecommunication organizations in order to identify synergies with their activities that may support the implementation of the regional initiative,

appeals

to international financial organizations/agencies, equipment suppliers and operators/service providers to contribute, fully or partially, to financing these regionally approved initiatives,

instructs the Director of the Telecommunication Development Bureau

1 to take all necessary measures for promoting and implementing these regionally approved initiatives at the national, regional, interregional and global levels, and in particular the similar initiatives agreed at international level;

2 to ensure that ITU-D actively coordinates, collaborates in and organizes joint activities in areas of common interest with regional organizations and training institutions, and takes into consideration their activities, as well as providing them with direct technical assistance;

3 to put forward a request at the annual Global Symposium for Regulators (GSR) meeting, for GSR to support the implementation of these regional and international initiatives;

4 to ensure that the ITU regional offices have a role in monitoring the implementation of the initiatives approved in their regions, identify the impact of these regional initiatives, considering the possible benefits at national level, in collaboration with countries served by these regional initiatives, and submit an annual report to the Telecommunication Development Advisory Group on the implementation of this resolution;

5 to continue to promote the dissemination to other regions of the results of projects implemented under regional initiatives;

6 that an annual meeting be held for each region in order to discuss the regional initiatives and projects for each region and mechanisms for implementation of the initiatives adopted and to make known the needs of the different regions, and that a regional development forum (RDF) may be held in conjunction with the annual meeting for each region;

7 to take all measures needed to promote consultation with the Member States in each region before implementing and executing approved initiatives in a timely fashion, in order to agree on priorities, suggest strategic partners, means of financing and other issues, thereby promoting a participatory, inclusive process of meeting the goals;

8 in consultation and coordination with the Directors of the Radiocommunication and Telecommunication Standardization Bureaux, to promote the joint work of the three Sectors in order to provide suitable, efficient, agreed assistance for Member States to implement the regional initiatives,

requests the Secretary-General

1 to continue special measures and programmes to develop and promote activities and regional initiatives, in close cooperation with regional and subregional telecommunication organizations, including regulators, and other related institutions;

2 to make every possible effort to encourage the private sector to take actions to facilitate cooperation with Member States in these regional initiatives, including countries with special needs;

3 to continue to work closely with the coordination mechanism established in the United Nations family and the five United Nations regional commissions;

4 to bring this resolution to the attention of the Plenipotentiary Conference with a view to securing adequate financial resources in the budget to fulfil the initiatives approved by the regions.

RESOLUTION 18 (Rev. Buenos Aires, 2017)

Special technical assistance to Palestine

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 32 (Kyoto, 1994) of the Plenipotentiary Conference, on technical assistance to Palestine for the development of telecommunications, and Resolution 125 (Rev. Busan, 2014) of the Plenipotentiary Conference, on assistance and support to Palestine for rebuilding its telecommunication networks;

b) Resolution 99 (Rev. Busan, 2014) of the Plenipotentiary Conference, on the status of Palestine in ITU;

c) the Charter of the United Nations and the Universal Declaration of Human Rights;

d) Resolution 18 (Rev. Dubai, 2014) of the World Telecommunication Development Conference (WTDC), on special technical assistance to Palestine;

e) United Nations General Assembly Resolution 68/235, which recognizes the Palestinian people's right to permanent sovereignty over their natural resources, specifically land, water, energy and other natural resources, in the occupied Palestinian territory, including East Jerusalem;

f) the provisions of § 16 of the Declaration of Principles of the first phase (Geneva, 2003) of the World Summit on the Information Society (WSIS) and the outcomes of the second phase of WSIS, particularly § 96 of the Tunis Agenda for the Information Society, relating to ITU's role in taking steps to ensure rational, efficient and economic use of, and equitable access to, the radio-frequency spectrum by all countries, based on relevant international agreements,

considering

a) that the ITU Constitution and Convention are designed to strengthen peace and security in the world for the development of international cooperation and better understanding among the peoples concerned;

b) ITU's policy of assistance to Palestine for the development of its telecommunication/information and communication technology (ICT) sector, which is efficient but has not yet achieved its goals;

c) Resolution 9 (Rev. Buenos Aires, 2017) of this conference, to the effect that it is the sovereign right of every State to manage spectrum use within its territories, and the provisions in Resolution 99 (Rev. Busan, 2014),

considering further

a) that establishment of a reliable and modern telecommunication network is an essential part of economic and social development and is of the utmost importance to the future of the Palestinian people;

b) the importance of the international community in assisting Palestine to develop a modern and reliable telecommunication network,

mindful

of the fundamental principles contained in the Constitution,

having regard to

a) the continuing challenges faced by Palestine and ITU in executing the five projects agreed with the Telecommunication Development Bureau (BDT) under the implementation of Resolution 18 (Rev. Istanbul, 2002), Resolution 18 (Rev. Doha, 2006), Resolution 18 (Rev. Hyderabad, 2010) and Resolution 18 (Rev. Dubai, 2014) of WTDC, which must be a matter of anxiety and concern for the entire international community, especially ITU;

b) the decisions of the Connect Arab summit;

c) the key outcomes of the Regional Preparatory Meeting for the Arab region (RPM-ARB), held in Bahrain in 2013, particularly issues relating to Palestine,

noting

the long-term technical assistance from BDT to Palestine for the development of its telecommunications/ ICTs pursuant to Resolution 32 (Kyoto, 1994) and the urgent need for forms of assistance to be provided in the various fields of information, informatics and communication, and the increasing difficulties that have accompanied the provision of this assistance continuously since that resolution was adopted,

noting with grave concern

the restrictions and difficulties related to the current situation in Palestine that are preventing access to telecommunication/ICT means, services and applications and which constitute a continuing obstacle to telecommunication/ICT development in Palestine,

resolves to continue to instruct the Director of the Telecommunication Development Bureau

1 to continue and enhance the technical assistance provided to Palestine for the development of its telecommunications/ICTs, taking into consideration the need to overcome the increasing and escalating difficulties encountered in the provision of this assistance during the previous cycles since 2002;

2 to take appropriate measures within the mandate of BDT aimed at facilitating the establishment of international access networks, including terrestrial and satellite stations, submarine cables, optical fibre and microwave systems;

3 to instruct BDT, in coordination with the Radiocommunication Bureau, to prepare and implement an urgent plan, to commence immediately, assist Palestine in completing the process of transition and migration to digital terrestrial television broadcasting in the frequency band 470-694 MHz, and identify mechanisms for ensuring that Palestine can exploit the 694-862 MHz frequency band resulting from the digital transition for broadband mobile service uses and applications to be used after the world radiocommunication conference 2015;

4 to provide a periodic report on various experiences in liberalization and privatization of telecommunications/ICTs and to assess their impact on the development of the sector in the Gaza Strip and the West Bank;

5 to implement e-health, e-education, e-government, spectrum planning and management pursuant to the previous agreements in ITU, and human resources development projects and all other forms of assistance;

6 to report to the ITU Council with an annual report on the progress made in implementing this resolution (and similar resolutions) and the mechanisms employed to deal with the increasing difficulties arising,

calls upon ITU members

1 to provide all forms of support and assistance to Palestine bilaterally or through executive actions taken by ITU in this regard;

2 to assist Palestine in rebuilding and restoring the Palestinian telecommunication network;

3 to assist Palestine in recovering its entitlements accruing from incoming and outgoing international traffic;

4 to provide Palestine with assistance in support of the implementation of BDT projects, including human resources capacity building,

requests the Secretary-General

to report to the Plenipotentiary Conference (Dubai, 2018) on the progress achieved in implementing this resolution.

RESOLUTION 20 (Rev. Buenos Aires, 2017)

Non-discriminatory access to modern telecommunication/ information and communication technology facilities, services and related applications

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 102 (Rev. Busan, 2014) of the Plenipotentiary Conference;

b) Resolution 64 (Rev. Busan, 2014) of the Plenipotentiary Conference, on non-discriminatory access to modern telecommunication/information and communication technology (ICT) facilities, services and applications, including applied research and transfer of technology, and e-meetings, on mutually agreed terms;

c) Resolution 69 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly, on non-discriminatory access and use of Internet resources and telecommunications/ICTs,

recalling also

a) the decisions of the two phases of the World Summit on the Information Society (WSIS) concerning non-discriminatory access, in particular §§ 15, 18 and 19 of the Tunis Commitment and §§ 90 and 107 of the Tunis Agenda for the Information Society;

b) United Nations General Assembly (UNGA) Resolution 70/1, on transforming our world: the 2030 Agenda for Sustainable Development;

c) UNGA Resolution 70/125, on the outcome document of the high-level meeting of the General Assembly on the overall review of the implementation of the WSIS outcomes;

d) the WSIS+10 Statement on the implementation of WSIS outcomes and WSIS+10 vision for WSIS beyond 2015, adopted at the ITU-coordinated WSIS+10 High-Level Event (Geneva, 2014) and endorsed by the Plenipotentiary Conference (Busan, 2014), which was submitted as an input into the UNGA overall review of WSIS,

taking into account

a) that ITU plays an important role in the promotion of global telecommunication/ICT standardization and development;

b) that, to this end, the Union coordinates efforts aimed at securing harmonious development of telecommunication/ICT facilities in all its Member States,

taking into account further

that this conference, like its predecessors, is required to formulate a viewpoint and draw up proposals on issues determining a worldwide strategy for the development of telecommunication/ICT facilities, services and applications, and facilitate mobilization of the necessary resources to that end,

noting

a) that modern telecommunication/ICT facilities, services and applications are established, in the main, on the basis of Recommendations of the ITU Radiocommunication (ITU-R) and ITU Telecommunication Standardization (ITU-T) Sectors;

b) that ITU-R and ITU-T Recommendations are the result of the collective efforts of all those taking part in the standardization process within ITU and are adopted by consensus by the members of the Union;

c) that limitations on access to the telecommunication/ICT facilities, services and applications on which national telecommunication/ICT development depends and which are established on the basis of ITU-R and ITU-T Recommendations constitute an obstacle to the harmonious development and compatibility of telecommunications/ICTs worldwide,

recognizing

that full harmonization of telecommunication/ICT networks is impossible unless all countries participating in the work of the Union without exception enjoy non-discriminatory access to new telecommunication/ICT technologies and modern telecommunication/ICT facilities, services and applications, without prejudice to national regulations and international commitments within the competence of other international organizations,

resolves

that there should be non-discriminatory access to telecommunication/ICT facilities, services and applications established on the basis of ITU-R and ITU-T Recommendations,

encourages the Director of the Telecommunication Development Bureau

to engage in partnerships or strategic cooperation with parties which respect access to telecommunication/ICT facilities, services and applications without discrimination,

requests the Secretary-General

to transmit this resolution to the forthcoming plenipotentiary conference for consideration,

invites the Plenipotentiary Conference

to consider this resolution with a view to taking measures to foster global access to modern telecommunication/ICT facilities, services and applications,

invites Member States

1 to refrain from taking any unilateral and/or discriminatory actions that could impede technically another Member State from having full access to the Internet within the spirit of Article 1 of the ITU Constitution and the WSIS principles;

2 to help telecommunication/ICT equipment manufacturers and service providers in ensuring that telecommunication/ICT facilities, services and applications established on the basis of ITU-R and ITU-T Recommendations are made available for the use of the public without any discrimination, in accordance with the WSIS outcomes.

RESOLUTION 21 (Rev. Buenos Aires, 2017)

Coordination and collaboration with regional and subregional organizations

The World Telecommunication Development Conference (Buenos Aires, 2017),

considering

a) Resolution 37 (Rev. Buenos Aires, 2017) of this conference, on bridging the digital divide;

b) Resolution 58 (Rev. Busan, 2014) of the Plenipotentiary Conference, on strengthening of relations between ITU and regional telecommunication organizations and regional preparations for the Plenipotentiary Conference;

c) Resolution 123 (Rev. Busan, 2014) of the Plenipotentiary Conference, on bridging the standardization gap between developing[1] and developed countries;

d) Resolution 139 (Rev. Busan, 2014) of the Plenipotentiary Conference, on use of telecommunications/information and communication technologies (ICTs) to bridge the digital divide and build an inclusive information society;

e) Resolution 44 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly (WTSA), on bridging the standardization gap between developing and developed countries;

f) Resolution 54 (Rev. Hammamet, 2016) of WTSA, on creation of, and assistance to, regional groups;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

g) Recommendation ITU-D 22 (Dubai, 2014) of the World Telecommunication Development Conference, on bridging the standardization gap in association with regional groups of the study groups;

h) Resolution 72 (Rev.WRC-07) of the World Radiocommunication Conference (WRC), on world and regional preparations for world radiocommunication conferences;

i) the provisions of §§ 26 and 27 of the Geneva Action Plan of the World Summit on the Information Society (WSIS);

j) the key principles of the WSIS Geneva Declaration of Principles in §§ 60, 61, 62, 63 and 64;

k) the provisions of §§ 23 c), 27 c), 80, 87, 89, 96, 97 and 101 of the WSIS Tunis Agenda for the Information Society;

l) Resolution 70/1 of the United Nations General Assembly (UNGA), on transforming our world: the 2030 Agenda for Sustainable Development;

m) UNGA Resolution 70/125, on the outcome document of the high-level meeting of the General Assembly on the overall review of the implementation of the WSIS outcomes,

noting

Article 43 of the ITU Constitution (No. 194),

conscious

a) that the role of regional and subregional organizations continues to grow with the changes that have taken place in recent years;

b) that regional organizations are important bodies, and coordination with them should be carried out in order to support coordination and collaboration on the implementation of regional projects;

c) that the relationship between ITU regional and area offices and regional telecommunication organizations has proved to be of great benefit;

d) that meetings of the regional groups of ITU study groups are held by ITU and can be supported by regional organizations and/or regional standardization bodies;

e) that the activities of regional groups have become more important, and encompass a growing number of issues of particular importance for developing countries;

f) that it is necessary to adopt ways and means of enhancing the role of ITU in general, and the ITU Telecommunication Development Sector (ITU-D) in particular, in implementing the WSIS goals and in implementing the 2030 Agenda for Sustainable Development in relation to the development of telecommunications/ICT globally, regionally and nationally, in close cooperation with other international and regional organizations and relevant civil-society bodies;

g) that it is necessary to seize every opportunity to give experts from developing countries additional opportunities to gain experience by participating in regional and subregional meetings relating to the work of ITU-D Study Groups 1 and 2,

recognizing

a) that developing countries are at different stages of development;

b) that there is a need, therefore, to exchange opinions on telecommunication development at a regional level;

c) the difficulty for some countries in some regions to participate in the activities of ITU-D, the ITU Telecommunication Standardization Sector (ITU-T) and the ITU Radiocommunication Sector (ITU-R);

d) that a common and coordinated approach within ITU to the study of matters relating to the development and standardization of telecommunications/ICT could serve to foster the promotion of standardization activities in developing countries;

e) that, pursuant to the aforementioned Resolutions 44 (Rev. Hammamet, 2016) and 54 (Rev. Hammamet, 2016), regional rapporteur groups might permit wider participation by some countries, at lower cost, to address certain questions;

f) that many of these countries make effective use of regional and subregional organizations;

g) that regional and subregional meetings are a valuable opportunity for exchanging information and generating managerial and technical experience and knowledge;

h) that it is necessary to collaborate with ITU-T in this respect in implementing Resolutions 44 (Rev. Hammamet, 2016) and 54 (Rev. Hammamet, 2016),

recalling

a) the possibility of creating regional groups to study questions or difficulties which, because of their specific nature, it is desirable to study within the framework of one or more of ITU's regions;

b) regional initiatives with a view to:

i) implementation of technical cooperation projects and direct assistance to other regions;

ii) cooperation in regional initiatives with regional and international organizations involved with telecommunication/ICT development;

c) the need to create an appropriate mechanism to unify efforts with the bodies referred to in Resolutions 44 (Rev. Hammamet, 2016) and 54 (Rev. Hammamet, 2016),

resolves

1 to continue to encourage the creation of regional groups to study questions or difficulties that concern a specific region;

2 to encourage cooperation of ITU regional and area offices with relevant regional groups, ITU Sector Members, Associates and Academia as well as with regional telecommunication organizations and regional standardization organizations, on issues of mutual interest;

3 that ITU-D continue to coordinate, collaborate in and organize joint activities in areas of common interest with regional and subregional organizations and training institutions and take into consideration their activities;

4 that the results of the activities of regional groups be sent for use, as appropriate, in ITU-D,

instructs the Director of the Telecommunication Development Bureau

1 to take the necessary measures to coordinate with regional and subregional telecommunication organizations, and regional standardization organizations, as required;

2 to implement the necessary procedures to ensure effective liaison between regional groups set up under WTSA Resolutions 44 (Rev. Hammamet, 2016) and 54 (Rev. Hammamet, 2016) and the ITU-T and ITU-D study groups, especially on complementary Questions under study,

instructs the Director of the Telecommunication Development Bureau, in collaboration with the Directors of the Radiocommunication Bureau and the Telecommunication Standardization Bureau

within the allocated or contributed resources that are available,

1 to provide all necessary support for creating and ensuring smooth functioning of the regional groups;

2 to consider, whenever possible, holding conferences and workshops concurrently with meetings of the ITU-T regional groups, in the relevant regions, and vice versa;

3 to take all necessary measures to facilitate the organization of meetings and conferences/workshops of the regional groups.

RESOLUTION 22 (Rev. Buenos Aires, 2017)

Alternative calling procedures on international telecommunication networks and identification of origin in providing international telecommunication services

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 21 (Rev. Busan, 2014) of the Plenipotentiary Conference, on measures concerning alternative calling procedures on international telecommunication networks;

b) Resolution 1099 adopted by the 1996 session of the ITU Council, on alternative calling procedures on international telecommunication networks, which urged the ITU Telecommunication Standardization Sector (ITU-T) to develop, as soon as possible, the appropriate Recommendations concerning alternative calling procedures;

c) Resolution 29 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly (WTSA), on alternative calling procedures on international telecommunication networks;

d) Resolution 20 (Rev. Hammamet, 2016) of WTSA, on procedures for allocation and management of international telecommunication numbering, naming, addressing and identification resources,

considering

a) the sovereign right of each Member State to regulate its telecommunications/information and communication technologies (ICTs), which may include the provision of calling line identification, calling party number delivery and origin identification;

b) the purposes of the Union, which include, *inter alia*:

- to maintain and extend international cooperation among all Member States of the Union for the improvement and rational use of telecommunications/ICTs of all kinds;

- to promote the development of technical facilities and their most efficient operation with a view to improving the efficiency of telecommunication services, increasing their usefulness, and making them, as far as possible, generally available to the public;

- to foster collaboration among its Member States and Sector Members with a view to the establishment of rates at levels as low as possible consistent with efficient services and taking into account the necessity for maintaining independent financial administration of telecommunications on a sound basis, pursuant to the purposes of the Union as set forth in Article 1, No. 16, of the ITU Constitution;

- to facilitate peaceful relations, international cooperation among peoples and economic and social development by means of efficient telecommunication services;

c) the necessity of identifying the origin of calls as one of the aims of national security;

d) the need to facilitate the determination of routing and charging,

considering further

a) that alternative calling procedures, which may be potentially harmful, are not permitted in many countries and permitted in some others that do not see such harm;

b) that the use of alternative calling procedures adversely affects the economies of developing countries[1] and may seriously hamper the efforts of these countries for the sound development of their telecommunication networks and services, may prejudice national security aims and may have an economic effect;

c) that some forms of alternative calling procedures may have an impact on traffic management and network planning, and degrade the quality and performance of telecommunication networks;

d) that a number of relevant ITU-T Recommendations, particularly those of ITU-T Study Groups 2 and 3, address, from several points of view, including technical and financial, the effects of alternative calling procedures on the performance and development of telecommunication networks,

noting

a) that the role of ITU with respect to reports of numbering misuse is stated in Recommendation ITU-T E.156, on guidelines for ITU action on reported misuse of E.164 resources;

b) the results of the ITU workshop on caller ID spoofing held by ITU-T Study Group 2 in Geneva on 2 June 2014;

c) that any calling procedure should aim to maintain acceptable levels of quality of service (QoS) and quality of experience (QoE), as well as to enable calling line identification (CLI) and/or origin identification (OI) information;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

d) the relevant articles of the International Telecommunication Regulations (ITRs), as appropriate;

e) the decisions of this conference with respect to the programme on Policy and regulatory environment, Questions to be studied by the study groups of the ITU Telecommunication Development Sector (ITU-D), and actions to be taken by the Director of the Telecommunication Development Bureau to support joint activities with ITU-T Study Groups 2, 3 and 12 for assisting developing countries on current study Questions relating to this resolution,

resolves

1 that Member States and Sector Members continue to support the study of the impact of alternative calling procedures on national environments based on the introduction of appropriate ITU-T Recommendations concerning alternative calling procedures;

2 to encourage all administrations and international telecommunication operators to give effect to ITU-T Recommendations which help limit the negative effects of alternative calling procedures and calling party number delivery on developing countries, and limit the negative effects of misappropriation and misuse of relevant international telecommunication resources within the remit of ITU;

3 to request ITU-D and ITU-T study groups to collaborate so as to avoid overlap and duplication of effort in studying alternative calling procedures, and specifically ITU-T Study Group 2, in studying aspects and forms of alternative calling procedures, ITU-T Study Group 3, in studying the economic effects of alternative calling procedures, and ITU-T Study Group 12, in studying the minimum QoS and QoE threshold to be fulfilled during the use of alternative calling procedures;

4 to request administrations and international telecommunication operators which permit the use of alternative calling procedures but do not provide calling party number delivery in their countries in accordance with their national regulations to respect the decisions of other administrations and international operators whose regulations do not permit such services and which request the provision of international calling line identification information, taking into account the relevant ITU-T Recommendations, for security and economic reasons;

5 that cooperation is required with ITU-T, and specifically ITU-T Study Group 2, in implementing Resolution 20 (Rev. Hammamet, 2016) in relation to telecommunication origin identification and misuse of relevant international telecommunication resources within the remit of ITU,

instructs the Director of the Telecommunication Development Bureau

to continue to cooperate with the Director of the Telecommunication Standardization Bureau in order to facilitate the participation of developing countries in ITU studies and to make use of the results of the studies, and in the implementation of this resolution,

invites Member States and Sector Members

to contribute to this work.

RESOLUTION 23 (Rev. Buenos Aires, 2017)

Internet access and availability for developing countries[1] and charging principles for international Internet connection

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) United Nations General Assembly (UNGA) Resolution 70/1, on transforming our world: the 2030 Agenda for Sustainable Development;

b) UNGA Resolution 70/125, on the 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 (WSIS);

c) Resolution 64 (Rev. Busan, 2014) of the Plenipotentiary Conference, on non-discriminatory access to modern telecommunication/information and communication technology (ICT) facilities, services and applications, including applied research and transfer of technology, and e-meetings, on mutually agreed terms, which invites Member States to refrain from taking any unilateral and/or discriminatory actions that could impede technically another Member State from having full access to the Internet, within the spirit of Article 1 of the ITU Constitution and the WSIS principles;

d) Resolution 101 (Rev. Busan, 2014) of the Plenipotentiary Conference, on Internet Protocol (IP)-based networks;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

e) Resolution 139 (Rev. Busan, 2014) of the Plenipotentiary Conference, on use of telecommunications/ICTs to bridge the digital divide and build an inclusive information society;

f) Resolution 20 (Rev. Buenos Aires, 2017) of this conference, on non-discriminatory access to modern telecommunication/ICT facilities, services and related applications;

g) Resolution 37 (Rev. Buenos Aires, 2017) of this conference, on bridging the digital divide;

h) the provisions of § 50 of the Tunis Agenda for the Information Society, recognizing the particular concerns among developing countries that charges for international Internet connectivity should be better balanced to enhance access, and calling for the development of strategies for increasing affordable global connectivity, thereby facilitating improved and equitable access for all, by the means described in the said paragraph, especially items a), b), c), d), e), f) and g) thereof;

i) the four targets set by the Broadband Commission for Digital Development for making broadband universal and boosting affordability and uptake thereof, namely: making broadband policy universal; making broadband affordable; connecting homes to broadband; and getting people online;

j) Opinion 1 (Geneva, 2013) of the World Telecommunication/ICT Policy Forum (WTPF), which expresses the view that enabling the interconnection of international, national and regional networks through Internet exchange points (IXPs) may be an effective way to improve international Internet connectivity and to reduce the costs of such connectivity, with regulation only when necessary to promote competition, and invites Member States and Sector Members to work in a collaborative manner to do a number of things, including to promote public policies aimed at permitting the local, regional and international Internet network operators to interconnect through IXPs,

noting

a) that Recommendation ITU-T D.50, on international Internet connection, recommends that administrations take appropriate measures nationally to ensure that parties (including operating agencies authorized by Member States) involved in the provision of international Internet connections negotiate and agree to bilateral commercial arrangements, or other arrangements as agreed between administrations, enabling direct international Internet connections that take into account the possible need for compensation between them for the value of elements such as traffic flow, number of routes, geographical coverage and cost of international transmission, and the possible application of network externalities, among others;

b) that Recommendation ITU-T D.52, on establishing and connecting regional Internet exchange points to reduce costs of international Internet connectivity, proposes measures to empower administrations and consumers to benefit from efficient cooperation so that they have the required information to take appropriate regulatory actions, and to identify measures for improving the way the market works and proposals for regulatory actions, which may include measures to lower costs;

c) that the rapid growth of the Internet and IP-based international services, in addition to the rise in high-speed mobile telecommunication access in all parts of the world and general availability of connected devices, has allowed users access to a wider range of services;

d) that international Internet connections remain subject to commercial agreements between the parties concerned, and Internet service provider (ISP) operators from developing countries have expressed concerns that such agreements have not achieved the required balance in regard to charges between developed and developing countries, especially affecting landlocked countries;

e) that the composition of costs for operators, whether regional or local, is, in part, significantly dependent on the type of connection (transit or peering) and the availability and cost of backhaul and long-haul infrastructure;

f) that the cost of transit is an obstacle for the availability and development of the Internet in developing countries;

g) that Opinion 1 (Geneva, 2013) considered that the establishment of IXPs is a priority to address connectivity issues, improve quality of service and reduce interconnection costs; and that IXPs and telecommunication traffic exchange points may play a relevant role in the deployment of Internet infrastructure and reaching the overall goals of improving quality, increasing the connectivity and resilience of networks, fostering competition and reducing the costs of interconnection;

h) that access to information and sharing and creation of knowledge contribute significantly to strengthening economic, social and cultural development, thus helping countries to reach the internationally agreed development goals and objectives, a process which can be enhanced by removing barriers to universal, ubiquitous, equitable and affordable access to information;

i) that continuing technical and economic development require ongoing studies in this area by the relevant ITU Sectors, in particular best practices for reducing the cost of international Internet connectivity (transit and peering);

j) that efficient networks and costs enable increased traffic volumes, economies of scale and a shift from transit connections to peering arrangements where appropriate;

k) that a rise in the costs of international connectivity will result in delayed access to and benefit from the Internet;

l) that the disparities in ICT development between countries remain substantial, ICT Development Index (IDI) values being on average twice as high in developed compared to developing countries;

m) that the case could arise in which the surcharges that a Member State, especially a transit country, applies to parties operating at the national level (including recognized operating agencies) are transferred via tariffs to the parties (including recognized operating agencies) that are operating abroad under the rules of another Member State,

recognizing

a) that commercial initiatives by service providers have the potential to deliver cost savings for Internet access, for example through the development of more local content and the optimization of Internet traffic routing patterns in a manner that provides for a greater proportion of traffic to be routed locally;

b) that the development of an information society requires not only the deployment of appropriate technical infrastructure but also measures to promote availability of local content, applications and services, in a range of languages and at affordable prices, while providing access to remotely available content regardless of location;

c) that skills development, education and capacity building play a critical role in promoting Internet access in developing countries and the development of an information society;

d) the need to bridge the digital divide at various levels (including the digital divide between regions, countries, parts of countries, and between urban and rural areas),

taking into account

a) that, as part of the work of Study Group 3 of the ITU Telecommunication Standardization Sector (ITU-T), on tariff and accounting principles including related telecommunication economic and policy issues, a rapporteur group was set up for the purpose of drafting a supplement to Recommendation ITU-T D.50 to facilitate the adoption of specific measures to reduce international Internet connection costs, especially for developing countries;

b) that ITU-T Study Group 3 adopted Recommendation ITU-T D. 52, on establishing and connecting regional IXPs to reduce costs of international Internet connectivity, which guides regional collaboration to establish central hubs or IXPs that enable local Internet traffic to be routed locally, saving international bandwidth and reducing the costs of international Internet connectivity,

invites Study Group 1 of the ITU Telecommunication Development Sector

1 to take into account the content of this resolution when conducting related studies to promote international connections to the Internet, and to maintain close cooperation with ITU-T Study Group 3;

2 to provide guidance based on contributions of Member States and Sector Members on the support and best practices which are available from ITU-T, including Recommendations ITU-T D.50 and ITU-T D.52, the Internet Society, the regional IXP associations and other relevant stakeholders in regard to the establishment of IXPs;

3 to continue to study the national aspects related to this resolution under ITU-D Study Group 1 Question 3/1,

resolves to invite Member States

1 to support the work of ITU-T in monitoring the application of Recommendations ITU-T D.50 and ITU-T D.52, bearing in mind the importance of the issue of international Internet connection costs in the developing countries;

2 to make progress in the coordination of regional policies in order to reduce international Internet connection costs, by agreeing on specific measures that will lead to an improvement in conditions for developing countries, including the deployment of regional IXPs, and supporting the Recommendation ITU-T D.52 supervisory work;

3 to promote, taking into account the policies of each country, the establishment of regional, subregional and national IXPs that represent an alternative to reduce the costs of broadband, ensuring that they in turn enable a direct flow without the need for recourse to international circuits;

4 to create policy conditions for effective competition in the international Internet backbone network access market as well as in the domestic Internet access service market, as an important factor for lowering the cost of Internet access for users and service providers;

5 to implement the Tunis Agenda in this respect, particularly § 50 thereof;

6 to take appropriate measures at national level to promote the provision of international connections that comply with international regulations in force;

7 to promote agreements for taking appropriate measures at national level that enable parties (including recognized operating agencies) that provide international connections to minimize the surcharges for parties (including recognized operating agencies) residing abroad that receive the aforementioned international connections;

8 to continue to support initiatives to promote skills development, education and capacity building in ICTs, particularly in developing countries;

9 to support the action being taken by ITU-T Study Group 3 to facilitate the adoption of specific measures to reduce the cost of global Internet connectivity, particularly for developing countries,

reaffirms

its resolution in the quest to continue to ensure that everyone can benefit from the opportunities that ICTs can offer, by recalling that governments, as well as the private sector, civil society and the United Nations and other international organizations, should work together to: improve access to information and communication infrastructure and technologies as well as to information and knowledge; build capacity; increase confidence and security in the use of ICTs; create an enabling environment at all levels; develop and widen ICT applications; foster and respect cultural diversity; recognize the role of the media; address the ethical dimensions of the information society; and encourage international and regional cooperation,

urges regulators

1 to promote such measures as may be considered appropriate to foster an improvement in conditions for service providers, including small and medium-sized ISPs and incumbent network access service providers, with a focus on reducing connectivity costs as referred to in *noting c), d), f)* and *i)* above;

2 to exchange experiences and best practices regarding the establishment of regional, subregional and national IXPs and encourage partnerships to improve international connections,

urges service providers

to negotiate and agree to bilateral commercial arrangements enabling direct international Internet connections that take into account the possible need for compensation between them for the value of elements such as, *inter alia*, traffic flow, number of routes, geographical coverage and the cost of international transmission,

instructs the Director of the Telecommunication Development Bureau

1 to continue to coordinate activities that promote information sharing among regulators on the relationship between charging arrangements for international Internet connection and the affordability of international Internet infrastructure development in developing and least developed countries, through cooperation with ITU-T in this matter, by giving the necessary priority to the relevant study Questions in the work under the programme concerned;

2 to continue to undertake studies on the structure of international Internet connection costs for developing countries, with emphasis on the influence and effects of the connection mode (transit and peering), secure cross-border connectivity and the availability and cost of backhaul and long-haul physical infrastructure;

3 to coordinate actions to provide training and technical assistance in order to encourage and promote the creation and development of regional interconnection infrastructure as a platform for exchanging Internet traffic between developing countries;

4 to organize workshops and seminars dealing with the advantages of establishing regional and national IXPs and international connectivity, covering technical, regulatory and quality-related matters as well as their impact on operators and users.

RESOLUTION 24 (Rev. Dubai 2014)

Authorization for the Telecommunication Development Advisory Group to act between world telecommunication development conferences

The World Telecommunication Development Conference (Dubai, 2014),

recalling

Resolution 24 (Rev. Hyderabad, 2010) of the World Telecommunication Development Conference (WTDC),

considering

a) that, under the provisions of Article 17A of the ITU Convention, the Telecommunication Development Advisory Group (TDAG) is to continue to provide guidelines for the work of study groups, review progress in the implementation of priorities, programmes and operations and recommend measures to foster coordination and cooperation with other relevant development and financial institutions;

b) that there is a need to evaluate the activities of study groups;

c) that the rapid pace of change in the telecommunication environment and in industry groups dealing with telecommunications/information and communication technologies (ICTs) still demands that the ITU Telecommunication Development Sector (ITU-D) make decisions on issues such as work priorities, study group structure and meeting schedules in shorter periods of time, between WTDCs;

d) that TDAG has demonstrated its capability to make proposals for enhancing the operational efficiency of ITU-D, for improving the quality of ITU-D Recommendations and for methods of coordination and cooperation;

e) that TDAG can help improve coordination of the study processes and provide improved decision-making processes for the important areas of ITU-D activities;

f) that flexible administrative procedures, including those related to budgetary considerations, are needed in order to adapt to rapid changes in the telecommunication/ICT environment;

g) that it is necessary that TDAG continue to act in the four years between WTDCs in order to meet the needs of the members in a timely manner,

recognizing

a) that the duties of WTDC are specified in the Convention;

b) that the current four-year cycle for WTDCs effectively precludes the possibility of addressing unforeseen issues requiring urgent action in the intervening period between two conferences;

c) that TDAG, which meets at least on a yearly basis, is capable of addressing these issues as they arise;

d) that, in accordance with No. 213A of the Convention, a WTDC may assign specific matters within its competence to TDAG, indicating the recommended action on those matters;

e) that TDAG has already demonstrated the capability to act effectively on matters referred to it by the previous WTDC,

noting

that there is still an ongoing need to identify an appropriate mechanism or mechanisms to address new emerging problems for developing countries that ITU-D may not yet have been able to consider,

resolves

1 to continue to assign to TDAG the following specific matters, between two consecutive WTDCs, acting through reports from the Director of the Telecommunication Development Bureau (BDT) and study group chairmen, as appropriate:

i) continue to maintain efficient and flexible working guidelines, and update them as necessary, including to provide opportunities for cross-regional sharing of experiences on the implementation of regional actions, initiatives and projects;

ii) review, on an ongoing basis, the relationship between the ITU-D objectives outlined in the strategic plan for the Union and the budgetary appropriations available for activities, particularly programmes and regional initiatives, with a view to recommending any measures necessary to ensure the efficient and effective delivery of the principal products and services (outputs) of the Sector;

iii) review, on an ongoing basis and in accordance with No. 223A of the Convention, the implementation of the rolling four-year operational plan for ITU-D and provide guidance to BDT on the elaboration of the draft ITU-D operational plan to be approved by the following ITU Council session;

iv) evaluate, and update as necessary, working methods and guidelines to ensure the most efficient and flexible implementation of the key elements of the WTDC Action Plan;

v) evaluate periodically the working methods and functioning of the ITU-D study groups, to identify options for maximizing programme delivery and to approve appropriate changes thereto following an assessment of their work programme, including strengthening of the synergy between Questions, programmes and regional initiatives;

vi) conduct the assessment pursuant to v) above, taking into account the following actions in relation to the current work programme of the study groups, if needed:

- redefinition of the terms of reference of Questions in order to provide focus and eliminate overlap;

- deletion or merging of Questions as appropriate; and

- evaluation of criteria to measure the effectiveness of Questions, both in qualitative and quantitative terms, including a periodical review based on the ITU-D strategic plan with a view to further exploring performance measures in order to more effectively implement actions referred to in v) above;

vii) restructure ITU-D study groups, if required, and, as a result of a restructuring or creation of ITU-D study groups, appoint chairmen and vice-chairmen to act until the next WTDC in response to the needs and concerns of the Member States, within the agreed budgetary limits;

viii) issue advice on study group schedules that meet development priorities;

ix) advise the Director of BDT on relevant financial and other matters;

x) approve the programme of work arising from the review of existing and new Questions and determine the priority, urgency, estimated financial implications and time-scale for the completion of their study;

xi) in order to promote flexibility in responding rapidly to high-priority matters, if required, create, terminate or maintain other groups, appoint their chairmen and vice-chairmen, and establish their terms of reference with a defined duration, in accordance with Nos 209A and 209B of the Convention and taking into account the leading role of the study groups in carrying out the studies on such matters; such other groups shall not adopt Questions or Recommendations;

xii) consult the Director of BDT on the development and implementation of an action plan on electronic working methods and, going forward, procedures and rules for electronic meetings, including legal aspects, taking into account the needs and the means of developing countries and in particular the least developed countries;

2 that, when dealing with restructuring of the study groups and the creation of new study groups, the decisions taken in TDAG meetings shall be unopposed by any Member State present at the meeting;

3 that TDAG, in carrying out its work, collaborate with the advisory groups of the other Sectors with the aim of coordinating efforts and eliminating duplication, consulting where appropriate with the Director of BDT;

4 that TDAG shall promptly consider at its meetings aspects of the decisions of the Plenipotentiary Conference and other conferences and assemblies of the Union that relate to the work of ITU-D,

instructs the Telecommunication Development Advisory Group

to take appropriate action for the implementation of this resolution and report the results to the next WTDC.

RESOLUTION 25 (Rev. Buenos Aires, 2017)

Assistance to countries in special need: Afghanistan, Burundi, Central African Republic, Democratic Republic of the Congo, Eritrea, Ethiopia, Guinea, Guinea-Bissau, Haiti, Liberia, Rwanda, Sierra Leone, Somalia and Timor-Leste

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

Resolution 34 (Rev. Busan, 2014) of the Plenipotentiary Conference,

recalling further

the purposes of the Union, as enshrined in Article 1 of the ITU Constitution,

recognizing

a) that the ongoing ITU efforts in extending assistance, including through ITU-TELECOM surplus funds, to countries in special need (Afghanistan, Burundi, Democratic Republic of the Congo, Eritrea, Ethiopia, Guinea, Guinea-Bissau, Haiti, Liberia, Rwanda, Sierra Leone, Somalia and Timor-Leste) should be extended to other countries whose circumstances are similar to the aforementioned countries;

b) that a reliable telecommunication network is indispensable for promoting the socio-economic development of countries, in particular those having suffered from natural disasters, domestic conflicts or war;

c) that, under the present conditions and in the foreseeable future, these countries will not be able to bring their telecommunication systems up to an acceptable level without help from the international community, provided bilaterally or through international organizations,

noting

a) the report of the Director of the Telecommunication Development Bureau (BDT) on the implementation, *inter alia*, of Resolution 34 (Rev. Busan, 2014);

b) the efforts deployed by the Secretary-General and the Director of BDT towards the implementation of Resolution 34 (Rev. Busan, 2014),

noting further

that the conditions of order and security sought by United Nations resolutions have been only partially achieved and that, due to non-allocation of resources for the implementation of Resolution 34 (Rev. Busan, 2014), the resolution has been only partially implemented,

resolves

that the special action initiated by the Secretary-General and the Director of BDT, with specialized assistance from the ITU Radiocommunication Sector and the ITU Telecommunication Standardization Sector, should be continued in order to provide appropriate assistance and support to countries that have suffered from natural disasters, domestic conflicts or wars, namely Afghanistan, Burundi, Central African Republic, Democratic Republic of the Congo, Eritrea, Ethiopia, Guinea, Guinea-Bissau, Haiti, Liberia, Rwanda, Sierra Leone, Somalia and Timor-Leste, in rebuilding their telecommunication networks, as and when the conditions of order and security sought by United Nations resolutions are met,

calls upon Member States

to offer all possible assistance and support to the governments of the countries in special need, either bilaterally or through the special action of the Union referred to above,

invites the ITU Council

to allocate the necessary funds within available resources for the implementation of this resolution,

instructs the Director of the Telecommunication Development Bureau

1 to use the necessary funds, within available resources, to implement activities in favour of the countries listed above;

2 to mobilize extrabudgetary resources to assist these countries,

requests the Secretary-General

1 to ensure that the Union's actions in favour of these countries are as effective as possible and to report on the matter to the Council;

2 to coordinate the activities carried out by the three ITU Sectors in accordance with *resolves* above, to ensure that the Union's action in favour of countries in special need is as effective as possible, and to report on the matter to the Council;

3 to update this list of countries from time to time, as needed and with the approval of the Council.

RESOLUTION 26 (Rev. Doha, 2006)

Assistance to countries in special need: Afghanistan

The World Telecommunication Development Conference (Doha, 2006),

recalling

Resolution 34 (Rev. Minneapolis, 1998) of the Plenipotentiary Conference,

recalling further

the purposes of the Union, as enshrined in Article 1 of the ITU Constitution,

recognizing

a) that no budget was allocated by the Plenipotentiary Conference to accompany Resolution 34 (Rev. Minneapolis, 1998) for the benefit of countries in special need;

b) that the telecommunication infrastructure in Afghanistan has been completely destroyed by the two decades of war and that the existing equipment in use is over forty years old and thus obsolete;

c) that Afghanistan at present does not have a national telecommunication infrastructure, access to international telecommunication networks or access to the Internet;

d) that a telecommunication system is an essential input for the reconstruction, rehabilitation and relief operations in the country;

e) that, under the present conditions and in the foreseeable future, Afghanistan will not be able to rebuild its telecommunication systems without help from the international community, provided bilaterally or through international organizations,

noting

a) that Afghanistan has not benefited from the Union's assistance over a long period due to war in the country;

b) the efforts deployed by the Secretary-General and the Director of the Telecommunication Development Bureau (BDT) towards the provision of assistance to other countries emerging from war situations,

resolves

that the special action initiated by the Secretary-General and the Director of BDT, with specialized assistance from the ITU Radiocommunication Sector and the ITU Telecommunication Standardization Sector, should be continued in order to provide assistance and support to Afghanistan in rebuilding its telecommunication infrastructure, establishing institutions for the sector, developing telecommunication legislation and regulatory framework, including numbering plan, spectrum management, tariff and human resource development and all other forms of assistance,

calls upon Member States

to offer all possible assistance and support to the Government of Afghanistan, either bilaterally or through the special action of the Union referred to above,

invites the ITU Council

to allocate the necessary funds within available resources for the implementation of this resolution,

instructs the Director of the telecommunication Development Bureau

1 to implement fully a programme of assistance for the least developed countries from which Afghanistan can receive focused assistance in various areas determined to be of high priority by the country;

2 to take immediate measures to assist Afghanistan in the period up to the Plenipotentiary Conference (Antalya, 2006),

requests the Secretary-General

to coordinate the activities carried out by the three ITU Sectors in accordance with *resolves* above, to ensure that the Union's action in favour of Afghanistan is as effective as possible, and to report on the matter to the Council.

RESOLUTION 27 (Rev. Hyderabad, 2010)

Admission of entities or organizations to participate as Associates in the work of the ITU Telecommunication Development Sector

The World Telecommunication Development Conference (Hyderabad, 2010),

recalling

Resolution 27 (Rev. Doha, 2006) of the World Telecommunication Development Conference,

considering

a) that the rapid pace of change in the telecommunication environment and in industry groups dealing with telecommunications/information and communication technology (ICT) demands the increased participation of interested entities and organizations in the development activities of ITU;

b) that entities or organizations, in particular those with highly focused areas of activity, may be interested only in a small part of the development work of the ITU Telecommunication Development Sector (ITU-D) and, therefore, do not intend to apply for membership in the Sector, but would be willing to join in the activity of a given study group of the Sector if simpler conditions existed;

c) that No. 241A of the ITU Convention enables the Sectors to admit entities or organizations to participate as Associates in the work of a given study group, its working parties or rapporteur groups;

d) that Nos 241A, 248B and 483A of the Convention describe the principles governing the participation of Associates,

resolves

1 that an interested entity or organization may join ITU-D as an Associate and be entitled to take part in the work of a selected single study group and its subordinate groups (such as rapporteur groups or working parties);

2 that Associates are limited to the study group roles described below and excluded from all others:

- Associates may take part in the process of preparing Recommendations within a single study group, including the roles of participating in meetings, submitting contributions and providing comments before the adoption of a Recommendation;

- Associates shall have access to documentation required for their work;

3 that the amount of the financial contribution for Associates be based upon a proportion of the contributory unit for Sector Members as determined by the Council for any particular biennial budgetary period,

requests the Secretary-General

to continue to admit entities or organizations to participate as Associates in the work of a given study group or subgroups or rapporteur group thereof, following the principles set in Nos 241B, 241C, 241D and 241E of the Convention,

requests the Telecommunication Development Advisory Group

to continue to review the conditions governing the participation (including the financial impact on the Sector budget) of Associates based on the experience gained within ITU-D in this area,

instructs the Director of the Telecommunication Development Bureau

to continue to prepare the necessary logistics for the participation of Associates in the work of the ITU-D study groups, including possible impacts of study group reorganization.

RESOLUTION 30 (Rev. Buenos Aires, 2017)

Role of the ITU Telecommunication Development Sector in implementing the outcomes of the World Summit on the Information Society, taking into account the 2030 Agenda for Sustainable Development

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) the outcomes of both phases of the World Summit on the Information Society (WSIS);

b) Resolution 70/125 of the United Nations General Assembly (UNGA), on the outcome document of the high-level meeting of the General Assembly on the overall review of the implementation of WSIS outcomes;

c) UNGA Resolution 70/1, on transforming our world: the 2030 Agenda for Sustainable Development;

d) the WSIS+10 Statement on the implementation of WSIS outcomes and the WSIS+10 vision for WSIS beyond 2015, adopted at the ITU-coordinated WSIS+10 High-Level Event (Geneva, 2014) and endorsed by the Plenipotentiary Conference (Busan, 2014), which were submitted as an input into the UNGA's overall review on the implementation of WSIS outcomes;

e) Resolution 37 (Rev. Buenos Aires, 2017) of this conference, on bridging the digital divide;

f) Resolution 71 (Rev. Busan, 2014) of the Plenipotentiary Conference, on the strategic plan for the Union for 2012-2015;

g) Resolution 77 (Rev. Buenos Aires, 2017) of this conference, on broadband technology and applications for greater growth and development of telecommunication/information and communication services and broadband connectivity;

h) Resolution 130 (Rev. Busan, 2014) of the Plenipotentiary Conference, on strengthening the role of ITU in building confidence and security in the use of information and communication technologies (ICTs);

i) Resolution 131 (Rev. Busan, 2014) of the Plenipotentiary Conference, on measuring ICTs to build an integrating and inclusive information society;

j) Resolution 139 (Rev. Busan, 2014) of the Plenipotentiary Conference, on telecommunications/ICTs to bridge the digital divide and build an inclusive information society;

k) Resolution 140 (Rev. Busan, 2014) of the Plenipotentiary Conference, on ITU's role in implementing the outcomes of WSIS and UNGA's overall review of their implementation;

l) Resolution 200 (Busan, 2014) of the Plenipotentiary Conference, on the Connect 2020 Agenda for global telecommunication/ICT development,

recognizing

a) that WSIS stated that the core competencies of ITU are of crucial importance for building the information society, and identified ITU as a moderator/facilitator for implementing Action Lines C2 and C5, and as a partner in Action Lines C1, C3, C4, C6, C7 and C11, as well as Action Line C8 and C9 as stated in Resolution 140 (Rev. Busan, 2014);

b) that it was agreed among the parties to follow up the Summit outcomes to appoint ITU as moderator/facilitator for the implementation of Action Line C6, in which it was previously only a partner;

c) that the ITU Telecommunication Development Sector (ITU-D) – in view of its purposes and objectives; the nature of the existing partnership among Member States and ITU-D Sector Members; its experience over many years in dealing with different development needs and implementing a range of projects, including infrastructure projects and specifically telecommunication/ICT infrastructure projects, financed by the United Nations Development Programme (UNDP) and various funds and through possible partnerships; the nature of its four existing objectives, adopted at this conference to meet the needs of the telecommunication/ICT infrastructure, including building confidence and security in the use of telecommunications/ICTs and fostering an enabling environment, and to achieve the WSIS goals; and the presence of its authorized regional offices – is a key partner in the implementation of WSIS outcomes, in respect of Action Lines C2, C5 and C6, which are the cornerstone of the Sector's work pursuant to the ITU Constitution and Convention, and also participates with other stakeholders, as appropriate, in the implementation of Action Lines C1, C3, C4, C7, C8, C9 and C11 and all other relevant action lines and other WSIS outcomes, within the financial limits set by the Plenipotentiary Conference;

d) that UNGA Resolution 70/125 calls for close alignment between the WSIS process and the 2030 Agenda for Sustainable Development, highlighting the cross-cutting contribution of ICTs to the Sustainable Development Goals (SDGs) and poverty eradication, and noting that access to ICTs has also become a development indicator and aspiration in and of itself;

e) that the WSIS outcomes will help achieve the 2030 Agenda for Sustainable Development and help facilitate the development of the digital economy,

recognizing further

a) the commitment of ITU to implement relevant WSIS outcomes as one of the most important goals for the Union;

b) the potential of ICTs to achieve the 2030 Agenda for Sustainable Development and other internationally agreed development goals;

c) that ITU-D shall give high priority to building information and communication infrastructure (WSIS Action Line C2), this being the physical backbone for all e-applications;

d) that the 2030 Agenda for Sustainable Development has substantial implications for the activities of ITU;

e) that the ITU Council 2016 resolved to use the WSIS framework as the foundation through which 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,

taking into account

a) Resolution 75 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly, on the ITU Telecommunication Standardization Sector's contribution in implementing the WSIS outcomes, taking into account the 2030 Agenda for Sustainable Development;

b) Resolution ITU-R 61 (Rev. Geneva, 2015) of the Radiocommunication Assembly, on the ITU Radiocommunication Sector's contribution in implementing the WSIS outcomes;

c) the programmes, activities and regional initiatives being carried out in accordance with the decisions of this conference for bridging the digital divide;

d) the relevant work already accomplished and/or to be carried out by ITU and reported to the Council, including the annual reports on the activities of the Council Working Group on WSIS (CWG-WSIS) and the Council Working Group on international Internet-related public policy issues (CWG-Internet),

noting

a) Resolution 1332 of Council 2016, on ITU's role in the implementation of the WSIS outcomes taking into account the 2030 Agenda for Sustainable Development;

b) Resolution 1336 of Council 2015, on CWG-Internet,

noting further

that the ITU Secretary-General created the ITU SDG&WSIS Task Force, whose role is to formulate strategies and coordinate ITU's policies and activities in relation to WSIS, taking into account the 2030 Agenda for Sustainable Development, and that this task force is chaired by the Deputy Secretary-General,

resolves to invite the ITU Telecommunication Development Sector

1 to continue working in cooperation with the other ITU Sectors and with development partners (governments, specialized agencies of the United Nations, relevant international and regional organizations, etc.), through a clear plan and appropriate mechanisms for coordination among the different partners concerned at the national, regional, interregional and global levels, having particular regard to the needs of the developing countries[1], including in the field of building the telecommunication/ICT infrastructure and building confidence and security in the use of telecommunications/ICTs, to support the implementation of the other WSIS goals that can help achieve 2030 Agenda for Sustainable Development and facilitate the development of the digital economy;

2 to continue its work on the realization of the WSIS vision beyond 2015;

3 to contribute to achievement of the objectives of the 2030 Agenda for Sustainable Development through and in harmony with the WSIS framework;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

4 to continue to encourage the principle of non-exclusion from the information society and to devise appropriate mechanisms to this end (§§ 20-25 of the Tunis Commitment);

5 to continue to facilitate an enabling environment encouraging ITU-D Sector Members to give priority to investing in the development of the telecommunication/ICT infrastructure, encompassing rural, isolated and remote regions, through different technologies;

6 to assist Member States in finding and/or improving innovative financial mechanisms to develop telecommunication/ICT infrastructure (such as those mentioned in § 27 of the Tunis Agenda, and partnerships);

7 to continue to assist developing countries in advancing their legal and regulatory frameworks in order to further the goal of building the telecommunication/ICT infrastructure and achieve the other WSIS goals and SDGs;

8 to promote international cooperation and capacity building in issues related to cyberthreats and building confidence and security in the use of ICTs consistent with Action Line C5, in which ITU is sole facilitator;

9 to pursue its activities in the field of statistical work for telecommunication development, using the indicators required to evaluate progress in this area with a view to bridging the digital divide, *inter alia*, within the framework of the Partnership on Measuring ICT for Development and consistent with §§ 113-118 of the Tunis Agenda and taking into account new and emerging technologies;

10 to develop and implement the ITU-D strategic plan, taking into account the need to give priority to building the telecommunication/ICT infrastructure, including broadband access, at the national, regional, interregional and global levels, and to achieve the other WSIS goals and SDGs related to the activities of ITU-D;

11 to continue to propose at the forthcoming plenipotentiary conference appropriate mechanisms for funding the activities flowing from the WSIS outcomes and SDGs that are relevant to the core competencies of ITU, specifically those to be adopted in relation to:

i) Action Lines C2, C5 and C6, in which ITU is now identified as the sole facilitator;

ii) Action Lines C1, C3, C4, C6, C7, including its eight sub-action lines, and C11, in which ITU is now identified as a co-facilitator, as well as C8 and C9, in which ITU is identified as a partner;

iii) relevant SDGs and targets through and in harmony with the WSIS framework,

instructs the Director of the Telecommunication Development Bureau

1 to continue to provide CWG-WSIS with a comprehensive summary of ITU-D activities on implementation of the WSIS outcomes, taking into account the 2030 Agenda for Sustainable Development;

2 to ensure that concrete objectives and deadlines for WSIS and 2030 Agenda for Sustainable Development activities are developed and reflected in the operational plans of ITU-D, in accordance with Resolution 140 (Rev. Busan, 2014) and with the objectives that will be set for ITU-D by the Plenipotentiary Conference in 2018 with regard to the implementation by ITU of the WSIS+10 outcomes;

3 to provide the membership with information on emerging trends based on ITU-D activities;

4 in close collaboration with the Directors of the Radiocommunication Bureau and the Telecommunication Standardization Bureau, to take account of the impact of ITU's work related to digital transformation, which fosters sustainable growth of the digital economy, in line with the WSIS stocktaking process, and provide assistance to membership upon request;

5 to take appropriate action to facilitate the activities to implement this resolution,

further instructs the Director of the Telecommunication Development Bureau

1 to act as a catalyst in the development of partnerships among all parties, with a view to ensuring that initiatives and projects attract investment, and to continue to act as a catalyst in the following functions, among others:

i) encouraging the implementation of regional telecommunication/ICT initiatives and projects;

ii) participating in the organization of training seminars;

iii) signing agreements with national, regional and international partners involved in development, when required;

iv) collaborating on initiatives and projects with other relevant international, regional and intergovernmental organizations, where appropriate;

2 to promote human capacity building in developing countries relating to various aspects of the telecommunication/ICT sector, consistent with the mandate of ITU-D;

3 to foster an environment, particularly with the ITU regional offices, that enables small, medium and micro enterprises (SMMEs) in and among developing countries to develop and grow;

4 in implementing the WSIS outcomes/SDGs within the mandate of ITU-D, to pay particular attention to the needs of developing countries;

5 to encourage international financial institutions, Member States and Sector Members, in their respective roles, to address, as a priority issue, the building, reconstruction and upgrading of networks and infrastructure in developing countries;

6 to pursue coordination with international bodies, with a view to mobilizing the financial resources needed in the implementation of projects;

7 to take the necessary initiatives to encourage partnerships which have been given high priority pursuant to:

i) the Geneva Plan of Action;

ii) the Tunis Agenda;

iii) the outcomes of the WSIS review process and WSIS vision beyond 2015;

iv) the 2030 Agenda for Sustainable Development;

8 to submit contributions to the relevant annual reports of the ITU Secretary-General on these activities;

9 to strengthen, involving, among others, the ITU regional and area offices, coordination and collaboration at the regional level with the UN regional economic commissions and UN Regional Development Group, as well as all UN agencies (in particular those acting as facilitator for WSIS action lines), and other relevant regional organizations, especially in the field of telecommunication/ ICT, with the aim of the following:

i) aligning WSIS and SDG processes and their implementation as requested by UNGA Resolution 70/125;

ii) implementing ICT for SDG actions through the UN's "Delivering as One" approach;

iii) incorporating ICTs in the UN development assistance frameworks;

iv) developing partnerships for implementation of inter-agency and multistakeholder projects, advancing implementation of WSIS action lines and advancing achievement of SDGs;

v) highlighting the importance of advocacy for ICTs in national sustainable development plans;

vi) strengthening regional input to the WSIS Forum, WSIS Prizes and WSIS Stocktaking,

calls upon Member States, Sector Members, Associates and Academia

1 to continue to give priority to the development of telecommunication/ICT infrastructure, including in rural, remote and underserved areas, to building confidence and security in the use of telecommunications/ICTs, to fostering an enabling environment and to ICT applications, in order to build an inclusive and connected information society and achieve the SDGs, which can facilitate the growth of the digital economy;

2 to consider the development of principles towards the adoption of strategies in areas such as telecommunication network security, consistent with WSIS Action Line C5;

3 to submit contributions to relevant ITU-D study groups and to the Telecommunication Development Advisory Group, where appropriate, and contribute to CWG-WSIS on implementing WSIS outcomes within ITU's mandate, taking into account the 2030 Sustainable Development Agenda;

4 to continue to support and collaborate with the Director of the Telecommunication Development Bureau in implementing relevant WSIS outcomes and the 2030 Agenda for Sustainable Development in ITU-D;

5 to engage in the WSIS and SDG processes, in order to reaffirm the need to address remaining challenges of ICT for development to be addressed in the implementation of the WSIS vision beyond 2015 and the 2030 Agenda for Sustainable Development,

requests the Secretary-General

to bring this resolution to the attention of the Plenipotentiary Conference (Dubai, 2018) for consideration and required action, as appropriate, when reviewing Resolution 140 (Rev. Busan, 2014).

RESOLUTION 31 (Rev. Buenos Aires, 2017)

Regional preparations for world telecommunication development conferences

The World Telecommunication Development Conference (Buenos Aires, 2017),

considering

a) that the six[1] regions have coordinated their preparations for this conference through preparatory meetings, and seek close cooperation with the Union;

b) that many common proposals have been submitted to this conference from administrations which have participated in the preparations, thereby facilitating the work of this conference;

c) that this consolidation of views at regional level, together with the opportunity for interregional discussions prior to the conference, has eased the task of reaching a consensus at the last meeting of the Telecommunication Development Advisory Group (TDAG) of the ITU Telecommunication Development Sector (ITU-D) and during the conference;

d) that preparation for future conferences is likely to increase;

e) the firm conviction that the coordination of preparations at regional level for the six regions has been of great benefit to the Member States;

f) that the continued success of future conferences will depend on greater efficiency of regional coordination and interaction at interregional level prior to such conferences, and in particular at the last TDAG meeting before the conference, as well as during the conference;

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[1] Africa, Americas, Arab States, Asia and the Pacific, Commonwealth of Independent States, Europe.

g) that there is a continuing need for overall coordination of the interregional consultations,

recognizing

the benefits of regional coordination for the six regions as already experienced in the preparation of all ITU conferences and assemblies,

taking into account

the continued belief in the benefits that a world telecommunication development conference (WTDC) could gain in terms of efficiency from an increased amount and level of preparation by the six regions for the ITU Member States prior to the conference,

noting

a) that many regional telecommunication organizations have expressed the need for the Union to cooperate more closely with regional telecommunication organizations (see Resolution 21 (Rev. Buenos Aires, 2017) of this conference, on coordination and collaboration with regional and subregional organizations);

b) that, consequently, the Plenipotentiary Conference (Kyoto, 1994) and the other subsequent plenipotentiary conferences have stressed the need for the Union to develop stronger relations with regional telecommunication organizations,

further noting

a) that relations between ITU regional offices and regional telecommunication organizations have proved to be of great benefit, and that regional offices should continue to be used to facilitate the preparation of WTDCs;

b) that some ITU Member States are not members of a regional telecommunication organization,

resolves to instruct the Director of the Telecommunication Development Bureau

1 to organize, within the financial limitations, one regional preparatory meeting (RPM) per region for each of the six regions (if the relevant region deems appropriate), in partnership with all Member States in the region, even if they do not belong to any of the regional telecommunication organizations, as soon as possible before the last meeting of TDAG before the next WTDC, avoiding overlap with other relevant ITU-D meetings and making full use of ITU regional offices to facilitate such meetings;

2 to organize a coordination meeting of the six regions in conjunction with the last meeting of TDAG, with the participation of ITU-D members;

3 to help the least developed countries to participate in RPMs, within the financial resources available;

4 to prepare, in close consultation with the chairmen and vice-chairmen of the RPMs, a report consolidating the results of such meetings, to be submitted to the TDAG meeting immediately preceding WTDC;

5 to convene the last TDAG meeting not less than three months and not more than four months before WTDC, in order to study, discuss and adopt the consolidated report presenting the outputs of the six RPMs in final form, as a basic document to be included, once approved by TDAG, in the report on the application of this resolution for submission to WTDC, as well as to accomplish whatever else is desirable prior to WTDC (such as consideration of Questions proposed for study by the study groups), including also a review and revision of all resolutions, Recommendations and programmes with the aim of proposing the necessary updates to some or all of them if possible and their submission as reports from TDAG to WTDC,

requests the Secretary-General, in cooperation with the Director of the Telecommunication Development Bureau

1 to continue to consult with Member States and regional telecommunication organizations in the six regions on the means by which assistance can be provided in support of their preparations for future WTDCs;

2 to continue, on the basis of such consultations, to assist Member States and regional telecommunication organizations in such areas as:

i) organization of informal and formal regional and interregional preparatory meetings;

ii) organization of information sessions;

iii) identification of mutual coordination methods;

iv) identification of major matters to be resolved by the future WTDC;

3 to continue to submit to the next WTDC a report on the application of this resolution,

invites Member States

to participate actively in the implementation of this resolution.

RESOLUTION 32 (Rev. Hyderabad, 2010)

International and regional cooperation on regional initiatives

(ABROGATED BY WTDC-17)

(Merged with Resolution 17)

RESOLUTION 33 (Rev. Dubai, 2014)

Assistance and support to Serbia for rebuilding its destroyed public broadcasting system

The World Telecommunication Development Conference (Dubai, 2014),

recalling

a) the noble principles, purpose and objectives embodied in the Charter of the United Nations and in the Universal Declaration of Human Rights;

b) the purpose of the Union, as enshrined in Article 1 of the ITU Constitution,

noting

a) Resolution 33 (Rev. Doha, 2006) of the World Telecommunication Development Conference;

b) Resolution 126 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference,

noting with appreciation

a) the efforts deployed by the Secretary-General of ITU and the Director of the Telecommunication Development Bureau (BDT) towards the implementation of the above-mentioned resolutions;

b) the significant assistance from the European Union (EU), through the pre-accession funds (IPA), for the implementation of the digitization process,

recognizing

a) that a reliable public broadcasting system is indispensable for promoting the socio-economic development of countries, in particular those having suffered from natural disasters, domestic conflicts or war;

b) that the newly established public broadcasting facility in Serbia, "Broadcast Multiplex and Network Operator" (ETV), formerly a part of Radio Television of Serbia, is the public entity responsible for terrestrial broadcasting;

c) that the severe damage to the public broadcasting system (ETV) in Serbia should concern the whole international community, in particular ITU;

d) that, under the present conditions and in the foreseeable future, Serbia will not be able to bring the public broadcasting system in Serbia up to an acceptable level without help from the international community, provided bilaterally or through international organizations,

resolves

1 to continue special action, within the framework and available budgetary resources of the ITU Telecommunication Development Sector, with specialized assistance from the ITU Radiocommunication Sector and the ITU Telecommunication Standardization Sector;

2 to provide appropriate assistance;

3 to support Serbia in rebuilding the public broadcasting system,

calls upon Member States

1 to offer all possible assistance;

2 to support the Government of Serbia, either bilaterally or through, or at any rate in coordination with, the special action of ITU referred to above,

instructs the Director of the Telecommunication Development Bureau

to use the necessary funds within available resources in order to continue the appropriate action,

requests the Secretary-General

1 to coordinate the activities carried out by the ITU Sectors in accordance with the above;

2 to ensure that the ITU action in favour of Serbia is as effective as possible;

3 to report on the matter to the Council;

4 to transmit this resolution to the Plenipotentiary Conference (Busan, 2014).

RESOLUTION 34 (Rev. Buenos Aires, 2017)

The role of telecommunications/information and communication technology in disaster preparedness, early warning, rescue, mitigation, relief and response

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 36 (Rev. Busan, 2014) of the Plenipotentiary Conference, on telecommunications/information and communication technologies (ICTs) in the service of humanitarian assistance;

b) Resolution 136 (Rev. Busan, 2014) of the Plenipotentiary Conference, on the use of telecommunications/ICTs for monitoring and management in emergency and disaster situations, and for early warning, prevention, mitigation and relief;

c) Resolution 646 (Rev.WRC-15) of the World Radiocommunication Conference (WRC), on public protection and disaster relief;

d) Resolution 647 (Rev.WRC-15) of WRC, on radiocommunication aspects, including spectrum management guidelines, for early warning, disaster prediction, detection, mitigation and relief operations relating to emergencies and disasters;

e) Article 5 of the International Telecommunication Regulations, on safety of life and priority of telecommunications;

f) Resolution 182 (Rev. Busan, 2014) of the Plenipotentiary Conference, on the role of telecommunications/ICTs in regard to climate change and the protection of the environment;

g) Recommendation ITU-T E.161.1, on guidelines to select emergency number for public telecommunication networks,

considering

a) that the Intergovernmental Conference on Emergency Telecommunications (Tampere, 1998) (ICET-98) adopted the Convention on the Provision of Telecommunication Resources for Disaster Mitigation and Relief Operations (Tampere Convention) and that this convention came into force in January 2005;

b) that ITU launched two new initiatives during the second Global Forum on Emergency Telecommunications (Kuwait, 2016) (GET-2016): the ITU Network of Volunteers for Emergency Telecommunications, and the Global Emergency Fund for Rapid Response;

c) that the second Tampere Conference on Disaster Communications (Tampere, 2001) (CDC-01) invited ITU to study the use of public mobile networks for early warning and the dissemination of emergency information and the operational aspects of emergency telecommunications such as call prioritization;

d) that Resolution 646 (Rev.WRC-15) resolves to encourage administrations to satisfy temporary needs for frequencies in emergency and disaster-relief situations, in addition to those normally made available by agreement with the administrations concerned, and to facilitate cross-border circulation of radiocommunication equipment intended for use in emergency and disaster-relief situations through mutual cooperation and consultation without hindering national legislation;

e) that Resolution 646 (Rev.WRC-15) likewise resolves to encourage administrations to consider Recommendation ITU-R M.2015, and to use agreed frequency bands for public protection and disaster relief to the maximum extent possible when undertaking their national planning for their public protection disaster relief (PPDR) applications, particularly broadband, in order to achieve harmonization;

f) that the same Resolution 646 (Rev. WRC-15) further encourages administrations to consider also parts of the regionally harmonized frequency ranges for their PPDR applications;

g) that Resolution 647 (Rev.WRC-15) resolves that the Radiocommunication Bureau (BR), through the study groups, study those aspects of radiocommunications/ICTs that are relevant to early warning, disaster prediction, detection, mitigation and relief operations taking into account Resolution ITU-R 55 (Rev. Geneva, 2015);

h) that the same Resolution 647 (Rev.WRC-15) instructs the Director of BR to continue assisting Member States with their emergency communication preparedness activities by maintaining a database of information from administrations for use in emergency situations, which includes contact information and optionally includes available frequencies for use in emergency situations, reiterating the importance of having spectrum available in the very early stages of humanitarian assistance intervention for disaster relief;

i) that Resolution 647 (Rev.WRC-15) likewise invites the Director of the Telecommunication Standardization Bureau (TSB) and the Director of the Telecommunication Development Bureau (BDT) to collaborate closely with the Director of BR to ensure that a consistent and coherent approach is adopted in the development of strategies in response to emergency and disaster situations;

j) the work of the study groups of the ITU Radiocommunication (ITU-R) and ITU Telecommunication Standardization (ITU-T) Sectors in adopting Recommendations that have helped to provide technical information on satellite and terrestrial radiocommunication systems and wired networks and their role in disaster management, including important Recommendations pertaining to the use of satellite networks in times of disasters;

k) the work of the ITU-T study groups in developing and adopting Recommendations for priority/preferential emergency telecommunications and emergency telecommunication services (ETS), including consideration of use of both terrestrial and wireless telecommunication systems during emergencies;

l) that the Radiocommunication Assembly updated Resolution ITU-R 55 (Rev. Geneva, 2015), on ITU studies of disaster prediction, detection, mitigation and relief;

m) that the World Conference on International Telecommunications (Dubai, 2012) adopted provisions regarding the absolute priority of safety-of-life telecommunications, such as distress telecommunications, where technically practicable and in accordance with the relevant articles of the ITU Constitution and Convention and taking due account of the relevant ITU-T Recommendations;

n) that modern telecommunications/ICTs are basic tools for disaster mitigation and relief;

o) that mobile and personal communication systems are beneficial for responding to disasters, and should therefore also be used before a disaster to ensure information can be shared with those who need it most;

p) the importance of utilizing both existing and new technologies and solutions (satellite and terrestrial) to satisfy a range of interoperability requirements and furthering the goals of public protection and disaster relief;

q) the terrible disasters from which many countries suffer, and the disproportionate impact of disasters and of climate change on developing countries[1];

r) that least developed countries (LDCs), landlocked developing countries (LLDCs) and small island developing states (SIDS) are particularly vulnerable to the impact that disasters can have on their economies and infrastructures and lack the capacity to respond to disasters;

s) that the requirements of persons with specific needs should be taken into account with respect to disaster warning, response planning and recovery efforts;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

t) that climate change may be considered to be a major contributing factor to emergencies and disasters affecting humankind;

u) the role of the private sector, governments and international and non-governmental organizations in providing telecommunication/ICT equipment and services, expertise and capacity-building assistance to support disaster-relief and recovery activities, particularly through the ITU Framework for International Cooperation in Emergencies (IFCE);

v) that a disaster, when it occurs, may extend beyond the borders of a State, and its management may involve the deployment of efforts by more than one country in order to prevent loss of human life and regional economic crisis;

w) that coordination between international, regional and national organizations that specialize in disaster management and administrations increases the probability of saving human life when rescue operations are conducted, and thereby mitigates the consequences of a disaster;

x) that collaborative work and networking among disaster-management experts is essential;

y) that the use of telecommunications/ICTs for sharing of information in the event of a disaster is a powerful decision-making tool for rescue services and operating entities, and for communication with and between citizens,

noting

a) Sustainable Development Goal (SDG) 9 (Building resilient infrastructures, promoting inclusive and sustainable industrialization and fostering innovation) and SDG 11 (Make cities and human settlements inclusive, safe, resilient and sustainable), adopted by the United Nations General Assembly at its 2015 Sustainable Development Summit;

b) § 51 of the Geneva Declaration of Principles adopted by the World Summit on the Information Society (WSIS), on the use of ICT applications for disaster prevention;

c) § 20 (c) of the Geneva Plan of Action adopted by WSIS, on e-environment, which calls for the establishment of monitoring systems, using ICTs, to forecast and monitor the impact of natural and man-made disasters, particularly in developing countries, LDCs and countries with small economies;

d) § 30 of the Tunis Commitment adopted by WSIS, on disaster mitigation;

e) § 91 of the Tunis Agenda for the Information Society adopted by WSIS, on disaster reduction;

f) the continued pursuit by ITU and other relevant organizations of joint activities being undertaken at the international, regional and national levels to establish internationally agreed means to operate systems for public protection and disaster relief on a harmonized and coordinated basis, and the successful role of BDT through its programme activities in this area;

g) that the capability and flexibility of all telecommunication facilities depend upon appropriate planning for the continuity of each phase of network development and implementation;

h) the successful role of BDT, in partnership with the ITU membership, with respect to rapid intervention in enabling and facilitating telecommunications/ICTs for countries which have suffered disasters;

i) that all phases of disaster operations can be greatly facilitated by national emergency communication plans that enable the pre-positioning, rapid deployment and effective utilization of ICT equipment;

j) that including the use of telecommunication/ICT tools in infrastructure development planning can avert the risk of disasters and mitigate their effects,

noting further

a) the latest version of the ITU Telecommunication Development Sector (ITU-D) Handbook on Emergency Telecommunications (2014), the Compendium of the ITU's Work on Emergency Telecommunications (2007), the ITU Handbook on Best Practice on Emergency Telecommunications (2008), and the adoption of Recommendation ITU-D 13 (Rev. 2005), on effective utilization of the amateur radio services in disaster-mitigation and relief operations;

b) that further guidance for ITU members on disaster-communication management is provided by the successful conclusions and outputs of ITU-D Study Group 2, notably under Question 5/2, including the Handbook on Outside Plant for Areas Frequently Exposed to Natural Disasters and an online toolkit which will be updated on a regular basis;

c) the results of work done by ITU-R Study Groups 4, 5, 6 and 7 on the use of different radiocommunication systems in emergency situations, and in particular Recommendations ITU-R S.1001, ITU-R M.1637, ITU-R BS.2107 and ITU-R RS-1859;

d) that the online toolkit maintained by ITU-D Question 5/2 and BDT serves as a publicly available resource with references and links to all relevant ITU resolutions, Recommendations, reports and handbooks;

e) that the ITU regional offices can be particularly helpful prior to and following emergencies, owing to their proximity to affected countries,

recognizing

a) that frequent tragic events in the world and the experience of BDT and the ITU membership in this area clearly demonstrate the need for enhanced disaster preparedness and for plans that incorporate consideration of high-quality communications equipment and services as well as reliable telecommunication infrastructure, in order to ensure public safety and assist disaster-relief agencies in minimizing risk to human life and to provide the necessary general public information and communication needs in such situations;

b) that natural disasters can damage both telecommunication/ICT infrastructures and electricity supplies that power telecommunication/ICT systems and devices, making services inoperable, such that considerations of redundancy and resilience of infrastructure and power supplies become important when planning for disasters;

c) that there is a growing general awareness at the global level of the potentially serious negative consequences of climate change,

resolves to instruct the Director of the Telecommunication Development Bureau

1 to continue to ensure that priority consideration is given to emergency communications as an element of telecommunication/ICT development, including continued close coordination and collaboration with ITU-R and ITU-T and relevant international organizations, and that coordination with BR must take into consideration the outcomes of studies, especially those mentioned in Resolutions 646 (Rev. WRC-15) and 647 (Rev. WRC-15), which provide for harmonized models for PPDR networks;

2 to organize a forum on emergency communications, periodically, and within budgetary resources, to provide administrations with best practices in terms of mechanisms, procedures and coordination for the use of telecommunications/ICTs in emergency situations;

3 to establish contact points at the level of BDT and the ITU regional offices, enabling affected Member States to request capacity building and direct assistance in terms of emergency communications, whereby the contact numbers of these points are to be circulated to ITU members and contact points are to be responsible for coordinating ITU assistance to disaster-struck countries and with relevant UN and international organizations that provide emergency communications;

4 to facilitate and encourage the use by members of telecommunications that are appropriate and commonly available for disaster response and mitigation, including those provided by amateur radio services, satellite and terrestrial network services/facilities;

5 to promote, in close collaboration with ITU-R and ITU-T, the implementation of early-warning systems, and emergency information broadcasting, for example audio and TV broadcasting, mobile messages, etc., taking into account persons with disabilities and specific needs;

6 to support administrations in their work towards the implementation of this resolution as well as the ratification and implementation of the Tampere Convention;

7 to report to the next world telecommunication development conference on the status of ratification and implementation of the Tampere Convention;

8 to support administrations and regulators in the areas identified in this resolution by taking appropriate measures during the implementation of the ITU-D action plan;

9 to continue to support administrations in preparing their national disaster response and relief plans, including consideration of the necessary enabling national regulatory and policy environments to support the development and effective use of telecommunications/ICTs for disaster mitigation, relief and response;

10 to strengthen the role of the ITU regional offices, in coordination with the above-mentioned points of contact, in assisting Member States and Sector Members in developing emergency preparedness plans and early-warning systems, in organizing training workshops on emergency relief and response, in providing equipment training, in fostering collaboration with all parties involved and in helping deploy communication equipment during emergencies;

11 as part of the ITU framework for cooperation in emergencies, to continue providing assistance to administrations, in coordination with the above-mentioned points of contact, within available resources, and in collaboration with the ITU membership and other partners, through the temporary supply of emergency communications equipment and services, especially during the initial phases of disasters;

12 to expedite the study of aspects of telecommunications/ICTs related to flexibility and continuity in the event of disasters, as part of national disaster plans, including promoting the use of broadband networks for emergency communications through the work of the ITU-D study groups, in collaboration with expert organizations, taking account of the activities of the other ITU Sectors and relevant UN and other international organizations;

13 in implementing outcome 2.3 under Objective 2 for 2018-2021, to work collaboratively with the ITU-D study Questions, as well as with the other two Sectors, ITU regional offices, the ITU membership and other relevant expert organizations, in implementing this resolution, and to report regularly on programme activities and relevant regional initiatives to the study groups;

14 to assist administrations in the use of mobile networks for the timely dissemination of alert messages and warnings in situations of risk or emergency, for those in potentially affected areas;

15 to assist Member States in enhancing and strengthening the use of all available services, including satellite, amateur radio and broadcasting services, in emergency situations, when conventional sources of electricity supply or telecommunications are often interrupted;

16 to include in the ITU Academy's training plans programmes on the use of ICTs for disaster management and mitigation;

17 to help activate the two new programmes of the Second Global Forum on Emergency Telecommunications (GET-2016), within existing budgetary resources,

requests the Secretary-General

to continue to work closely with the office of the United Nations Emergency Relief Coordinator and other relevant external organizations with a view to further increasing the Union's involvement in, and support of, emergency communications and early-warning systems, and to report on outcomes of related international conferences, relief activities and meetings so that the Plenipotentiary Conference (Dubai, 2018) may take any action that it deems necessary,

invites

1 the United Nations Emergency Relief Coordinator, the Working Group on Emergency Telecommunications and other relevant external organizations or bodies to ensure follow-up and continue collaborating with ITU, specifically BDT, in working towards implementing this resolution and the Tampere Convention, and supporting administrations and international and regional telecommunication organizations in the implementation of that Convention;

2 Member States to continue to deploy all necessary efforts to integrate disaster risk reduction and resilience into telecommunication development plans, as well as to incorporate ICTs into national or regional disaster-management plans and frameworks, taking note of the specific needs of persons with disabilities, children, older persons, displaced persons and the illiterate in disaster preparedness, rescue, relief and recovery planning, and the importance of collaborating with all stakeholders in all disaster phases;

3 regulators to ensure that disaster-mitigation and relief operations make provision for the necessary telecommunications/ICTs, through appropriate national regulations and national disaster plans as well as enabling regulatory and policy environments;

4 ITU-D to take account of the particular telecommunication requirements of LDCs, LLDCs, SIDS and low-lying coastal countries in terms of disaster preparedness, rescue, relief and recovery;

5 Member States that have not yet ratified the Tampere Convention to take necessary action to do so as appropriate;

6 BDT to consider how space-based technologies can be used to help ITU Member States collect and disseminate data on the effects of climate change and support early warning, having regard to the link between climate change and natural disasters;

7 ITU-D to take account of the work of ITU-R study groups and dedicated working groups, considering the increased use of mobile and portable communication devices which can be used by first responders to transmit and receive critical information;

8 Member States to facilitate, to the extent practicable, cross-border circulation of radiocommunication equipment intended for use in emergency situations, rescue and relief operations and disaster-relief situations, through mutual cooperation and consultation, without prejudice to national legislation, in accordance with Resolution 646 (Rev.WRC-15);

9 Member States to encourage authorized operating companies to inform all users, including roaming users, in good time and free of charge, of the number to be used for calls to the emergency services;

10 Member States to consider introducing, in addition to their existing national emergency numbers, a harmonized national/regional number for access to emergency services, taking into account the relevant ITU-T Recommendations;

11 Sector Members to make the necessary efforts to enable the operation of telecommunication services in emergency or disaster situations, giving priority, in all cases, to telecommunications concerning safety of life in the affected areas, and providing for such purpose contingency plans;

12 Member States and Sector Members to work together on the study of new digital technologies, standards and related technical issues for improving radio broadcasting systems for sending and receiving information concerning public warning, rescue, disaster mitigation and relief;

13 Member states to consider the appropriate and effective mechanisms to facilitate disaster communications preparedness and response efforts;

14 Member States to coordinate on a regional basis, with the help of ITU bodies and regional and international specialized organizations, in order to draw up regional response plans in the event of a disaster;

15 Member States to develop partnerships, in order to reduce barriers to access to relevant data obtained through the use of telecommunications/ICTs required for the purpose of assisting rescue operations;

16 Member States to develop preparedness, disaster-recovery and business-continuity plans that provide redundant, resilient environments for essential government information systems;

17 Member States to foster the training and updating of knowledge of the actors involved in the implementation, maintenance and updating of the ICT systems intended to intervene in situations of emergency.

RESOLUTION 35 (Rev. Hyderabad, 2010)

Support for development of the African information and communication technology sector

(ABROGATED BY WTDC-17)

(Merged with Resolution 75)

RESOLUTION 36 (Rev. Hyderabad, 2010)

Support for the African Telecommunication Union

The World Telecommunication Development Conference (Hyderabad, 2010),

recalling

Resolution 58 (Kyoto, 1994) of the Plenipotentiary Conference, particularly its *resolves*,

recalling further

Resolution 21 (Rev. Doha, 2006) of the World Telecommunication Development Conference,

considering

the urgent need of the African Telecommunication Union (ATU) for assistance and cooperation,

resolves to instruct the Director of the Telecommunication Development Bureau

to take all necessary steps to associate ATU in the implementation of the Hyderabad Action Plan, in respect of support to the African telecommunication/information and communication technology sector in the framework of New Partnership for Africa's Development (NEPAD),

requests the Secretary-General and instructs the Director of the Telecommunication Development Bureau

to take all necessary steps to provide ATU with administrative support and assistance, including logistical and information technology support, in particular by stepping up cooperation between ATU and the ITU Regional Office for Africa, and by making experts available to that organization.

RESOLUTION 37 (Rev. Buenos Aires, 2017)

Bridging the digital divide

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) United Nations General Assembly (UNGA) Resolution 70/1, on transforming our world: the 2030 Agenda for Sustainable Development;

b) UNGA Resolution 70/125, on the 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 (WSIS);

c) Resolution 74 (Rev. Hyderabad, 2010) of the World Telecommunication Development Conference (WTDC);

d) Resolution 37 (Rev. Dubai, 2014) of WTDC;

e) Resolution 50 (Rev. Dubai, 2014) of WTDC, on the optimal integration of information and communication technologies;

f) Resolution 25 (Rev. Busan, 2014) of the Plenipotentiary Conference, on strengthening the regional presence;

g) Resolution 135 (Rev. Busan, 2014) of the Plenipotentiary Conference, on ITU's role in the development of telecommunications/information communications technologies (ICT), in providing technical assistance and advice to developing countries[1] and in implementing relevant national, regional and interregional projects;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

h) Resolution 11 (Rev. Buenos Aires, 2017) of this conference, on telecommunication/ICT services in rural, isolated and poorly served areas and indigenous communities;

i) Resolution 20 (Rev. Buenos Aires, 2017) of this conference, on non-discriminatory access to modern telecommunication/ICT facilities, services and related applications;

j) Resolution 23 (Rev. Buenos Aires, 2017) of this conference, on Internet access and availability for developing countries and charging principles for international Internet connection;

k) Resolution 46 (Rev. Buenos Aires, 2017) of this conference, on assistance and promotion for indigenous communities through ICT;

l) Resolution 68 (Rev. Dubai, 2014) of WTDC, on assistance to indigenous peoples within the activities of the Telecommunication Development Bureau (BDT) in its related programmes;

m) Resolution 69 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly (WTSA), on non-discriminatory access and use of Internet resources and telecommunications/ICTs;

n) Resolution 139 (Rev. Busan, 2014) of the Plenipotentiary Conference, on the use of telecommunications/ICTs to bridge the digital divide and build an inclusive information society;

o) Resolution 200 (Busan, 2014) of the Plenipotentiary Conference, on the Connect 2020 Agenda for global telecommunication/ICT development;

p) the WSIS+10 Statement on the implementation of WSIS outcomes and WSIS+10 vision for WSIS beyond 2015, adopted at the ITU-coordinated WSIS+10 High-Level Event (Geneva, 2014) and endorsed by the Plenipotentiary Conference (Busan, 2014),

q) Resolution 16 (Rev. Buenos Aires, 2017) of this conference, on special actions and measures for the least developed countries (LDCs), small island developing states (SIDS), landlocked developing countries (LLDCs) and countries with economies in transition;

r) Resolution 123 (Rev. Busan, 2014) of the Plenipotentiary Conference, on bridging the standardization gap between developing and developed countries;

s) that Resolutions 30 and 143 (Rev. Busan, 2014) of the Plenipotentiary Conference highlight that what countries need, as reflected in the two resolutions, is for the digital divide to be bridged, as a fundamental goal;

t) Resolution 175 (Rev. Busan, 2014) of the Plenipotentiary Conference, on telecommunication/ICT accessibility for persons with disabilities and persons with specific needs;

u) Resolution 58 (Rev. Buenos Aires, 2017) of this conference, on telecommunication/ICT accessibility for persons with disabilities, including persons with age-related disabilities;

v) Resolution 70 (Rev. Hammamet, 2016) of WTSA, on telecommunication/ICT accessibility for persons with disabilities and persons with specific needs;

w) Action Line C7 of the Tunis Agenda for the Information Society, covering the following ICT applications:

i) e-government

ii) e-business

iii) e-learning

iv) e-health

v) e-employment

vi) e-environment

vii) e-agriculture

viii) e-science,

noting

a) that broadband connectivity has the potential to bridge the digital divide;

b) that digital literacy is a requirement for closing the digital divide;

c) that developing countries benefit from integrating ICTs into education systems, by providing a more effective education experience and ensuring that all students obtain the skills necessary to succeed in a knowledge-based economy and society;

d) that the beneficiaries of such integration will be not only the students, but entire populations;

e) that such a transformation will improve education, assist in connecting all citizens globally, and facilitate the effective use of national resources for the future of children and society;

f) that countries and communities have limited education budgets which have to be apportioned among many different needs, and so studies on the relative benefits of ICTs in education systems will help countries and communities make informed decisions;

g) that UNGA will assess the outcomes and implementation of both the Sustainable Development Goals (SDGs) in 2030 and the WSIS outcomes in 2025,

recognizing

a) that the telecommunication environment has undergone significant changes in recent years and that progress has been made in implementing the outputs of Phases 1 and 2 of WSIS;

b) that there is still a need to show clearly what the digital divide is, where it occurs, and who suffers from it;

c) that development in ICTs has continued to reduce the cost of relevant equipment;

d) that, in many ITU Member States, regulations have been adopted dealing with regulatory issues such as interconnection, determination of tariffs, universal service, etc., designed to bridge the digital divide at the national level;

e) that the introduction of competition in the provision of telecommunication/ICT services has also continued to reduce telecommunication/ICT costs to users;

f) that national plans and projects for the provision of telecommunication services in developing countries contribute to reducing costs to users and bridging the digital divide;

g) that the introduction of new applications and services has also resulted in bringing down telecommunication/ICT costs;

h) that there is still an ongoing need to create digital opportunities in developing countries, including LDCs, SIDS, LLDCs and countries with economies in transition, taking advantage of the revolution that ICTs have witnessed and are currently witnessing;

i) that various activities are being executed towards bridging the digital divide by many international and regional organizations, such as, in addition to ITU, the Organisation for Economic Co-operation and Development (OECD), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Development Programme (UNDP), the United Nations Conference on Trade and Development (UNCTAD), the United Nations Economic and Social Council (ECOSOC), the United Nations economic commissions, the World Bank, the Asia-Pacific Telecommunity (APT), the regional economic communities, the regional development banks and many others, and that such activity has increased following the conclusion of WSIS and the adoption of the Tunis Agenda for the Information Society, particularly in relation to implementation and follow-up;

j) that the BYND2015 World Youth Summit participants, in the Declaration of Costa Rica 2013, called for equitable and universal access to ICTs, particularly for women and girls, as well as other groups marginalized by the digital divide, and called for the United Nations, the international community and all Member States to consider their words and put them into action;

k) that the SDGs, officially known under the title "Transforming our world: the 2030 Agenda for Sustainable Development", are a set of 17 "global goals" with 169 targets aimed at ending poverty, protecting the planet and ensuring prosperity for all,

recognizing further

a) ITU's role as a catalyst, and in particular that of the ITU Telecommunication Development Sector (ITU-D) as coordinator and promoter of the rational use of resources in the context of the various projects intended to narrow the digital divide;

b) that most ITU Member States have adopted integrated connectivity policies with a view to making affordable ICT services more accessible to citizens, as an indispensable tool in reducing the digital divide;

c) that it is necessary to coordinate the efforts of both the public and private sectors to ensure that opportunities arising from the information society yield benefits, especially for the most disadvantaged;

d) that the integration models supported by the ITU Member States are an element that integrates, facilitates and does not exclude, one which takes into account the individual characteristics of all existing projects, respecting their autonomy and independence;

e) that the integration models propose ways to increase the profitability of existing infrastructure, to lower the cost of developing and implementing ICT projects and platforms, to provide for the sharing of expertise and skills, and to foster intraregional and extraregional technology transfers

f) that the declarations of previous WTDCs (Istanbul, 2002; Doha, 2006; Hyderabad, 2010; and Dubai, 2014) have continued to affirm that ICTs and ICT applications are essential for political, economic, social and cultural development, that they play an important role in poverty alleviation, job creation, environmental protection and the prevention and mitigation of natural and other disasters (in addition to the importance of disaster prediction), and that they must be placed at the service of development in other sectors; and that, therefore, opportunities offered by new ICTs should be fully exploited in order to foster sustainable development;

g) that Goal 2 in Resolution 71 (Rev. Busan, 2014) of the Plenipotentiary Conference, on the strategic plan for the Union for 2016-2019, continues to declare that the aim is for ITU to assist in bridging the national, regional and international digital divide in ICTs and ICT applications by facilitating interoperability, interconnection and global connectivity of telecommunication networks and services, and by playing a leading role in the process for follow-up and implementation of the relevant goals and objectives of WSIS, and to focus on bridging the digital divide and providing broadband for all,

considering

a) the role of ITU, in particular the specific functions of ITU-D;

b) that many stakeholders in the public, private, academic, non-governmental organization and multilateral sectors are seeking to bridge this divide;

c) that, even with all the developments mentioned above, in many developing countries and especially in rural areas, telecommunications/ICTs, particularly in relation to the Internet, are still not affordable to the majority of the people, as is evident at present;

d) the progress accomplished in the implementation of the outcomes of Phases 1 and 2 of WSIS;

e) that each region, country and area should tackle its own specific issues regarding the digital divide, while stressing the importance of cooperation in this area at regional and international level in order to benefit from experience gained;

f) that many developing countries do not have the necessary basic infrastructure, long-term plans, laws, appropriate regulations and such like in place for telecommunication/ICT development;

g) that the use of radiocommunication systems, in particular satellite systems, to provide access for local communities located in rural or remote areas without increased connection costs due to distance or other geographical characteristics is an extremely useful tool for bridging the digital divide;

h) that satellite broadband systems support communication solutions offering high connectivity, speed and reliability in both urban areas and rural and remote areas, and thus constitute a fundamental driver of economic and social development for countries and regions;

i) that the development of radiocommunication technologies and deployment of satellite systems enable sustainable and affordable access to information and knowledge, through the provision of communication services with high connectivity (broadband) and wide coverage (regional or global reach), which contribute significantly to bridging the digital divide, efficiently complementing other technologies and enabling countries to be connected directly, quickly and reliably;

j) that the programmes of BDT under its action plans, on information and communication infrastructure and technology development, have provided assistance to developing countries in the area of spectrum management and in the efficient and cost-effective development of rural, national and international broadband telecommunication networks, including satellite;

k) that, despite the previous decade's achievements in ICT connectivity, many forms of digital divide remain, both between and within countries, that need to be addressed through, among other actions, strengthened enabling policy environments and international cooperation to improve affordability, access, education, capacity building, multilingualism, cultural preservation, investment and appropriate financing, as well as measures to improve digital literacy and skills and to promote cultural diversity,

bearing in mind

a) that this continuing difference in access to ICTs would lead to an extreme escalation of economic and social disparities, with negative impacts on the social and economic environment in the various regions excluded from the use of ICTs;

b) the interest shown by WSIS in ICT integration and the role of the three ITU Sectors in this regard;

c) the "Call to Action" of the Broadband Commission for Digital Development, to include ICT networks, services and applications as enablers of sustainable development,

considering further

a) that public rights of way and the sharing of infrastructure, as well as the implementation of public policy through public investment and other mechanisms, when employed to support the application of ICTs, can lead to considerable savings in the cost of provision;

b) that the distribution of the benefits brought about by ICTs and the digital economy is not equitable between developing and developed countries, and between social categories within countries, taking into account the commitments of both phases of WSIS to bridge the digital divide and transform it into a digital opportunity;

c) that equitable access to information and the transition of the countries of the developing world into knowledge economies and into the information age will enhance their economic, social and cultural development, in the implementation of the aims of the Geneva Plan of Action and Tunis Agenda and of Goal 2 (Inclusiveness – Bridge the digital divide and provide broadband for all) of the strategic plan for the Union for 2016-2019 in Resolution 71 (Rev. Busan, 2014), which is expected to be maintained in the new plan for 2020-2024, taking into consideration that such access shall be affordable;

d) that the implementation of the 2015-2020 SDGs as adopted by UNGA in September 2015 will play a major role in narrowing the digital divide, and the WSIS+10 Statement and WSIS+10 vision for WSIS beyond 2015;

e) the continuing disparity between those who have and those who do not have access to ICTs, referred to as the "digital divide";

f) the lessons learned from the implementation of Action Line C7 of the Tunis Agenda;

g) that the goal of using and disseminating ICTs is to bring benefits in all aspects of our daily life, and that ICTs are enormously important in facilitating citizens' access to ICT applications;

h) that the application of ICTs in contexts specified in WSIS Action Line C7 must give due regard to local needs in terms of language, culture and sustainable development;

i) that one of the principal advantages of satellite is access to remote, local communities without increased connection costs due to distance or to the geographical features of the areas in which the societies are located;

j) that the security and privacy of these applications require the building of confidence in the use of ICT;

k) that as ICT is being continuously integrated into all sectors of society, the applications referred to in WSIS Action Line C7 are triggering profound changes in social productivity and hastening a major leap forward in industrial productivity, thus creating a good opportunity for developing countries to raise their level of industrial development and improve social and economic growth;

l) that sharing of experiences and best practices among ITU members will help to facilitate deployment of ICT applications,

confirms

the importance of approaches to funding for bridging the digital divide in the Geneva Plan of Action, the Tunis Agenda and the strategic plan for the Union and their translation into equitable mechanisms for action, particularly in respect of issues related to Internet management, taking into consideration the special initiatives for promoting full gender equality, having regard to persons with specific needs, including persons with disabilities and the elderly, youth, issues related to indigenous peoples, telecommunications/ICTs for disaster relief and mitigation, and the child online protection initiative,

undertakes

to carry out work from which all countries, especially the developing countries, may benefit, with a view to establishing international methods and specific mechanisms to strengthen international cooperation for bridging the digital divide, through connectivity solutions which support sustainable and affordable access to ICTs, and, in parallel, to continue to shorten the time-frames for implementation of the Digital Solidarity Agenda, beginning with the Geneva Plan of Action, the outcomes of the Connect the World summits, the Tunis Agenda and the strategic plan for the Union,

resolves

that BDT, in collaboration with the Telecommunication Standardization Bureau and the Radiocommunication Bureau, continue to adopt the necessary measures to implement regional projects derived from the non-exclusive integration models which it has acquired, to link all stakeholders, organizations and institutions of the various sectors in an ongoing relationship of cooperation in which information is disseminated over networks, so as to narrow the digital divide in line with the outputs of Phases 1 and 2 of WSIS,

resolves to request the Director of the Telecommunication Development Bureau

1 to continue to follow up BDT's work pursuant to Resolution 8 (Rev. Buenos Aires, 2017) of this conference in creating social connectivity indicators for the digital divide, standard indicators for each country and a single index, in cooperation with the competent organizations and the relevant United Nations agencies, using available statistics so that charts can be compiled to illustrate the current situation of the digital divide in each country and region;

2 to continue to advocate the advantages of developing low-cost, high-quality ICT customer equipment, that can be directly connected to the networks supporting the Internet and Internet services and applications, so that economies of scale can be achieved on account of their acceptability at the global level, taking into consideration the possibility of satellite use of this equipment;

3 to continue to assist in developing a user-awareness campaign in order to build user trust and confidence in ICT services and applications;

4 to ensure that special programmes under the ITU centres of excellence (CoE) continue to address the specific issue of ICT training for poverty alleviation, and to give top priority to these centres;

5 to continue to foster the development of innovative models in order to reduce poverty and bridge the digital divide in the developing countries successfully;

6 to continue to identify key ICT applications in rural areas and to cooperate with specialized organizations with a view to developing a standardized user-friendly content format that overcomes the barrier of literacy and language;

7 to encourage innovation and the use of new and emerging technologies; and the development of business models or other innovative ways to help telecommunication operators in reducing costs and thereby bridging the digital divide;

8 to continue to assist in reducing access costs by encouraging manufacturers to develop appropriate technology scalable to broadband applications and having a low operating and maintenance cost, this having been adopted as a key objective of the Union as a whole and ITU-D in particular;

9 to encourage members to provide ITU with ICT rural experiences, which can then be put on the ITU-D website;

10 to facilitate discussion and exchange of best practices regarding the challenges and benefits of implementing projects or activities relating to e-applications referred to in WSIS Action Line C7 through strategic partnerships;

11 to take into consideration the importance of the security and confidentiality of the ICT applications highlighted in WSIS Action Line C7 and of protection of privacy, in order to facilitate discussions regarding guidelines, tools and mechanisms; improve collaboration between government authorities; implement user-friendly government services, potentially including integration and personalization of services; improve the quality of e-government services; and increase awareness of such services;

12 to continue to assist the Member States and Sector Members in developing a pro-competition policy and regulatory framework for ICTs, including online services and electronic commerce, as well as capacity building in connectivity and accessibility, taking into account the specific needs of women and marginal, vulnerable and disadvantaged groups;

13 to ensure BDT continues to play a central role in this initiative and collaborates closely with ITU Member States, through the ITU regional offices, to implement relevant programmes and projects, in addition to maintaining an active communication channel between strategic stakeholders;

14 to continue to encourage development of broadcast-mode methods for promoting ICT uses in rural areas;

15 to continue to help in promoting greater participation of women as well as persons with disabilities and specific needs in ICT initiatives, particularly in rural areas;

16 to promote the implementation of studies or projects and activities, in collaboration with the ITU Radiocommunication Sector (ITU-R), with a view, on the one hand, to complementing national radiocommunication systems, including satellite systems, and, on the other, to increasing knowledge and capacities thereof, in order to achieve optimum utilization of the radio-frequency resource, particularly the digital dividend, and of the orbit/spectrum resource, with the aim of stimulating satellite broadband development and coverage for bridging the digital divide;

17 to analyse the adoption of measures for collaboration with ITU-R, in order to support studies, projects or systems and, at the same time, to implement joint activities which seek to build capacities in efficient use of the orbit/spectrum resource for the provision of satellite services, with a view to achieving affordable access to satellite broadband and facilitating network connectivity between different areas, countries and regions, especially in the developing countries;

18 to continue to encourage the adoption of necessary measures to implement regional projects to link all stakeholders, organizations and institutions of the various sectors in an ongoing relationship of cooperation in which information is disseminated over networks, so as to narrow the digital divide in line with the outputs of Phases 1 and 2 of WSIS, and to contribute and work towards the Connect 2020 Agenda;

19 to continue to support and coordinate efforts to connect people with disabilities using ICT services and applications;

20 to continue cooperating with study groups of the ITU Telecommunication Standardization Sector (ITU-T) in bridging the standardization gap between developing and developed countries**;**

21 to ensure that the necessary resources within the budgetary limits are allocated to the above actions;

22 to continue to make these applications a major strand for the activities of the relevant BDT programme, focusing on its key role for the implementation of study Questions related to ICT applications for the previous and forthcoming study periods;

23 to circulate the outputs of these activities on applications to all Member States on a regular basis;

24 that BDT collaborate closely, through the ITU regional offices, with ITU Member States in order to implement these regional projects, in addition to maintaining an active communication channel between the strategic stakeholders and playing a central role,

invites

international financial institutions, donor agencies and private-sector entities to assist and to develop different business models in developing ICT applications referred to in WSIS Action Line C7, including public-private partnership projects and programmes in developing countries,

invites Member States

1 to consider promoting relevant policies to foster public and private investment in the development and construction of radiocommunication systems, including satellite systems, in their countries and regions, and to consider including the use of such systems in their national and/or regional broadband plans, as an additional tool that will help to bridge the digital divide and meet telecommunication needs, especially in the developing countries;

2 when implementing Resolution 17 (Rev. Buenos Aires, 2017) of this conference, on implementation of regionally approved initiatives at the national, regional, interregional and global levels, to select a project among those proposed for the regions that reflects optimal integration of ICTs with the aim of bridging the digital divide;

3 to participate actively in regional and global collaborative forums dealing with experiences and best practices in the implementation of e-government strategies and programmes;

4 to participate in the study of the role of ICTs in education systems by contributing their own experiences regarding the implementation of ICTs for achieving universal education worldwide,

invites Member States and Sector Members

1 to incorporate, in their e-government strategies and programmes, actions to encourage the use of ICTs to improve collaboration between government authorities, actions to encourage the implementation of user-friendly services, potentially including integration and personalization of services to improve the quality of e-government services, and actions to increase awareness of such services;

2 to support the collection and analysis of data and statistics on e-applications and services, such as ICT applications in industry, e-government and e-health and ICT in education, that will contribute to public policy design and implementation as well as enabling cross-country comparisons;

3 to participate actively in regional and global collaborative forums dealing with experiences and best practices in the implementation of e-government strategies and programmes;

4 to participate in the study of the role of ICTs in education systems by contributing their own experiences regarding the implementation of ICTs for achieving universal education worldwide.

RESOLUTION 39 (Istanbul, 2002)

Agenda for connectivity in the Americas and Quito Action Plan

(ABROGATED BY WTDC-17)

RESOLUTION 40 (Rev. Buenos Aires, 2017)

Group on capacity-building initiatives

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) the principles relating to capacity building in the World Summit on the Information Society (WSIS) Geneva Declaration of Principles, in §§ 29 and 34 thereof;

b) the provisions of § 11 in the WSIS Geneva Plan of Action;

c) the provisions of §§ 14 and 32 of the WSIS Tunis Commitment;

d) the provisions of §§ 22, 23a), 26g), 51 and 90c), d), k) and n) of the WSIS Tunis Agenda for the Information Society;

e) that ITU is one of the moderators/facilitators identified under Action Line C4 in the Annex to the Tunis Agenda, alongside the United Nations Development Programme (UNDP), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the United Nations Conference on Trade and Development (UNCTAD);

f) Resolution 73 (Rev. Buenos Aires, 2017) of this conference, on ITU centres of excellence;

g) United Nations General Assembly Resolution 70/125, on the outcome document of the high-level meeting of the General Assembly on the overall review of the implementation of the WSIS outcomes,

considering

a) that human resources are still the most vital asset of any organization, and that technical, development and management skills continuously need to be reviewed;

b) that critical to the development of human and institutional capacity is the continuation of ongoing training and exchange of ideas with other experienced technical, regulatory and development professionals and institutions;

c) that the Telecommunication Development Bureau (BDT) continues to play a pivotal role in the development of such skills through its numerous activities, including its capacity-building and digital inclusion programme, and its activities in the field, with the excellent legacy of the Technical Cooperation Department of ITU in this domain prior to the creation of BDT;

d) that the major capacity-building initiatives undertaken by BDT, including the ITU Academy initiative[1], global and regional human capacity development forums, and the centres of excellence and Internet training centres initiatives, have greatly contributed to addressing these issues, and that their aims are in line with the outputs of WSIS, in cooperation with all programmes, and with the two ITU-D study groups, each according to their respective field of competence;

e) that it is necessary for BDT to systematize its numerous human skills development and capacity-building activities, treating them in a holistic, coordinated, integrated and transparent manner to meet the overall strategic objectives of the ITU Telecommunication Development Sector (ITU-D) and make the most efficient use of resources;

f) that it is necessary for BDT to consult regularly with members on their human skills development and capacity-building priorities and to implement activities accordingly;

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[1] In an effort to streamline and consolidate its numerous capacity-building efforts in the area of ICTs and telecommunications, BDT launched the ITU Academy, which encompasses its related programme activities and partnership initiatives, including the centres of excellence and Internet training centres.

g) that it is necessary for BDT to report to the Telecommunication Development Advisory Group (TDAG) on the initiatives and activities undertaken and results achieved, in order to allow members to be fully informed of difficulties encountered and progress made, and to guide BDT in its activities in this field,

taking into account

a) the success, and demonstrated value in terms of providing practical skills and hands-on learning, of forums such as regional seminars and the World Radiocommunication Seminar (WRS);

b) the large number and diversity of organizations and individuals who participate in and with BDT, whose value as educational resources should be recognized;

c) the human skills development and capacity-building initiatives, needs and priorities identified by regions,

resolves to instruct the Director of the Telecommunication Development Bureau

1 to maintain the Group on Capacity-Building Initiatives (GCBI), composed of competent capacity-development experts familiar with the needs of their regions, to enhance the ability of ITU Member States, Sector Members, Associates, Academia, experienced and expert professionals and organizations with relevant expertise to assist ITU-D, and to contribute to the successful implementation of its human skills development and capacity-building activities in an integrated manner in cooperation with the two ITU-D study groups and in accordance with adopted regional initiatives, each according to its respective field of competence;

2 that GCBI shall include two capacity-building experts representing each of the six regions, that participation shall also be open to all interested Member States and Sector Members, and that the group shall work with BDT staff electronically or, where appropriate, face-to-face, in order to:

i) assist in identifying global trends in the domain of telecommunication/information and communication technology (ICT) human skills development and capacity building;

ii) assist in identifying regional needs and priorities for human skills development and capacity-building activities, considering, above all, the regional initiatives and the topics addressed by the study groups, evaluate the progress of related BDT activities, and make proposals to eliminate any overlap in activities and harmonize ongoing initiatives, etc.;

iii) assist in the strategic review of the results of the ITU Centres of Excellence programme and advise accordingly;

iv) coordinate, as appropriate, with organizations and professionals that have expertise in human skills development and building capacity in areas of identified need, leveraging their expertise by either directing members to those experts or facilitating their involvement in ITU capacity-building activities;

v) assist BDT in designing and implementing an integrated framework for ITU Academy activities, to be implemented during the period 2018-2021;

vi) provide advice on the development of formal telecommunication/ICT curricula design and content for both general telecommunication/ICT literacy and specialized skills;

vii) provide advice on accreditation and certification based on regional and/or international standards;

viii) provide advice on initiatives, academic alliances and partnerships that further the overall strategic objectives of the ITU Academy, including integration with, *inter alia*, centres of excellence, Internet training centres and ITU regional offices;

ix) provide advice on standards for quality assurance and monitoring of courses delivered through the ITU Academy partnerships, including those delivered through the centres of excellence, Internet training centres and/or academic institutions;

x) assist in submitting an interim annual report to be presented and discussed during the TDAG meeting, including achievements and proposed recommendations that may need to be taken to fulfil the respective programme;

xi) act as regional representatives in the related biennial forums organized by BDT;

3 provide the necessary support for GCBI to carry out its work effectively;

4 take due account of any recommendations of GCBI.

RESOLUTION 43 (Rev. Buenos Aires, 2017)

Assistance in implementing International Mobile Telecommunications and future networks

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 15 (Rev. Buenos Aires, 2017) of this conference, on applied research and transfer of technology;

b) Resolution 200 (Busan, 2014) of the Plenipotentiary Conference, on the Connect 2020 Agenda for global telecommunication/information and communication technology (ICT) development;

c) Resolution 59 (Rev. Buenos Aires, 2017) of this conference, on strengthening coordination and cooperation among the three ITU Sectors on matters of mutual interest;

d) Resolution 135 (Rev. Busan, 2014) of the Plenipotentiary Conference, on ITU's role in the development of telecommunications/ICTs, in providing technical assistance and advice to developing countries[1] and in implementing relevant national, regional and interregional projects;

e) Resolution 178 (Guadalajara, 2010) of the Plenipotentiary Conference, on ITU's role in organizing the work on technical aspects of telecommunication networks to support the Internet;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

f) Resolution ITU-R 23 (Rev. Geneva, 2015) of the Radiocommunication Assembly (RA), on extension of the international monitoring system to a worldwide scale;

g) Resolution ITU-R 50 (Rev. Geneva, 2015) of RA, on the role of the Radiocommunication Sector (ITU-R) in the ongoing development of International Mobile Telecommunications (IMT);

h) Resolution ITU-R 56 (Rev. Geneva, 2015) of RA, on naming for IMT;

i) Resolution ITU-R 57 (Rev. Geneva, 2015) of RA, on principles for the process of development of IMT-Advanced;

j) Resolution ITU-R 65 (Rev. Geneva, 2015) of RA, on principles for the process of future development of IMT for 2020 and beyond;

k) Resolution 238 (WRC-15) of the World Radiocommunication Conference (WRC), on studies on frequency-related matters for IMT identification, including possible additional allocations to the mobile services on a primary basis in portion(s) of the frequency range between 24.25 and 86 GHz for the future development of IMT for 2020 and beyond;

l) Recommendation 207 (Rev.WRC-15) of WRC, on future IMT systems;

m) Resolution 92 (Hammamet, 2016) of the World Telecommunication Standardization Assembly (WTSA), on enhancing the standardization activities in the ITU Telecommunication Standardization Sector (ITU-T) related to non-radio aspects of IMT;

n) Resolution 93 (Hammamet, 2016) of WTSA, on interconnection of 4G, IMT-2020 networks and beyond,

considering

a) the tremendous growth of data traffic and expansion of IMT networks, and the continuous need to promote the use of IMT throughout the world, particularly in developing countries;

b) the important role of ITU in contributing to the standardization and harmonized use of IMT, which will promote global broadband connectivity and accelerate the uptake of advanced mobile applications and services;

c) that IMT systems have contributed to global economic and social development, and are intended to provide telecommunication services on a worldwide scale, regardless of location, network or terminal used;

d) that IMT-2020 will be utilized widely in the near future to build a connected smart society and information ecosystem, and will make a positive and important contribution to the United Nations Sustainable Development Goals (SDGs);

e) that ITU-R and ITU-T are actively continuing their studies on standardization and development of mobile communication systems, overall network aspects of IMT and future networks;

f) that the ITU-T and ITU-R study groups have had, and continue to have, effective informal coordination via liaison activity with respect to the development of Recommendations relating to IMT and future networks;

g) that the ITU-R Handbook on Global Trends in International Mobile Telecommunications defines IMT and provides general guidance to relevant parties on issues related to the deployment of IMT systems and for the introduction of their IMT-2000 and IMT-Advanced networks;

h) that the ITU Telecommunication Development Sector (ITU-D) study groups of the are currently involved in activities closely coordinated with ITU-T Study Groups 11 and 13 and ITU-R Study Group 5 in order to identify the factors influencing the effective development of broadband, including IMT and future networks, for developing countries;

i) that IMT systems are now being evolved to provide diverse usage scenarios and applications such as enhanced mobile broadband, massive machine-type communications and ultra-reliable and low-latency communications, and a substantial number of countries have started implementing these;

j) that ITU-T Study Group 13 initiated the study of non-radio aspects of IMT-2020 and future networks;

k) that many aspects of the research and development of designs for IMT and future networks are linked to big data, cloud computing and fog computing;

l) the need to develop relevant documents on the smooth transition of existing mobile networks to IMT-2020 and a handbook on deployment of IMT-2020 systems;

m) the increasing global reliance on the use of IMT to support the achievement of, among other objectives, the 17 SDGs adopted in Resolution 70/1 of the United Nations General Assembly, particularly in key sectors such as health, agriculture, finance and education;

n) the positive impact of IMT and future networks on economic development and improvement of communication as well as social inclusion;

o) the very important role of IMT and future networks in broadband services and the crucial role of IMT-2020 for new services;

p) that IMT-2020 will provide many very important benefits to developing countries (such as smart transportation systems to prevent traffic accidents, remote surgery with e-health, augmented/virtual reality-based e-learning, smart energy, smart water management, smart agriculture, new innovative applications for persons with disabilities and persons with specific needs, etc.), and successful planning and deployment of IMT-2020 is very important;

q) that ITU has successfully focused on the promotion of IMT during the last 16 years, coverage of these networks having reached 84 per cent of the world's population in 2016, and that it is important for ITU-D to include IMT-2020 in the next four-year period, the other two Sectors, ITU-R and ITU-T, having already prioritized IMT-2020;

r) the need for assistance to developing countries to provide high-speed and high-quality mobile broadband in those countries, insofar as developed and developing countries are using the same mobile broadband technologies but there are very important differences between the mobile data speeds and service qualities;

s) the need for assistance for affordable mobile broadband and widespread usage by all people and sectors,

noting

a) the excellent work of the relevant ITU-R and ITU-T study groups in this regard;

b) the handbooks for deployment of IMT systems prepared jointly by the three Sectors and their subsequent supplements adopted by ITU-R and ITU-T;

c) the adoption by this conference of Question 1/1,

recognizing

a) that deploying IMT in low-frequency bands has benefited operators in providing service in wider areas, as well as enabling investment efficiency and competitive prices for wireless broadband services in developing countries;

b) that developing and developed countries should cooperate though exchanges of experts, the organization of seminars, specialized workshops and meetings relating to the deployment of IMT and future networks;

c) that Member States, especially developing countries, would require continued assistance in the adoption of IMT technologies and systems that meet their national requirements and needs;

d) that the emerging Internet of Things (IoT) applications have resulted in a rapid increase in the number of devices accessing the telecommunication network which, in turn, makes the need to coordinate work among the three Sectors in implementing IMT throughout the world more pressing;

e) that there are many issues to consider in deploying IMT and future networks, such as suitable IMT technologies, frequency-band harmonization and strategic planning;

f) that ITU-T Recommendations to address network architectures, roaming principles, numbering issues, charging and security mechanisms as well as interoperability and conformance testing for interconnection of IMT and future networks and beyond shall be progressed as quickly as possible,

resolves

1 to include support for implementation aspects of IMT, including suitable IMT technologies, a transition roadmap, frequency-band harmonization and re-planning of certain frequency bands to facilitate deployment of IMT, including the technologies currently used, and support for their implementation as a priority in the action plan adopted by this conference for developing countries;

2 to include support for ITU work on the deployment of IMT and future networks in developing countries in the action plan and the work plans of ITU study groups:

i) ITU-R study groups: in the area of development of suitable technologies, a transition roadmap, frequency-band definition and harmonization and re-planning of certain frequency bands to facilitate deployment, including the technologies currently used;

ii) ITU-T study groups: in the area of standardization of non-radio aspects of network management, protocols and interoperability, quality of service, future networks, transport, fronthaul/backhaul and security,

instructs the Director of the Telecommunication Development Bureau

in close collaboration with the Directors of the Radiocommunication Bureau (BR) and the Telecommunication Standardization Bureau (TSB), as well as the relevant regional telecommunication organizations:

1 to continue to involve the membership in activities to define and establish priorities with regard to challenges pertaining to the deployment of IMT and future networks, especially in developing countries;

2 to provide assistance to developing countries in their planning and optimization of spectrum usage for the medium to long term for the implementation of IMT, taking into account national and regional specificities and needs;

3 to continue encouraging and assisting developing countries to implement IMT systems and future networks using the relevant ITU Recommendations and studies carried out by the ITU study groups, taking into account the need to protect existing services;

4 to devote particular attention to work on questions related to the technologies and the radiocommunication standards recommended by ITU, in order to meet national requirements for the implementation of IMT in the short, medium and long term, with a view to encouraging the use of harmonized spectrum and associated band plans and standards to achieve economies of scale;

5 to disseminate as widely as possible the above-mentioned guidelines and amendments thereto, which are recommended to be used for the evolution of existing networks to IMT-2020 and future networks;

6 to provide assistance to administrations on the use and interpretation of ITU Recommendations relating to IMT and future networks adopted by both ITU-R and ITU-T;

7 to conduct seminars, workshops or training on strategic planning for the transition from networks operated primarily to IMT and future networks, taking into account specific national and regional requirements and characteristics;

8 to promote the exchange of information among international organizations, donor countries and recipient countries on upgrading to and deploying IMT-Advanced/IMT-2020 systems in certain frequency bands used by previous-generation IMT (particularly those operated below 2 GHz);

9 to provide expert advice on the creation of roadmaps for the evolution of IMT;

10 to encourage administrations to take heed of Reports ITU-R M.2078, ITU-R M.2290 and ITU-R M.2370 as well as Recommendation ITU-R M.2083, by making available a sufficient quantity of spectrum to enable the proper development of IMT, including IMT-2020, with the aim of expanding the provision of mobile-broadband services in an efficient manner;

11 to support projects and training on the use of IMT and future networks in key sectors, including health, finance, education and public safety, among others, through strategic partnerships;

12 to take into account the results of the work under Question 1/1 in relevant BDT programmes, that are components of the toolkit BDT uses when solicited by Member States and Sector Members in order to support their efforts to build broadband and deploy IMT networks,

invites the study groups of the ITU Telecommunication Development Sector

1 to take into account the contents of this updated resolution when conducting studies, and to maintain close cooperation in this matter with ITU-R study groups;

2 to take into account the decisions of RA-15, WRC-15 as well as WTSA-16 when implementing this resolution;

3 to take into account the importance of transition to IMT-2020;

4 to take into account the challenges to enhancing mobile-broadband services, including the need for greater data speeds, service quality and affordability in developing countries,

encourages Member States

to provide all possible support for the implementation of this resolution and for the future work on studies relating to the relevant Questions.

RESOLUTION 45 (Rev. Dubai, 2014)

Mechanisms for enhancing cooperation on cybersecurity, including countering and combating spam

The World Telecommunication Development Conference (Dubai, 2014),

recalling

a) Resolution 130 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference, on the role of ITU in building confidence and security in the use of information and communication technologies (ICTs);

b) Resolution 174 (Guadalajara, 2010) of the Plenipotentiary Conference, on ITU's role with regard to international public policy issues relating to the risk of illicit use of ICTs;

c) Resolution 179 (Guadalajara, 2010) of the Plenipotentiary Conference, on ITU's role in child online protection;

d) Resolution 181 (Guadalajara, 2010) of the Plenipotentiary Conference, on definitions and terminology relating to building confidence and security in the use of ICTs;

e) Resolution 45 (Rev. Hyderabad, 2010) of the World Telecommunication Development Conference (WTDC);

f) Resolution 50 (Rev. Dubai, 2012) of the World Telecommunication Standardization Assembly (WTSA), on cybersecurity;

g) Resolution 52 (Rev. Dubai, 2012) of WTSA, on countering and combating spam;

h) Resolution 58 (Rev. Dubai, 2012) of WTSA, on encouraging the creation of national computer incident response teams (CIRTs), particularly in developing countries;

i) Resolution 69 (Rev. Dubai, 2014) of this conference, on the creation of CIRTs, particularly for developing countries, and cooperation among them;

j) Resolution 67 (Rev. Dubai, 2014) of this conference, on the role of the ITU Telecommunication Development Sector (ITU-D) in child online protection;

k) the noble principles, aims and objectives embodied in the Charter of the United Nations and the Universal Declaration of Human Rights;

l) that ITU is the lead facilitator for Action Line C5 in the Tunis Agenda for the Information Society (Building confidence and security in the use of ICTs);

m) the cybersecurity-related provisions of the Tunis Commitment and the Tunis Agenda;

n) the goal set out in the strategic plan for the Union for 2012-2015, approved by Resolution 71 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference, which calls on ITU-D to promote the availability of infrastructure and foster an enabling environment for telecommunication/ICT infrastructure development and its use in a safe and secure manner;

o) Question 22 of ITU-D Study Group 1, under which in the previous cycle many members collaborated to produce reports, including course materials for use in developing countries, such as a compendium of national experiences, best practices for public-private partnerships, best practices for building a CIRT with accompanying course material, and best practices for a CIRT management framework;

p) the report of the Chairman of the High-Level Group of Experts (HLEG) of the Global Cybersecurity Agenda (GCA), established by the ITU Secretary-General pursuant to the requirements of Action Line C5 on building confidence and security in the use of ICTs and in accordance with Resolution 140 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference, on the role of ITU as sole facilitator for World Summit on the Information Society (WSIS) Action Line C5, and Resolution 58 (Rev. Dubai, 2012), on encouraging the creation of national CIRTs, particularly for developing countries;

q) that ITU and the United Nations Office on Drugs and Crime (UNODC) have signed a memorandum of understanding (MoU) in order to strengthen security in the use of ICTs,

considering

a) the role of telecommunications/ICTs as effective tools to promote peace, economic development, security and stability and to enhance democracy, social cohesion, good governance and the rule of law, and the need to confront the escalating challenges and threats resulting from the abuse of this technology, including for criminal and terrorist purposes, while respecting human rights (see also § 15 of the Tunis Commitment);

b) the need to build confidence and security in the use of telecommunications/ICTs by strengthening the trust framework (§ 39 of the Tunis Agenda), and the need for governments, in cooperation with other stakeholders within their respective roles, to develop necessary legislation for the investigation and prosecution of cybercrime at national levels, and cooperate at regional and international levels having regard to existing frameworks;

c) that United Nations General Assembly (UNGA) Resolution 64/211 invites Member States to use, if and when they deem appropriate, the voluntary self-assessment tool that is annexed to the resolution for national efforts;

d) the need for Member States to develop national cybersecurity programmes centred around a national plan, public-private partnerships, a sound legal foundation, an incident management, watch, warning, response and recovery capability, and a culture of awareness, using as a guide the reports on best practices for a national approach to cybersecurity: building blocks for organizing national cybersecurity efforts, drawn up under the two study periods of Question 22 of ITU-D Study Group 1;

e) that the considerable and increasing losses which users of telecommunication/ICT systems have incurred from the growing problem of cybercrime and deliberate sabotage worldwide alarm all developed and developing nations of the world without exception;

f) the reasons behind the adoption of Resolution 37 (Rev. Dubai, 2014) of this conference, on bridging the digital divide, having regard to the importance of multistakeholder implementation at the international level and to the action lines referenced in § 108 of the Tunis Agenda, including "Building confidence and security in the use of ICTs";

g) the outcomes of several ITU activities related to cybersecurity, especially, but not limited to, the ones coordinated by the Telecommunication Development Bureau, in order to fulfil ITU's mandate as facilitator for the implementation of Action Line C5 (Building confidence and security in the use of ICTs);

h) that various organizations from all sectors of society work in collaboration to enhance cybersecurity of telecommunications/ICTs;

i) that Objective 3 of ITU-D, set under the strategic plan for the Union for 2012-2015, contained in Resolution 71 (Rev. Guadalajara, 2010), was to foster the development of strategies to enhance the deployment, and the safe, secure and affordable use of ICT applications and services towards mainstreaming telecommunications/ICTs in the broader economy and society;

j) that the fact, among others, that critical telecommunication/ICT infrastructures are interconnected at global level means that low infrastructure security in one country could result in greater vulnerability and risks in others;

k) that various information, materials, best practices and financial resources, as appropriate, are available to Member States from national, regional and other relevant international organizations, according to their respective roles;

l) that the results of the cybersecurity awareness survey conducted by BDT and Question 22-1/1 in the previous study period showed that least developed countries require substantial assistance in this area;

m) that the ITU Global Cybersecurity Agenda (GCA) encourages international cooperation aimed at proposing strategies for solutions to enhance confidence and security in the use of telecommunications/ICTs,

recognizing

a) that measures undertaken to ensure the stability and security of telecommunication/ICT networks, to protect against cyberthreats/cybercrime and to counter spam must protect and respect the provisions for privacy and freedom of expression as contained in the relevant parts of the Universal Declaration of Human Rights (see also § 42 of the Tunis Agenda) and the International Covenant on Civil and Political Rights;

b) that UNGA Resolution 68/167, on the right to privacy in the digital age, affirms, *inter alia*, "that the same rights the people have off line must also be protected on line, including the right to privacy";

c) the need to take appropriate actions and preventive measures, as determined by law, against abusive uses of telecommunications/ICTs, as mentioned in connection with "Ethical dimensions of the information society" in the Geneva Declaration of Principles and Plan of Action (§ 43 of the Tunis Agenda), the need to counter terrorism in all its forms and manifestations on telecommunication/ICT networks, while respecting human rights and complying with other obligations under international law, as outlined in operative paragraph 81 of UNGA Resolution 60/1 on the 2005 world summit outcome, the importance of the security, continuity and stability of telecommunication/ICT networks and the need to protect telecommunication/ICT networks from threats and vulnerabilities (§ 45 of the Tunis Agenda), while ensuring respect for privacy and the protection of personal information and data, whether via adoption of legislation, the implementation of collaborative frameworks, best practices and self-regulatory and technological measures by business and users (§ 46 of the Tunis Agenda);

d) the need to effectively confront challenges and threats resulting from the use of telecommunications/ICTs such as for purposes that are inconsistent with objectives of maintaining international stability and security and may adversely affect the integrity of the infrastructure within States to the detriment of their security, and to work cooperatively to prevent the abuse of information resources and technologies for criminal and terrorist purposes, while respecting human rights;

e) the role of telecommunications/ICTs in the protection of children and in enhancing their development, and the need to strengthen action to protect children and youth from abuse and defend their rights in the context of telecommunications/ICTs, emphasizing that the best interests of the child are a key consideration;

f) the desire and commitment of all concerned to build a people-centred, inclusive and secure development-oriented information society, premised on the purposes and principles of the Charter of the United Nations, international law and multilateralism, and respecting fully and upholding the Universal Declaration of Human Rights, so that people everywhere can create, access, utilize and share information and knowledge in complete security, in order to achieve their full potential and to attain the internationally agreed development goals and objectives, including the Millennium Development Goals;

g) the provisions of §§ 4, 5 and 55 of the Geneva Declaration of Principles, and that freedom of expression and the free flow of information, ideas and knowledge are beneficial to development;

h) that the Tunis phase of WSIS represented a unique opportunity to raise awareness of the benefits that telecommunications/ICTs can bring to humanity and the manner in which they can transform people's activities, interaction and lives, and thus increase confidence in the future, conditional upon the secure use of telecommunications/ICTs, as the implementation of the Summit outcomes has demonstrated;

i) the need to deal effectively with the significant problem posed by spam, as called for in § 41 of the Tunis Agenda, as well as, *inter alia*, spam, cybercrime, viruses, worms and denial-of-service attacks;

j) the need for effective coordination between ITU-D programmes and Questions,

noting

a) the continuing work of Study Group 17 (security) of the ITU Telecommunication Standardization Sector (ITU-T) and other standards-development organizations on various aspects of security of telecommunications/ICT;

b) that spam is a significant problem and continues to pose a threat for users, networks and the Internet as a whole, and that the issue of cybersecurity should be addressed at appropriate national, regional and international levels;

c) that cooperation and collaboration among Member States, Sector Members and relevant stakeholders contributes to building and maintaining a culture of cybersecurity,

resolves

1 to continue to recognize cybersecurity as one of ITU's priority activities and to continue to address, within its area of core competence, the issue of securing and building confidence in the use of telecommunications/ICTs, by raising awareness, identifying best practices and developing appropriate training material in order to promote a culture of cybersecurity;

2 to enhance collaboration and cooperation with, and share information among, all relevant international and regional organizations on cybersecurity-related initiatives within ITU's areas of competence, taking into account the need to assist developing countries,

instructs the Director of the Telecommunication Development Bureau

1 to continue to organize, in collaboration with relevant organizations, as appropriate, in conjunction with the programme under Output 3.1 of Objective 3, based on member contributions, and in cooperation with the Director of the Telecommunication Standardization Bureau (TSB), meetings of Member States, Sector Members and other relevant stakeholders to discuss ways and means to enhance cybersecurity;

2 to continue, in collaboration with relevant organizations and stakeholders, to carry out studies on strengthening the cybersecurity of developing countries at regional and international level, based on a clear identification of their needs, particularly those relating to telecommunication/ICT use, including the protection of children and youth;

3 to support Member States' initiatives, especially in developing countries, regarding mechanisms for enhancing cooperation on cybersecurity;

4 to assist the developing countries in enhancing their states of preparedness in order to ensure a high and effective level of security for their critical telecommunication/ICT infrastructures;

5 to assist Member States in the establishment of an appropriate framework between developing countries allowing rapid response to major incidents, and propose an action plan to increase their protection, taking into account mechanisms and partnerships, as appropriate;

6 to implement this resolution in cooperation and collaboration with the Director of TSB;

7 to report the results of the implementation of this resolution to the next WTDC,

invites the Secretary-General, in coordination with the Directors of the Radiocommunication Bureau, the Telecommunication Standardization Bureau and the Telecommunication Development Bureau

1 to report on MoUs between countries, as well as existing forms of cooperation, providing analysis of their status, scope and applications of these cooperative mechanisms to strengthen cybersecurity and combat cyberthreats, with a view to enabling Member States to identify whether additional memoranda or mechanisms are required;

2 to support regional and global cybersecurity projects, such as IMPACT, FIRST, OAS, APCERT, among others, and to invite all countries, particularly developing ones, to take part in these activities,

requests the Secretary-General

1 to bring this Resolution to the attention of the next plenipotentiary conference for consideration and required action, as appropriate;

2 to report the results of these activities to the Council and to the Plenipotentiary Conference in 2018,

invites Member States, Sector Members, Associates and Academia

1 to provide the necessary support for and participate actively in the implementation of this resolution;

2 to recognize cybersecurity and countering and combating spam as high-priority items, and to take appropriate action and contribute to building confidence and security in the use of telecommunications/ICTs at the national, regional and international level;

3 to encourage service providers to protect themselves from the risks identified, endeavour to ensure the continuity of services provided and notify security infringements,

invites Member States

1 to establish an appropriate framework allowing rapid response to major incidents, and propose an action plan to prevent and mitigate such incidents;

2 to establish strategies and capabilities at the national level to ensure protection of national critical infrastructures, including enhancing the resilience of telecommunication/ICT infrastructures.

RESOLUTION 46 (Rev. Buenos Aires, 2017)

Assistance to indigenous peoples and communities through information and communication technology

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 139 (Rev. Busan, 2014) of the Plenipotentiary Conference, on the use of telecommunications/information and communication technologies (ICTs) to bridge the digital divide and create an inclusive information society;

b) Resolution 200 (Busan, 2014) of the Plenipotentiary Conference, on the Connect 2020 Agenda for global telecommunication/ICT development,

recognizing

a) the need to achieve the goal of digital inclusion, enabling universal, sustainable, ubiquitous and affordable access to ICTs for all, including indigenous peoples, and to facilitate accessibility of ICTs for all, in the framework of access to information and knowledge;

b) the need to ensure the inclusion of indigenous peoples in the information society, as outlined in the Geneva Declaration of Principles and the Tunis Commitment of the World Summit on the Information Society (WSIS), and to contribute to the development of their communities using ICTs, based on tradition and self-sustainability,

considering

a) that the Telecommunication Development Bureau (BDT) provides assistance to indigenous peoples through all of its programmes in general, and Output 4.3 under Objective 4 in particular;

b) that the multistakeholder report delivered by the United Nations Permanent Forum on Indigenous Issues (UNPFII) and the International Indigenous Steering Committee to the Tunis WSIS plenary (November 2005) highlighted the size of the population of indigenous peoples around the world and the fact that public-private partnerships and multistakeholder cooperation are essential to meet the needs of indigenous peoples more effectively towards their integration in the information society,

taking into account

a) that the WSIS Geneva Plan of Action and the Tunis Commitment established that the attainment of their objectives with regard to indigenous peoples and communities is a priority;

b) that Article 16 of the United Nations Declaration on the Rights of Indigenous Peoples states the following: "Indigenous peoples have the right to establish their own media in their own languages and to have access to all forms of non-indigenous media without discrimination";

c) that Article 41 of the aforementioned Declaration states that: "The organs and specialized agencies of the United Nations system and other intergovernmental organizations shall contribute to the full realization of the provisions of this Declaration through the mobilization, *inter alia*, of financial cooperation and technical assistance";

d) that according to the WSIS+10 Statement on implementation of the WSIS outcomes, digital integration remains an overall priority, beyond affordability and access to ICT networks, services and applications, particularly in rural and remote areas;

e) the linkage between WSIS Action Lines C2, C5 and C6 and the targets of Goal 9 of the Sustainable Development Goals (SDGs), which include significantly increasing access to ICTs and striving to facilitate universal and affordable Internet access in the least developed countries by 2020 at the latest,

recognizing further

a) that the public policy recommendations and best practices developed through the "Connect a School, Connect a Community" initiative, in accordance with the principles established by WSIS, indicate that there are minimum conditions in the sphere of technology, capacity building, regulatory framework, self-sustainability and participation, and content development, which must be ensured to achieve ICT development in indigenous regions;

b) that the Declaration of the Second Summit on Indigenous Communication of Abya Yala, held in Mexico in 2013, decided to move ahead on consultation processes with international organizations in the interests of operationalizing the rights of indigenous peoples to communication laid down in the above-mentioned United Nations Declaration on the Rights of Indigenous Peoples;

c) the necessity of continuing to foster the training of indigenous technicians on the basis of their cultural practices and technological innovation solutions, while at the same time ensuring the availability of resources and spectrum to support the development and sustainability of telecommunication/ICT networks operated by indigenous peoples;

d) that telecommunication networks operated by indigenous peoples themselves have been developed and that, in order to ensure their development and sustainability, it is necessary to continue fostering the training of indigenous technicians on the basis of their cultural practices and technological innovation solutions, while at the same time ensuring the availability of resources and spectrum for implementing those networks;

e) that it is important to monitor closely the evolving communication experiences of the peoples in question and add to the public policy recommendations and best practices developed by ITU, taking into account the underlying technological innovations and organizational approaches that have stimulated their growth,

resolves

1 to reinforce assistance to indigenous peoples in all BDT programmes;

2 to support digital inclusion of indigenous peoples in general, and in particular their participation in workshops, seminars, forums and training on ICT for social and economic development;

3 to support, through the ITU Academy[1], human-resource training programmes in the design and management of public policies aimed at the development of ICTs for indigenous peoples and communities, within available BDT funds and human resources;

4 to support, through the ITU Academy, capacity-building programmes for indigenous peoples in the maintenance and development of ICTs and networks in indigenous communities;

5 to incorporate, in these training programmes, best practices, experience and knowledge that the indigenous peoples have developed on the matter and, where appropriate, include the participation of indigenous experts and mechanisms for exchange and internships among their members, in accordance with applicable ITU rules and regulations governing recruitment;

6 to update the research on best practices and public policy recommendations for the development of ICTs in indigenous communities and foster the study of mechanisms that ensure the availability of spectrum for network deployment;

7 to promote training and innovative solutions through pilot projects that enable the implementation of local communication networks administered and operated by indigenous peoples,

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[1] The ITU Academy initiative encompasses the centres of excellence and Internet training centres initiatives.

invites the World Telecommunication Development Conference and the Director of the Telecommunication Development Bureau

1 to ensure, within the available resources and partnerships to be implemented, that the necessary financial and human resources are allocated within BDT to respond to the existing global initiative for indigenous peoples;

2 to recognize the importance of issues of concern to indigenous peoples worldwide in the determination of priority activities for the ITU Telecommunication Development Sector (ITU-D);

3 to encourage Sector Members to promote the integration of indigenous peoples in the information society worldwide and to promote ICT projects that respond to their specific needs;

4 in line with the above, the ITU mandate, the WSIS outcomes and the SDGs, to recognize the global initiative of the assistance to indigenous peoples worldwide as an integral part of the activities of BDT,

instructs the Director of the Telecommunication Development Bureau

1 to carry out the necessary actions to reinforce the implementation of the Buenos Aires Action Plan as it relates to indigenous peoples, establishing collaboration mechanisms with the Member States, other relevant regional and international organizations and cooperation agencies;

2 that, within the allocated resources in the financial plan and biennial budget as approved by the ITU Council, as well as partnerships to be implemented, the necessary financial and human resources be allocated within BDT to respond to the existing global initiative for indigenous peoples;

3 to recognize the importance of issues of concern to indigenous peoples worldwide in the determination of priority activities for ITU-D;

4 in line with the above, the ITU mandate, the WSIS outcomes and the SDGs, to recognize the global initiative of the assistance to indigenous peoples worldwide as an integral part of the activities of BDT,

requests the Secretary-General

1 to bring the continuous assistance provided by BDT to indigenous peoples through its activities to the attention of the next plenipotentiary conference, with a view to providing appropriate financial and human resources for the relevant actions and projects to be implemented in the telecommunication sector;

2 to submit a report on the BDT outcomes and activities in implementing this resolution to the Plenipotentiary Conference (Dubai, 2018), with a view to providing appropriate financial and human resources for the relevant actions and projects to be implemented in the telecommunication sector,

invites Member States

to provide the necessary facilities and information to allow the participation of members of indigenous peoples and communities in the activities provided for in this resolution

RESOLUTION 47 (Rev. Buenos Aires, 2017)

Enhancement of knowledge and effective application of ITU Recommendations in developing countries[1], including conformance and interoperability testing of systems manufactured on the basis of ITU Recommendations

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 139 (Rev. Busan, 2014) of the Plenipotentiary Conference, on use of telecommunications/information and communication technologies (ICTs) to bridge the digital divide and build an inclusive information society;

b) Resolution 123 (Rev. Busan, 2014) of the Plenipotentiary Conference, on bridging the standardization gap between developing and developed countries;

c) Resolution 15 (Rev. Buenos Aires, 2017), of this conference, on applied research and transfer of technology;

d) Resolution 37 (Rev. Buenos Aires, 2017) of this conference, on bridging the digital divide;

e) Resolution 40 (Rev. Buenos Aires, 2017) of this conference, on the Group on capacity-building initiatives (GCBI),

considering

a) that Resolution 123 (Rev. Busan, 2014) instructed the Secretary-General and the Directors of the three Bureaux to work closely with each other to bridge the standardization gap between developing and developed countries;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

b) that Resolution 177 (Rev. Busan, 2014) of the Plenipotentiary Conference, on conformance and interoperability (C&I), calls to assist developing countries in establishing regional or subregional C&I centres suitable to perform C&I testing, as appropriate and according to their needs;

c) that the same resolution considered the importance, especially to developing countries, that ITU take a leading role in the implementation of the ITU C&I programme, with the ITU Telecommunication Standardization Sector (ITU-T) taking lead responsibility for Pillars 1 and 2, and the ITU Telecommunication Development Sector (ITU-D) for Pillars 3 and 4;

d) the action plan of the C&I programme as updated at the 2013 session of the ITU Council, the pillars of which are 1) Conformity assessment, 2) Interoperability events, 3) Capacity building, and 4) Establishment of test centres and C&I programme in developing countries;

e) that Resolution 200 (Busan, 2014) of the Plenipotentiary Conference, on the Connect 2020 Agenda for global telecommunication/ICT development, endorses a shared global vision for the development of the telecommunication/ICT sector, under the "Connect 2020" agenda, envisaging "an information society, empowered by the interconnected world, where telecommunications/ICTs enable and accelerate social, economic and environmentally sustainable growth and development for everyone";

f) that Resolution 197 (Busan, 2014) of the Plenipotentiary Conference, on facilitating the Internet of Things (IoT) to prepare for a globally connected world, takes into account that interoperability is obligatory to prepare services stemming from IoT worldwide, to the extent practicable;

g) Resolution 98 (Hammamet, 2016) of the World Telecommunication Standardization Assembly (WTSA), on enhancing the standardization of IoT and smart cities and communities for global development;

h) Resolution ITU-R 62 (Rev. Geneva, 2015) of the Radiocommunication Assembly, on studies related to testing for conformance with Recommendations of the ITU Radiocommunication Sector (ITU-R) and interoperability of radiocommunication equipment and systems;

i) that C&I of telecommunication/ICT equipment and systems, thanks to the implementation of relevant programmes, policies and decisions, can enhance market opportunities and reliability, and promote world integration and trade;

j) the report produced for Question 4/2 of the ITU-D study groups reasserting the importance of C&I for achieving the Sustainable Development Goals (SDGs);

k) the efforts made by regions (e.g. Maghreb, ECOWAS, CTU, South America and EAC), with the collaboration of the Telecommunication Development Bureau (BDT), to promote the collaboration and creation of societies aimed at promoting the efficient use of infrastructures for testing conformance, such as the harmonization of standards and testing services in laboratories;

l) that strengthening the capacity of Member States in the matter of conformance assessment and testing, as well as the availability of facilities for national and regional conformance assessment testing, can help to combat counterfeit telecommunication/ICT equipment and devices;

m) Resolution 79 (Rev. Buenos Aires, 2017) of this conference, on the role of telecommunications/ICTs in combating and dealing with counterfeit devices;

n) Resolution 96 (Hammamet, 2016) of WTSA, on ITU-T studies for combating counterfeit telecommunication/ICT devices,

considering further

that WTSA in its Resolution 76 (Rev. Hammamet, 2016), on studies related to C&I testing, assistance to developing countries, and a possible future ITU Mark programme, invited Member States and ITU-D Sector Members to evaluate and assess the risks and various costs resulting from the lack of C&I tests, particularly in developing countries, and share necessary information and Recommendations to avoid losses, based on best practices,

recognizing

a) that the provisions of ITU Recommendations may be taken into consideration by ITU Member States in the development of national standards;

b) that Resolution 44 (Rev. Hammamet, 2016) of WTSA instructs the Director of the Telecommunication Standardization Bureau (TSB), in collaboration with the Directors of the Radiocommunication Bureau (BR) and BDT, to provide support and assistance to developing countries, if requested, in drafting/developing a set of guidelines on the application of ITU-T Recommendations at the national level in order to enhance their participation in ITU-T study groups, with the assistance of the ITU regional offices, for bridging the standardization gap, and to assist developing countries with their studies, particularly in respect of their priority Questions and towards developing and implementing ITU-T Recommendations;

c) that conformance systems and testing, encompassing items such as security, interoperability, spectrum occupancy, quality and national technical regulation of ICT equipment, constitute important tests from the standpoint of ICT infrastructure and the consumer;

d) that Resolution 76 (Rev. Hammamet, 2016) calls on ITU-T, in collaboration with the other Sectors, as appropriate, to assist developing countries in identifying human and institutional capacity-building and training opportunities on C&I testing and in establishing regional or subregional C&I centres suitable to perform C&I testing, as appropriate, encouraging cooperation with governmental and non-governmental, national and regional organizations and international accreditation and certification bodies;

e) that the C&I programme action plan was updated by the Council (Documents C12/48, C13/24, C14/24, C15/24, C16/24 and C17/24);

f) the decision of the Council, at its 2012 session, concerning postponement of the implementation of the ITU Mark until such time as Pillar 1 (Conformity assessment) of the action plan has reached a more mature stage of development;

g) the growing need for harmonization of wireless systems to support 5G services and the adoption of IoT, as well as the priority of technical requirements with respect to security, the specific absorption rate, electromagnetic compatibility, and an interference-free electromagnetic environment;

h) that having infrastructure applications in developing countries which are compatible with ITU Recommendations is desirable, so as to maintain a competitive environment, reduce costs, increase the chances of interoperability and ensure satisfactory quality of service and quality of experience;

i) that interoperability of international telecommunication networks was the main reason for creating the International Telegraph Union in 1865, and that this remains one of the main goals in the ITU strategic plan;

j) that emerging technologies have increasing requirements for C&I testing;

k) that conformity assessment is the accepted way of demonstrating that a product adheres to an international standard, and continues to be important in the context of World Trade Organization members' international standardization commitments under the Agreement on Technical Barriers to Trade;

l) that technical training and institutional capacity development for testing and certification are essential issues for countries to improve their conformity assessment processes, to promote the deployment of advanced telecommunication networks and to increase global connectivity;

m) that an ITU C&I Portal website has been established, which is being continuously updated,

further recognizing

that the ITU C&I programme was initiated at the request of the ITU membership, particularly the developing countries, in order to enhance the conformity and interoperability of ICT networks and products implementing ITU Recommendations or part thereof, solicit feedback to improve the quality of ITU Recommendations, and reduce the digital divide and the standardization gap by assisting developing countries with human-resources and infrastructure capacity building,

taking into account

a) that C&I testing could help in combating counterfeit devices, especially in developing countries;

b) that technical training and capacity building for testing and certification are essential for countries to increase global connectivity and promote the deployment of advanced telecommunication networks;

c) that the ITU-T Conformity Assessment Steering Committee (CASC) has been set up for the purpose of developing a procedure for the recognition of ITU experts and elaborating detailed procedures for the implementation of a test laboratory recognition procedure in ITU-T;

d) that CASC, in collaboration with the International Electrotechnical Commission (IEC), is working on the establishment of a joint IEC/ITU certification scheme for assessing ICT equipment for conformity with ITU-T Recommendations;

e) that ITU-T has launched a Product Conformity Database and is progressively populating it with details of ICT equipment having undergone testing for conformity with ITU-T Recommendations,

noting

a) that some countries, especially developing countries, have not as yet acquired the capacity to test equipment and provide security with respect to the consumers in their countries;

b) that the activities of ITU-D Study Group 2 under Question 4/2 and of ITU-T Study Group 11, especially in the field of C&I testing, have created growing interest in developing countries in building capacities related to the C&I programme around the two pillars entrusted to ITU-D, namely Pillar 3: Capacity building, and Pillar 4: Assistance in the establishment of national/regional test centres;

c) that enhancing Member States' capabilities for conformance assessment and testing and the availability of national and regional conformance assessment testing facilities may help combat counterfeit telecommunication/ ICT devices and equipment;

d) that C&I testing can facilitate the interoperability of certain emerging technologies such as IoT, IMT-2020, etc.;

e) that having infrastructure applications in developing countries which are compatible with the Recommendations and standards of ITU-T and/or other international and internationally recognized organizations is desirable, as against those based on proprietary technologies and equipment, so as to maintain a competitive environment, reduce costs, increase the chances of interoperability and ensure satisfactory quality of service and quality of experience;

f) the need for C&I testing in order to reduce the probability of errors being introduced during the network integration period, which can impact on commercial deployment schedules;

g) that, when interoperability experiments or testing have not been performed, users may have suffered from the lack of interconnection performance between equipment from different manufacturers;

h) that ITU is implementing human-resources capacity building in the regions on conformity, interoperability and testing, which will also be organized in cooperation with other relevant regional and international organizations, to clarify fundamental aspects and accreditation;

i) that guidelines have been prepared by BDT with this aim which will provide basic elements to formulate a strategy for the establishment of test centres, including technical, human and instrumental resources, international standards and financial issues;

j) that the remote testing of equipment and services using virtual laboratories will enable all countries, especially those with economies in transition and developing countries, to conduct C&I testing, while at the same time facilitating the exchange of experience among technical experts taking into account the positive results achieved in implementing the ITU pilot project for the creation of such laboratories;

k) that, along with ITU-T Recommendations, there are a number of specifications for C&I testing developed by other standards-development organizations (SDOs), forums and consortia;

l) that understanding ITU Recommendations and related international standards in order to apply new technology to the network appropriately and effectively is essential for the implementation of Resolution 76 (Rev. Hammamet, 2016),

resolves

1 to continue engaging in activities to enhance knowledge and effective application of ICT standards, including ITU-R and ITU-T Recommendations, in developing countries;

2 to enhance efforts to introduce best practice and share experiences on the application of ICT standards, including ITU-R and ITU-T Recommendations, in, for example, but not limited to, fibre-optic transmission technology, broadband network technology, International Mobile Telecommunications, next-generation networks and emerging technologies, including IoT, and building confidence and security in the use of ICTs, by organizing training courses and workshops especially for developing countries, involving academia in the process;

3 to evaluate the benefits of using equipment tested in accordance with ITU-T and ITU-R Recommendations, particularly in developing countries, and share necessary information and recommendations to avoid losses, based on best practices,

instructs the Director of the Telecommunication Development Bureau, in close collaboration with the Directors of the Telecommunication Standardization Bureau and the Radiocommunication Bureau

1 to continue to encourage the participation of developing countries in training courses and workshops organized by ITU-D, so as to introduce best practices and to share experience in the application of ICT standards, including ITU-R and ITU-T Recommendations;

2 to assist developing countries, in collaboration with the Director of TSB, in accordance with Programme 2 under WTSA Resolution 44 (Rev. Hammamet, 2016), to take advantage of the guidelines established and developed by ITU-T on how to apply ITU-T Recommendations, in particular on manufactured products and interconnection, with emphasis on Recommendations having regulatory and policy implications;

3 to provide assistance in developing methodological guidance (manuals) on implementing ITU Recommendations;

4 to assist developing countries in building their capacity, in collaboration with the other Bureaux, so as to be able to perform conformance testing and interoperability testing of equipment and systems, relevant to their needs, in accordance with the relevant Recommendations, including the development or recognition of, as appropriate, conformity assessment bodies;

5 to assist the Director of TSB, in collaboration with the Director of BR and, as appropriate, with equipment and systems manufacturers and internationally and regionally recognized SDOs, in holding conformance assessment and interoperability testing events, preferably in the developing countries, to encourage developing countries to attend these events

6 to collaborate with the Director of TSB in order to build the capacity of the developing countries to effectively participate and be involved in these events, and to provide the views of developing countries on this issue on the basis of a questionnaire addressed by the relevant BDT programme to the ITU members;

7 to promote, with the collaboration of regional C&I bodies (for example, regional standardization bodies, accreditation bodies, certification bodies and testing laboratories, among others), the establishment of technical collaboration with respect to conformance assessment;

8 to assist developing countries in establishing regional or subregional C&I centres and encourage cooperation with governmental and non-governmental, national and regional organizations and international accreditation and certification bodies;

9 to promote the development of pilot projects to carry out remote testing;

10 to identify regional and subregional ICT testing centres in developing countries as ITU centres of excellence for testing, training and capacity building of ITU members, as part of the strategies to fulfil the objectives of this resolution;

11 to use the ITU seed fund meant for projects and encourage donor agencies to fund annual capacity-building and training programmes in testing centres adopted as ITU centres of excellence;

12 to coordinate and foster capacity building, by facilitating participation from developing countries in the work of international or regional test laboratories of organizations or entities specialized in conformance testing and interoperability testing, in order to gain on-the-job experience;

13 to collaborate with the Director of TSB in order to implement the recommended actions under Resolution 76 (Rev. Hammamet, 2016) in the C&I programme action plan as endorsed by the Council (Documents C12/48, C13/24, C14/24, C15/24, C16/24 and C17/24);

14 to assign to the BDT programme concerned the responsibility for following up implementation of this resolution;

15 to submit a periodic report to the Telecommunication Development Advisory Group on the implementation of this resolution, as well as a report to the next world telecommunication development conference on implementation of this resolution, which shall also contain lessons learned with a view to updating the resolution for the cycle after 2020;

16 to continue fostering the participation of developing countries in training courses and workshops organized by ITU-D to introduce suitable practices for implementing ICT standards, including ITU-R and ITU-T Recommendations;

17 to support the review, amendment, updating or drafting of various regulatory instruments such as technical standards, rules, conformance assessment procedures, guidelines for the type-approval and certification of products, equipment, devices or apparatus that can be connected to a telecommunication network;

18 to foster harmonization of C&I procedures, strengthening international, regional and national capacity in this matter;

19 to facilitate, through the ITU regional offices, meetings of experts at the regional and subregional levels, in order to promote awareness in developing countries on the question of the establishment of an appropriate C&I programme in such countries;

20 to assist Member States in enhancing their capabilities for conformance assessment and testing in order to combat counterfeit devices and to provide experts for developing countries;

21 to submit the results of the activities to the Council for its consideration and required actions,

invites the Council

to consider the Director's report,

invites Member States and Sector Members

1 to contribute to the implementation of this resolution by means of the following, among others:

i) the specification of requirements to conduct C&I testing, actively submitting contributions to the relevant study groups;

ii) consideration of the possibility of collaborating in future C&I activities;

2 to encourage national and regional bodies in charge of ICT equipment and system conformance to contribute to the implementation of this resolution;

3 to exchange C&I expertise in order to enhance knowledge and share experiences;

4 to create an enabling environment for ICT equipment manufacturers to consider the local design and manufacture of equipment in developing countries;

5 to develop and improve the mutual recognition of C&I test and results mechanisms and data analysis techniques between different regional testing centres;

6 to work together to combat counterfeit equipment using nationally and/or regionally established conformance assessment systems;

7 to evaluate the risks and costs of lack of conformity with acceptable international standards, especially in developing countries, and to share the necessary information and recommendations on best practices, in order to prevent losses,

invites eligible organizations under Recommendation ITU-T A.5

in collaboration with the Director of BDT and the Director of TSB, in accordance with Resolution 177 (Rev. Busan, 2014), on C&I, to work on building the capacity of developing countries in C&I testing, including training.

RESOLUTION 48 (Rev. Buenos Aires, 2017)

Strengthening cooperation among telecommunication regulators

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 48 (Rev. Hyderabad, 2010) of the World Telecommunication Development Conference;

b) Resolution 138 (Antalya, 2006) of the Plenipotentiary Conference, on the Global Symposium for Regulators (GSR);

c) Resolution 135 (Rev. Busan, 2014) of the Plenipotentiary Conference, on the ITU's role in the development of telecommunications/information and communication technologies (ICTs), in providing technical assistance and advice to developing countries[1] and in implementing relevant national, regional and interregional projects;

d) Resolution 2 (Rev. Busan, 2014) of the Plenipotentiary Conference, on the world telecommunication/ICT policy forum;

e) Resolution 70/125 of the United Nations General Assembly (UNGA), on the 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 (WSIS);

f) UNGA Resolution 70/1, on transforming our world: the 2030 Agenda for Sustainable Development,

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

considering

a) that market liberalization, technological development and service convergence have resulted in new challenges, requiring new regulatory competencies among telecommunication regulators;

b) that an effective regulatory framework requires a balance of interest among all stakeholders, promoting fair competition and ensuring an equal-opportunity environment for all players, including addressing issues of consumer protection;

c) that ITU plays a fundamental role in providing global perspectives on the development of the information society, and one of the main tasks of the ITU Telecommunication Development Sector (ITU-D) under the terms of No. 127 of the ITU Constitution is to "offer advice, carry out or sponsor studies, as necessary, on technical, economic, financial, managerial, regulatory and policy issues, including studies of specific projects in the field of telecommunications";

d) that the rapid development of telecommunications/ICTs in recent years and the introduction of new technologies and systems calls for new approaches in the field of regulation;

e) that there is no single correct approach to telecommunication/ICT regulation in all countries, and the particular characteristics of each country must be taken into account; in an increasingly dynamic digital ecosystem, however, it is essential to seek harmonization of general principles;

f) that in the light of the considerable changes in telecommunications/ICTs, and the development of markets and society, telecommunication/ICT reforms have globally been implemented in most countries of the world, both developed and developing, including reforms of telecommunication/ICT regulation;

g) that the success of telecommunication/ICT reform will mostly depend on the establishment and implementation of an effective regulatory framework, regulatory mechanisms and laws,

recognizing

a) that telecommunication regulators have been increasing, and that newly established regulators and regulators in developing countries would require strengthening of their competencies to cope with the increasing complexity of regulatory work with regard to the design and implementation of new laws and policies as part of telecommunication reform, especially in the rapidly changing telecommunication environment;

b) the need to exchange information and share experiences among regulators on telecommunication development and reform, particularly among regulators and newly established ones;

c) the importance and necessity of cooperation among these entities at the regional and international level,

recalling further

a) the relevant Buenos Aires Action Plan programmes, especially telecommunication/ICT regulatory symposia, forums, seminars and workshops;

b) the recommendations of past GSRs on the creation of a global exchange programme for regulators;

c) the success and continuation of the global exchange programme for regulators, which provides a platform for exchange of views on regulatory issues,

resolves

1 to continue the specific platform (G-REX) for telecommunication regulators to share and exchange matters concerning regulatory issues electronically;

2 that ITU, and in particular ITU-D, should continue to support regulatory reform by facilitating information and experience sharing among the membership;

3 that the Telecommunication Development Bureau should continue to coordinate and facilitate joint activities relating to telecommunication/ICT policy and regulatory issues with regional and subregional regulatory organizations and associations;

4 that ITU-D should continue to provide further technical cooperation, regulatory exchange, capacity building and expert advice, with the support of its regional offices,

instructs the Director of the Telecommunication Development Bureau

1 to continue to rotate GSR in different regions, to the extent possible;

2 to promote the formal meetings of regulators and regulatory associations at GSR and encourage the participation of other stakeholders;

3 to continue to have a specific platform for regulators and regulatory associations;

4 to organize, coordinate and facilitate activities that promote information sharing among regulators and regulatory associations on key issues at the international, inter-regional and regional level;

5 to organize seminars, regional workshops and training programmes and other activities to help strengthen regulators, and to provide resources and assistance in consolidating all work relating to key policy and regulatory issues within ITU-D and provide easier access to and strengthened transfer of knowledge, information and experience sharing among the regulators,

invites the study groups of the ITU Telecommunication Development Sector

each within its mandate, to adopt the guidelines and best practices issued annually by GSR and to take them into account in their studies on relevant Questions,

calls upon Member States

1 to provide to the governments of countries in special need all possible assistance and support for regulatory reform, whether bilaterally, multilaterally or through the special action of the Union;

2 to share knowledge, skills and experiences in adapting, designing and implementing new laws and policies as part of telecommunication/ICT reform,

requests the Secretary-General

to transmit this resolution to the Plenipotentiary Conference (Dubai, 2018) in order to ensure that appropriate attention is given to these activities, in particular within the framework of the implementation of the WSIS outcomes, and in regard to the role of regulators in the implementation of the strategic plan for the Union.

RESOLUTION 50 (Rev. Dubai, 2014)

Optimal integration of information and communication technologies

(ABROGATED BY WTDC-17)

(Merged with Resolution 37 and Resolution 54)

RESOLUTION 51 (Rev. Hyderabad, 2010)

Provision of assistance and support to Iraq to rebuild and re-equip its public telecommunication systems

The World Telecommunication Development Conference (Hyderabad, 2010),

recalling

a) Resolution 51 (Doha, 2006) of the World Telecommunication Development Conference;

b) Resolution 34 (Rev. Antalya, 2006) of the Plenipotentiary Conference;

c) the noble principles, intentions and goals embodied in the Charter of the United Nations and the Universal Declaration of Human Rights;

d) the purposes of the Union, as enshrined in Article 1 of the ITU Constitution,

conscious

a) that the telecommunication infrastructure in the Republic of Iraq has been destroyed by two and a half decades of war and most of the systems currently in use have become antiquated through long years of use;

b) that the substantial losses the public telecommunication systems in Iraq have suffered should be a matter of concern to the entire international community, especially ITU;

c) that telecommunication systems are fundamental for rebuilding and rehabilitation and for enhancing the social and economic development of nations, particularly those that have suffered the effects of war;

d) that, under present circumstances, Iraq will be unable to rebuild or develop its telecommunication systems to an acceptable level without help from the international community, provided bilaterally or through international organizations;

e) that similar resolutions have been adopted in relation to countries experiencing similar circumstances to those which Iraq is experiencing,

having regard to

the difficulties that were faced in the implementation of Resolution 51 (Doha, 2006),

noting

a) that Iraq has not received appropriate assistance from ITU;

b) the efforts which have been and are being deployed by the Secretary-General and the Director of the Telecommunication Development Bureau to provide assistance to other countries that have recently emerged from the conditions of war they endured,

resolves

1 that special measures need to be taken, within the framework and available budgetary resources of the ITU Telecommunication Development Sector, to provide the appropriate assistance to Iraq;

2 to support Iraq in rebuilding and overhauling its telecommunication infrastructure, establishing institutions, establishing tariffs, developing human resources and setting up training operations outside Iraqi territory if necessary, and to provide other forms of assistance, including technical assistance,

calls upon Member States

to offer all possible assistance in this area, within the framework of the special measures provided by ITU for this purpose,

instructs the Director of the Telecommunication Development Bureau

1 to continue taking immediate measures to assist Iraq to the extent possible within available resources;

2 to take all possible measures to mobilize additional resources to this aim;

3 to submit an annual report to the ITU Council on the progress achieved in implementing this resolution and the mechanisms employed to tackle difficulties as they arise,

requests the Secretary-General

to bring to the attention of the Plenipotentiary Conference (Guadalajara, 2010) the need to allocate a specific budget for Iraq as from the beginning of 2011.

RESOLUTION 52 (Rev. Dubai, 2014)

Strengthening the executing agency role of the ITU Telecommunication Development Sector

The World Telecommunication Development Conference (Dubai, 2014),

recalling

a) Resolution 135 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference, on ITU's role in the development of telecommunications/ information and communication technologies (ICTs), in providing technical assistance and advice to developing countries and in implementing relevant national, regional and interregional projects;

b) Resolution 157 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference, on strengthening of the project execution function in ITU;

c) Resolution 13 (Rev. Hyderabad, 2010) of the World Telecommunication Development Conference (WTDC), on resource mobilization and partnerships for accelerating telecommunication/ICT development;

d) Resolution 52 (Rev. Hyderabad, 2010) of WTDC,

considering

a) that, in accordance with No. 118 of the ITU Constitution, one of the functions of the ITU Telecommunication Development Sector (ITU-D) is to discharge, within its specific sphere of competence, the Union's dual responsibility as a United Nations specialized agency and executing agency for implementing projects under the United Nations development system or other funding arrangements, so as to facilitate and enhance telecommunication development by offering, organizing and coordinating technical cooperation and assistance activities;

b) Resolution 17 (Rev. Dubai, 2014) of this conference, on implementation of regionally approved initiatives at the national, regional, interregional and global levels;

c) that Resolution 140 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference, on ITU's role in implementing the outcomes of the World Summit on the Information society (WSIS), recognized the key role that ITU can play in executing many of the projects pursuant to the WSIS outcomes;

d) that, through programmes, projects and initiatives of the Telecommunication Development Bureau (BDT) and the regional offices, and some other efforts, including partnerships, there is significant local expertise that has developed over time;

e) that partnerships between the public and private sectors are recognized as an efficient way of implementing sustainable ITU projects,

recognizing

a) that the final outputs of the WSIS process have an impact on the definition of the future activities of ITU in general and ITU-D in particular;

b) that ITU-D undertakes a significant number of projects and activities each year, corresponding to its goals and objectives, including in relation to the various ITU-D programmes, projects and regional initiatives,

noting

a) that BDT has taken several steps to strengthen its project execution role by developing necessary tools and methodologies, including guidelines and templates for project management;

b) that both large-scale and small-scale activities should contribute to the goals and objectives of ITU-D and the broader strategic plan for the Union;

c) that BDT continues to build effective partnerships around specific projects and long-term activities, particularly in relation to the initiatives adopted by the six regions;

d) that, to the greatest extent possible, it is important to develop and maintain the professional project-implementation potential of BDT staff at ITU headquarters and in the regional offices,

taking into account

a) the continued implementation of results-based budgeting (RBB) and results-based management (RBM) in ITU, the main purpose of which is to ensure that activities within this framework are adequately resourced in order to achieve planned results;

b) that the main pillars of RBB and RBM are the process of planning, programming, budgeting, monitoring and evaluation; delegation of authority and accountability; and staff performance and contract management;

c) the potential for improved sharing of information, experiences and lessons learned which would assist in reducing fragmentation and duplication among the wide range of projects undertaken by BDT,

resolves to instruct the Director of the Telecommunication Development Bureau

on the basis of experience acquired in implementing Resolution 52 (Rev. Hyderabad, 2010), the contents of Resolutions 135 and 157 (Rev. Guadalajara, 2010) and other relevant resolutions:

1 to recognize the various benefits of involving locally available expertise, in the region and the country, as the case may be, in executing ITU projects in their region or country, and to stress the involvement of this expertise in the relevant ITU-D projects;

2 to encourage use of the ITU project toolbox for implementing projects and the regional initiatives in the capacity of executing agency;

3 to ensure, as specified in Resolution 157 (Rev. Guadalajara, 2010), that, as far as possible, support costs and expenses borne by ITU-D in respect of project implementation under United Nations Development Programme (UNDP) arrangements or other agreed financing arrangements are recovered;

4 to continue to conclude partnerships with Member States, Sector Members, financial institutions and international and regional organizations in order to finance activities pertaining to implementation of this resolution;

5 to encourage collaboration and information sharing among ITU headquarters, regional offices and area offices, in order to optimize resources and efforts in implementing ITU-D projects;

6 to consider enhancing the projects portfolio on the ITU website, as far as practicable within existing resources, along with project activities and outcomes, where appropriate, in order to learn from past experiences.

NOTE – When implementing this resolution, the updating of relevant resolutions by the next Plenipotentiary Conference (Busan, 2014) may be taken into consideration.

RESOLUTION 53 (Rev. Dubai, 2014)

Strategic and financial framework for the elaboration and implementation of the Dubai Action Plan

The World Telecommunication Development Conference (Dubai, 2014),

considering

a) that, in accordance with No. 118 of the ITU Constitution and No. 209 of the ITU Convention, the duties of world telecommunication development conferences (WTDC) shall include: i) establishing work programmes and guidelines for defining telecommunication development questions and priorities, and ii) providing direction and guidance for the work programme of the ITU Telecommunication Development Sector (ITU-D);

b) that Resolution 71 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference contains the strategic plan for ITU-D for the period 2012-2015 and defines the strategic goal and objectives of ITU-D for that period;

c) that Resolution 72 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference determined that there should be a linkage between strategic, financial and operational planning in ITU;

d) that Decision 5 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference, in defining the income and expenditure of the Union for the period 2012-2015 and in recognizing the current financial constraints of the Union, has identified in its Annex 2 several measures for reducing expenditure to be taken into account by all three Sectors of the Union,

considering further

a) that, pursuant to Resolution 31 (Rev. Dubai, 2014) of this conference, the identification, analysis and elaboration of regional initiatives and projects at the regional preparatory meetings provides a key input to this conference;

b) that Resolution 1358 of the ITU Council, adopted at its 2013 session, established the Council Working Group for the elaboration of the draft strategic plan and draft financial plan of the Union for 2016-2019 (CWG-SPFP), which was to provide the Telecommunication Development Advisory Group and this conference with the principles, glossary of terms, structure and guidelines for the elaboration of the strategic plan for ITU-D, on the basis of a clear linkage of strategic and operational planning with financial planning and budgeting,

taking into account

a) that Resolution 1359 adopted by the Council at its 2013 session approved the biennial budget of ITU for the period 2014-2015 with a view to achieving financial stability, securing unfunded long-term liabilities, preserving a positive net asset value and avoiding withdrawals from the Reserve Account;

b) the continued implementation of results-based budgeting (RBB) in ITU, the main feature of which is the identification of costs, objectives, expected results, performance indicators and priorities presented within the framework of well-defined outputs (defined as Sector or intersectoral products or services provided by ITU),

taking into account further

a) that the Dubai Action Plan strategic framework is based on:

– Resolutions 71 (Rev. Guadalajara, 2010) and 72 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference;

– the strategic objectives of ITU-D for the period 2016-2019, elaborated by this conference;

– the aim of fulfilling the mandates of ITU-D, in accordance with the Constitution, avoiding duplication of efforts with the other Sectors and implementing the strategic goals set forth in the strategic plans of the Union for 2012-2015 and 2016-2019;

b) that the Dubai Action Plan financial framework is based on:

– Decision 5 (Rev. Guadalajara, 2010), particularly the measures to reduce expenditure identified in Annex 2 thereto;

– the approved biennial budget of the Union for the period 2014-2015 and the forecast of revenues and expenses for the period 2016-2017;

– the aim of achieving long-term financial stability, preserving the net asset value and avoiding withdrawals from the Reserve Account;

c) that the Dubai Action Plan defines programmes, objectives, regional initiatives and expected results that correlate to the principles, terminology and structure of the draft strategic plan for ITU-D for 2016-2019 elaborated by this conference;

d) that the Dubai Action Plan is elaborated in conformity with results-based management/budgeting (RBM/RBB) methodologies, with a view to ensuring that high-priority activities are adequately resourced in order to achieve the planned results,

recognizing

a) the overall review process of the outcomes of the World Summit on the Information Society (WSIS) to take place in 2014/2015;

b) that Resolution 30 (Rev. Dubai, 2014) of this conference has defined ITU-D's role in implementing the WSIS outcomes;

c) that Resolution 140 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference resolved that ITU-D shall assign high priority to the implementation of WSIS Action Line C2, on building information and communication infrastructure;

d) that Resolution 1332 adopted by the Council at its 2011 session instructed the Director of the Telecommunication Development Bureau to take into account ITU's tasks as lead facilitator of WSIS Action Lines C2, C5 and C6 and as co-facilitator of WSIS Action Lines C1, C3, C4, C7, C8, C9, C11 in the preparations for this conference,

resolves to instruct the Director of the Telecommunication Development Bureau

in the implementation of the Dubai Action Plan:

1 to provide the ITU regional and area offices with the assistance necessary for the full implementation of the regional initiatives approved by this conference in Resolution 17 (Rev. Dubai, 2014);

2 to integrate the mandates handed down to ITU-D by the Plenipotentiary Conference and the Council on the implementation of WSIS action lines, taking into account the national development goals established by Member States;

3 to formulate and structure the activities and programmes of the Dubai Action Plan in a manner that facilitates their evaluation, given the critical need to ensure that such activities are assessed on an ongoing basis;

4 to take into account the human and financial resource constraints identified in the biennial budget for 2014-2015 and expected to continue for the next financial planning cycle (2016-2019);

5 to identify and implement multistakeholder partnership arrangements with, *inter alia*, international financial institutions, regional development banks, regional commissions of the Department of Economic and Social Affairs (UNDESA) and other agencies and departments of the United Nations, with international development agencies, regional telecommunication organizations and the private sector, in order to optimize the use of resources and avoid duplication of effort;

6 to continue efforts to identify additional sources of revenue and funding, in order to ensure that the programmes and activities of ITU-D can be fully implemented;

7 to report on the results of implementation of this resolution to the next WTDC.

RESOLUTION 54 (Rev. Dubai, 2014)

Information and communication technology applications

(ABROGATED BY WTDC-17)

(Merged with Resolution 37 and Resolution 50)

RESOLUTION 55 (Rev. Buenos Aires, 2017)

Mainstreaming a gender perspective[1] for an inclusive and egalitarian information society

The World Telecommunication Development Conference (Buenos Aires, 2017),

noting

a) Resolution 70/1 of the United Nations General Assembly (UNGA), containing Sustainable Development Goal (SDG) 5 (Achieve gender equality and empower all women and girls), which recognizes that gender equality is a necessary right to contribute to achieving a peaceful, prosperous, and sustainable world, and more specifically SDG target 5.b (Enhance the use of enabling technology, in particular information and communication technology (ICT), to promote the empowerment of women), as well as SDG 9 (Build resilient infrastructure, promote sustainable industrialization and foster innovation), which promotes subject areas that cut across other goals;

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[1] "Gender perspective": Mainstreaming a gender perspective is the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of design, implementation, monitoring and evaluation so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality. (Source: Report of the United Nations Inter-Agency Committee on Women and Gender Equality, third session, New York, 25-27 February 1998).

b) Resolution 70 (Rev. Busan, 2014) of the Plenipotentiary Conference, on gender mainstreaming in ITU and promotion of gender equality and the empowerment of women through telecommunications/ICTs, which resolves to continue the work being done at ITU, and particularly in the Telecommunication Development Bureau (BDT), to promote gender equality in telecommunications/ICTs by recommending measures at the international, regional and national levels on policies and programmes for the economic and social empowerment of women and girls, helping to tackle disparities and facilitate the acquisition of life skills;

c) Resolution 55 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly, on mainstreaming a gender perspective in ITU Telecommunication Standardization Sector (ITU-T) activities, which ensures gender mainstreaming in ITU-T activities,

noting further

a) UNGA Resolution 64/289, on system-wide coherence, adopted on 2 July 2010, establishing the United Nations Entity for Gender Equality and the Empowerment of Women, which will be known as "UN Women", with the mandate to promote gender equality and the empowerment of women;

b) Resolution 2012/24 of the United Nations Economic and Social Council (ECOSOC), on mainstreaming a gender perspective into all policies and programmes in the United Nations system, which welcomed the development of the UN System-Wide Action Plan on Gender Equality and the Empowerment of Women (UNSWAP);

c) that the United Nations Chief Executives Board (CEB), in April 2013, advocated the "Action Plan to measure gender equality and the empowerment of women across the United Nations system", under which ITU will participate in the dissemination, coordination, communication and networking activities forming part of the strategy, as well as the United Nations Secretary-General's launch of the System Wide Strategy on Gender Parity in September 2017;

d) the #eSkills4Girls initiative ("Transforming the future of women and girls in the digital economy"), which calls for support of the development of the #eSkills4Girls online platform and encourages multistakeholder partnerships such as the Global Partnership for Gender Equality in the Digital Age (EQUALS) to accelerate global progress on bridging the gender digital divide,

noting also

a) the outcomes of the World Summit on the Information Society (WSIS), namely the Geneva Declaration of Principles, the Geneva Plan of Action, the Tunis Commitment and Tunis Agenda for the Information Society, as well as the WSIS+10 review;

b) the four-year rolling operational plans for the ITU Radiocommunication (ITU-R), Telecommunication Standardization (ITU-T) and Telecommunication Development (ITU-D) Sectors and the General Secretariat adopted by the ITU Council;

c) the decision of the Council at its 2013 session to endorse the ITU Gender Equality and Mainstreaming Policy (GEM), with the aim of becoming a model organization for gender equality, and to leverage the power of telecommunications/ICTs to empower both women and men;

d) the establishment (endorsed at Council 2013), of an internal Gender Task Force by the Secretary-General, with the aim of fulfilling the main objectives of ensuring coordinated implementation of Resolution 70 (Rev. Busan, 2014), reporting progress to the governing bodies of ITU, preparing a Union-wide action plan to implement the ITU GEM Policy (Council 2013) and overseeing its implementation,

recognizing

a) that telecommunications/ICTs can help to create a world in which societies are free of gender discrimination, women and men enjoy the same opportunities, and the economic and social potential of women and girls is guaranteed in order to improve their conditions as individuals, taking into account the 2030 Agenda for Sustainable Development;

b) that the effect of telecommunications/ICTs as a catalyst will serve the actions and objectives agreed at the United Nations Conference on Sustainable Development (Rio+20) to ensure that the world takes a more sustainable path to development, incorporating the social, economic and environmental dimensions, favouring social inclusion, equality of women and men, and strengthening protection of the environment on which all forms of life depend, taking into account the 2030 Agenda for Sustainable Development,

considering

a) the progress made by BDT in promoting the use of telecommunications/ICTs for the purpose of economic and social empowerment of women and girls, in particular the results of International Girls in ICT Day, within the framework of Resolution 70 (Rev. Busan, 2014), in which 300 000 girls and young women in over 166 countries were made aware of the job opportunities in the ICT sector between 2011 and 2017 with the support of BDT;

b) that the Broadband Commission for Sustainable Development has set an advocacy target which consists in achieving gender equality in broadband access by 2020;

c) the contributions made by ITU's Gender Task Force, proposing ways of ensuring that gender mainstreaming and the empowerment of women is underscored in policies and programmes and fully integrated in ITU's work and strategic plan,

resolves

1 that BDT should maintain close links and collaborate, as appropriate, with the Gender Task Force set up by the Secretary-General, and the Working Group on Broadband and Gender of the Broadband Commission for Sustainable Development, reciprocally supporting gender mainstreaming in the Union's activities, and that these groups should join forces to eliminate inequalities in access to and use of telecommunications/ICTs, in the interests of building a non-discriminatory and egalitarian information society, taking into account the 2030 Agenda for Sustainable Development (SDG target 5.b);

2 that BDT should continue to work to promote gender equality in the field of telecommunications/ICTs, recommending action on policies and programmes at the international, regional and national level in order to improve the socio-economic condition of women, with greater emphasis on developing countries[2], taking into account the 2030 Agenda for Sustainable Development;

3 that inclusion of the gender perspective should be ensured in the implementation of all relevant BDT initiatives and projects and of the outcomes of this conference;

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[2] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

4 that high priority be accorded to the incorporation of gender policies in the management, staffing and operation of ITU-D;

5 that BDT should contribute to the economic empowerment and high-level professional employment of women in decision-making posts, encouraging women's leadership in the sphere of telecommunications/ICTs, collaborating to promote a plural, inclusive and integrating information society;

6 that telecommunications/ICTs contribute to preventing and eliminating violence against women and girls in both public and private spaces;

7 to invite the Telecommunication Development (TDAG), Radiocommunication (RAG) and Telecommunication Standardization (TSAG) advisory groups to assist in the identification of subjects and mechanisms to foster the mainstreaming of a gender perspective, as well as matters of mutual interest in that regard;

8 that BDT should and inform the ITU regional offices on, and ensure their participation in, progress and results achieved in implementing this resolution,

further resolves

to endorse the following measures:

1 design, implement and support projects and programmes in developing countries and countries with economies in transition that are either specifically targeted to women and girls or are gender sensitive, for the purpose of tackling the barriers that women and girls encounter in access to and use of ICTs in terms of digital literacy, training in science, technology, engineering and mathematics (STEM) fields, affordability, trust and confidence, at the international, regional and national levels, taking into account SDG target 5.b;

2 support the collection and analysis of sex-disaggregated data and the development of gender-sensitive indicators that will enable cross-country comparisons and highlight trends in the digital gender divide in the sector;

3 evaluate relevant projects and programmes to assess gender implications, in connection with Resolution 17 (Rev. Buenos Aires, 2017) of this conference;

4 provide gender mainstreaming training and/or capacity building to BDT staff responsible for the design and implementation of development projects and programmes and work with them to develop gender-sensitive projects as appropriate;

5 incorporate a gender perspective into study group Questions, as appropriate;

6 mobilize resources for gender-sensitive projects, including projects to ensure that women and girls can use ICTs for their own empowerment and create services and develop applications that contribute to the equality and empowerment of all women and girls;

7 develop partnerships with other United Nations agencies to promote the use of telecommunications/ICTs in projects aimed at women and girls, with the aim of encouraging women and girls to connect to the Internet, increasing training for women and monitoring the telecommunication/ICT gender gap, including supporting EQUALS – The Global Partnership for Gender Equality in the Digital Age;

8 promote educational programmes to protect women and girls from cyberviolence and to address their safety needs;

9 support International Girls in ICT Day and efforts of the ITU membership to undertake year-long activities to make girls and young women aware of job opportunities in the ICT sector and develop their ICT skills,

instructs the Director of the Telecommunication Development Bureau

1 to report to TDAG and the Council annually on the results and the progress made on the inclusion of a gender perspective in the work of ITU-D, and on the implementation of this resolution;

2 to continue the work of BDT in promoting the use of telecommunications/ICTs for the economic and social empowerment of women and girls, taking into account the 2030 Agenda for Sustainable Development,

invites the Director of the Telecommunication Development Bureau

to assist members:

1 to encourage the mainstreaming of a gender perspective through appropriate administrative mechanisms and processes within regulatory agencies and ministries and to promote inter-organizational cooperation on this issue within the telecommunication sector, taking into account the 2030 Agenda for Sustainable Development;

2 to provide concrete advice, in the form of guidelines for gender-sensitive project development and evaluation in the telecommunication sector as well as guidelines for projects aimed at bridging the gender digital divide;

3 to increase awareness of gender issues among members through the collection and dissemination of information related to gender issues and telecommunications/ICTs and through best practices on gender-sensitive programming;

4 to establish partnerships with Sector Members in order to develop and/or support specific telecommunication/ICT projects that target women and girls in developing countries and in countries with economies in transition;

5 to encourage Sector Members to promote gender equality in the telecommunication/ICT sector through financial commitments to specific projects involving women and girls, taking into account SDG target 5.b;

6 to support active involvement of women experts in ITU-D study groups and other ITU-D activities, including project implementation,

invites the Plenipotentiary Conference

1 to build on and consolidate past accomplishments, by providing the necessary financial and human resources for the effective and sustained integration of a gender perspective in the development activities of ITU-D;

2 to instruct the Secretary-General to bring this resolution to the attention of the United Nations Secretary-General in an effort to promote increased coordination and cooperation for development policies, programmes and projects that link access to and use and appropriation of telecommunications/ICTs and broadband for women and girls, taking into account the 2030 Agenda for Sustainable Development;

3 to support the promotion of gender equality, empowerment and the social and economic development of women and girls, taking into account SDG target 5.b.

RESOLUTION 57 (Rev. Hyderabad, 2010)

Assistance to Somalia

The World Telecommunication Development Conference (Hyderabad, 2010),

recalling

Resolution 57 (Doha, 2006) of the World Telecommunication Development Conference (WTDC) and Resolutions 34 (Rev. Marrakesh, 2002) and 34 (Rev. Antalya, 2006) of the Plenipotentiary Conference,

recalling further

the purposes of the Union, as enshrined in Article 1 of the ITU Constitution,

recognizing

a) that the telecommunication infrastructure in the Somali Democratic Republic remains completely destroyed by civil conflict, with limited recovery, and that the Somali network requires rehabilitation and reconstruction;

b) that Somalia at present does not have an adequate national telecommunication infrastructure, access to international telecommunication networks or access to the Internet;

c) that a telecommunication system is an essential input for the reconstruction, rehabilitation and relief operations in the country after Somalia was hit by the tsunami;

d) that, under the present conditions and in the foreseeable future, Somalia will not be able to rebuild its telecommunication systems without assistance from the international community, provided bilaterally or through international organizations,

noting

that Somalia has not effectively benefited from the Union's assistance over a long period due to war in the country and the lack of a national government since 1991,

resolves

that special action be initiated by the Secretary-General and the Director of the Telecommunication Development Bureau, with specialized and increased assistance from the ITU Telecommunication Standardization Sector and the ITU Radiocommunication Sector, resulting in the launch of a special initiative with funds allocated, within available budgetary resources, aimed at providing assistance and support to Somalia in rebuilding and modernizing its telecommunication infrastructure and in training activities,

calls upon Member States

to offer all possible assistance and support to the Government of Somalia, either bilaterally or through the special action of the Union,

invites the Council

to allocate the necessary funds within available resources for the implementation of this resolution,

instructs the Director of the Telecommunication Development Bureau

1 to implement fully a programme of assistance for the least developed countries, of which reconstruction and rehabilitation of telecommunication/information and communication technology infrastructure is an integral part, and from which Somalia can receive focused assistance in various areas determined to be of high priority by the country;

2 to take immediate measures, to the extent possible within available resources, to assist in the period up to WTDC-14, focusing on staff training,

requests the Secretary-General

to coordinate the activities carried out by the three ITU Sectors in accordance with *resolves* above, to ensure that the Union's action in favour of Somalia is as effective as possible, and to report on the matter to the ITU Council.

RESOLUTION 58 (Rev. Buenos Aires, 2017)

Telecommunication/information and communication technology accessibility for persons with disabilities and persons with specific needs

The World Telecommunication Development Conference (Buenos Aires, 2017),

recognizing

a) Resolution 175 (Rev. Busan, 2014) of the Plenipotentiary Conference, on telecommunication/information and communication technology (ICT) accessibility for persons with disabilities and persons with specific needs;

b) Resolution 70 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly, on telecommunication/ICT accessibility for persons with disabilities and persons with specific needs;

c) Article 12 of the International Telecommunication Regulations, adopted by the World Conference on International Telecommunications (Dubai, 2012), which states that Member States should promote access for persons with disabilities to international telecommunication services, taking into account the relevant Recommendations of the ITU Telecommunication Standardization Sector (ITU-T);

d) the ITU Telecommunication Development Sector (ITU-D) digital inclusion programme, which promotes telecommunication/ICT accessibility and use for the economic and social development of persons with disabilities and persons with specific needs;

e) the formation of the Global Initiative for Inclusive Information Communication Technologies (G3ict)[1], and related activities/actions;

f) that the Telecommunication Development Bureau (BDT), in partnership with G3ict, has elaborated the Model ICT Accessibility Policy Report for policy-makers, regulators and service providers, which is freely available and accessible online, in order to: i) facilitate development of best policies and strategies for implementation of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD); and ii) set forth action steps for an effective policy framework;

g) the related issues in ITU-T;

h) the related issues in the ITU Radiocommunication Sector (ITU-R);

i) the formation by the Internet Governance Forum (IGF) of the Dynamic Coalition on Accessibility and Disability (DCAD), in which ITU-D participates, sponsored by the Director of the Telecommunication Standardization Bureau (TSB), and the partnership between ITU-T and DCAD for the purposes of maximizing the benefits of electronic communications and online information over the Internet for all sectors of the global community;

j) the related resolutions from the Global Standards Collaboration (GSC) meetings;

k) activities relating to the development of new standards (e.g. ISO TC 159, JTC 1 SC35, IEC TC100, ETSI TC HF and W3C WAI), and the implementation and maintenance of existing standards (e.g. ISO 9241-171);

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[1] An ITU-D Sector Member and flagship advocacy initiative of the United Nations Global Alliance for ICT and Development (UN-GAID), in collaboration with the secretariat of the Convention on the Rights of Persons with Disabilities.

l) Resolution 70/1 of the United Nations General Assembly (UNGA), on the 2030 Agenda for Sustainable Development,

considering

a) that the World Health Organization estimates that over one billion of the world's inhabitants live with some form of disability, and that there are different types of disabilities (e.g. physical, motor, cognitive, neurological and sensorial disabilities), each requiring special considerations when designing ICT public policy;

b) that the UNCRPD, which came into force on 3 May 2008, requires States Parties to take appropriate measures, namely:

1) undertake or promote research and development on, and promote the availability and use of, new technologies, including ICTs, mobility aids, devices and assistive technologies, suitable for persons with disabilities, giving priority to technologies at an affordable cost (Article 4, section 1 (*g*));

2) ensure ICT and emergency service access for persons with disabilities on an equal basis (Article 9, § 1(*b*));

3) promote ICT access for persons with disabilities to new ICT services, including Internet (Article 9, § 2 (g));

4) promote the design, production and distribution of accessible ICT at an early stage (Article 9, § 2(*h*));

5) ensure that persons with disabilities can exercise the right to freedom of expression and opinion (Article 21);

6) provide information in accessible formats and technologies appropriate to different kinds of disabilities in a timely manner and without additional cost (Article 21, § (*a*));

7) urge private entities that render services to the public to provide information and services in accessible and usable formats for persons with disabilities (Article 21, § (*c*));

8) encourage mass media (including information providers through Internet) to make their services accessible to persons with disabilities (Article 21, § (*d*));

c) that, in addition, the UNCRPD further states that there is discrimination on the basis of disability if there is denial of reasonable accommodation, considering "reasonable accommodation" to mean necessary and appropriate modification or adjustments not imposing a disproportionate or undue burden, to ensure to persons with disabilities the enjoyment or exercise of all human rights and fundamental freedoms (i.e. freedom of speech, access to information) (Article 2);

d) that States Parties to the UNCRPD undertake to collect adequate information for formulating and implementing policies to give effect to the Convention, and that this information must be disaggregated, and should help identify and address barriers faced by persons with disabilities in exercising their rights (Article 31);

e) that maximizing access to ICT services, products, content and terminals for persons with disabilities will support autonomy of persons with disabilities, access to digital literacy, with particular educational focus on aspects that cannot be offered through everyday education, incorporation in worthy ICT employment and, more generally, access to all the benefits that lead to social inclusion, including healthcare;

f) that UNGA Resolution 61/106 adopting the UNCPRD requests the Secretary-General (in § 5) "… to implement progressively standards and guidelines for the accessibility of facilities and services of the United Nations system, taking into account relevant provisions of the Convention, in particular when undertaking renovations";

g) that persons with disabilities, both acting as individuals and through relevant organizations, should be involved in and participate in the process of elaborating legal/regulatory provisions, public policy and standards, pursuant to the rationale of "nothing about us without us";

h) that Article 14 of UNGA Resolution 65/186 and the High-Level Meeting of the General Assembly on Disability and Development (HLMDD) sent a message concerning the important role telecommunications and ICTs can play to enable a post-2015 disability-inclusive development framework, and HLMDD proposes to work together within the framework of the UN system towards the achievement of the United Nations common goal: "Inclusive development and a society in which persons with disabilities are both agents and beneficiaries";

i) that UNGA Resolution 66/288 endorses the outcome document of the United Nations Conference on Sustainable Development (Rio+20), entitled "The Future we want", which states as follows: "... 9. We reaffirm the importance of the Universal Declaration of Human Rights, as well as other international instruments relating to human rights and international law. We emphasize the responsibilities of all States, in conformity with the Charter, to respect, protect and promote human rights and fundamental freedoms for all, without distinction of any kind as to race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth, disability age or other status",

recalling

a) that the World Summit on the Information Society (WSIS) acknowledged that special attention should be given to the needs of older persons and persons with disabilities: i) when elaborating national cyberstrategies, including educational, administrative and legislative measures; ii) for using ICT in education and human resources development; iii) in order that equipment and services offer easy and affordable access, under the principles of universal design and assistive technology; iv) to promote telework and to increase employment opportunities for persons with disabilities; v) for creation of content that is pertinent to persons with disabilities; and vii) to create the required abilities for the use of ICT by persons with disabilities;[2]

b) the Cairo Declaration (November, 2007) and the Lusaka Declaration (July, 2008) on supporting access to ICT services for persons with disabilities, as well as the Phuket Declaration on tsunami preparedness for persons with disabilities (March, 2007) and the IGF's Hyderabad Declaration on accessibility for persons with disabilities (December 2008),

c) the general observation of the UN Committee on the Rights of Persons with Disabilities (April 2014) related to Article 9 on accessibility, to promote access for persons with disabilities to new information and communications technologies and systems, including the Internet;

d) that the implementation of the relevant WSIS action lines will contribute to the achievement of Sustainable Development Goal (SDG) target 9.c (Significantly increase access to ICT and strive to provide universal and affordable access to the Internet in least developed countries by 2020),

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[2] Geneva Declaration of Principles, §§ 13 and 30; Geneva Plan of Action, §§ 9 e) and f), 19 and 23; Tunis Commitment, §§ 18 and 20; Tunis Agenda for the Information Society, § 90 c) and e).

taking into account

a) the principles that should govern ICT services, equipment and software in order to be accessible, namely: universal design, equal access, functional equivalence, affordability and accessibility, which means designing ICTs with parameters and capabilities adapted to the needs, preferences and special abilities of each user;

b) that telecommunication/ICT accessibility for persons with disabilities should be achieved through the formulation of policy options and cooperation between governments, specialized bodies, the private sector, non-governmental organizations and civil society;

c) that mainstreaming persons with disabilities, accessibility and inclusive planning in the strategic framework for reinforcing the disability perspective in the global development agenda[3] highlights the importance of coordination and exchange of information by and between United Nations bodies concerned;

d) the prevailing difference in ICT accessibility for persons with disabilities in the regions, in countries, and within each country, emphasizing that 80 per cent of persons with disabilities live in developing countries[4], according to the United Nations Development Programme;

e) that women and girls with disabilities suffer multiple disadvantages, being excluded on account of their gender and their disability,

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[3] Report 66/128, on strengthening efforts to ensure that persons with disabilities are included in and have access to all aspects of development, in accordance with UNGA Resolution 65/186.

[4] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

resolves to invite Member States

1 to ratify the UNCPRD, and to take the relevant measures to ensure that ICT services, equipment and software contribute to the development of telecommunication/ICT accessibility and are effectively accessible to persons with disabilities, with the aim of promoting the inclusion of all members of society, in favour of those who are at risk of marginalization and socially vulnerable, taking into account the 2030 Agenda for Sustainable Development;

2 to develop national legal frameworks, including laws, regulations, policies, guidelines or other national and local mechanisms for telecommunication/ICT accessibility for persons with disabilities in accordance with the principles of equal access, functional equivalence, affordability and universal design, taking full advantage of available tools, guidelines and standards;

3 to consider establishing a government procurement policy for accessible telecommunications/ICTs, establishing accessibility criteria;

4 to continue strengthening the collection and analysis of disaggregated data and statistics on disability related to telecommunication/ICT accessibility for persons with disabilities, aimed at creating e-accessibility statistics and similarly relevant indicators that will contribute to the public policy design, planning and implementation process;

5 to consider introducing telecommunication/ICT relay services[5] for persons with disabilities, and encourage the development of applications for telecommunication terminals and products to increase the accessibility and usability of telecommunications/ICTs for persons with visual, auditory, verbal and other physical and cognitive disabilities, such as telecommunication/relay services for any combinations of hearing, visual, verbal and motor disabilities, accessible websites, public phones with accessibility features (e.g. volume control, information in Braille), public schools, institutions and community centres with a range of accessible equipment, including screen readers, Braille printers, hearing aids, among others, and to facilitate access to digital TV content, etc., in order to guarantee the rights of persons with disabilities to information and knowledge;

6 to encourage and enable active participation by persons with disabilities, both as individuals and as organizations, in the policy-making process for ICTs and related areas where ICTs have an impact, by ensuring that the consultation process, meetings and/or surveys are accessible to participation by persons with disabilities;

7 to promote and undertake research and development on ICT-accessible equipment, services and software, with emphasis on free and open-source software and affordable equipment and services;

8 to envisage establishing a programme that considers ICT-accessibility priorities, to be periodically reviewed in order to ensure its relevance to the specific local conditions of a country/region, with a view to progressive implementation;

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[5] Telecommunication relay services enable users of different modes of communication (e.g. text, sign, speech) to interact by providing convergence between the modes of communication, usually through human operators.

9 to mainstream telecommunication/ICT accessibility for persons with disabilities, which involves taking into consideration accessibility principles in a cross-cutting manner;

10 to consider exemption from taxes and customs duties on ICT devices and assistive equipment for persons with disabilities, in accordance with the national regulations on this matter;

11 to establish ongoing and permanent collaboration between developed and developing countries in order to exchange information, technology and best practices related to telecommunication/ICT accessibility for persons with disabilities and specific needs;

12 to participate actively in accessibility-related studies in ITU-D, ITU-T and ITU-R, and to encourage and promote self-representation by persons with disabilities in the development and standardization process, so as to ensure that their experiences, views and opinions are taken into account in all the work of the study groups;

13 to promote the development of learning and capacity-building opportunities to train persons with disabilities to use ICTs for their social and economic development, including through train-the-trainer courses and distance learning, for a more inclusive society;

14 to advocate for the rights of persons with disabilities and persons with specific needs, and contribute to their integrated development and full inclusion,

invites Sector Members

1 to adopt a self-regulation approach for rendering accessibility-related ICT equipment, software and services accessible for persons with disabilities, it being expressly understood that self-regulation does not override legal and regulatory provisions;

2 to adopt a universal design principle from an early stage when designing, producing and creating ICT equipment, services and software, so as to avoid costly retrofitting measures;

3 to promote, if applicable, research and development on ICT-accessible equipment, services and software, having due regard to affordability for persons with disabilities and specific needs;

4 to take due account of the situations and needs of persons with disabilities, encouraging their active participation so as to receive first-hand information on their requirements for telecommunication/ICT accessibility;

5 to collaborate with Member States in order to make telecommunication/ICT accessibility a reality for persons with disabilities, in particular to promote affordable accessible telecommunications/ICTs for persons with disabilities and specific needs;

6 to promote communication tools for persons with disabilities, so that they can access services and information independently and confidently,

instructs the Director of the Telecommunication Development Bureau

1 to ensure that each ITU-D programme, project or activity takes into account telecommunication/ICT accessibility issues and is adapted to the situations and/or needs of all persons with disabilities and with specific needs;

2 to develop and/or update tools and guidelines for use/reference by Member States in mainstreaming telecommunication/ICT accessibility issues in their national/regional policies and regulations, and provide the necessary capacity building, taking into account the 2030 Agenda for Sustainable Development;

3 to identify and document examples of best practice for accessibility in the field of telecommunications/ICTs for dissemination, publication and sharing of experiences, best practices and information among ITU Member States and Sector Members, taking into account the 2030 Agenda for Sustainable Development;

4 to consider holding seminars, symposia or forums for policy-makers, telecommunication regulators and Sector Members at which telecommunication/ICT accessibility policies are presented and discussed, and also to promote the elaboration of books, reports or literature that address telecommunication/ICT accessibility for persons with disabilities and persons with specific needs;

5 to collaborate with the Radiocommunication Bureau (BR) and the Telecommunication Standardization Bureau (TSB) on accessibility-related activities, particularly in creating awareness and mainstreaming telecommunication/ICT accessibility policies, as well as creating programmes that enable countries to introduce services which allow persons with disabilities and specific needs to utilize ICT services effectively, reporting the findings to the ITU Council, as appropriate, in both cases;

6 to collaborate and cooperate with relevant United Nations entities and organizations for persons with disabilities in all regions in order to generate awareness of the need for the design and implementation of policies or self-regulatory approaches that will make ICTs accessible for persons with disabilities and persons with specific needs;

7 to ensure that the needs of the communities of persons with disabilities are taken into account in the provision of telecommunication/ICT accessibility equipment, services and software;

8 to consider the development of an internship programme for persons with disabilities who have expertise in the field of telecommunications/ICTs, so as to build capacity among persons with disabilities in the public policy-making process;

9 to strengthen the Digital Inclusion programme to promote telecommunication/ICT accessibility for persons with disabilities;

10 to promote the exchange of experiences and best practices in terms of access to telecommunication and ICT services for persons with disabilities and persons with specific needs,

further instructs the Director of the Telecommunication Development Bureau

1 to review, in consultation with the Secretary-General, the accessibility of ITU services and facilities, including meetings and events, to consider taking actions, where appropriate, pursuant to UNGA Resolution 61/106, and to inform Member States and Sector Members about the implementation of such actions, as appropriate;

2 to contribute, within the scope of BDT, to uniting efforts for the implementation of the provisions of Resolution 70 (Rev. Hammamet, 2016) and Resolution 175 (Rev. Busan, 2014);

3 to provide advice to, evaluate and supervise initiatives, projects and programmes, so as to determine their impact in terms of telecommunication/ICT accessibility for persons with disabilities, under Resolution 17 (Rev. Buenos Aires, 2017) of this conference on regional initiatives, where appropriate;

4 to provide assistance to Member States, as appropriate, in the establishment of their national funding strategies aimed at addressing the needs of persons with disabilities;

5 to identify, within the study groups, taking into account the financial implications, new accessible software, services and solutions to enable all persons with disabilities and persons with specific needs to effectively use telecommunication/ICT services, on the basis of contributions from the Member States and Sector Members, as well as the ITU-T and ITU-R study groups, as appropriate,

invites the Plenipotentiary Conference

1 to build on and consolidate past accomplishments, by providing the necessary financial and human resources for the effective and sustained integration of telecommunication/ICT accessibility for persons with disabilities in the development activities of ITU;

2 to instruct the Secretary-General to bring this resolution to the attention of the Secretary-General of the United Nations in an effort to promote increased coordination and cooperation for development policies, programmes and projects for achieving ICT accessibility for persons with disabilities, in line with the principles of equitable access, functional equivalence, affordability and universal design, and fully harnessing the available tools, guidelines and standards, to eliminate obstacles and discrimination.

RESOLUTION 59 (Rev. Buenos Aires, 2017)

Strengthening coordination and cooperation among the three ITU Sectors on matters of mutual interest

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 123 (Rev. Busan, 2014) of the Plenipotentiary Conference, on bridging the standardization gap between the developing[1] and developed countries;

b) Resolution 191 (Rev. Busan, 2014) of the Plenipotentiary Conference, on strategy for the coordination of efforts among the three Sectors of the Union;

c) Resolution 5 (Rev. Buenos Aires, 2017) of this conference, on enhanced participation by developing countries in ITU activities;

d) Resolution ITU-R 7 (Rev. Geneva, 2015) of the Radiocommunication Assembly, on telecommunication development including liaison and collaboration with the ITU Telecommunication Development Sector (ITU-D);

e) Resolution 44 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly (WTSA), on bridging the standardization gap between developing and developed countries;

f) Resolution 18 (Rev. Hammamet, 2016) of WTSA, on principles and procedures for the allocation of work to, and strengthening coordination and cooperation among, the ITU Radiocommunication (ITU-R), ITU Telecommunication Standardization (ITU-T) and ITU Telecommunication Development (ITU-D) Sectors,

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

considering

a) that a basic principle for collaboration and cooperation among the three ITU Sectors is the need to avoid duplication of activities of the Sectors, and ensure that the work is undertaken efficiently and effectively;

b) that the mechanism for cooperation at secretariat level among the three Sectors and the General Secretariat of the Union was established to ensure close cooperation between the secretariats and with the secretariats of external entities and organizations that deal with key priority issues, such as emergency telecommunications and climate change;

c) that interaction and coordination in the joint holding of seminars, workshops, forums, symposia and so forth have yielded positive results in terms of financial and human resource savings,

taking into account

a) the expanding sphere of joint studies between the three Sectors and the need for coordination and cooperation among them in this regard;

b) the growing number of issues of mutual interest and concern to the three Sectors, including, but not limited to: electromagnetic compatibility, international mobile telecommunications, middleware, audiovisual broadcasting, access to telecommunications/information and communication technologies (ICTs) for persons with disabilities, emergency telecommunications including preparedness, ICT and climate change, cybersecurity, compliance of systems with the Recommendations emanating from the ITU-R and ITU-T study groups and their joint activities, etc.;

c) the need to avoid duplication and overlapping of work among the Sectors and to support efficient and effective integration among them,

resolves

1 that the Telecommunication Development Advisory Group (TDAG) and the Director of the Telecommunication Development Bureau (BDT) shall continue to cooperate actively with the Radiocommunication Advisory Group (RAG) and the Director of the Radiocommunication Bureau (BR) and with the Telecommunication Standardization Advisory Group (TSAG) and the Director of the Telecommunication Standardization Bureau (TSB), as called for by Resolution 191 (Rev. Busan, 2014);

2 to invite TDAG, in collaboration with RAG and TSAG, to assist in identifying subjects common to the three Sectors, or, bilaterally, subjects common to ITU-D and either ITU-R or ITU-T, and in identifying the necessary mechanisms to strengthen cooperation and joint activity among the three Sectors or with each Sector, on issues of joint interest, paying particular attention to the interests of the developing countries, including through the establishment of the intersectoral coordination team on issues of mutual interest;

3 to invite the Director of BDT, in collaboration with the Secretary-General, the Director of TSB and the Director of BR, to continue to create cooperation mechanisms at secretariat level on matters of mutual interest to the three Sectors, and also to invite the Director of BDT to create a mechanism for bilateral cooperation with ITU-R and ITU-T, as required;

4 to request the Secretary-General to report annually to the ITU Council on the implementation of this resolution, in particular the joint operational activities undertaken by the three Bureaux, including funding arrangements, including voluntary contributions if any,

invites

1 RAG, TSAG and TDAG to continue to assist intersector coordination in the identification of subjects common to the three Sectors and mechanisms to enhance cooperation and collaboration in all Sectors on matters of mutual interest;

2 the Directors of BR, TSB and BDT to report to the respective Sector advisory groups on options for improving cooperation at the secretariat level to ensure that close coordination is maximized,

instructs

1 the ITU-D study groups to continue cooperation with the study groups of the other two Sectors so as to avoid duplication of effort and make use of the results of work done by the study groups of those two Sectors;

2 the Director of BDT, in cooperation with the Director of TSB and the Director of BR, to provide an annual report to ITU-D study groups on the latest development in the activities of ITU-T and ITU-R study groups;

3 the Director of BDT to inform TDAG annually on the implementation of this resolution.

RESOLUTION 60 (Hyderabad, 2010)

Assistance to countries in special situations: Haiti

The World Telecommunication Development Conference (Hyderabad, 2010),

recalling

Resolution 34 (Rev. Antalya, 2006) of the Plenipotentiary Conference,

further recalling

the purposes of the Union, as enshrined in Article 1 of the ITU Constitution,

recognizing

a) that the telecommunication infrastructure in the Republic of Haiti has been significantly affected by the earthquake that struck the country on 12 January 2010;

b) that Haiti at present does not have a sufficient national information and communication infrastructure with adequate international and Internet access;

c) that an adequate telecommunication system is an essential tool in the process of rebuilding the country;

d) that, under the present conditions and in the foreseeable future, Haiti will require the support of the international community in order to build a national information infrastructure that is compatible with its socio-economic development objectives,

noting

a) that Haiti received emergency telecommunication assistance from ITU immediately following the earthquake;

b) the efforts deployed by the ITU Secretary-General and the Director of the Telecommunication Development Bureau (BDT) to assist other countries following armed conflicts or natural disasters,

resolves

that the special action initiated by the Secretary-General and the Director of BDT, with specialized assistance from the ITU Radiocommunication Sector and the ITU Telecommunication Standardization Sector, should be continued in order to provide assistance and support to Haiti in rebuilding its telecommunication/information and communication technology (ICT) infrastructure, establishing appropriate institutions, human capacity building, developing telecommunication legislation and a regulatory framework and harnessing the recognized potential of telecommunications/ICTs for the country's socio-economic and cultural development,

calls upon Member States

to offer all possible assistance and support to the Government of Haiti, either bilaterally or through the special action of the Union referred to above,

invites the Council

to allocate the necessary funds for the implementation of this resolution,

instructs the Director of the Telecommunication Development Bureau

1 to provide focused assistance in the different fields identified by Haiti;

2 to take immediate measures to implement a framework of cooperation allowing the country's systematic adoption of ICTs with a view to its sustainable development,

requests the Secretary-General

1 to bring this resolution to the attention of the Plenipotentiary Conference (Guadalajara, 2010) and seek the allocation of the necessary resources;

2 to coordinate the activities carried out by the three ITU Sectors in accordance with *resolves* above;

3 to ensure that the Union's action in favour of Haiti is as effective as possible, and to report on the matter to the ITU Council.

RESOLUTION 61 (Rev. Dubai, 2014)

Appointment and maximum term of office of chairmen and vice-chairmen of study groups in the ITU Telecommunication Development Sector and of the Telecommunication Development Advisory Group

The World Telecommunication Development Conference (Dubai, 2014),

considering

a) that No. 209 of the ITU Convention provides for the establishment of study groups of the ITU Telecommunication Development Sector (ITU-D);

b) that Article 20 of the Convention provides that, in appointing chairmen and vice-chairmen, personal competence and equitable geographical distribution should be especially kept in mind, as well as the need to promote more effective participation by developing countries[1];

c) that No. 214 of the Convention and other related provisions indicate the nature of the work of the study groups;

d) that provisions for the Telecommunication Development Advisory Group (TDAG) have been incorporated in Article 17A of the Convention;

e) that No. 242 of the Convention requires the World Telecommunication Development Conference (WTDC) to appoint the chairman and one vice-chairman or more for each study group, taking account of competence and equitable geographical distribution, and the need to promote more efficient participation by the developing countries;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

f) that section 2 of Resolution 1 (Rev. Dubai, 2014) of this conference contains guidelines regarding the appointment of study group chairmen and vice-chairmen at WTDCs;

g) that procedures and qualifications for the chairman and vice-chairmen of TDAG should generally follow those for the appointment of study group chairmen and vice-chairmen;

h) that experience of ITU in general and of ITU-D in particular would be of particular value for the chairman and vice-chairmen of TDAG;

i) that No. 244 of the Convention describes the procedure for replacing a study group chairman or vice-chairman who is unable to carry out his or her duties at some time in the interval between two WTDCs;

j) that No. 215I of the Convention states that TDAG shall "adopt its own working procedures compatible with those adopted by the world telecommunication development conference";

k) that a specific time-limit on the term of office would permit the introduction of new ideas on a periodic basis, while at the same time give an opportunity for study group chairmen and vice-chairmen and the chairman and vice-chairmen of TDAG to be appointed from different Member States and Sector Members,

noting

a) Article 19 of the Convention, on the participation of entities and organizations in the Union's activities;

b) Resolution 166 (Guadalajara, 2010) of the Plenipotentiary Conference, on the number of vice-chairmen of Sector advisory groups, study groups and other groups;

c) Resolution 58 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference, on strengthening of relations between ITU, regional telecommunication organizations and all Member States without exception, for the regional preparations for the Plenipotentiary Conference,

taking into account

a) that a maximum time in office of two terms for study group and TDAG chairmen and vice-chairmen provides for a reasonable amount of stability while providing the opportunity for different individuals to serve in these capacities;

b) that § 10.1 of Resolution 1 (Rev. Dubai, 2014) indicates that the study group management team should be composed, at least, of the chairman and the vice-chairmen of the study group, the chairmen and vice-chairmen of working parties and the rapporteurs and vice-rapporteurs;

c) that the TDAG bureau should include at least the chairman and vice-chairmen of TDAG and its working party chairmen and vice-chairmen,

resolves

1 that candidates for the posts of chairmen and vice-chairmen of the ITU-D study groups and candidates for the posts of chairman and vice-chairmen of TDAG should be appointed according to the procedures given in Annex 1, the qualifications given in Annex 2 and the guidelines given in Annex 3 to this resolution;

2 that candidates for the posts of study group chairmen and vice-chairmen and candidates for the posts of chairman and vice-chairmen of TDAG should be identified, taking into account that, for each study group and for TDAG, WTDC will appoint the chairman and up to two vice-chairmen from each of the six regions[2] for the efficient and effective management and functioning of the group in question, applying the guidelines given in Annex 3;

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[2] Africa, Americas, Arab States, Asia-Pacific, Commonwealth of Independent States, Europe.

3 that nominations for the posts of study group chairmen and vice-chairmen or for the posts of chairman and vice-chairmen of TDAG should be accompanied by a biographical profile highlighting the qualifications of the individuals proposed, taking into careful consideration continuity in participation in ITU-D study groups or TDAG, and that the Director of the Telecommunication Development Bureau (BDT) will circulate the profiles to the heads of delegation present at WTDC;

4 that the term of office for both chairmen and vice-chairmen should not exceed two terms of office between consecutive WTDCs;

5 that the term of office in one appointment (e.g. as a vice-chairman) does not count towards the term of office for another appointment (e.g. as a chairman) and that steps should be taken to provide some continuity between chairmen and vice-chairmen;

6 that the interval between WTDCs during which a chairman or vice-chairman is elected under No. 244 of the Convention does not count towards the term of office;

7 that the counting of a term of office is effective from WTDC-10 and is not retroactive,

invites Member States and Sector Members

to support their successful candidates for such posts in ITU-D, and support and facilitate their task during their term of office.

ANNEX 1 TO RESOLUTION 61 (Rev. Dubai, 2014)

Procedure for the appointment of chairmen and vice-chairmen of the ITU-D study groups and of TDAG

1 Typically, the positions of chairmen and vice-chairmen to be filled are known in advance of WTDC.

a) In order to help WTDC appoint chairmen/vice-chairmen, Member States, ITU-D Sector Members and the study group concerned or TDAG should be encouraged to indicate to the Director of BDT suitable candidates preferably three months, but no later than two weeks before the opening of WTDC.

b) In nominating suitable candidates, ITU-D Sector Members should carry out prior consultations with the administration/Member State concerned, in order to avoid any possible disagreement in regard to such nomination.

c) On the basis of proposals received, the Director of BDT will circulate to Member States and Sector Members the list of candidates. The list of candidates should be accompanied by an indication of the qualifications of each candidate as given in Annex 2 to this resolution.

d) On the basis of this document and any relevant comments received, the heads of delegation, at a suitable time during WTDC, should be invited to prepare, in consultation with the Director of BDT, a consolidated list of designated study group and TDAG chairmen and vice-chairmen to be submitted in a document to WTDC for final approval.

e) In drafting the consolidated list, the following should be taken into account: in cases where there are two or more candidates with equal competence for the same chairman position, preference should be given to candidates from Member States and Sector Members having the lowest number of designated study group and TDAG chairmen.

2 Situations which cannot be considered within the above will be dealt with on a case-by-case basis at WTDC.

For example, if WTDC decides to set up a completely new study group, discussions will have to be held at WTDC and appointments made.

3 These procedures should be applied for appointments made by TDAG under delegated authority (see Resolution 24 (Rev. Dubai, 2014) of this conference).

4 Vacant positions of chairmen and vice-chairmen that occur in mid-term between WTDCs are filled in accordance with No. 244 of the Convention.

ANNEX 2 TO RESOLUTION 61 (Rev. Dubai, 2014)

Qualifications of chairmen and vice-chairmen

No. 242 of the Convention states that:

"… In appointing chairmen and vice-chairmen, particular consideration shall be given to the requirements of competence and equitable geographical distribution and to the need to promote more efficient participation by the developing countries."

Whilst giving primary consideration to the qualifications below, there should be an appropriate representation of chairmen and vice-chairmen from developing countries, including the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

As regards competence, the following qualifications, *inter alia*, appear to be of importance when appointing study group chairmen and vice-chairmen:

– knowledge and experience;

– continuity in participation in the relevant study group;

– managerial skills;

– availability[3];

– active in the work of the study group;

and the following qualifications, *inter alia*, appear to be of importance when appointing the chairman and vice-chairmen of TDAG:

– knowledge and experience;

– continuity in the activities of ITU in general and of ITU-D in particular;

– managerial skills;

– availability[3].

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[3] A further factor to be considered when appointing chairmen and vice-chairmen to both study groups and TDAG is candidates' availability for the period up to the next WTDC.

Particular reference to the above qualifications should be included in the biographical profile to be circulated by the Director of BDT.

ANNEX 3 TO RESOLUTION 61 (Rev. Dubai, 2014)

Guidelines for appointment of the optimum numbers of vice-chairmen for ITU-D study groups and for TDAG

1 Pursuant to Resolution 166 (Guadalajara, 2010) and No. 242 of the Convention, the requirements of competence, equitable geographical distribution and the need to promote more effective participation by the developing countries should be taken into account to the extent practicable.

2 To the extent possible, and taking into account the need for demonstrated competence, appointment or selection to the management team should utilize the resources of as broad a range of Member States and Sector Members as possible, at the same time recognizing the need to appoint only the number of vice-chairmen necessary for the efficient and effective management and functioning of the study groups, consistent with the projected structure and work programme.

3 The workload should be a factor in determining the appropriate number of vice-chairmen, up to two vice-chairmen from each region, to ensure that every aspect within the purview of TDAG and the study groups is fully managed.

4 The total number of vice-chairmen proposed by any administration should be fairly reasonable, so as to observe the principle of equitable distribution of posts among the Member States concerned.

5 Regional representation in the advisory group, study groups and other groups of all three Sectors should be taken into account (as indicated in *resolves* 2), such that no single individual may hold more than one vice-chairmanship position in these groups in any one Sector, and only in exceptional cases hold such a position in more than one Sector[4].

6 Where the re-election of vice-chairmen is concerned, the nomination of candidates who have failed to participate in at least half of all meetings during the previous study period should normally be avoided, taking into account prevailing circumstances.

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[4] The criterion mentioned in this paragraph should not prevent a vice-chairman of a given advisory group or a vice-chairman of a given study group from holding positions of chairman or vice-chairman of a given working party or as rapporteur or associate rapporteur for any group under the mandate of that Sector group.

RESOLUTION 62 (Rev. Buenos Aires, 2017)

Assessment and measurement of human exposure to electromagnetic fields

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 176 (Busan, 2014) of the Plenipotentiary Conference, on human exposure to and measurement of electromagnetic fields (EMF);

b) Resolution 72 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly, on measurement and assessment concerns related to human exposure to EMF, which calls for close cooperation among the Directors of the three Bureaux to implement the resolution within the available financial resources in view of its importance to developing countries[1],

considering

a) that there is a pressing need for information on the potential effects of human exposure to EMF in order to protect humans from such effects;

b) that there are a number of eminent international bodies involved in establishing measurement methodologies for assessing human exposure to EMF, and these already cooperate with many telecommunication standards bodies, including the ITU Telecommunication Standardization Sector (ITU-T);

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

c) that the World Health Organization (WHO) has issued fact sheets on EMF based on the work of the International Commission on Non-Ionizing Radiation Protection (ICNIRP);

d) the lack of the necessary tools in some countries to measure and assess the impact of radiowaves on the human body,

recognizing

a) that some publications and information about EMF effects on health create doubts and worries among the population, in particular in developing countries, causing these countries to address questions to ITU-T and to the ITU Telecommunication Development Sector (ITU-D);

b) that without adequate information or appropriate regulation, people, particularly in developing countries, may have concerns about the effect of EMF on their health, and that inadequate, or in some cases incorrect, information may result in increasing opposition to the deployment of radio installations in their vicinity;

c) that the effect on humans of EMF from handheld devices has not received enough public attention, and use of a mobile phone may expose the user to stronger EMF levels than to those radiated by a base station;

d) that the cost of the advanced equipment used for measuring, assessing and monitoring human exposure to EMF is very high and difficult for many developing countries to afford;

e) that implementing such measurement is essential for many regulatory authorities in developing countries, in order to monitor the limits for human exposure to radio-frequency energy, and that they are called upon to ensure that those limits are met in order to license different services;

f) the work of ITU-T Study Group 5 on this issue, including the updating of practical and affordable guidelines to help developing countries deal with this issue effectively;

g) the work of the ITU Radiocommunication Sector (ITU-R) Study Group 1 under Question 239/1, on measurement techniques to assess human exposure from wireless installations and presenting the measurement results;

h) the creation of the new mobile application launched by ITU as a guide to EMF, which provides information and education resources on EMF suitable for all communities, stakeholders and governments, especially in developing countries,

resolves to instruct the Director of the Telecommunication Development Bureau

in response to the needs of the developing countries and consistent with the substance of Resolution 72 (Rev. Hammamet, 2016), and in close cooperation with the Director of the Radiocommunication Bureau (BR) and Director of the Telecommunication Standardization Bureau (TSB):

1 to give the necessary priority to this subject and, within the available resources, allocate the necessary funds for expediting execution of this resolution;

2 to conduct international and regional seminars and workshops to identify the needs of developing countries and to build human capacity in regard to EMF, including specific absorption rate (SAR);

3 to ensure that those responsible for ITU-D Output 2.1 determine the requirements of developing countries and their regulatory authorities (at regional level) in relation to this resolution, contribute to studies on this subject, take an active part in the work of the relevant ITU-R and ITU-T study groups, and submit written contributions on the results of their work in this regard, plus any proposals they deem necessary, to ITU-D Study Group 2;

4 to provide the necessary assistance to Member States, in particular developing countries, by supplying them with measurement methods for assessing human electromagnetic exposure, including methods to manage the risk perception by the public;

5 to foster the exchange of experiences and best practices in connection with the challenges and opportunities of developing technical regulations on the adoption of limits for reference levels of non-ionizing electromagnetic radiation from radio-frequency stations, as well as SAR levels;

6 to establish and keep up a dialogue among all interested parties, such as civil society, authorities, industry, the scientific community, associations and the media, in order to provide support for measuring human exposure to EMF, and to adopt a regulatory framework on the reference levels for persons on the basis of the technical specifications drawn up by the international bodies specializing in human health and protection against non-ionizing radiation;

7 to promote the EMF-estimator software that implements the methodology described in Recommendation ITU-T K.70;

8 to implement necessary assistance to Member States, in particular developing countries, by supplying them with measurement methods for assessing human electromagnetic exposure, as referred to in *considering b)*, in order to define a current situation regarding protection against electromagnetic exposure and its impact on current national regulations;

9 to implement projects under the United Nations development systems or arrangements funded by international financial institutions and donor agencies to facilitate measurements of non-ionizing radiations and investigations/research in developing countries,

instructs Study Group 2

within the framework of its Questions, including Question 7/2, to cooperate with ITU-T Study Group 5 and ITU-R Study Groups 1, 4, 5 and 6, in order to achieve the following goals:

i) collaborate with ITU-T Study Group 5 in particular to update the mobile EMF guide application relating to human exposure to EMF and the guidance on its implementation, as a matter of high priority;

ii) contribute to the organization of seminars, workshops or training on the subject of EMF;

iii) ensure wide dissemination of ITU publications and literature on EMF issues;

iv) contribute to preparation of the guide on the use of ITU-T publications on electromagnetic compatibility and safety and on measurement methodologies, the need for measurements to be performed by a "qualified and certified radio engineer or technician" and the criteria for this "qualified radio engineer or technician", as well as system specifications;

v) continue to cooperate with the World Health Organization (WHO), the International Commission on Non-Ionizing Radiation Protection (ICNIRP), the Institute of Electrical and Electronics Engineers (IEEE) and other relevant international organizations with regard to awareness and dissemination of information to the membership and the public,

invites Member States

1 to conduct a periodic review concerning the performance of the operators and mobile equipment manufacturers in this field to verify that they are following the national specifications or ITU Recommendations, in order to ensure the safe use of EMF;

2 to conduct public awareness campaigns on the adverse impact of EMF, and deploy successful solutions, including regulations;

3 to continue to cooperate through exchange of experts, the organization of seminars, specialized workshops and meetings;

4 to adopt international standards, and use effective methods for verifying compliance,

encourage members from academia and centres of excellence

to participate actively in the work under this resolution through the submission of contributions and proposals.

RESOLUTION 63 (Rev. Buenos Aires, 2017)

IP address allocation and facilitating the transition to IPv6 deployment in the developing countries[1]

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 101 (Rev. Busan, 2014), Resolution 102 (Rev. Busan, 2014) and Resolution 180 (Rev. Busan, 2014) of the Plenipotentiary Conference;

b) Resolution 63 (Rev. Dubai, 2014) of the World Telecommunication Development Conference (WTDC);

c) Resolution 64 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly;

d) Opinion 3 (Geneva, 2013) of the fifth World Telecommunication/ Information and Communication Technology (ICT) Policy Forum (WTPF), on supporting capacity building for the deployment of IPv6;

e) Opinion 4 (Geneva, 2013) of WTPF, in support of IPv6 adoption and transition from IPv4;

f) the results of the ITU Council Working Group on the subject of the transition from IPv4 to IPv6;

g) the partial progress that has been made towards the adoption of IPv6 over the past few years;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

h) that accelerating the transition from IPv4 to IPv6 deployment has become an issue of the utmost importance today for Member States and Sector Members and stakeholders in the Internet community, because of IPv4 address exhaustion,

recognizing

a) that Internet Protocol (IP) addresses are fundamental resources that are indispensable for the current development of IP-based telecommunication/ICT networks, which are important for the digital economy;

b) that many countries believe that there are historical imbalances related to IPv4 allocation;

c) that the fastest possible transition from IPv4 and migration to and deployment of IPv6 addresses available to all countries is necessary in order to respond to global appeals and needs in this regard;

d) that the adoption of IPv6 in all countries is needed to meet the growing demands for world connectivity;

e) that deployment of IPv6 facilitates Internet of Things (IoT) solutions, which require a huge amount of IP addresses;

f) that there are a number of developing countries that still need expert technical assistance for making this transition, despite the partial progress made in some other countries;

g) that the implementation of IPv6 solves the current problem of shortages in the numerical space of IP addresses, enabling the allocation of publicly routable addresses on the Internet to each one of the devices;

h) the importance of providing technical assistance from experts in IPv6 deployment to those Member States and Associates that request it,

taking into account

a) that many developing countries are experiencing some challenges today in the deployment process;

b) that it is necessary to encourage the collaboration and cooperation of all relevant stakeholders to be able to carry out the deployment,

resolves

to promote the exchange of experiences and information relating to the adoption of IPv6, with the aim of unifying joint efforts of all stakeholders and ensuring the contributions that enhance the Union's efforts to support this deployment,

instructs the Director of the Telecommunication Development Bureau

1 to continue the close cooperation and coordination with the Director of the Telecommunication Standardization Bureau in this regard, continue ongoing activities to facilitate the process of raising awareness on IPv6 deployment among all members, and provide the necessary information on training and education activities;

2 to continue cooperating with relevant international and regional organizations, including the regional Internet registries (RIRs), on capacity building and the enhancement of technical skills for IPv6 in order to respond to the needs of developing countries;

3 to submit an annual report to the ITU Council on the progress made in this regard, and report to the next WTDC;

4 to develop guidelines to enable, if necessary, adjustment of the organizational frameworks and policies necessary for migration to and deployment of IPv6,

invites Member States

1 to examine RIRs' inventories of IP addresses registered within their respective territories for the purposes of evaluation, development and monitoring;

2 to continue to stimulate and encourage the transition to IPv6 deployment, and particularly to encourage national initiatives and strengthen interaction with government and private-sector entities, academia and civil-society organizations in order to exchange experiences, expertise and knowledge;

3 to encourage the training of technicians and administrators from governmental agencies and private-sector organizations in IPv6 network, with theory and labs that show how to implement IPv6 on their networks;

4 to raise awareness among providers on the importance of making their services available over IPv6;

5 to encourage manufacturers to supply fully-featured customer premises equipment (CPE) that supports IPv6 in addition to IPv4;

6 to foster cooperation among Internet service providers (ISPs), service providers and other relevant stakeholders to shorten the transition period to IPv6 deployment.

RESOLUTION 64 (Rev. Buenos Aires, 2017)

Protecting and supporting users/consumers of telecommunication/ information and communication technology services

The World Telecommunication Development Conference (Buenos Aires, 2017),

considering

a) Resolution 196 (Busan, 2014) of the Plenipotentiary Conference, on protecting telecommunication service users/consumers;

b) Resolution 84 (Hammamet, 2016) of the World Telecommunication Standardization Assembly, on studies concerning the protection of users of telecommunication/information and communication technology (ICT) services;

c) United Nations guidelines on consumer protection, reviewed and approved by the United Nations General Assembly in Resolution 70/186 of 22 December 2015, which establish the main characteristics that consumer protection laws must have, the institutions in charge of enforcing them, and compensation systems so they can be effective;

d) Resolution 188 (Busan, 2014) of the Plenipotentiary Conference, on combating counterfeit telecommunication/ICT devices;

e) Resolution 189 (Busan, 2014) of the Plenipotentiary Conference, on assisting Member States to combat and deter mobile device theft;

f) § 13 e) of the Geneva Plan of Action of the World Summit on the Information Society, which states that governments should continue to update their domestic consumer-protection laws to respond to the new requirements of the information society;

g) §§ 4.4 and 4.5 of Article 4 of the International Telecommunication Regulations,

taking into account

a) ITU's mandate to serve as coordinator and facilitator for Action Lines C5 and C6 of the Geneva Plan of Action;

b) that the basic principles of consumer and user relations include education and outreach on the appropriate consumption and use of products and services, in order to guarantee freedom of choice and fairness in contracting, together with clear and appropriate information on different products and services, with the correct specification of quantities, characteristics, composition, quality and price, taking into account the 2030 Agenda for Sustainable Development;

c) that information is the main input of the digital economy, for which reason it is recognized that the cross-border flow of personal consumer and user data demands the observance of national laws and regulations;

d) that it is necessary to work in redefining the protection needs of users and consumers in an increasingly connected world;

e) that the establishment of effective protection for users and consumers must also take into account issues like their economic interests, information about security and protection of their personal data, the coordinated fight against device theft, and advances in financial services, among others;

f) that the same policies should ensure access to telecommunications/ ICTs for persons with disabilities, persons with specific needs, and the elderly, in conditions of use comparable to all other consumers and users;

g) the report presented by the Rapporteur for Question 6/1, on information to consumers, protection and rights: laws, regulations, economic bases, consumer networks;

h) that telecommunication/ICT services provided to users and consumers should be based on quality standards;

i) that policies on information transparency make it possible to increase the level and quality of the information provided by operators to users and consumers,

resolves

to continue leading studies to establish guidelines and best practices on the protection of users and consumers regarding issues such as information on the basic features of the telecommunication/ICT services being provided, their rates and prices, their quality and security, and the protection of personal data, among other aspects,

to instruct the Director of the Telecommunication Development Bureau in collaboration with the Directors of the Radiocommunication Bureau and the Telecommunication Standardization Bureau

1 to continue to support work aimed at raising awareness among decision-makers regarding telecommunications/ICTs as well as among regulatory agencies regarding the importance of keeping users and consumers informed about the basic characteristics, quality, security and rates of the different services offered by operators, and at creating other protection mechanisms to facilitate the exercise of consumers' and users' rights;

2 to continue coordination with the ITU Telecommunication Standardization Sector on such topics as service quality, perceived quality and security;

3 to issue regular information about relations and joint efforts with other international organizations and entities involved in consumer and user protection;

4 to invite the respective regions to create their end-user and consumer associations;

5 to organize training programmes, such as workshops and seminars, in order to analyse best practices, to encourage training in consumer education, education for sustainable consumption and data protection, and to formulate possible recommendations about tools and measures that foster the protection of users and consumers,

encourages Member States

1 to empower users/consumers through the formulation and promotion of policies that foster the provision of information and good practices in regard to consumer education, consumer rights, and the characteristics, quality, security and rates of the telecommunication services offered by different providers, considering especially those that facilitate the provision of free-of-charge, transparent, up-to-date and accurate information;

2 to foster measures to ensure that, in international roaming, visiting users are provided with telecommunication services of satisfactory quality, and consumers and end users are informed in a timely manner about international telecommunication services, including international roaming rates, and relevant applicable conditions;

3 to encourage operators/providers to develop clear, simple offers, as well as better consumer-education practices;

4 to encourage offering users and consumers better telecommunication/ICT service options, at affordable prices, with quality service, with information transparency, in accessible language and format, and that are easy to understand;

5 to build the trust of users and consumers in the utilization and leverage of telecommunications/ICTs;

6 to include users with disabilities, persons with specific needs, and the elderly, so they have access to telecommunication/ICT services under equal conditions,

invites Sector Members of the ITU Telecommunication Development Sector

to contribute inputs that will allow the dissemination of best practices and policies they have implemented in regard to consumer and user protection, taking into consideration ITU guidelines and recommendations.

RESOLUTION 66 (Rev. Buenos Aires, 2017)

Information and communication technology and climate change

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 182 (Rev. Busan, 2014) of the Plenipotentiary Conference, on the role of telecommunications/information and communication technologies (ICTs) in regard to climate change and the protection of the environment;

b) Resolution 1353 adopted by the 2012 session of the ITU Council, which recognizes that telecommunications and ICTs are essential components for developed and developing countries[1] in achieving sustainable development, and instructs the Secretary-General, in collaboration with the Directors of the Bureaux, to identify new activities to be undertaken by ITU to support developing countries in achieving sustainable development through telecommunications and ICTs;

c) § 20 of the Geneva Plan of Action of the World Summit on the Information Society, on e-environment, calling for the establishment of monitoring systems using ICTs to forecast and monitor the impact of natural and man-made disasters, particularly in developing countries;

d) Resolution 34 (Rev. Buenos Aires, 2017) of this conference, on the role of telecommunications/ICT in disaster preparedness, early warning, rescue, mitigation, relief and response;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

e) Resolution 673 (Rev.WRC-12) of the World Radiocommunication Conference (Geneva, 2015), on the use of radiocommunications for Earth observation applications, in collaboration with the World Meteorological Organization (WMO);

f) the outcomes of the United Nations Climate Change Conference (Bali, Indonesia, 3-14 December 2007), highlighting the role of ICTs as both a contributor to climate change and an important element in tackling the associated challenges;

g) Resolution 73 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly (WTSA), on ICTs, environment and climate change, instructing the ITU Telecommunication Standardization Sector (ITU-T) in this area;

h) the results of ITU Telecommunication Development Sector (ITU-D) Study Group 2 Question 5/2, on the utilization of telecommunications/ICTs for disaster preparedness, mitigation and response, Question 6/2, on ICTs and climate change, and Question 8/2 on strategies and policies for the proper disposal or reuse of telecommunication/ICT waste material (study period 2014-2017);

i) Resolution 1307 adopted by the 2009 session of the Council, ITU studies having shown that ICT is one of the critical elements, if not the fundamental element, in combating climate change, in terms of monitoring climate change and the role it can play in any international agreement in this area, in addition to mitigating the effects of climate change in many cases;

j) Recommendation ITU-D 21 (Dubai, 2014), on ICT and climate change;

k) Opinion 3 (Lisbon, 2009) of the World Telecommunication Policy Forum, on ICT and the environment, which highlighted the importance of the work associated with climate change in its many facets, including the global problems of the distribution of food, as well as the need for study on environmentally safe disposal and recycling of discarded ICT equipment;

l) the outcomes of the United Nations Climate Change Conferences;

m) the Nairobi Declaration on the Environmentally Sound Management of Electrical and Electronic Waste, and the adoption by the ninth Conference of the Parties to the Basel Convention of the Work Plan for the Environmentally Sound Management of E-waste, focusing on the needs of developing countries;

n) the main outcomes of the twelfth Conference of the Parties to the Basel Convention on the Environmentally Sound Management of E-waste, which strongly recommends the development of pilot projects for collection systems, prevention of illegal traffic in electronic waste, a life-cycle approach to electronic products, and ensuring that electrical and electronic equipment subject to transboundary movement is not at the end of its life cycle;

o) Resolution 79 (Rev. Hammamet, 2016) of WTSA, on the role of telecommunications/ICTs in handling and controlling e-waste from telecommunication and information technology equipment and methods of treating it;

p) the progress already made in the international symposia on ICTs, environment and climate change, held in various parts of the world[2], by distributing their outcomes as widely as possible;

q) the outcomes of ITU-T Study Group 5 on the environment, climate change and circular economy, which is responsible for studies on methodologies for evaluating the ICT effects on climate change and also for studying design methodologies to reduce environmental effects, for example recycling of ICT facilities and equipment;

r) the overview of contributions received through the ITU-D Study Group 2 consolidated survey for Questions 6/2, 7/2 and 8/2 (ITU-D SG 2 Document 2/372 of 13 September 2016);

s) Resolution 70/1 of the United Nations General Assembly, on transforming our world: the 2030 Agenda for Sustainable Development;

t) the Green Standards Week, organized by ITU-T,

taking into consideration

a) that the United Nations Intergovernmental Panel on Climate Change (IPCC) estimated that global greenhouse gas (GHG) emissions had risen by more than 81 per cent between 1970 and 2010, having an effect on global warming, changing weather patterns, rising sea-levels, desertification, shrinking ice cover and other long-term effects;

b) that climate change is acknowledged as a threat to all countries and calls for a global response;

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[2] Kyoto, Japan, 15-16 April 2008; London, United Kingdom, 17-18 June 2008; Quito, Ecuador, 8-10 July 2009; Seoul Virtual Symposium, 23 September 2009; Cairo, Egypt, 2-3 November 2010; Accra, Ghana, 7-8 July 2011; Seoul, Republic of Korea, 19 September 2011; and Montreal, Canada, 29-31 May 2012.

c) the role that ICTs and ITU can play in promoting green ICTs to mitigate climate-change effects;

d) the importance of promoting sustainable development and the ways in which ICTs can enable clean development;

e) that the consequences of developing countries' lack of preparation in the past have recently come to light, and that without preparation they risk significant adverse impact, including those relating to rising sea levels for many coastal areas in developing countries;

f) that the strategic plan for the Union for 2016-2019 gives clear priority to combating climate change using ICTs;

g) that the global observation tools employed by the Global Climate Observing System (GCOS) serve to meet the diverse needs for data and information, including for improved management of the impacts and consequences of climate variability and current and future climate change;

h) that the role of ICTs in tackling the challenge of climate change encompasses a wide array of activities, including, but not limited to: the development of energy-efficient devices, applications and networks; the development of energy-efficient working methods; the implementation of satellite and ground-based remote-sensing platforms for environmental observation, including weather monitoring; and the use of ICTs to warn the public of dangerous weather events and provide communication support for governmental and non-governmental aid providers;

i) Recommendation ITU-T L.1000, on the universal power adapter and charger solution for mobile terminals and other handheld ICT devices, and Recommendation ITU-T L.1100, on the procedure for recycling rare metals in ICT goods;

j) that, in processes for extracting raw materials from recycled products, caution must be exercised over the procedures used in order to ensure low environmental pollution levels,

k) the final report of ITU-D Study Group 2 on Question 8/2 (Strategies and policies for the proper disposal or reuse of telecommunication/ICT waste material) (study period 2014-2017);

taking into consideration further

a) the outcome document adopted by the United Nations Conference on Sustainable Development (Rio+20), entitled "The Future we want", reflecting the renewed commitment to advancing sustainable development and achieving environmental sustainability;

b) that the Rio+20 outcome document recognizes that ICTs are facilitating the flow of information between governments and the public, highlighting the need to continue working towards improved access to ICTs, especially broadband networks and services, and bridging the digital divide, recognizing the contribution of international cooperation in this regard;

c) that Rio+20 has called for further mainstreaming of the three dimensions of sustainable development throughout the United Nations system, inviting UN specialized agencies to consider appropriate measures for integrating the social, economic and environmental dimensions across the UN system's operational activities and to support developing countries, on request, in achieving sustainable development,

aware

a) that ICTs also contribute to GHG emissions, a contribution which, although relatively small, will grow with the increased use of ICTs, and that the necessary priority must be given to reducing GHG emissions from equipment;

b) that ICTs are contributing to mitigating and adapting to the effects of climate change, as well as measuring and monitoring changes,

noting

a) current and future work on ICTs and climate change, including the work in relevant ITU study groups such as ITU-T Study Group 5 and ITU-D Study Group 2, which focus on the study of climate change, e-waste, and human exposure to electromagnetic fields;

b) the use of ICTs as energy-efficient and eco-friendly working methods, as exemplified by the Virtual International Symposium on ICTs and Climate Change (23 September 2009, Seoul, Republic of Korea);

c) that it is important to facilitate an environment in which ITU Member States, Sector Members and other stakeholders may cooperate to obtain and effectively use remote-sensing data for the purposes of research in climate change, disaster management and public administration;[3]

d) the positive impact of ICTs in mitigating climate change, insofar as they offer more energy-efficient alternatives to other applications by providing more efficient energy-management systems (buildings/homes) and distribution systems (smart grid);

e) the outcomes of the conferences of the United Nations Framework Convention on Climate Change (UNFCCC);

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[3] This includes areas such as water management, air quality, agriculture, fishing, health, energy, environment, ecosystems and pollution control.

f) that there are other international forums that are working on climate-change issues with which ITU should cooperate,

resolves

1 to give priority to ITU-D activities in this area and to providing the necessary support, while ensuring appropriate coordination among the three ITU Sectors on a full range of issues, including, for example, studies on the impact of non-ionizing radiation;

2 to continue and further develop ITU-D activities on ICTs and climate change in order to contribute to the wider global efforts to mitigate and adapt to climate change;

3 to include, as a priority, assistance to developing countries in strengthening their human and institutional capacity in tackling ICTs and climate change, as well as in areas such as climate-change adaptation, as a key element of disaster-management planning;

4 to increase awareness and promote information-sharing on the role of ICTs in enhancing environmental sustainability, in particular by promoting the use of more energy-efficient[4] devices and networks and more efficient working methods, as well as ICTs that can be used to replace or displace higher energy consuming technologies/uses;

5 to promote the development and application of renewable energy systems where appropriate, to support ICT operations and in particular continuity and resilience during disasters;

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[4] With respect to efficiency, promotion of efficient use of materials used in ICT devices and network elements should also be a consideration in ITU-D activity.

6 to assist in bridging the standardization gap by providing technical assistance to countries in developing their national green ICT action plans;

7 to set up e-learning programmes on ITU Recommendations related to ICT, the environment, climate change and the circular economy, within available resources,

instructs the Director of the Telecommunication Development Bureau, in collaboration with the Directors of the other Bureaux

1 to formulate a plan of action for the role of ITU-D in this regard, taking into account the role of the other two Sectors;

2 to ensure that the plan of action is implemented under the relevant objective of the Buenos Aires Action Plan dealing with ICTs and climate change, taking into account the needs of developing countries, and cooperating closely with the study groups of the other two Sectors and with ITU-D Study Group 2 in its implementation of the relevant Questions on ICTs and climate change;

3 to promote liaison with other relevant organizations in order to avoid duplication of work and optimize the use of resources;

4 to organize, in close collaboration with the Directors of the Radiocommunication Bureau and the Telecommunication Standardization Bureau and with other competent bodies, workshops, seminars and training courses in developing countries at the regional level for the purpose of raising awareness and identifying key issues;

5 to report on progress on the implementation of this resolution annually at the meeting of the Telecommunication Development Advisory Group (TDAG);

6 to ensure, in implementing the Buenos Aires Action Plan, that appropriate resources are allocated for initiatives related to ICTs and climate change;

7 to provide input to the ITU-T calendar of events relevant to ICTs, the environment and climate change, based on proposals by TDAG and in close collaboration with the other two Sectors;

8 to develop pilot projects aimed at bridging the standardization gap on environmental sustainability issues, in particular in developing countries, and gauge the needs of the developing countries in the field of ICTs, the environment and climate change, within available resources;

9 to support the development of reports on ICTs, the environment and climate change, taking into consideration relevant studies, in particular the ongoing work under ITU-D Study Group 2 Questions 5/2 and 6/2 related to, *inter alia*, ICTs and climate change, and to assist affected countries with utilizing relevant applications for disaster preparedness, mitigation and response, and management of telecommunication/ICT waste;

10 to assist developing countries in undertaking proper assessment of the magnitude of e-waste and pilot projects, to achieve environmentally sound management of e-waste through e-waste collection, dismantling, refurbishment and recycling, as well as a lifecycle approach to electronic products, considering the work carried out by ITU-T Study Group 5

11 to assist developing countries in initiating projects that achieve the sustainable and smart management of water resources through the use of ICTs;

12 to assist developing countries in initiating projects on disaster prediction, detection, monitoring, response and relief,

instructs the Telecommunication Development Advisory Group

to consider possible changes to working methods in order to meet the objectives of this resolution, such as extending the use of electronic means, virtual conferencing, teleworking, etc.,

invites Member States, Sector Members and Associates

1 to continue to contribute actively to the ITU-D work programme on ICTs and climate change;

2 to continue or initiate public and private programmes that include ICTs and climate change, giving due consideration to relevant ITU initiatives;

3 to take necessary measures to reduce the effects of climate change by developing and using more energy-efficient ICT devices, applications and networks;

4 to continue supporting the work of the ITU Radiocommunication Sector in remote sensing (active and passive) for environmental observation[5] in accordance with relevant resolutions adopted by radiocommunication assemblies and world radiocommunication conferences;

5 to integrate the use of ICTs as an enabling tool to address and combat the effects of climate change into national adaptation and mitigation plans;

6 to incorporate environmental indicators, conditions and standards in their national ICT plans;

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[5] Environmental observation can be used to forecast weather and warn the public in the case of natural disasters, and to gather information on dynamic environmental processes and systems.

7 to liaise with their relevant national entities responsible for environmental issues in order to support and contribute to the wider United Nations process on climate change, by providing information and developing common proposals related to the role of telecommunications/ICTs in mitigating and adapting to the effects of climate change, so that they can be taken into consideration within UNFCCC.

RESOLUTION 67 (Rev. Buenos Aires, 2017)

The role of the ITU Telecommunication Development Sector in child online protection

The World Telecommunication Development Conference (Buenos Aires, 2017),

recognizing

a) that children's rights is a relevant topic in the context of the United Nations 2030 Agenda for Sustainable Development;

b) high Internet user growth rates, particularly in the young population of all Member States;

c) that there is an urgent need and global demand for the protection of children from exploitation and exposure to risks and harm when using the Internet and other information and communication technology (ICT), particularly mobile technologies;

d) that many of them will participate in the youth programmes of the Telecommunication Development Bureau (BDT) and will become active members in the development of coordination mechanisms with youth forums,

recalling

a) the memorandum of understanding between the secretariat of the Union and Child Helpline International (CHI);

b) Resolution 1306 adopted by the ITU Council at its 2009 session, under which a child online protection working group was set up, with the participation of Member States and Sector Members, and the group's mandate defined by the ITU members in close collaboration with the secretariat of the Union;

c) Resolution 179 (Rev. Busan, 2014) of the Plenipotentiary Conference, on ITU's role in child online protection;

d) the outcomes of the work accomplished by the Council Working Group on Child Online Protection (CWG-COP);

e) that the United Nations adopted the Convention on the Rights of the Child (New York, 1989), bearing in mind that the need to extend particular care to the child has been stated in the Geneva Declaration of the Rights of the Child of 1924 and in the Declaration of the Rights of the Child adopted by the United Nations General Assembly on 20 November 1959 and recognized in the Universal Declaration of Human Rights, in the International Covenant on Civil and Political Rights (in particular in Articles 23 and 24), in the International Covenant on Economic, Social and Cultural Rights (in particular in Article 10) and in the statutes and relevant instruments of specialized agencies and international organizations concerned with the welfare of children;

f) that, within the framework of the Convention on the Rights of the Child, the States Parties undertook to protect the child from all forms of exploitation and sexual abuse, and for that purpose, in particular, to take all appropriate national, bilateral and multilateral measures to prevent a) the inducement or coercion of a child to engage in any unlawful sexual activity; b) the exploitative use of children in prostitution or other unlawful sexual practices; c) the exploitative use of children in pornographic performances and materials (Article 34);

g) that the Convention on the Rights of the Child establishes for States Parties that children have the right to freedom of expression, which includes the freedom to seek, receive and impart information and ideas, especially those aimed at promoting their social, spiritual and moral well-being and their physical and mental health;

h) that pursuant to Article 10 of the Optional Protocol to the Convention on the Rights of the Child (New York, 2000) on the sale of children, child prostitution and child pornography, the States Parties shall take all necessary steps to strengthen international cooperation by multilateral, regional and bilateral arrangements for the prevention, detection, investigation, prosecution and punishment of those responsible for acts involving the sale of children, child prostitution, child pornography and child sex tourism; and shall also promote international cooperation and coordination between their authorities, national and international non-governmental organizations and international organizations;

i) that the World Summit on the Information Society (WSIS), in the Tunis Commitment of 2005 (§ 24), recognized the role of ICTs in the protection of children and in enhancing the development of children, urging Member States to strengthen action to protect children from abuse and defend their rights in the context of ICTs,

j) that, by Resolution 45 (Rev. Dubai, 2014) of the World Telecommunication Development Conference (WTDC), on the establishment of mechanisms for enhancing cooperation on cybersecurity, including countering and combating spam, WTDC recognized the role of telecommunications/ICTs in the protection of children and in enhancing their development and that action to protect children from abuse and defend their rights in the context of telecommunications/ICTs should be strengthened, emphasizing that the best interests of the child are a key consideration;

k) that, during the 2012 WSIS Forum in Geneva, a meeting was organized with partners in the Child Online Protection (COP) initiative, which achieved an important outcome, namely the agreement to work closely with the Family Online Safety Institute and the Internet Watch Foundation in order to provide the necessary assistance to Member States;

l) Resolution 17 (Rev. Buenos Aires, 2017) of this conference, which invites nations to pursue regional initiatives;

m) the work under way in Question 3/2 of Study Group 2 of the ITU Telecommunication Development Sector (ITU-D), on cybersecurity, which includes child online protection, as well as the current work of the Joint Coordination Activity on Child Online Protection, established by Study Group 17 of the ITU Telecommunication Standardization Sector (ITU-T),

taking into account

a) that there are online risks that children are exposed to on the Internet, which have diversified and multiplied with the rapid development of information technology and telecommunication devices;

b) the growing development, diversification and spread of access to telecommunications/ICTs worldwide, in particular the Internet, and the increasingly widespread use thereof by children, at times with no control or guidance;

c) the importance of empowering children in the use of telecommunications/ICTs, so they can develop ICT knowledge and skills to make critical and safe use of the Internet, through media and information literacy;

d) the need for children to use telecommunication/ICT tools, with emphasis on the importance of protecting them online;

e) the requirement for a multistakeholder approach, as envisaged by WSIS, in order to promote social responsibility in the telecommunication/ICT sector so as to effectively make use of the variety of tools available to build confidence and security in the use of telecommunications/ICTs, reducing the risks identified for children;

f) that, in order to address the issue of cybersecurity for children, it is critical that proactive measures be taken in order to protect children online at an international level;

g) the technical difficulties involved in establishing a single harmonized global child helpline number;

h) that the number of children who possess mobile phones is constantly increasing;

i) the need to continue working at global and regional levels to find available technological solutions to protect children online, as well as innovative applications to make it easier for children to communicate with child online protection helplines;

j) the activities undertaken by ITU in the area of child online protection at the regional and international levels, including the development of guidelines and multimedia training courses for children, parents, teachers, and representatives of the private and public sectors;

k) the activities undertaken by many countries in recent years, including those related to the regional initiatives, approved at WTDC,

instructs the Director of the Telecommunication Development Bureau

1 to continue supporting activities of the COP initiative with relevant study group Questions, with a view to providing guidance to Member States on strategies, best practices and cooperative efforts that can be promoted for the benefit of children;

2 to continue with the activities in the area of child online protection with a view to providing guidance to Member States on strategies, best practices and cooperative efforts that can be promoted for the benefit of children;

3 to collaborate closely with CWG-COP, as well as relevant study group Questions, and encourage coordination among them, with the aim of avoiding duplication of efforts and maximizing outputs relevant to child online protection;

4 to coordinate with other similar initiatives being undertaken at national, regional and international level, with the objective of establishing partnerships to maximize efforts in this important area;

5 to promote the dissemination of methodological frameworks for the collection of statistics on child online protection with the purpose of maximizing global data comparison among countries and capacity development;

6 to encourage regional coordination in addressing the issue of child online protection, such as through the development of guiding principles, in cooperation with ITU regional offices and relevant entities;

7 to disseminate these guiding principles, in cooperation with ITU regional offices and relevant entities;

8 to investigate suitable ways of encouraging developing[1] and least developed countries to participate in the work of CWG-COP;

9 to coordinate with the ITU regional offices on the submission of quarterly reports to CWG-COP and on ways of progressing work on child online protection;

10 to support the work of CWG-COP by organizing orientation sessions for experts in connection with meetings of the group;

11 to identify the most appropriate opportunities for ITU to ensure that as much attention as possible is drawn to the issue of child online protection in developing countries;

12 to assist developing countries in raising the level of awareness of the issue of child online protection;

13 to facilitate the dissemination of training materials and guidance on child online protection programmes that have been developed through BDT processes, including their translation into ITU official languages, within the limits of available financial resources;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

14 to submit a report on the results of implementation of this resolution to the next WTDC,

invites Member States

1 to join and continue participating actively in CWG-COP and in related ITU activities, for the purposes of comprehensive discussion and exchange of information on legal, technical, organizational and procedural issues as well as capacity building and international cooperation for protecting children online;

2 to develop information, to educate and to create consumer-awareness campaigns targeting parents, teachers, industry and the population in general in order to make children aware of the risks to be found online;

3 to promote the allocation of regional telephone numbers for child online protection;

4 to foster the development of tools that contribute to enhancing child online protection;

5 to support the collection and analysis of data and the production of statistics and indicators on child online protection that will contribute to public policy design and implementation, enabling cross-country comparisons;

6 to consider establishing national child online protection frameworks;

7 to work closely with CHI and relevant non-governmental organizations;

8 to develop self-regulatory approaches in cooperation with the private sector, academia and non-governmental organizations;

9 to facilitate the dissemination of training courses and guidance on child online protection that have been developed through BDT processes, among interested parties and training establishments,

invites Sector Members

1 to participate actively in all relevant ITU activities, including CWG-COP, Question 3/2 of ITU-D Study Group 2, ITU-T Study Group 17 and relevant programmes within ITU-D, and in other ITU activities, in particular in ITU-D, with the aim of informing the ITU membership about technological solutions for protecting children online, through various mechanisms such as workshops;

2 to develop innovative solutions and applications to make it easier for children to communicate with child online protection helplines;

3 to formulate guiding principles for informing Member States of modern technological solutions for protecting children online, taking into account best practices for industry and other relevant interested parties.

RESOLUTION 68 (Rev. Dubai, 2014)

Assistance to indigenous peoples within the activities of the Telecommunication Development Bureau in its related programmes

(ABROGATED BY WTDC-17)

(Merged with Resolution 46)

RESOLUTION 69 (Rev. Buenos Aires, 2017)

Facilitating creation of national computer incident response teams, particularly for developing countries[1], and cooperation between them

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolutions 101, 102 and 130 (Rev. Busan, 2014) of the Plenipotentiary Conference, which stress the need for collaboration;

b) Resolution 69 (Rev. Dubai, 2014) of the World Telecommunication Development Conference (WTDC), and the need to improve coordination and capacity to respond to cybersecurity challenges;

c) Resolution 58 (Rev. Dubai, 2012) of the World Telecommunication Standardization Assembly (WTSA), on encouraging the creation of national computer incident response teams (CIRTs), particularly in developing countries;

d) Resolution 50 (Rev. Hammamet, 2016) of WTSA, on cybersecurity,

recognizing

a) the highly satisfactory results obtained by the regional approach adopted within the framework of Resolution 69 (Rev. Dubai, 2014);

b) the increasing level of computer use and computer dependency in information and communication technologies (ICT) in developing countries;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

c) the exposure of developing countries to attacks and threats targeting ICT networks, and that they could be better prepared for such attacks and threats and for the increasing level of fraudulent activity by these means;

d) the results of the work carried out to date under Question 3/2 by Study Group 2 of the ITU Telecommunication Development Sector (ITU-D) and its reports and coursework on this subject, which include support for the creation of CIRTs and establishing public-private partnerships;

e) the work carried out to date by the Telecommunication Development Bureau (BDT), to bring together Member States and other stakeholders to assist countries in building national incident management capabilities, such as CIRTs;

f) the importance of having an appropriate level of computer emergency preparedness in all countries, particularly developing countries, by establishing CIRTs on a national basis, and the importance of coordination within and among the regions and of taking advantage of regional and international initiatives in this regard, including ITU cooperation with regional and global projects and organizations, such as the Forum of Incident Response and Security Teams (FIRST), the Organization of American States (OAS) and the Asia-Pacific Computer Emergency Response Team (APCERT), among others;

g) the work of Study Group 17 of the ITU Telecommunication Standardization Sector (ITU-T) on cybersecurity information exchange (CYBEX) techniques,

noting

a) that there is an improved, but still low, level of computer emergency preparedness within developing countries;

b) that the high level of interconnectivity of telecommunication/ICT networks could be affected by the launch of an attack from networks of the less-prepared nations, which are mostly the developing countries;

c) *considering f)* in Resolution 130 (Rev. Busan, 2014), which states that, in order to protect these infrastructures and address these challenges and threats, coordinated national, regional and international action is required for prevention, preparation, response and recovery from computer security incidents, on the part of government authorities, at the national (including the creation of CIRTs) and sub-national levels, the private sector and citizens and users, in addition to international and regional cooperation and coordination, and that ITU has a lead role to play within its mandate and competencies in this field;

d) the importance of having an appropriate level of computer emergency preparedness in all countries;

e) the work of ITU-T Study Group 17 in the area of national CIRTs, particularly for developing countries, and cooperation between them, as contained in the outputs of that study group;

f) the need for the establishment of CIRTs on a national basis, including CIRTs responsible for government-to-government cooperation, and the importance of coordination among all relevant organizations;

g) the ITU Global Cybersecurity Agenda,

resolves

1 to invite Member States and Sector Members with experience in this area:

- to establish national CIRTs, including CIRTs responsible for government-to-government cooperation, where needed or currently lacking;
- to collaborate closely with relevant organizations, and ITU-T, in this regard, taking into consideration Resolution 58 (Rev. Dubai, 2012);
- to facilitate exchanging best practices among their national CIRTs;

2 to instruct the Director of BDT to give the necessary priority to this, by:

- promoting national, regional and international best practices for establishing CIRTs, as identified to date by the relevant ITU study groups, such as ITU-D Study Group 1 under past Question 22-1/1, and by other relevant organizations and experts;
- preparing the training programmes necessary for this purpose and continuing to provide support as required to those developing countries that so wish;
- promoting collaboration between and among national CIRTs, including CIRTs responsible for government-to-government cooperation, industry CIRTs and academia CIRTs, in accordance with national legislation, at the regional and global level, by encouraging the participation of developing countries in regional and global projects and in the work of organizations such as FIRST, OAS and APCERT, among others;
- working to achieve these goals while avoiding duplication of effort with other organizations;

3 to instruct ITU-D Study Group 2, under Question 3/2, within its mandate, to contribute to the implementation of this resolution, also taking into consideration the work carried out by ITU-T on this issue.

RESOLUTION 71 (Rev. Buenos Aires, 2017)

Strengthening cooperation between Member States, Sector Members, Associates and Academia of the ITU Telecommunication Development Sector and the evolving role of the private sector in the ITU Telecommunication Development Sector

The World Telecommunication Development Conference (Buenos Aires, 2017),

considering

a) No. 126 of the ITU Constitution, which encourages participation by industry in telecommunication development in developing countries[1];

b) the ITU Telecommunication Development Sector (ITU-D) provisions of the strategic plan for the Union relating to the promotion of partnership arrangements between the public and private sectors in developed countries;

c) the importance placed, in the outcome documents of the World Summit on the Information Society (WSIS), including the Geneva Plan of Action and the Tunis Agenda for the Information Society, on private-sector participation in meeting the objectives of WSIS, including public-private partnerships;

d) that Sector Members, in addition to their financial contributions to the three Sectors of ITU, also provide professional expertise and support to the Telecommunication Development Bureau (BDT) and, conversely, can benefit from participation in ITU-D activities,

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

considering also

a) that ITU-D should undertake actions in order to be responsive to Sector Members' needs, in particular at the regional level;

b) that it is in the interest of ITU to achieve its development objectives, increase the number of Sector Members, Associates and Academia (cf. Resolution 169 (Rev. Busan, 2014) of the Plenipotentiary Conference) and promote their participation in the activities of ITU-D;

c) that partnerships between and among the public and private sectors, including ITU and other entities such as national, regional, international and intergovernmental organizations, as appropriate, continue to be key to promoting sustainable telecommunication/information and communication technology (ICT) development;

d) that such partnerships prove to be an excellent tool for maximizing resources for, and the benefits of, development projects and initiatives,

recognizing

a) the rapidly changing telecommunication/ICT environment;

b) the important contribution that Sector Members make towards the increased provision of telecommunications/ICTs in all countries;

c) the progress achieved, through BDT special initiatives such as partnership meetings and colloquiums, in strengthening cooperation with the private sector and increased support at the national, regional and global levels;

d) the continued need to ensure increased participation of Sector Members, Associates and Academia,

recognizing further

a) that telecommunications/ICTs are of critical importance to overall economic, social and cultural development;

b) that Sector Members, Associates and Academia may face challenges in the provision of telecommunication/ICT services;

c) the important role played by Sector Members, Associates and Academia in suggesting and implementing ITU-D activities such as initiatives, projects and programmes;

d) that a large number of ITU-D activities are of interest to Sector Members, Associates and Academia;

e) the importance of the principles of transparency and non-exclusivity for partnership opportunities and projects;

f) the need to promote increased Sector Member, Associate and Academia membership and their active participation in ITU-D activities;

g) the need to facilitate exchange of views and information between Member States, Sector Members, Associates and Academia at the highest possible level;

h) that these actions should strengthen the participation of Sector Members, Associates and Academia in all ITU-D activities,

noting

a) that the role of the private sector in a very competitive environment is increasing in all countries;

b) that economic development relies, among others, on the resources and capacity of ITU-D Sector Members;

c) that ITU-D Sector Members are engaged in the work accomplished within ITU-D and can provide ongoing support and expertise to facilitate the work of ITU-D;

d) that an essential part of the work within the ITU Sectors, and in particular in the development of telecommunications/ICTs, is done by representatives of industry;

e) that ITU-D Associates and Academia are engaged in the work accomplished within ITU-D and can provide scientific and knowledge background to support ITU-D's work;

f) that ITU-D Sector Members, Associates and Academia have a key role in addressing ways by which private-sector issues can be incorporated into ITU-D strategy development, programme design and project delivery, with the overall goal of increasing mutual responsiveness to the requirements of telecommunication/ICT development;

g) that ITU-D Sector Members, Associates and Academia could also advise on ways and means of enhancing partnerships with the private sector and of reaching out to the private sector of developing countries and the many companies that are not knowledgeable of ITU-D activities;

h) the excellent results achieved through the high-level discussions that took place between Member States and Sector Members during the Chief Regulatory Officers' (CRO) meetings and the Industry Leaders Debate (ILD),

resolves

1 that the ITU-D operational plans should continue to respond to issues relevant to Sector Members, Associates and Academia by strengthening the communication channels between BDT, Member States and ITU-D Sector Members, Associates and Academia at the global, regional and national levels;

2 that ITU-D, and the ITU regional and area offices in particular, should employ the necessary means to liaise with the private sector and to encourage its representatives to take a more active part through partnerships with telecommunication/ICT entities in developing countries, and especially with those in the least developed countries, in order to help close the gap in universal and information access;

3 that ITU-D should take into account the interests and requirements of its Sector Members, Associates and Academia in its programmes so as to enable them to participate effectively in achieving the objectives of the Buenos Aires Action Plan, the objectives set forth in the Geneva Plan of Action and the Tunis Agenda, and the targets of the Sustainable Development Goals (SDGs);

4 that a permanent agenda item dedicated to private-sector issues will continue to be included in the plenary agenda of the Telecommunication Development Advisory Group (TDAG), dealing with relevant inputs concerning the private sector;

5 that the Director of BDT, when implementing the ITU-D operational plan, should consider the following actions:

i) to improve regional cooperation between Member States, Sector Members, Associates and Academia and other relevant entities, through the continuation of regional meetings addressing issues of common interest, in particular for Sector Members, Associates and Academia;

ii) to facilitate the development of public-private sector partnerships for the implementation of global, regional and national flagship initiatives;

iii) to promote through its various programmes an enabling environment for investment in telecommunication/ICT development;

iv) to provide support to regional offices so that they have tools within budgetary resources available to encourage representatives of the private sector and universities not previously involved in the Union's activities to participate in regional and global ITU events and projects, in order to demonstrate the advantages of ITU membership and attract investment in the implementation of ITU projects of great importance to Member States,

resolves further

that appropriate steps should continue to be taken for the creation of an enabling environment at the national, regional, and international levels to encourage development and investment in the telecommunication/ICT sector by Sector Members,

instructs the Director of the Telecommunication Development Bureau

1 to continue working closely with ITU-D Sector Members, Associates and Academia for their participation in successful implementation of the Buenos Aires Action Plan;

2 to address, as appropriate, in the ITU-D activities, issues of interest to Sector Members, Associates and Academia;

3 to facilitate communications between Member States and Sector Members on issues which contribute to an enabling environment for investment, particularly in developing countries, and in particular to further deploy and strengthen the ITU-D Sector Members, Associates and Academia website in order to help exchange and disseminate information for all ITU members;

4 to facilitate participation of ITU Sector Members, in their own capacity, at all ITU-D meetings in which they are involved, including those at regional level;

5 to continue to organize meetings for high-level industry executives, for example the Industry Advisory Group for Development Issues (IAGDI), possibly back-to-back with the Global Symposium for Regulators (GSR) and other major ITU events, in order to foster exchange of information and assist in identifying and coordinating development priorities and in identifying regulatory barriers;

6 to further deploy and strengthen the ITU-D Sector Members, Associates and Academia portal in order to help exchange and disseminate information for all ITU members, bring the needs of developing countries to the high-level industry meetings by consulting them prior to the meetings, and encourage the participation of local industry representatives;

7 to develop a comprehensive strategy for raising the motivation of representatives of the private sector, including universities and other academic and research institutions, to become Sector Members, Associates and Academia, as well as a strategy for more active involvement of current Sector Members, Associates and Academia in ITU-D activities, including participation in the work of ITU-D study groups;

8 to encourage participation in IAGDI of a wide representation of industry from the ITU-D Sector Members from all regions;

9 to develop effective mechanisms to organize participation by industry representatives in the meetings (for example, by having a stable composition for IAGDI and regular participation in the group by a member or alternate);

10 to take the results of IAGDI into account in ITU-D work, especially under the dedicated agenda item in TDAG and within the ITU-D study groups, as appropriate;

11 to produce a regular report to TDAG on the follow-up of the CRO meeting conclusions;

12 to produce a report to the next world telecommunication development conference, assessing the outcomes of the CRO group over the period and examining the need to continue or enhance its activities,

encourages Member States, Sector Members, Associates and Academia of the ITU Telecommunication Development Sector

1 subject to the relevant provisions of the Constitution and the Convention, to participate together and actively in the work of TDAG, to submit contributions, in particular regarding private-sector issues to be discussed, and to provide relevant guidance for the Director of BDT;

2 to participate actively at the appropriate level in all activities of ITU-D;

3 to identify means of enhancing cooperation and arrangements between the private and public sectors in all countries, working closely with BDT,

encourages Sector Members of the ITU Telecommunication Development Sector

to participate at the level of their executives in the IAGDI meetings, and to raise proposals in regard to their priorities and specific needs of developing countries.

RESOLUTION 73 (Rev. Buenos Aires, 2017)

ITU centres of excellence

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 139 (Rev. Busan, 2014) of the Plenipotentiary Conference, on use of telecommunications/information and communication technologies (ICTs) to bridge the digital divide and build an inclusive information society;

b) Resolution 123 (Rev. Busan, 2014) of the Plenipotentiary Conference, on bridging the standardization gap between developing[1] and developed countries;

c) the terms of the Buenos Aires Declaration;

d) Resolution 15 (Rev. Buenos Aires, 2017) of this conference, on applied research and transfer of technology;

e) Resolution 37 (Rev. Buenos Aires, 2017) of this conference, on bridging the digital divide;

f) Resolution 40 (Rev. Buenos Aires, 2017) of this conference, on the Group on capacity-building initiatives (GCBI);

g) Resolution 47 (Rev. Buenos Aires, 2017) of this conference, on enhancement of knowledge and effective application of ITU Recommendations in developing countries, including conformance and interoperability testing of systems manufactured on the basis of ITU Recommendations;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

h) Resolution 70/125 of the United Nations General Assembly, on the 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,

considering

a) that ITU centres of excellence have been operating successfully since 2001 in several languages including English, Arabic, Chinese, Spanish, French, Russian and Portuguese in different regions of the world;

b) that the Centres of Excellence (CoE) programme entered into operation as from 1 January 2015 in accordance with the new strategy;

c) that, in every country, specialists in the field of telecommunications/ICTs hold great potential for development of the sector;

d) that there is a need for constant upgrading of the qualifications of all stakeholders, and especially telecommunication/ICT specialists;

e) that key ITU Telecommunication Development Sector (ITU-D) projects in regard to the training of telecommunication/ICT staff, including the work of the ITU centres of excellence, make a significant contribution to upgrading the qualifications of telecommunication/ICT specialists;

f) that, having enough results from the period 2015–2018, there is a need for further improvement of the strategy;

g) that the centres of excellence would be financially self-sustaining,

recognizing

a) that telecommunication/ICT staff training and capacity building, taking into account gender equality, youth and persons with disabilities, as well as the population as a whole, should be constantly developed and improved;

b) that ITU centres of excellence fulfil an important role in the ITU capacity-building scheme, including under the ITU Academy activities;

c) that partnerships and cooperation between ITU centres of excellence and with other education centres contribute to effective training of specialists;

d) the sovereign right of each State to formulate its own policy in regard to the licensing of services for capacity building;

e) the need to attract, first and foremost, qualified experts from academia to the work of the ITU centres of excellence;

f) that activities in the field of human capacity building are being organized and held in parallel in the ITU centres of excellence and in the regional/area offices under the operational plan of ITU-D,

resolves

1 to undertake a major strategic review of the ITU CoE programme after the current cycle is finished and report the result to the Telecommunication Advisory Group (TDAG);

2 that the activity of ITU centres of excellence should be continued and executed in accordance with the CoE strategy while reflecting the results of the major strategic review;

3 that the programme's themes be agreed by each world telecommunication development conference and constitute a high priority for the ITU members and other stakeholders, in accordance with a prior assessment of needs conducted at global and regional levels in consultation with regional organizations in the telecommunication/ICT sector, and in accordance with the ITU strategic plan;

4 when setting priorities for the work of the ITU centres of excellence, to proceed from the current needs of the region, which are to be identified using the regional organizations or associations in the telecommunication/ICT sector as well as through consultations with ITU members;

5 to consider that human capacity-building efforts should be concentrated in the ITU centres of excellence, whose activities should be included in the operational plans;

6 that the numbers of centres of excellence will be regulated and endorsed by TDAG;

7 that an annual regular assessment of the activities of centres of excellence shall be conducted and reported to TDAG;

8 that results of the strategic review be reflected in the report to TDAG for further consideration and implementation by the Telecommunication Development Bureau,

instructs the Director of the Telecommunication Development Bureau

1 to provide assistance for the work of the ITU centres of excellence according it the necessary priority attention;

2 to carry out a major strategic review of the ITU CoE programme after the termination of the current cycle, starting in 2018, and to make appropriate changes to the document entitled "Operational processes and procedures for a new ITU centres of excellence strategy";

3 in drawing up ITU-D operational plans, to incorporate therein activities prepared and carried out by the ITU centres of excellence under the corresponding ITU-D action plans;

4 to make the necessary organizational arrangements for the formulation of standards for ITU human capacity-building activities;

5 to facilitate the work of the ITU centres of excellence, providing them with the necessary support;

6 to make the necessary organizational arrangements for setting up, within the ITU regional/area offices, a database of experts and participants in ITU centres of excellence activities, for exchanges of experts in the field,

calls upon Member States, Sector Members and Academia of the ITU Telecommunication Development Sector

to participate actively in the ITU centres of excellence activity, including through the provision of recognized experts, training materials and also financial support.

RESOLUTION 75 (Rev. Buenos Aires, 2017)

Implementation of the Smart Africa Manifesto and support for the development of information and communication technologies sector in Africa

The World Telecommunication Development Conference (Buenos Aires, 2017),

considering

a) the provisions of the ITU Constitution, as contained in Chapter IV thereof on the Telecommunication Development Sector (ITU-D), particularly with regard, *inter alia*, to the functions of the Sector for building awareness of the impact of telecommunications/information and communication technologies (ICTs) on national economic and social development, its catalytic role in promoting the development, expansion and operation of telecommunication services and networks, especially in developing countries[1], and the need to maintain and enhance cooperation with regional and other telecommunication organizations;

b) that, at its 22nd ordinary session, it was decided that the African Union Assembly "ENDORSES the key outcomes of the Transform Africa Summit hosted by H.E. Paul Kagame, President of the Republic of Rwanda in October 2013 which adopted the SMART Africa Manifesto highlighting the need to place ICT at the centre of national socio-economic development agenda and SMART Africa Alliance as implementation framework";

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

c) Resolution 30 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference, on special measures for the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition;

d) the Sustainable Development Goals (SDGs) 2015-2020 adopted by the United Nations General Assembly in September 2015;

e) the outcome of the Geneva (2003) and Tunis (2005) phases of the World Summit on the Information Society (WSIS) as well as the WSIS+10 Statement and WSIS+10 vision beyond 2015,

noting

that, in its Declaration and resolutions, the World Telecommunication Development Conference (Doha, 2006) reaffirmed a commitment to enhancing expansion and development of telecommunication services in developing countries and harnessing capacity for the application of new and innovative services,

taking note of

a) the recognition by the United Nations General Assembly in its Resolution 56/37 of the adoption by the Assembly of Heads of State and Government of the Organization of African Unity at its 37th ordinary session (Lusaka, July 2001) of the New Partnership for Africa's Development (NEPAD);

b) the actions for NEPAD set out in annex hereto;

c) the declaration by the Economic and Social Council on the role of the United Nations system in supporting the efforts of African countries to achieve sustainable development,

taking cognizance of

a) the work under way to implement the African Regional Action Plan for the Knowledge Economy (ARAPKE);

b) the request, formulated in the Addis Ababa Declaration adopted by the Heads of State and Government during the 14th Conference of the African Union, that an African digital agenda be set;

c) the appeal made by the conference referred to in *b)* above to development partners, especially financing institutions, to integrate telecommunications/ICTs into their priorities by granting them financing conditions similar to those of other basic public utility infrastructures;

d) the African Union's Agenda 2063 and NEPAD;

e) the decisions taken by the Connect Africa summit held in Kigali in October 2007,

recognizing

that, in spite of the impressive growth and expansion in infocommunication services recorded in the African region in recent years, many areas of major concern still exist and considerable disparities persist in the region, and the digital divide continues to widen,

recalling

the Connect Africa summit goals adopted by African Heads of State present on 29-30 October 2007, which reflect the challenges and opportunities in the Africa region,

resolves to instruct the Director of the Telecommunication Development Bureau

1 to mobilize the resources needed to implement this resolution, which complements the resolutions resulting from the 14th Assembly of Heads of State and Government of the African Union, held in Addis Ababa in February 2010, on the theme "Information and communication technologies in Africa: challenges and prospects for development";

2 to pay particular attention to implementation of the provisions of the ITU-D action plan relating to the recommendations of the report "Partnership framework for ICT infrastructure development in Africa", earmarking resources so that this can be permanently monitored;

3 to continue supporting the Smart Africa Manifesto in accordance with Resolution 195 (Busan, 2014) of the Plenipotentiary Conference, and to provide technical expertise to carry out feasibility studies and project management for the implementation of the Smart Africa Manifesto,

instructs the Secretary-General

1 to engage the different United Nations agencies to support various components of the Smart Africa programmes, in areas within their scope and mandate;

2 to mobilize financial support from the existing networks, including broadcasters, satellite providers, etc.,

invites Member States

1 to cooperate with African countries in promoting regional, subregional, multilateral and bilateral projects and programmes for the implementation of the Smart Africa Manifesto;

2 to transmit this resolution to the Plenipotentiary Conference (Dubai, 2018) for consideration and in order to make available the financial resources required to implement it.

ANNEX TO RESOLUTION 75 (Rev. Buenos Aires, 2017)

Recommendations of the report "Partnership framework for ICT infrastructure development in Africa"

1 Infrastructure

i) Support to the Ministerial Committee of the African Union for the establishment of the Inter-Agency Coordinating Forum

ii) Preparation of master plans for ICT infrastructure development (PIDA)

iii) Facilitation of the introduction of digital technologies, especially for broadcasting

iv) Support for all projects which promote ICT development and subregional and regional integration, for example, the East African Submarine Cable project (EASSy), the NEPAD e-school initiative, the telecommunication/ICT component of the Programme for Infrastructure Development in Africa (PIDA), RASCOM, e-Post Africa, COMTEL, SRII, INTELCOM II, the ARAPKE projects, etc.

v) Establishment and interconnection of national Internet exchange points

vi) Evaluation of the impact and adoption of measures for strengthening functional capacities and the new missions of subregional maintenance centres

vii) Encourage the establishment of technological alliances in order to promote research and development at a regional level

2 Environment

Development and implementation of:

i) an Africa-wide vision, strategy and action plan for ICT

ii) a national vision and strategies for the development of ICT with maximum linkage to other national development strategies, notably the Poverty Reduction Strategy Paper (PRSP)

iii) elaboration of a national policy framework and strategy for universal access

iv) provision of support for the harmonization of policy and regulatory frameworks at the subregional level

3 Capacity building, cooperation and partnerships

i) Support for the elaboration of the planning and management of the frequency spectrum at national, subregional and regional levels

ii) Support the strengthening of ICT training institutions and the network of centres of excellence in the region

iii) Establishment of a cooperation mechanism amongst regional institutions that provide development assistance to African countries in the ICT sector

iv) Regional or multi-national approach to provision of support

v) Establishment of an ad hoc regional ICT think tank for Africa

vi) Strengthening of subregional telecommunication regulatory associations

vii) Strengthening of public-private partnership

viii) Establishment of an African ICT database

ix) Strengthening the capacities of regional economic communities for better implementation of the ICT projects and initiatives.

RESOLUTION 76 (Rev. Buenos Aires, 2017)

Promoting information and communication technologies among young women and men for social and economic empowerment

The World Telecommunication Development Conference (Buenos Aires, 2017),

noting

a) Resolution 70 (Rev. Busan, 2014) of the Plenipotentiary Conference, which calls for promoting and increasing the interest of, and opportunities for, women and girls in information and communication technology (ICT) careers during elementary, secondary and higher education so as to encourage girls to choose a career in the field of ICT and foster the use of ICTs for the social and economic empowerment of women and girls;

b) Resolution 198 (Busan, 2014) of the Plenipotentiary Conference, which calls for empowerment of youth through telecommunications/ICTs;

c) the BYND 2015 Global Youth Summit, held in Costa Rica in September 2013 led by ITU, which brought together some 700 participants and over 3 000 young people around the world who logged in virtually to contribute their ideas to shape the sustainable development agenda in the post-2015 era;

d) that the world's youth have set priorities for the post-2015 development agenda in their "Costa Rica Declaration", as an outcome of the Global Youth Summit, which have been presented for consideration to the United Nations General Assembly (UNGA) at its 68th session;

e) the fact that the United Nations Secretary-General has put "youth" as a priority in his Agenda and included youth employment, entrepreneurship and education as overall goals through the System-Wide Action Plan on Youth;

f) UNGA Resolution 70/1, on the 2030 Agenda for Sustainable Development, in particular Sustainable Development Goal (SDG) 8 on promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all, including the development and implementation of a global strategy for youth employment,

recognizing

a) that youth are digital natives, the best promoters of ICTs and a world force for progress;

b) that ICTs are tools through which both young women and men can substantively contribute to, participate in and leverage their social and economic development,

considering

a) the progress made by the Telecommunication Development Bureau (BDT) in promoting gender equality, in the development and implementation of projects that target youth and young women and are gender sensitive, as well as in increasing awareness on the importance of education in the ICT sector and awareness on career development for young girls in ICTs and related fields within the Union and among Member States and Sector Members;

b) the results achieved within the framework of Resolution 70 (Rev. Busan, 2014), through which, since 2011, by promoting the International Girls in ICT Day, over 300 000 girls and young women in over 166 countries have been made aware of the job opportunities in the ICT sector with the support of BDT;[1]

c) the fact that ICTs play an important role in the promotion of education, career development and work opportunities, as well as for social and economic development of young women and men;

d) the fact that ITU, through the Global Youth Summit, engaged a worldwide community to gather their opinions and ideas on how technology can contribute to a better world and shape the post-2015 development agenda;

e) the fact that BDT plays a substantive role, through its activities, towards youth empowerment and involvement in the decision-making processes related to ICTs for development-related issues,

resolves

1 that the ITU Telecommunication Development Sector (ITU-D), taking into account the above considerations, shall continue to support the development of activities, projects and events aimed at promoting ICT applications among young women and men, in particular in the areas of employment, entrepreneurship and education, and thereby contribute to youth educational, social and economic development and empowerment, taking into account the 2030 Agenda for Sustainable Development;

2 that the established ITU-D objective on digital inclusion will continue to support the work promoting ICTs to young women and men,

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[1] Source: www.itu.int/girlsinict

resolves further

1 to establish partnerships with academia concerned with youth development programmes;

2 to add a youth dimension in Questions for study, wherever possible,

instructs the Director of the Telecommunication Development Bureau

1 to seek appropriate means to integrate youth issues into the activities of BDT and to actively pursue diversity;

2 to ensure that the necessary resources, within budgetary limits, are allocated to these activities;

3 to promote ICTs among young women and men and their social and economic development and empowerment;

4 to provide guidance on measuring the extent of youth empowerment at national and international level;

5 to provide guidance on digital citizenship among youth, including e-government services,

invites the Director of the Telecommunication Development Bureau

to assist Member States:

1 to promote enrolment in ICT-oriented education programmes, including from early education, and to promote ICTs for the social and economic development and empowerment of young women and men, taking into account the 2030 Agenda for Sustainable Development;

2 to provide concrete advice, in the form of guidelines, to integrate young women and men in the information society;

3 to establish partnerships with Sector Members, in order to develop and/or support specific ICT projects that target young women and men in developing countries and in countries with economies in transition, taking into account the 2030 Agenda for Sustainable Development;

4 to include a youth component in BDT activities aimed at raising awareness of the challenges that youth are facing in the ICT area, and calling for implementation of concrete solutions;

5 to promote ICT-friendly frameworks in education and careers for youth without gender discrimination, and thus encourage young girls and women to be part of the ICT sector,

encourages Member States

1 to share best practices on national approaches targeting the use of ICTs for the social and economic development of young women and men, taking into account the 2030 Agenda for Sustainable Development;

2 to develop national strategies for using ICTs as a tool for the educational, social and economic development of young women and men;

3 to promote ICTs for youth empowerment and involvement in the decision-making processes of the ICT sector;

4 to support ITU-D activities in the field of ICTs for the social and economic development of young women and men;

5 to promote the relevance of ICTs as facilitators of new ideas for creating alternative work options;

6 to acknowledge the importance of entrepreneurship among youth, particularly in innovative sectors and new technology, for adding economic value and helping to create skilled jobs by promoting the use of ICTs among young women and men,

encourages Member States, Sector Members and Academia

1 to coordinate global and regional youth forums, considering available resources, taking into account the 2030 Agenda for Sustainable Development;

2 to provide access to telecommunications/ICTs and provide up-to-date training for young people on ICT use;

3 to foster collaboration with civil society and the private sector in order to provide specialized training for young innovators,

invites Academia

to equip youth with job-ready digital skills and, thereby, foster their empowerment and ability to compete in the global labour market to improve their quality of life, including through academic exchange programmes,

requests the Secretary-General

1 to bring this resolution to the attention of the Plenipotentiary Conference with a view to releasing appropriate resources, within the budgetary limits, for the corresponding activities and functions;

2 to bring this resolution to the attention of the United Nations Secretary-General in an effort to promote increased coordination and cooperation for development policies, programmes and projects that link ICTs to the promotion and empowerment of young women and men.

RESOLUTION 77 (Rev. Buenos Aires, 2017)

Broadband technology and applications for greater growth and development of telecommunication/information and communication services and broadband connectivity

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 71 (Rev. Busan, 2014) of the Plenipotentiary Conference, on the strategic plan for the Union;

b) Resolution 139 (Rev. Busan, 2014) of the Plenipotentiary Conference, on telecommunications/information and communication technologies (ICTs) to bridge the digital divide and build an inclusive information society;

c) the outcome documents of the 2005 phase of the World Summit on the Information Society (WSIS);

d) Resolution 135 (Rev. Busan, 2014) of the Plenipotentiary Conference, on ITU's role in the development of telecommunications/ICTs, and the importance of telecommunications/ICTs for economic and social progress;

e) Opinion 2 (Geneva, 2014) of the World Telecommunication/ICT Policy Forum, on fostering an enabling environment for the greater growth and development of broadband connectivity;

f) Resolution 20 (Rev. Buenos Aires, 2017) of this conference, on non-discriminatory access to modern telecommunication/ICT facilities, services and related applications;

g) Resolution 37 (Rev. Buenos Aires, 2017) of this conference, on bridging the digital divide;

h) Resolution 43 (Rev. Buenos Aires, 2017) of this conference, on assistance for implementing international mobile telecommunications (IMT);

i) Resolution 203 (Busan, 2014) of the Plenipotentiary Conference, on connectivity to broadband networks;

j) Resolution ITU-R 65 (Geneva, 2015) of the Radiocommunication Assembly, on principles for the process of future development of IMT for 2020 and beyond;

k) Resolution 92 (Hammamet, 2016) of the World Telecommunication Standardization Assembly (WTSA), on enhancing the standardization activities of the ITU Telecommunication Standardization Sector (ITU-T) related to non-radio aspects of IMT;

l) Resolution 93 (Hammamet, 2016) of WTSA, on interconnection of 4G, IMT-2020 networks and beyond;

m) Resolution 9 (Rev. Buenos Aires, 2017) of this conference,

considering

a) the role of ITU, and the role of the ITU Telecommunication Development Sector (ITU-D) in particular, in the development of telecommunication/ICT facilities and services;

b) the potential benefits of the rapid introduction of new and diverse telecommunication services, including those highlighted in Resolution 66/184 of the United Nations General Assembly, and consistent with § 54 of the Tunis Agenda for Information Society, and the role of broadband connectivity are essential elements in attaining the UN Sustainable Development Goals (SDGs);

c) the importance of broadband capacity to facilitate the delivery of a broader range of services and applications, promote investment and provide Internet access at affordable prices to both existing and new users in underserved and unserved communities using a technology-neutral approach to bridging the existing digital divide;

d) that new innovative terrestrial, wireless access systems, as well as satellite system technologies, can help bridge the digital divide, not only between developing countries[1] and developed countries but also between urban, remote and rural regions where coverage by conventional fixed telecommunication services may not be adequate;

e) that broadband terrestrial and satellite systems are an effective, and in many cases – particularly for rural areas – the most effective, means of performing many practical tasks to open up new prospects to help bridge the digital divide and afford developing countries access to new technologies;

f) that ITU and the United Nations Educational, Scientific and Cultural Organization (UNESCO) set up the Broadband Commission for Sustainable Development, which agreed a set of four ambitious but achievable targets that countries around the world should strive to meet in order to ensure their populations participate fully in tomorrow's emerging knowledge societies;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

g) that in accordance with Resolution 9 (Rev. Buenos Aires, 2017), the Director of the Telecommunication Development Bureau (BDT), in close consultation with the Director of the Radiocommunication Bureau (BR), is collecting pertinent information and preparing, over the period between world telecommunication development conferences (WTDCs), appropriate documents and other relevant outputs that are responsive to the specific needs of developing countries on national, economic, regulatory and financial approaches to, and challenges of, spectrum management and spectrum monitoring,

taking into account

a) the report of the fifth WTDC (Hyderabad, 2010), highlighting the importance of telecommunication infrastructure and technology development, particularly in developing countries, and adopting regional initiatives and the Hyderabad Action Plan to assist developing countries in achieving, to a greater degree, universal access to telecommunication services;

b) that many countries are interested in introducing a comprehensive technology-neutral approach for broadband services in activities such as e-health, e-government and e-education;

c) that, despite considerable improvements in the availability and affordability of broadband, almost two-thirds of the world population lacks access to affordable broadband;

d) that unequal access to broadband telecommunication services does nothing to eradicate social inequality and has an adverse impact on the social and economic situation in different countries and regions;

e) the importance of competition in promoting investment, as presented in the report of the Broadband Commission for Digital Development[2];

f) that, as part of the work of ITU-T Study Group 3, on tariff and accounting principles including related telecommunication economic and policy issues, a rapporteur group was set up for the purpose of drafting a supplement to Recommendation ITU-T D.50 to facilitate the adoption of specific measures to reduce international Internet connection costs, especially for developing countries;

g) that ITU-T Study Group 3 adopted Recommendation ITU-T D.52, on establishing and connecting regional Internet exchange points (IXPs) to reduce costs of international Internet connectivity, which guides regional collaboration to establish central hubs or IXPs that enable local Internet traffic to be routed locally, saving international bandwidth and reducing the costs of international Internet connectivity,

recognizing

a) the important role of ITU-D in coordinating the rational use of resources in the context of various projects aimed at securing more widespread deployment of technology-neutral telecommunication services in different countries of the world;

b) that broadband-enabled terrestrial, wireless access and satellite communications are a factor in eliminating the isolation of certain categories of population who live in parts of a country where coverage by conventional telecommunication networks remains inadequate and who lack resources;

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[2] "Broadband: A Platform for Progress". A report by the Broadband Commission for Digital Development, September 2010. (Available at http://www.broadbandcommission.org/Documents/publications/Report_2.pdf)

c) that studies suggest that broadband penetration is higher in countries with national broadband plans, policies or strategies than in countries without them;

d) that, pursuant to § 22 of the Geneva Declaration of Principles adopted by WSIS, a well-developed information and communication network infrastructure that is easily accessible and affordable and makes greater use of broadband can accelerate the social and economic progress of countries and the well-being of all individuals, communities and peoples;

e) the policy recommendations in the report of the Broadband Commission for Digital Development[3], advocating broadband infrastructure development and the creation of a favourable environment for investment in telecommunication infrastructure by encouraging all Member States to:

i) enable government services that will stimulate demand for and investment in telecommunications, especially in developing countries;

ii) establish a universal service programme to support technology-neutral telecommunication infrastructure investment;

iii) encourage efficient and innovative broadband practices for new market entrants and consumers;

iv) ensure the availability and affordability of broadband-enabled services;

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[3] "The State of Broadband 2012: Achieving Digital Inclusion for All". A report by the Broadband Commission for Digital Development, September 2012. (Available at http://www.broadbandcommission.org/Documents/publications/bb-annualreport2012.pdf).

f) that development and implementation of a national broadband plan, policy or strategy is essential to broadband development and economic growth;

g) the work of the Internet Society (ISOC), the Internet Exchange Federation (IEF) and the regional IXP associations and other stakeholders to support the establishment of IXPs in developing countries in order to promote better connectivity,

resolves

1 to encourage greater coordination by BDT, and encourage the private sector to continue playing a significant role in supporting initiatives that foster access to and uptake of broadband connectivity by utilizing the most appropriate technology mix approach, with the aim of providing citizens greater access to ICT applications in support of national broadband strategies;

2 to promote availability, accessibility, reliability and affordability of broadband in developing countries by enabling Member States to develop national broadband policies and implementation strategies based on careful evaluation of supply and demand for broadband;

3 that BDT should support the implementation of regional and national projects for the use of terrestrial and satellite broadband communication systems to provide the population with services, including mobile services and applications such as e-government, e-health and e-education, as well as mobile money transfer and transactions, mobile payment, mobile banking and mobile marketing, on the basis of cooperation with interested Member States, relevant international organizations and the private sector;

4 that BDT, taking into account available experience and the strategy for bridging the digital divide and building the global information society, should formulate and implement a programme to develop proposals and recommendations on the most effective and efficient use of technology, including telecommunication services for broadband connectivity at regional and national level, acting in association with ITU connectivity initiatives as appropriate,

instructs the Director of the Telecommunication Development Bureau

1 to seek partnerships and cooperation with parties directly involved in the provision of services to the population using the most practical telecommunication technology, facilities and networks, to ensure effective implementation of the relevant ITU programmes and activities in the development of broadband connectivity, providing reliable broadband access at affordable prices to both existing and new users in underserved and unserved communities;

2 to establish clear links between the broadband study Question(s), programmes and regional initiatives in order to maximize the use of human and financial resources and, most importantly, better meet the needs of developing countries;

3 to assist Member States in increasing connectivity and reducing costs by establishing national and regional IXPs to help connect landlocked developing countries (LLDCs);

4 to work in collaboration with ITU-T, ISOC, IEF and the regional IXP associations and other stakeholders to support developing countries, particularly LLDCs, in accessing effective advice and support on the establishment of IXPs;

5 to explore options to facilitate broadband connectivity, in close collaboration with the ITU Radiocommunication Sector (ITU-R) and ITU-T,

invites Member States

1 to create and promote widespread affordable access to broadband communication infrastructure through enabling legal and regulatory environments, including the availability of spectrum for new broadband wireless access technologies and licensing policies that are fair, transparent, stable, predictable and non-discriminatory;

2 to undertake all efforts to foster an enabling environment for the greater growth and development of technology-neutral broadband connectivity, in particular in developing countries;

3 to actively contribute to the broadband study Question(s);

4 to implement the results of the work performed on the study Question(s), including legal, regulatory and market reforms that create an enabling environment for broadband by promoting competition, private investment and public-private partnerships;

5 to implement policies and plans to encourage the availability of services, applications and content that stimulate demand for broadband;

6 to adopt measures that promote human capacity building, including digital literacy programmes and technical education, taking account of the need to promote broadband access for women and girls, persons with disabilities, people living in rural and remote areas and indigenous peoples.

RESOLUTION 78 (Rev. Buenos Aires, 2017)

Capacity building for countering and combating misappropriation and misuse of ITU Telecommunication Standardization Sector numbering resources

The World Telecommunication Development Conference (Buenos Aires, 2017),

considering

the provisions of Chapter IV the ITU Constitution, on the ITU Telecommunication Development Sector (ITU-D), particularly with regard, *inter alia*, to the functions of ITU-D for building awareness of the impact of telecommunications/information and communication technologies (ICTs) on national economic and social development, its catalytic role in promoting the development, expansion and operation of telecommunication services and networks, especially in developing countries, and the need to maintain and enhance cooperation with regional and other telecommunication organizations,

considering further

a) Resolution 22 (Rev. Buenos Aires, 2017) of this conference, on alternative calling procedures on international telecommunication networks and identification of origin in providing international telecommunication services;

b) Resolution 190 (Busan, 2014) of the Plenipotentiary Conference, on countering misappropriation and misuse of international telecommunication numbering resources;

c) Resolution 61 (Rev. Dubai, 2012) of the World Telecommunciation Standardization Assembly, on countering and combating misappropriation and misuse of international telecommunication numbering resources;

d) the resolutions from previous world telecommunication development conferences in regard to countries in special need;

e) the work carried out to date in ITU-D to assist countries in understanding and countering the misappropriation of Recommendation ITU-T E.164 telephone numbers, through ITU-D programmes, activities and projects,

noting

a) the significantly reduced number of cases reported to the Director of the Telecommunication Standardization Bureau (TSB) regarding misappropriation and misuse of E.164 international telecommunication numbering resources;

b) that Member States are responsible for managing E.164 international telecommunication numbering resources behind country codes assigned to them under Recommendation ITU-T E.164;

c) that many Member States, particularly developing countries[1], have been significantly and adversely affected by misappropriation of E.164 international telecommunication numbering resources;

d) that many telecommunication operators have been significantly and adversely affected by misappropriation of E.164 international telecommunication numbering resources;

e) Recommendation ITU-T E.156, which sets out guidelines for ITU Telecommunication Standardization Sector (ITU-T) action on reported misuse of ITU-T E.164 numbers, and Supplement 1 to Recommendation ITU-T E.156, which provides a best-practice guide on countering misuse of ITU-T E.164 numbering resources,

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

recognizing

a) that there is a need to counter and combat misappropriation and misuse of E.164 international telecommunication numbering resources assigned in accordance with Recommendation ITU-T E.164;

b) that the allocation of global telephone numbering resources is managed by the Director of TSB in accordance with ITU-T Recommendations;

c) that the management and allocation of national telephone numbering resources is the responsibility of Member States, and that such management is their sovereign right and reflected in national regulatory and legal frameworks;

d) that differences exist between Member States in their approach to managing their national telephone numbering resources;

e) that Member States have the right to impose rules on the parties to whom they allocate telephone numbering resources, for example through national numbering plan authorities;

f) that telecommunication operators and operating agencies must act in accordance with all international rules and applicable national regulatory and legal frameworks of the Member State in which the number is being used,

requests the Director of the Telecommunication Development Bureau

1 to publish, identify, promote and use the documents and research produced thus far as a template for future activity in order to allow consistent identification of the issues and to combat misappropriation of E.164 international telecommunication numbering resources;

2 to utilize notifications of misappropriation of E.164 international telecommunication numbering resources submitted to support consistent identification of E.164 international telecommunication numbering resource misappropriation issues;

3 to assist, at the request of Member States, in developing their capability to counter misappropriation of E.164 international telecommunication numbering resources;

4 to continue to work with regions, subregions and countries, in particular developing countries and least developed countries, to develop national legal and regulatory frameworks that are sufficient to ensure best practices in the management of E.164 international telecommunication numbering resources in order to counter their misappropriation,

requests the Director of Telecommunication Development Bureau, in cooperation with the Director of the Telecommunication Standardization Bureau

1 to ensure that national numbering plans are available, either directly from the Member State or via the ITU Operational Bulletin, using the format specified in Recommendation ITU-T E.129, in order to contribute to countering misappropriation of E.164 international telecommunication numbering resources;

2 to be responsive to Member State requests, particularly those from developing countries and small island developing states, with a view to developing, supporting and acting on best practices in combating misappropriation of E.164 international telecommunication numbering resources, resulting in templates, proposals, guidelines and resolutions to counter and combat such misappropriation;

3 to work cooperatively in order to continue to develop measures based on proven best practices for countering misappropriation of E.164 international telecommunication numbering resources,

invites Member States

1 to collaborate in order to identify, counter and combat activities associated with misappropriation of E.164 international telecommunication numbering resources;

2 to support the development and deployment of best practices in the management of E.164 international telecommunication numbering resources within their jurisdiction;

3 to work collaboratively with other Member States, with telecommunication operators and with operating agencies in order to keep them informed of the rules, guidelines and allocation methods for E.164 international telecommunication numbering resources within their country;

4 to gather information on legislative initiatives for countering the misappropriation and misuse of E.164 international telecommunication numbering resources and to facilitate the dissemination of that information,

invites Member States and Sector Members

to contribute to the development of best practices for countering misappropriation of E.164 international telecommunication numbering resources, and to encourage administrations and international telecommunication operators to ensure that E.164 international telecommunication numbering resources are used only by the assignees and only for the purposes for which they were assigned, and that unassigned resources are not used.

RESOLUTION 79 (Rev. Buenos Aires, 2017)

The role of telecommunications/information and communication technologies in combating and dealing with counterfeit telecommunication/information and communication devices

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 177 (Rev. Busan, 2014) of the Plenipotentiary Conference, on conformance and interoperability (C&I);

b) Resolution 188 (Busan, 2014) of the Plenipotentiary Conference, on combating counterfeit telecommunication/information and communication technology (ICT) devices;

c) Resolution 176 (Rev. Busan, 2014) of the Plenipotentiary Conference, on human exposure to and measurement of electromagnetic fields (EMF);

d) Resolution 72 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly (WTSA), on measurement and assessment concerns related to human exposure to EMF;

e) Resolution 62 (Rev. Buenos Aires, 2017) of this conference, on measurement concerns related to human exposure to EMF;

f) Resolution 182 (Rev. Busan, 2014) of the Plenipotentiary Conference, on the role of telecommunications/ICTs in regard to climate change and the protection of the environment;

g) Resolution 96 (Hammamet, 2016) of WTSA, on ITU Telecommunication Standardization Sector (ITU-T) studies for combating counterfeit telecommunication/ICT devices;

h) Resolution 174 (Rev. Busan, 2014) of the Plenipotentiary Conference, on ITU's role with regard to international public policy issues relating to the risk of illicit use of ICTs;

i) Resolution 64 (Rev. Buenos Aires, 2017) of this conference, on protecting and supporting users/consumers of telecommunication/ICT services;

j) Resolution 76 (Rev. Hammamet, 2016) of WTSA, on studies related to C&I testing, assistance to developing countries[1], and a possible future ITU Mark programme;

k) Resolution 47 (Rev. Buenos Aires, 2017) of this conference, on enhancement of knowledge and effective application of ITU Recommendations in developing countries, including C&I testing of systems manufactured on the basis of ITU Recommendations, and in particular assistance to developing countries in addressing their fears in relation to counterfeit equipment;

l) Resolution 79 (Dubai, 2012) of WTSA, on the role of telecommunications/ICTs in handling and controlling e-waste from telecommunication and information technology equipment and methods of treating it,

recognizing

a) the noticeably growing sales and circulation of counterfeit telecommunication/ICT devices in the markets, which have an adverse impact on governments, manufacturers, vendors, operators and consumers through: loss of revenues, erosion of brand value/intellectual property rights (IPRs) and reputation, network disruptions, poor quality of service (QoS) and potential hazard to public health and safety, as well as the environmental impact of e-waste;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

b) that ITU's Conformity and Interoperability and Bridging Standardization Gap programmes are intended to add value, by bringing clarity to standardization processes and product conformity with international standards;

c) that industry initiatives have been created to establish collaboration between operators, manufacturers and consumers;

d) that counterfeit telecommunication/ICT products and devices have become a growing problem in the world, adversely affecting to a large extent all stakeholders in the ICT field (vendors, governments, operators and consumers);

e) that mobile devices rely on unique device identifiers to limit and deter the proliferation of counterfeit mobile devices;

f) that counterfeit telecommunication/lCT devices may negatively impact on security and privacy for users;

g) that Recommendation ITU-T X.1255 provides a framework for discovery of identity management information that can help in combating counterfeiting of telecommunication/ICT devices;

h) that several countries have introduced some awareness-raising campaigns, practices and regulations in their markets in order to limit and deter counterfeit products and devices, which have had a positive impact, and that developing countries may benefit from this experience;

i) that counterfeit telecommunication/ICT devices may contain unacceptable levels of hazardous substances, threatening consumers and the environment,

taking into account

a) that, with the boom in telecommunications/ICTs, counterfeit telecommunication/ICT devices have increased noticeably in recent times;

b) that these counterfeit devices affect economic growth and IPRs, impede innovation, are hazardous to health and safety and have an impact on the environment and the increasing amount of harmful e-waste;

c) that counterfeiting of these devices poses a complex challenge and increases the risks of network disruption and interoperability difficulties that reduce the quality of telecommunication/ICT services;

d) that ITU and relevant stakeholders have a key role to play in fostering coordination between the parties concerned to study the impact of counterfeit devices and the mechanism for limiting them and to identify ways of dealing with them internationally and regionally,

noting

a) that individuals or entities engaged in manufacturing and trading of counterfeit telecommunication/ICT devices are continually developing and enhancing their capabilities and means of illegal activities to circumvent Member States' and other affected parties' legal and technical efforts to combat counterfeit telecommunication/ICT products and devices;

b) that supply and demand economics for counterfeit telecommunication/ICT products complicate attempts to tackle the global black/grey market, and that no single solution is easily envisaged,

aware

a) that governments play an important role in combating the manufacture of and international trade in counterfeit and copied devices by formulating appropriate strategies, policies and legislation;

b) of the related work and studies in ITU-T Study Groups 5, 11, 17, and 20;

c) of the ongoing work and studies in Study Group 1 and Study Group 2 of the ITU Telecommunication Development Sector (ITU-D);

d) that there is ongoing cooperation with standards-development organizations (SDOs), the World Trade Organization (WTO), the World Intellectual Property Organization (WIPO), the World Health Organization (WHO) and the World Customs Organization (WCO) on matters related to counterfeit products,

considering

a) that a counterfeit telecommunication/ICT device is a product that explicitly infringes the trademark, copies hardware or software designs, or infringes brand or packaging rights of an original or authentic product and, in general, infringes applicable national and/or international technical standards, regulatory requirements or conformity processes, manufacturing licensing agreements, or other applicable legal requirements;

b) that tampered telecommunication/ICT devices are devices that have components, software, a unique identifier, an item protected by IPRs or a trademark tentatively or effectively altered without the explicit consent of the manufacturer or its legal representative;

c) that tampering telecommunication/ICT devices, especially the ones that clone a legitimate identifier, may diminish the effectiveness of solutions adopted by the countries when addressing counterfeiting;

d) that ITU and other relevant stakeholders have key roles to play in fostering coordination between the parties concerned in order to study the impact of counterfeit and tampered telecommunication/ICT devices and the mechanism for limiting their use, and to identify ways of dealing with them both internationally and regionally,

e) the work of ITU-T, particularly Study Group 11, on tampering and its relationship with counterfeit devices;

resolves to instruct the Director of the Telecommunication Development Bureau, in close collaboration with the Director of the Telecommunication Standardization Bureau and the Director of the Radiocommunication Bureau

1 to continue to increase and develop ITU activities on combating, and ways of limiting the spread of, counterfeit devices;

2 to assist Member States, particularly developing countries, in addressing their concerns regarding counterfeit devices;

3 to continue to work in collaboration with stakeholders (such as WTO and WIPO), including academia and relevant organizations, to coordinate activities relating to combating counterfeit devices through study groups, focus groups and other related groups;

4 to organize seminars and workshops to raise awareness of the health and environmental risks of using counterfeit devices and ways of limiting them, particularly in developing countries, which are the most at risk from the dangers of counterfeit devices;

5 to continue assisting developing countries attending these workshops and seminars by providing fellowships and remote participation;

6 in collaboration with WTO, WIPO and other relevant bodies, to restrict the trading, export and circulation of counterfeit devices internationally;

7 to submit periodic reports on the implementation of this resolution,

invites the Director of the Telecommunication Development Bureau

to provide information on a periodic basis on international and regional testing, type-approval and accreditation bodies and laboratories,

instructs Study Groups 1 and 2 of the ITU Telecommunication Development Sector, within their mandate, as appropriate, in collaboration with the relevant ITU study groups

1 to prepare and document examples of best practices on limiting counterfeit devices, for distribution to ITU Member States and Sector Members;

2 to prepare guidelines, methodologies and publications to assist Member States in identifying counterfeit devices and methods of increasing public awareness to restrict trade in these devices, as well as the best ways of limiting them, taking into account ongoing studies conducted by ITU-T Study Group 11;

3 to study the impact of counterfeit telecommunication/ICT devices being transported to developing countries;

4 to continue studying safe ways of disposing of the harmful e-waste from the counterfeit devices currently in circulation in the world;

5 to cooperate with relevant ITU-T study groups, in particular Study Group 11 as the lead study group in the area of combating counterfeit telecommunication/ICT devices,

invites Member States

1 to take all necessary measures to combat counterfeit devices and to review their regulations;

2 to cooperate and exchange expertise among themselves in this area;

3 to incorporate policies to combat counterfeit devices in their national telecommunication/ICT strategies;

4 to raise awareness among consumers regarding the negative impacts of counterfeit devices.

RESOLUTION 80 (Rev. Buenos Aires, 2017)

Establishing and promoting trusted information frameworks in developing countries to facilitate and encourage electronic exchanges of economic information between economic partners

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 135 (Rev. Busan, 2014) of the Plenipotentiary Conference, on ITU's role in the development of telecommunications/information and communication technologies (ICTs), in providing technical assistance and advice to developing countries and in implementing relevant national, regional and interregional projects;

b) Resolution 181 (Guadalajara, 2010) of the Plenipotentiary Conference, on definitions and terminology relating to building confidence and security in the use of ICTs;

c) Resolution 71 (Rev. Buenos Aires, 2017) of this conference, on strengthening cooperation between Member States and Sector Members of the ITU Telecommunication Development Sector (ITU-D), including the private sector;

d) Resolution 50 (Rev. Dubai, 2014) of the World Telecommunication Development Conference (WTDC), on optimal integration of ICTs;

e) Resolution 48 (Rev. Buenos Aires, 2017) of this conference, on strengthening cooperation among telecommunication regulators;

f) Resolution 54 (Rev. Dubai, 2014) of WTDC, on ICT applications;

g) Resolution 45 (Rev. Dubai, 2014) of WTDC, on mechanisms for enhancing cooperation on cybersecurity, including countering and combating spam,

considering

a) current difficulties in establishing business partnerships in developing countries;

b) the important role that national telecommunication/ICT policy can play in stimulating innovation and investment in new technologies that enable the rapid evolution of the market for goods and services;

c) the sovereign right of each country to establish its national telecommunication/ICT priorities and policies;

d) the importance of telecommunication networks and ICT infrastructure for economic development;

e) that the amount of information being exchanged by electronic means among developing countries at national and regional levels is growing, and its development potential is undeniable;

f) the potential for broader access to a range of telecommunication/ICT applications and services that are readily available to facilitate economic development, enabling companies to adopt technologies that may potentially broaden their offering through services based on platforms capable of making them more competitive;

g) that the World Summit on the Information Society adopted specific action lines in its Plan of Action, including in particular:

– Action Line C1: The role of governments and all stakeholders in the promotion of ICTs for development

– Action Line C2: Information and communication infrastructure: An essential foundation for the information society

– Action Line C5: Building confidence and security in the use of ICTs

– Action Line C6: Enabling environment

– Action Line C7: ICT applications: Benefits in all aspects of life,

noting

a) the adoption and implementation of the Hyderabad Action Plan (WTDC-10), which incorporated provisions on the development of telecommunication/ICT services in developing countries through various programmes, in particular Programme 2 on cybersecurity, ICT applications and IP-based network-related issues and Programme 3 on the enabling environment;

b) that this conference has reaffirmed, in its Declaration and resolutions, a commitment to:

– foster international cooperation on telecommunication/ICT development issues;

– create an enabling environment conducive to telecommunication/ICT development;

– enhance confidence and security in the use of telecommunications/ICTs, and roll-out of relevant applications and services,

recognizing

a) that effective deployment and use of ICTs is an important factor in implementing social, cultural, economic and environmental development programmes, especially in developing countries;

b) the growing level of electronic communications and economic information exchanges at the regional level within and between the developing countries;

c) that ICTs have helped to transform business models and organizational structures in countries and are thus a key asset for an enterprise or a country in becoming integrated into the new global economy;

d) that the establishment of trusted information frameworks between economic partners will increase confidence in, and encourage the use of, exchanges of economic information through electronic means, and will be a key factor in future growth of the digital economy at the global level;

e) the work already being carried out by other international and private-sector organizations in the fields of trusted information frameworks and electronic commerce,

conscious

a) that the modernization of telecommunication networks and the development of services and applications associated with ICTs in these countries will be an important factor in their economic development and will offer them an opportunity to lay the foundations of an inclusive information society;

b) of the potential beneficial impact for developing countries of the establishment of trusted information frameworks to facilitate the electronic exchange of economic information in the world of business and, in particular, their importance to actors involved in the digital economy;

c) that the removal of existing obstacles to the development of electronic exchanges of economic information in the developing countries depends on establishing trusted information frameworks that encourage the creation of new regional partnerships between administrations, businesses and individuals, taking account of national regulatory frameworks governing the exchange of such information,

resolves

that relevant ITU-D and ITU Telecommunication Standardization Sector (ITU-T) study groups, to the extent possible, take into account the aims of this resolution in studies under Questions pertaining to ICT applications,

instructs the Director of the Telecommunication Development Bureau

1 to act as a catalyst in enhancing international and regional cooperation among Member States, especially regarding the use of ICT applications and services to facilitate electronic exchanges of economic information between economic partners;

2 to invite ITU-D Study Group 2 to take into account the aims of this resolution when studying new Question 1/2 (Creating smart society: Employing ICTs for sustainable social and economic development);

3 to assist developing countries to take advantage of resources and services provided by the public and private sectors and relevant organizations at the regional and international levels on global standards and best practices for establishing trusted information frameworks and mechanisms that facilitate electronic exchanges of economic information between economic partners, taking into consideration the national regulatory frameworks relating to such information,

invites Member States and Sector Members

1 to encourage the creation of an enabling framework for international and regional partnerships in which countries identify their needs in terms of electronic exchanges of economic information, and assess the feasibility of associated operational and technical interoperability frameworks;

2 to organize forums and workshops, at regional and international level, dealing with aspects of the development of trusted information frameworks for electronic exchange of economic information based on global standards and best practices.

RESOLUTION 81 (Rev. Buenos Aires, 2017)

Further development of electronic working methods for the work of the ITU Telecommunication Development Sector

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 167 (Rev. Busan, 2014) of the Plenipotentiary Conference, on strengthening ITU capabilities for electronic meetings and means to advance the work of the Union;

b) Resolution 66 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference, on documents and publications of the Union, regarding the electronic availability of documents;

c) Resolution 32 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly, on strengthening electronic working methods (EWM) for the work of the ITU Telecommunication Standardization Sector (ITU-T), and the implementation of EWM capabilities and associated arrangements in the work of ITU-T,

considering

a) the rapid technological change in the field of telecommunications and the associated policy, regulatory and infrastructure adaptations required at national, regional and global levels;

b) the consequent need for the widest possible engagement of the ITU membership from around the world to address these matters in the work of the Union;

c) that developments in technologies and facilities for the holding of electronic meetings and the further development of EWM will enable more open, rapid and easy collaboration between participants in the activities of ITU, which may be paperless;

d) that the implementation of EWM capabilities and associated arrangements will have significant benefits for the membership of the ITU Telecommunication Development Sector (ITU-D), including resource-limited individuals, organizations and States, by allowing them timely and effective access to standards information and the standards-making and approval process;

e) that EWM will be advantageous towards improving communication among members of ITU-D and between other relevant standardization organizations and ITU, towards globally harmonized standards;

f) the key role of the Telecommunication Development Bureau (BDT) in providing support to EWM capabilities,

recognizing

a) the budgetary difficulty developing countries[1] have in participating actively in face-to-face ITU-D meetings;

b) that numerous ITU-D meetings and ITU meetings as a whole are already available as audio and video webcasts and that the use of videoconferencing, audioconference calls, real-time captioning and web-based collaboration tools for electronic participation in certain types of meetings has been advanced in meetings of the Sectors and the General Secretariat;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

c) that, at the regional and national levels, considerable progress has also been made in the use of EWM,

recognizing further

a) the difficulties that developing countries, in particular least developed countries, could have in implementing electronic working methods;

b) that the time difference between regions complicates remote participation in meetings,

mindful

that some activities and procedures associated with certain ITU-D meetings still require direct face-to-face participation by the Union's membership,

noting

a) that, as an alternative to face-to-face meetings, there are benefits in utilizing electronic meetings to progress discussions;

b) that the existence of electronic meetings, with well-documented rules and procedures, will help ITU-D in widening the involvement of potential stakeholders, particularly from developing countries, who are unable to participate in face-to-face meetings;

c) that electronic meetings may lead to increased efficiency of the activities of ITU-D and reduction of costs for all parties, for example by reducing the need for travel and reducing the need for printed copies of documents, thereby contributing to climate neutrality;

d) that different modes of participation are suitable for different types of meetings;

e) that there is a need for procedures to ensure fair and equitable participation by all;

f) that electronic meetings can contribute to bridging the digital divide;

g) that there needs to be a coordinated and harmonized approach to the EWM technologies used, both in ITU-D and in ITU as a whole,

noting further

a) the desire of members to receive documents in electronic format in a timely manner and the need to reduce the increasing amount of hard-copy documentation generated during meetings and dispatched by mail;

b) that many forms of EWM have already been implemented by ITU-D, such as electronic document submission and the electronic forum service;

c) the preferred use of portable computers by members during meetings;

d) the advantage to the membership of facilitating greater electronic participation in the work of rapporteur groups, study groups and the Telecommunication Development Advisory Group (TDAG), in particular by members unable to participate in meetings in Geneva and elsewhere;

e) the difficulties in terms of bandwidth availability and other constraints, particularly in developing countries;

f) the economies possible from enhancing ITU-D EWM capabilities (e.g. reduced costs for distribution of paper documentation, travel costs, etc.);

g) the experience of collaboration using EWM gained by the other ITU Sectors and other organizations;

h) that the use of EWM often helps to broaden significantly the opportunities for attracting experts to participate in ITU events, including events associated with the ITU Academy and centres of excellence,

resolves

1 to further develop facilities and capabilities for remote participation by electronic means in appropriate meetings of ITU-D;

2 to build upon trials for electronic meetings, such that their subsequent implementation is technology-neutral, to the greatest extent possible, and cost effective, in order to allow broad participation, satisfying the necessary security requirements;

3 that the principal EWM objectives of ITU-D are:

- that collaboration between ITU-D members on the development and dissemination of texts should also be by electronic means, bearing in mind that the procedure for the approval of documents is specified in Resolution 1 (Rev. Buenos Aires, 2017) of this conference;

- that BDT, in close collaboration with the Radiocommunication Bureau (BR) and the Telecommunication Standardization Bureau (TSB), should provide facilities and capabilities for EWM at meetings, workshops and training, particularly to assist developing countries, least developed countries, small island developing states, landlocked developing countries and countries with economies in transition that have bandwidth limitations and other constraints;

- to encourage electronic participation of developing countries in ITU-D meetings, by providing simplified facilities and guidelines, and by waiving any expenses on those participants, other than the local call or Internet connectivity charges;

- that BDT should provide all members of ITU-D with appropriate and ready access to electronic documentation for their work, including a global, unified and consolidated view of document traceability;

- to continue to develop regional EWM systems for all regions, including videoconferencing systems based at ITU's regional and area offices worldwide;

- that BDT should provide appropriate systems and facilities to support the conduct of ITU-D's work by electronic means;

- that all activities, procedures, studies and reports of ITU-D study groups be posted on the ITU-D website in an easy manner to navigate and find all relevant information,

instructs the Director of the Telecommunication Development Bureau

1 to take action, in consultation with TDAG, in order to provide appropriate electronic participation or observation facilities in ITU-D meetings for delegates unable to attend face-to-face meetings;

2 to elaborate, together with the General Secretariat and Bureaux of the other Sectors, a coordinated and harmonized approach to the EWM technology used in ITU;

3 to involve TDAG in the evaluation of the use of electronic meetings and to develop further procedures and rules associated with electronic meetings, including the legal aspects;

4 to continue to implement and regularly update the EWM action plan to address the practical and physical aspects of increasing ITU-D's EWM capability, including the use of tools such as videoconferencing;

5 to ensure that the objectives referred to in *resolves* 2 above are systematically addressed in the EWM action plan, including individual action items identified by the ITU-D membership or BDT, and to establish their priority and management in consultation with TDAG;

6 to identify and review costs and benefits of the action items on a regular basis;

7 to report to each meeting of TDAG on the status of the EWM action plan, including the results of the cost and benefit reviews described above;

8 to assign the executive authority, budget within BDT and resources to execute the EWM action plan as swiftly as possible;

9 to continue to develop and disseminate guidelines for the use of ITU-D EWM facilities and capabilities;

10 to take action in order to provide appropriate electronic participation or observation facilities (e.g. webcast, audioconference, webconference, document sharing, videoconference, etc.) in ITU-D meetings, workshops and training courses for delegates unable to attend events in person, and to coordinate with BDT to assist in the provision of such facilities;

11 to continue promoting EWM so as to encourage and facilitate the participation of all developing countries in the work of ITU-D;

12 to provide an ITU-D website that is easy to navigate to find all relevant information, with use of the Union's six official languages on an equal footing;

13 to report to the ITU Council on an ongoing basis on the developments made with regard to electronic meetings, in order to assess progress in their use within ITU,

instructs the Telecommunication Development Advisory Group

1 to continue to participate in the development and implementation of the action plan on EWM and on further procedures and rules associated with electronic meetings, including the legal aspects;

2 to review the status of the EWM action plan on a regular basis,

invites Sector Members of the ITU Telecommunication Development Sector

to assist BDT in implementing the EWM action plan.

RESOLUTION 82 (Dubai, 2014)

Preserving and promoting multilingualism on the Internet for an inclusive information society

The World Telecommunication Development Conference (Dubai, 2014),

considering

a) the provisions of Resolutions 101 and 102 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference, on ITU's role with regard to international public policy issues pertaining to the Internet and the management of Internet resources, including domain names and addresses;

b) Resolution 133 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference, on the role of administrations of Member States in the management of internationalized (multilingual) domain names;

c) Resolution 154 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference, on the use of the six official languages of the Union on an equal footing;

d) Resolution 69 (Rev. Dubai, 2012) of the World Telecommunication Standardization Assembly (WTSA), on non-discriminatory access and use of Internet resources;

e) that the mission of the ITU Telecommunication Development Sector (ITU-D) falls within the more general framework of ITU's purposes, laid down in Article 1 of the ITU Constitution, and is formulated as follows: "The mission of the ITU Telecommunication Development Sector (ITU-D) shall be to foster international cooperation and solidarity in the delivery of technical assistance and in the creation, development and improvement of telecommunication/information and communication technology (ICT) equipment and networks in developing countries. ITU-D is required to discharge the Union's dual responsibility as a United Nations specialized agency and executing agency for implementing projects under the United Nations development system or other funding arrangements, so as to facilitate and enhance telecommunication/ICT development by offering, organizing and coordinating technical cooperation and assistance activities",

recalling

Resolution 20 (Rev. Hyderabad, 2010) of the World Telecommunication Development Conference (WTDC), on non-discriminatory access to modern telecommunication/ICT facilities, services and related applications,

recognizing

a) Articles 19 and 27 of the Universal Declaration of Human Rights of 1948, to the effect that: "Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers", and "Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits…";

b) Article 27 of the International Covenant on Civil and Political Rights of 1966, and the International Covenant on Economic, Social and Cultural Rights of 1966, designed to impose specific obligations in regard to protection against sexual, religious, racial or other forms of discrimination, which stipulates that: "In those States in which ethnic, religious or linguistic minorities exist, persons belonging to such minorities shall not be denied the right, in community with the other members of their group, to enjoy their own culture, to profess and practise their own religion, or to use their own language";

c) United Nations General Assembly (UNGA) Resolution 47/135 of 18 December 1992, adopting the Declaration on the rights of persons belonging to national or ethnic, religious and linguistic minorities, which states that: "States shall protect the existence and the national or ethnic, cultural, religious and linguistic identity of minorities within their respective territories and shall encourage conditions for the promotion of that identity";

d) the United Nations Administrative Committee on Coordination (ACC) Statement of 1997 on universal access to basic communication and information services, which asserts that: "... the information and technology gap and related inequities between industrialized and developing nations are widening: a new type of poverty – information poverty – looms";

e) § 25 of the Millennium Declaration approved by UNGA, which refers to measures aimed at increasing the effectiveness of the United Nations in human rights and public information efforts;

f) UNGA Resolution 35/201, approved at the 97th plenary session on 16 December 1980, transmitting the recommendation on promotion and use of multilingualism and universal access to cyberspace;

g) the report drawn up by the Organisation for Economic Co-operation and Development (OECD), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Internet Society in 2012, entitled "The relationship between local content, Internet development and access prices", which informs us that there is a strong correlation between the development of local network infrastructure and the growth of local content, that local content is growing in volume as a result of investment worldwide, and that its composition is changing and local content is no longer dominated by developed countries, but is more representative of the diversity of multiple cultures, languages and communities existing in the world[1],

emphasizing

a) the role played by ITU in the successful organization of the two phases of the World Summit on the Information Society (WSIS), and that the Geneva Declaration of Principles and the Geneva Plan of Action, adopted in 2003, and the Tunis Commitment and the Tunis Agenda for the Information Society, adopted in 2005, have been endorsed by UNGA;

b) the WSIS 2003 Declaration of Principles and its commitment to "build a people-centred, inclusive and development-oriented information society, where everyone can create, access, utilize and share information and knowledge";

c) that the Internet is a subject of valid international interest and must flow from full multistakeholder cooperation, with a duty to guarantee equitable distribution of resources, facilitate access for all and guarantee stable and secure functioning of the Internet, having due regard to multilingualism, on the basis of the outcomes of the two phases of WSIS;

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[1] Report available at http://www.internetsociety.org/localcontent/

d) that the Geneva Declaration of Principles aimed at "building the information society: a global challenge in the new millennium" establishes, as one of its fundamental principles, under § B8 (Cultural diversity and identity, linguistic diversity and local content), that "the creation, dissemination and preservation of content in diverse languages and formats must be accorded high priority in building an inclusive information society, paying particular attention to the diversity of supply of creative work and due recognition of the rights of authors and artists. It is essential to promote the production of and accessibility to all content – educational, scientific, cultural or recreational – in diverse languages and formats. The development of local content suited to domestic or regional needs will encourage social and economic development and will stimulate participation of all stakeholders, including people living in rural, remote and marginal areas";

e) that the aforementioned Declaration of Principles also asserts that "the preservation of cultural heritage is a crucial component of identity and self-understanding of individuals that links a community to its past. The information society should harness and preserve cultural heritage for the future by all appropriate methods, including digitization";

f) that, similarly, at the WSIS meeting in Geneva, UNESCO introduced its concept of knowledge societies, emphasizing plurality, diversity and inclusion, and highlighting that the use of ICTs has to take into account universally recognized human rights, focusing on four principles: freedom of expression, universal access to information and knowledge, cultural and linguistic diversity and quality education for all;

g) that the UNESCO Convention of 2005 on the Protection and Promotion of the Diversity of Cultural Expression stipulates that: "Equitable access to a rich and diversified range of cultural expressions from all over the world and access of cultures to the means of expressions and dissemination constitute important elements for enhancing cultural diversity and encouraging mutual understanding";

h) that UNESCO has provided assistance to Member States in the implementation of the policy guidelines assembled in the recommendations for decision-makers, and carried out various training activities in respect of universal access to information and the promotion and use of multilingualism, in conjunction with the Organization of American States (OAS);

i) that the Paris Declaration on Open Educational Resources of 2012 recommends that States, within their capacities and authority, *inter alia*, promote the understanding and use of open educational resources, facilitate enabling environments for use of ICTs, reinforce the development of strategies and policies on open educational resources and encourage the development and adaptation of open educational resources in a variety of languages and cultural contexts,

taking into account

a) that International Mother Language Day, proclaimed by the UNESCO General Conference in November 1999, has been observed yearly since 2000 to promote linguistic and cultural diversity and multilingualism, and that the 2011 edition focused on the theme "Information and communication technologies for the safeguarding and promotion of languages and linguistic diversity";

b) that, in the changing telecommunication/ICT environment, a continuing challenge facing the Union is to remain a pre-eminent intergovernmental organization where Member States, Sector Members and Associates work together to enable the growth and sustained development of telecommunications and information networks and applications, and to facilitate universal access so that people everywhere can participate in, and benefit from, the emerging information society;

c) that ITU is deploying maximum efforts, in collaboration and coordination with competent organizations in the field of Internet governance, to bring the greatest possible benefits to the world community;

d) that, at the operational level, ITU has been carrying out the tasks assigned under the WSIS outcomes, in its capacity as: lead facilitator (along with UNESCO and the United Nations Development Programme (UNDP)) for coordinating the multistakeholder implementation of the Geneva Action Plan; facilitator for Action Lines C2 (Information and communication infrastructure) and C5 (Building confidence and security in the use of ICTs) and, at UNDP's request, having accepted to play the role of facilitator for Action Line C6 (Enabling environment); co-facilitator for Action Lines C1 (Role of governments and all stakeholders in the promotion of ICTs for development), C3 (Access to information and knowledge), C4 (Capacity building), C7 (ICT applications: Benefits in all aspects of life) and C11 (International and regional cooperation); and partner in Action Lines C8 (Cultural diversity and identity, linguistic diversity and local content) and C9 (Media);

e) the 2012 report by the Broadband Commission for Digital Development, which makes it clear that content and broadband-enabled services in local languages as well as the capacities of local communities to create and share content are important drivers of the use of broadband infrastructure by local population;

f) the 2013 report of the Broadband Commission for Digital Development, which presents a series of strategies that governments worldwide, in particular the developing countries and other entities interested in education, should adopt in order to derive maximum benefit from the advantages offered by ICTs, including promoting mobility of education and open educational resources, supporting the development of content adapted to local contexts and languages, etc., pointing to the need to create ecosystems of online educational applications and services with local and homegrown content,

resolves to instruct the Director of the Telecommunication Development Bureau, in collaboration with the Director of Telecommunication Standardization Bureau

to include in the work programmes of relevant ITU-D study groups necessary actions to preserve and promote multilingualism on the Internet and the provision of a huge range of social services, from health to education, with focus on the development of digital content from popular cultures and minority groups using a range of non-mainstream languages which are currently not covered in the Internet, in order to contribute from ITU-D's vantage point, with the Member States, to guaranteeing digital inclusion, building an inclusive and plural information society, and prompting calls for action within the framework of ITU so as to ensure that the importance of preserving linguistic and cultural diversity is recognized, within the framework and available budgetary resources of ITU-D,

further instructs the Director of the Telecommunication Development Bureau

1 to ensure that, in all ITU-D programmes, projects and activities, due account is taken of the need to resolve the issues that hamper the preservation and promotion of multilingualism in the digital ecosystem of the Internet and associated services;

2 to consider holding seminars, symposia or forums for policy-makers, telecommunication/ICT regulators, Sector Members and interested stakeholders, at which public policies for protecting linguistic and cultural diversity of communities, peoples and minority groups and persons with specific needs are presented and discussed, so that their voices are heard and their identities, lifestyles, etc., are taken into account;

3 to collaborate with the Radiocommunication Bureau and the Telecommunication Standardization Bureau in regard to their activities to promote awareness and mainstream policies, and in the creation of programmes and projects that help developing countries foster linguistic diversity and multilingualism on the Internet;

4 to provide advice to, evaluate and supervise projects, initiatives and programmes, so as to determine their impact in terms of preserving and promoting linguistic diversity and multilingualism, under Resolution 17 (Rev. Dubai, 2014) of this conference on regional initiatives, where appropriate;

5 to report to the ITU Council on the implementation of this resolution,

invites Member States and Sector Members, Academia and Associates, as appropriate

1 to participate actively in all international discussions and initiatives for guaranteeing the preservation and promotion of multiculturalism and multilingualism in the digital ecosystem of the Internet and associated services, with a view to ensuring universal access and bringing multilingual societies to life, and strengthening dialogue between cultures, openness and mutual understanding, tolerance towards others, etc.;

2 to submit contributions within ITU-D in order to facilitate effective implementation of this resolution;

3 to promote the creation of capacity building to develop local digital content, in rural contexts and within vulnerable groups of the population, in order to preserve multiculturalism and promote their regional, national and local integration;

4 to contribute, with UNESCO, which is the facilitator for implementation of WSIS Action Line C8, focusing on concerns and requests for assistance, in particular from developing countries, to facilitating and fostering affordability of international Internet connectivity, and thereby overcome language barriers and increase use of the Internet;

5 to contribute to the establishment of regional, national and local strategic plans to promote sites which ensure and foster linguistic diversity and multilingualism in the digital ecosystem of the Internet;

6 to contribute to studying appropriate mechanisms for converting digital archives in non-mainstream languages, with a view to fostering socio-economic development and information and knowledge sharing between communities and groups with specific needs, and so that more and new voices can benefit from the potential offered by telecommunications/ICTs;

7 to recommend measures within their competencies for cooperation with academia, civil society and other interested and involved stakeholders, under a multistakeholder approach, with a view to reducing disparity, exclusion and discrimination in terms of opportunities, by exploiting the potential that protecting and safeguarding languages not present in the digital ecosystem of the Internet offers;

8 to promote awareness among equipment manufacturers and designers regarding the advantages of introducing in the regions already identified by UNESCO alternative alphabets for languages not present in the digital ecosystem of the Internet, to be used by people with different native languages, and thus contribute to moving forward towards digital inclusion, respecting their cultural identity,

invites the Secretary-General

1 to bring this resolution to the attention of the next plenipotentiary conference, for its consideration, taking into account past accomplishments, by allocating the necessary human resources to make effective contributions to ITU-D's activities for institutionalizing the issue of multilingualism within ITU;

2 to bring this resolution to the attention of the Secretary-General of the United Nations in an effort to promote increased cooperation and coordination for development policies, programmes and projects in order to make progress in linguistic diversity and the Internet, in line with the principles of equitable access, functional equivalence, affordability and universal design, fully harnessing the available tools, guidelines and standards, for the elimination of all forms of discrimination and digital exclusion.

RESOLUTION 83 (Buenos Aires, 2017)

Special assistance and support to the Government of Libya for rebuilding its telecommunication networks

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 34 (Rev. Busan, 2014) of the Plenipotentiary Conference, on assistance and support to countries in special need for rebuilding their telecommunication sector;

b) the noble principles, purposes and objectives enshrined in the Charter of the United Nations and in the Universal Declaration of Human Rights, as well as in the Declaration of Principles adopted by the World Summit on the Information Society;

c) the purposes of the Union as enshrined in Article 1 of the ITU Constitution,

considering

a) that reliable telecommunication systems are indispensable for promoting the socio-economic development of countries, in particular of countries in special need, which are those having suffered from domestic conflicts or war;

b) that the telecommunication infrastructure in Libya has been grievously affected by war;

c) that, under the present conditions, Libya will not be able to rebuild its war-damaged infrastructure and ensure effective operation of its telecommunication sector to meet its social and economic goals without the help of the international community, provided bilaterally or through international organizations,

noting

a) the efforts which have been and are being deployed by the Secretary-General and the Director of the Telecommunication Development Bureau (BDT) to provide assistance to countries in special need which have endured armed conflict and war;

b) the technical assistance from BDT for the purpose of telecommunication/information and communication technology development in Member States,

resolves

to initiate special action, within the framework of ITU and within available resources, with the aim of providing assistance and support to the Government of Libya in rebuilding its telecommunication infrastructure, creating appropriate institutions, building human capacities, formulating legislation in the area of telecommunications, and developing a regulatory framework,

calls upon members

to offer all possible assistance and support to the Government of Libya, either bilaterally or through the special action of the Union referred to above,

invites the ITU Council

to allocate the necessary funds for the implementation of this resolution,

instructs the Director of the Telecommunication Development Bureau

1 to use the necessary funds to implement activities in favour of the Government of Libya;

2 to mobilize extrabudgetary resources to assist Libya,

requests the Secretary-General

1 to coordinate the activities carried out by the three ITU Sectors in accordance with *resolves* above, in order to ensure that the ITU action in favour of the Government of Libya is as effective as possible;

2 to report on the implementation of this resolution to the Council and plenipotentiary conferences;

3 to bring to the attention of the Plenipotentiary Conference (Dubai, 2018) the need to allocate the necessary resources for Libya.

RESOLUTION 84 (Buenos Aires, 2017)

Combating mobile telecommunication device theft

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 189 (Busan, 2014) of the Plenipotentiary Conference, on assisting Member States to combat and deter mobile device theft;

b) Resolution 97 (Hammamet, 2016) of the World Telecommunication Standardization Assembly (WTSA), on combating mobile telecommunication device theft;

c) Resolution 188 (Busan, 2014) of the Plenipotentiary Conference, on combating counterfeit telecommunication/information and communication technology (ICT) devices;

d) Resolution 174 (Rev. Busan, 2014) of the Plenipotentiary Conference, on ITU's role with regard to international public policy issues relating to the risk of illicit use of ICTs;

e) Resolution 79 (Rev. Buenos Aires, 2017) of this conference, on the role of telecommunications/ICTs in combating and dealing with counterfeit telecommunication/ICT devices;

f) Resolution 64 (Rev. Buenos Aires, 2017) of this conference, on protecting and supporting users/consumers of telecommunication/ICT services;

g) Resolution 96 (Hammamet, 2016) of WTSA, on ITU Telecommunication Standardization Sector (ITU-T) studies for combating counterfeit telecommunication/ICT devices,

recognizing

a) that governments and industry have been implementing actions to prevent and combat mobile device theft;

b) that the theft of user-owned mobile devices may lead to the criminal use of telecommunication/ICT services and applications, resulting in financial losses for the lawful owner and user;

c) that measures to combat mobile device theft adopted by some countries rely on unique device identifiers, and therefore tampering with (changing without authorization) unique identifiers can diminish the effectiveness of these solutions;

d) that some solutions to combat counterfeit telecommunication/ICT devices can also be used to combat the use of stolen telecommunication/ICT devices, in particular those devices whose unique identifier has been tampered for the purpose of re-introducing them to the market;

e) that studies on combating counterfeiting, including of telecommunication/ICT devices, and systems adopted on the basis of those studies, in some circumstances, can facilitate the detection and blocking of devices and prevention of their further use,

considering

a) that technological innovation driven by telecommunications/ICTs has significantly modified the ways in which people access telecommunications;

b) that the positive impact of mobile telecommunications and the development generated by all related services have increased the penetration of mobile telecommunication/ICT devices;

c) that the widespread use of mobile telecommunications in the world has also been accompanied by a rise in the problem of mobile device theft;

d) that the act of mobile device theft can sometimes have a negative impact on the health and safety of citizens and on their sense of security;

e) that problems that occur around the crimes related to mobile device theft have become a worldwide issue, since these stolen devices are often very easily resold on the international markets;

f) that the illicit trading of stolen mobile devices constitutes a risk to consumers and causes loss of revenue for the industry;

g) that some governments have implemented regulations, law-enforcement actions, policies and technological mechanisms to prevent and combat mobile device theft;

h) that some manufacturers of mobile devices, as well as operators and industry, offer solutions for consumers, such as free anti-theft applications, with the aim of reducing the rate of mobile device theft,

aware

a) of the related ongoing work in ITU-T Study Group 11 on combating counterfeit and mobile device theft;

b) of the related ongoing work in ITU-T Study Group 17 on security;

c) that manufacturers, operators and industry associations have been developing a range of technological solutions and governments have been developing policies to address the mobile device theft problem,

resolves

1 that the ITU Telecommunication Development Sector (ITU-D) should explore all applicable solutions and develop reports or implementation guidelines, taking into account the needs of countries, especially developing countries[1], in consultation with relevant ITU-T and ITU Radiocommunication Sector (ITU-R) study groups, to combat and deter mobile device theft, offering all interested parties a forum for encouraging discussion, member cooperation, exchange of best practices and guidelines and dissemination of information on combating mobile device theft;

2 that ITU-D study groups should include activities relating to combating mobile telecommunication device theft,

resolves to instruct the Director of the Telecommunication Development Bureau, in collaboration with the Directors of the Radiocommunication Bureau and Telecommunication Standardization Bureau

1 to provide assistance, within ITU-D's expertise and within available resources, as appropriate, in cooperation with relevant organizations, to Member States, if so requested, in order to reduce mobile device theft and the use of stolen mobile devices in their countries;

2 to compile information on best practices developed by governments and other stakeholders and on promising trends in combating mobile device theft,

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

instructs Study Groups 1 and 2 of the ITU Telecommunication Development Sector, within their mandates and in collaboration with study groups of the ITU Telecommunication Standardization Sector

1 to develop guidelines, recommendations and reports to address the problem of mobile telecommunication device theft and its negative effects;

2 to gather information about any technologies that can be used as tools for combating mobile telecommunication device theft, and to build capacities in developing countries in this regard,

invites Member States and Sector Members

1 to take all necessary measures to combat mobile telecommunication device theft and its negative effects;

2 to cooperate and share expertise in this area;

3 to participate actively in ITU studies relating to the implementation of this resolution by submitting contributions;

4 to take the necessary actions to prevent or discover and control tampering (unauthorized changing) of unique mobile telecommunication/ICT device identifiers and prevent tampered devices from accessing mobile networks.

RESOLUTION 85 (Buenos Aires, 2017)

Facilitating the Internet of Things and smart cities and communities for global development

The World Telecommunication Development Conference (Buenos Aires, 2017),

recalling

a) Resolution 197 (Busan, 2014) of the Plenipotentiary Conference, on facilitating the Internet of Things (IoT) to prepare for a globally connected world;

b) Resolution ITU-R 66 (Geneva, 2015) of the Radiocommunication Assembly, on studies related to wireless systems and applications for the development of the IoT;

c) Resolution 98 (Hamammet, 2016) of the World Telecommunication Standardization Assembly, on enhancing standardization of the IoT and smart cities and communities for global development;

d) Resolution 50 (Rev. Buenos Aires, 2017) of this conference, on optimal integration of information and communication technologies (ICTs);

e) the goals of the ITU Telecommunication Development Sector (ITU-D), defined by Resolution 71 (Rev. Busan, 2014) of the Plenipotentiary Conference, particularly objective D2, under which ITU-D is entrusted with the task of fostering an enabling environment for ICT development and of fostering the development of telecommunication/ICT networks as well as relevant applications and services, including bridging the standardization gap;

f) Recommendation ITU-D 22 (Dubai, 2014) of the World Telecommunication Development Conference, on bridging the standardization gap in association with regional groups of the study groups;

g) Resolution 139 (Rev. Busan, 2014) of the Plenipotentiary Conference, on use of telecommunications/ICTs to bridge the digital divide and build an inclusive information society;

h) Resolution 77 (Rev. Buenos Aires, 2017) of this conference, on broadband technology and applications for greater growth and development of telecommunication/ICT services and broadband connectivity;

i) Resolution 200 (Busan, 2014) of the Plenipotentiary Conference, on the Connect 2020 Agenda for global telecommunication/ICT development,

noting

the work carried out by the United for Smart Sustainable Cities (U4SSC) initiative, launched by ITU together with the United Nations Economic Commission for Europe (UNECE) in May 2016,

considering

a) that the development of IoT technologies will have a positive impact on both ICT and non-ICT sectors including, in particular, health, agriculture, transport and energy in view of the applications provided;

b) that IoT deployment will contribute significantly to the successful implementation of the 2030 Agenda for Sustainable Development;

c) that the development and deployment of IoT will benefit from cooperative efforts at the regional and global level;

d) that the development and implementation of IoT will hinge upon the active participation of governments, industry and other relevant international and regional organizations and stakeholders;

e) that special support should be given to developing countries[1], as they may have limited resources to build an inclusive society,

recognizing

a) the important role of ITU and, in particular, that of ITU-D, in encouraging telecommunication/ICT development at the global level; and in particular the relevant work carried out by ITU-D study groups;

b) the role of the ITU Telecommunication Standardization Sector (ITU-T) and, in particular, that of ITU-T Study Group 20, in carrying out studies and standardization work associated with IoT and its applications, including smart cities and communities, and coordinating with other organizations working in these two areas;

c) the role of the ITU Radiocommunication Sector (ITU-R) in conducting studies on the technical and operational aspects of radio networks and systems for IoT,

resolves

that ITU-D, in close collaboration with ITU-T and ITU-R, promote the adoption of IoT and the development of smart cities and communities, in order to maximize the benefits in advancing socio-economic development and contribute to achieving the Sustainable Development Goals and the Connect 2020 Agenda,

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

instructs the study groups of the ITU Telecommunication Development Sector, each according to its mandate

1 to collect national and regional experiences on the adoption of IoT and prepare guidelines for the implementation of IoT on the basis of ITU Recommendations and contributions from other organizations;

2 to carry out studies on the opportunities and challenges in the implementation of IoT;

3 to identify case studies on the application of IoT and smart cities and communities, focusing on factors affecting the roll-out of IoT,

instructs the Director of the Telecommunication Development Bureau

1 to support Member States, in particular the developing countries, in adopting IoT through capacity building aimed at facilitating the development of enabling environments and infrastructure and fostering digital innovation ecosystems;

2 to facilitate the deployment and adoption of IoT and smart cities and communities, especially in developing countries, through projects under the United Nations development systems and in accordance with No. 118 (Article 21) of the ITU Constitution;

3 to work in coordination with international and regional organizations and cooperate with other stakeholders in order to establish a favourable environment to enable the exchange of knowledge, expertise and best practices to support the deployment of IoT and smart cities and communities, including applications and services, by organizing workshops and forums at both regional and international levels,

instructs the Director of the Telecommunication Development Bureau, in collaboration with the Directors of the Telecommunication Standardization Bureau and the Radiocommunication Bureau

1 to prepare a report identifying the needs of developing countries related to IoT and smart cities and communities, based on the work conducted by ITU-T, ITU-R and ITU-D as well as other stakeholder organizations;

2 to collate the work done within ITU relating to IoT and smart cities and communities, including studies conducted on technology and standards as well as recommendations on policy and regulation, so as to facilitate the development and adoption of IoT;

3 to facilitate discussions and exchange of best practices through the organization of workshops and training programmes on IoT,

invites Member States, Sector Members, Associates and Academia

1 to participate actively in ITU studies relating to IoT and smart cities and communities, including applications and services, by providing all possible assistance;

2 to collaborate and exchange expertise and best practices in this area,

encourages Member States

to adopt appropriate strategies, policies, plans and an enabling environment to facilitate and stimulate the development of IoT and smart cities and communities, including applications and services.

RESOLUTION 86 (Buenos Aires, 2017)

Use in the ITU Telecommunication Development Sector of the languages of the Union on an equal footing

The World Telecommunication Development Conference (Buenos Aires, 2017),

recognizing

a) the adoption by the Plenipotentiary Conference of Resolution 154 (Rev. Busan, 2014), on the use of the six official languages of the Union on an equal footing, which instructs the ITU Council and the General Secretariat on how to achieve equal treatment of the six languages;

b) Resolution 1372 of the Council, as revised at its 2016 session, which notes the work accomplished by the ITU Radiocommunication Sector (ITU-R) Coordination Committee for Vocabulary (CCV) and the ITU Telecommunication Standardization Sector (ITU-T) Standardization Committee for Vocabulary (SCV) on the adoption and agreement of terms and definitions in the field of telecommunications/information and communication technologies (ICT) in all six official languages of the Union;

c) the decisions of the Council centralizing the editing functions for languages in the General Secretariat (Conferences and Publications Department), calling upon the Sectors to provide the final texts in English only (this applies also to terms and definitions);

d) Resolution ITU-R 36 (Rev. Geneva, 2015) of the ITU Radiocommunication Assembly (RA), on coordination of vocabulary;

e) Resolution 67 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly (WTSA), on use in ITU-T of the languages of the Union on an equal footing;

f) Resolution 1386 of the Council, adopted at its 2017 session, on the ITU Coordination Committee for Terminology (ITU CCT),

considering

a) that, under Resolution 154 (Rev. Busan, 2014), the Council is instructed to continue the work of the Council Working Group on Languages (CWG-LANG), in order to monitor progress and report to the Council on the implementation of that resolution;

b) the importance of providing information in all the official languages of the Union on an equal footing on webpages of the ITU Telecommunication Development Sector (ITU-D),

noting

a) that the CCV chairman and six vice-chairmen, each representing one of the official languages, are nominated by RA;

b) that the SCV chairman and six vice-chairmen, each representing one of the official languages, are nominated by WTSA;

c) that, according to Council Resolution 1386, the World Telecommunication Development Conference (WTDC) should appoint two vice-chairmen to represent ITU-D in ITU CCT,

resolves

1 that, when selecting and using terms and definitions, the ITU-D study groups shall take into account the established use of terms and existing definitions in ITU, in particular those appearing in the online ITU Terms and Definitions database;

2 that, where more than one ITU-D study group is considering the use of the same terms, definitions and/or concept, a single term and a single definition that is acceptable to all the ITU-D study groups concerned shall be selected;

3 that two experts, one from Study Group 1 and one from Study Group 2 of ITU-D, shall be appointed by WTDC to represent ITU-D in the ITU CCT at the level of vice-chairmen,

instructs the Director of the Telecommunication Development Bureau

1 to continue to translate all Recommendations and final reports in all the languages of the Union;

2 to translate all Telecommunication Development Advisory Group reports in all the languages of the Union;

3 to monitor the quality of translation, including translated material posted on the ITU-D websites, and associated expenses;

4 to bring this resolution to the attention of the Director of the Radiocommunication Bureau and the Director of the Telecommunication Standardization Bureau,

invites the Council

to take appropriate measures to ensure that information is posted on the ITU websites in the six official languages of the Union on an equal footing, within budgetary limits, consistent with Council Resolution 1372,

instructs the Telecommunication Development Advisory Group

to continue consideration on use of all six languages of the Union on an equal footing in ITU-D publications and sites.

RECOMMENDATION ITU-D 15

Models and methods to determine the cost of national telecommunication services

(January, 2002)

Question 12/1: *Tariff policies, tariff models and methods of determining the cost of national telecommunication services*

The ITU Telecommunication Development Bureau (ITU-D),

recognizing

a) that the level and structure of telecommunication tariffs have an important role to play in creating the internally generated funds needed by telecommunication operators, which in most cases serve to finance telecommunication entities' development programmes and are also used in meeting their recurrent expenditure requirements;

b) that the establishment of a balanced and attractive telecommunication tariff structure can promote efficient use of the network and services, enhance universal service provision and have a positive effect on the development of other sectors of the economy,

noting

a) that many developing countries lack adequate experience and skills in formulating cost-orientated tariffs to enable them to benefit fully from telecommunication tariff policies, strategies and practices;

b) that these countries need assistance in obtaining tools for determining and calculating costs in the context of the implementation of cost-orientated tariff structures and levels,

recommends

1 that, in establishing of their legal and regulatory frameworks, public authorities and administrations should:

a) focus on methods for determining and calculating cost-orientated tariffs for telecommunication services, including interconnection charges;

b) take the necessary measures to ensure that they are provided with the appropriate tools for determining the costs of telecommunication services;

c) provide for appropriate training of staff responsible for the tariff structure on the various models and approaches existing worldwide, including in particular the regional tariff models relating to national costs,

2 that the following general principles identified by ITU-T Study Group 3 be implemented in determining and calculating costs:

a) transparency,

b) practicability,

c) objectivity,

d) cost causality,

e) cost recovery,

3 that ITU-D, and the Director of BDT in particular, pursuant to WTDC-98 Resolution 12, give support to administrations in the implementation of cost-orientated tariff structures.

RECOMMENDATION ITU-D 16

Tariff rebalancing and cost-oriented tariffs

(January, 2002)

Question 12/1: *Tariff policies, tariff models and methods of determining the cost of national telecommunication services*

The ITU Telecommunication Development Bureau (ITU-D),

recognizing

a) that the level and structure of telecommunication tariffs play an important role for telecommunication operators in the financing of their development programmes and meeting their recurrent expenditure requirements;

b) that the establishment of a balanced and attractive telecommunication tariff structure can promote use of the network and the operation of services, enhance universal service provision and have a positive effect on the development of other sectors of the economy,

noting

a) that many developing countries lack adequate experience and skills in formulating cost-orientated tariffs to enable them to benefit fully from telecommunication tariff policies, strategies and practices;

b) that these countries need assistance in obtaining tools for determining and calculating costs in the context of the implementation of cost-orientated tariff structures and levels,

recommends

1 that, in establishing their legal and regulatory frameworks, public authorities and administrations should take into consideration, where necessary, the impact of high inflation,

2 that public authorities:

a) gradually rebalance tariffs so as to move to cost-orientated tariffs;

b) adopt time-limited safeguards to ensure that losses of income due to the lowering of tariffs for certain services and/or in certain areas are not offset by price increases for other services and/or in other areas (peripheral, rural, …);

c) move towards rebalancing of traffic and judges its consequences on the affordability of telecom services, which need to be linked to appropriate measures that regulators and policy makers may derive,

3 that public authorities ensure:

a) that tariffs for access to and use of the fixed public telephone network are independent of the type of application which the operators and users implement, except to the extent that they require different services or facilities;

b) that the tariffs for facilities additional to the provision of connection to the fixed public telephone network and fixed public telephone services are sufficiently unbundled so that the user is not required to pay for facilities which are not necessary for the service requested;

c) that, in cases where different tariffs exist, in particular to take account of high traffic load during peak hours and low traffic load at quiet times, the differences are commercially justified,

4 that ITU-D, and the Director of BDT in particular, pursuant to WTDC-98 Resolution 12, should give support to administrations in the implementation of cost-orientated tariff structures, *inter alia* by conducting case studies, making the questionnaire an annual one and updating the database.

RECOMMENDATION ITU-D 17

Sharing of facilities in rural and remote areas

(January, 2002)

Question 10/2: *Communications for rural and remote areas*

The ITU Telecommunication Development Bureau (ITU-D),

considering

a) the work of Focus Group 7[1], Focus Group 7's Report[2], and the updated Report on Communications for rural and remote areas;

b) the need for provision of and the fundamental goal of providing access to basic and advanced telecommunication services;

c) the significance of obtaining physical access to and use of public or community communications centres (e.g. public call offices, multi-purpose community telecentres, and other community access centres; and

d) the benefit brought to underserved communities by these facilities,

bearing in mind

a) that the success of a community access focal point also depends upon access, availability, cost, community participation, reliability, sustainability, and services offered;

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[1] Focus Group 7 was established at WTDC-98 to study various mechanisms by which to promote the development of new telecommunication technologies for rural applications. Focus Group 7 completed its work at the end of 2000.

[2] The Report of Focus Group 7 entitled New technologies for rural applications was published in February 2001. Also see http://www7.itu.int/itudfg7/

b) that the success of the community access focal point also depends on analysis and assessment of the needs of the community and the appropriate technology, a community action and business plan, and the development of know-how, expertise and human resources,

noting

that there is no single model that meets the needs of an individual community, but that certain elements may be applicable in other community models,

recommends

1 that community stakeholders, policy makers, the private sector, and regulators facilitate the most inclusive framework for sharing community access facilities from practical and partnership perspectives, and collaborate to document successful and sustainable examples of community centres/access facilities, and

2 that stakeholders take advantage of a wealth of knowledge gained by development organizations, non-governmental organizations, ITU members and ITU experts on lessons learned in creating sustainable community access centres.

RECOMMENDATION ITU-D 19

Telecommunications for rural and remote areas

The World Telecommunication Development Conference (Dubai, 2014),

recognizing

a) that the following Recommendation resulting from the ITU-D study period 1998-2002 has provided guidance on a number of issues concerning telecommunications/information and communication technologies (ICTs) in rural and remote areas:

– RECOMMENDATION ITU-D 17, Sharing of facilities in rural and remote areas (January 2002);

b) that Focus Group 7, on rural telecommunications, addressed technological options, service potential and financing mechanisms for the provision of telecommunications/ICTs in rural and remote areas;

c) that the Telecommunication Development Bureau (BDT), through the "Connect a School, Connect a Community" initiative, has developed public policy recommendations and best practices for the development of ICTs in indigenous communities, and that therein, based on relevant cases of countries worldwide, it notes the importance of creating conditions for the provision of telecommunication services in those areas, through projects that are organized around achieving economies of scale and run by the communities themselves,

noting

a) that Focus Group 7 paid particular attention to the role of micro-finance institutions (MFI) in promoting access to ICT services and application by supporting small entrepreneurs;

b) the excellent results of the study period 2006-2010, which consolidate experiences worldwide on the successful provision of telecommunications/ICTs to rural and remote areas, based, *inter alia*, on information submitted to the case library and on e-discussions on the issues identified by the Rapporteur Group[1];

c) that experiences all over the world with emerging technologies deployed in rural and remote areas providing broadband, wired transmission media and wireless transmission media indicate rapid decrease of costs and increase of range and capacity, and that all these developments make connecting rural areas a feasible option;

d) that backhaul wireless solutions play a key role in extending broadband service delivery and coverage for rural and remote areas;

e) that the deployment of IP-based platforms serving wide areas can make a range of developmental services and applications such as education, health, agriculture, etc. available to the rural population;

f) that, in remote and rural areas, spectrum use might be improved by the use of new spectrum-access approaches;

g) that these developments make it possible for telecommunication/ICT services and applications to be provided by small and medium enterprises, local governments and non-governmental organizations in rural and remote areas with appropriate business models;

h) that technical expertise and adoption capacity are important factors to plan, implement and operate such facilities;

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[1] The case library for Question 10-2/2 can be consulted at http://www.itu.int/ITU-D/study_groups/SGP_2006-2010/events/Case_Library/index.asp. The address of the e-discussion web page is: http://www.itu.int/ituweblogs/ITU-D-SG2-Q10/.

i) that in rural and remote areas of developing countries, low incomes and lack of literacy and computer literacy limit the number of people who can have Internet access in their homes: These communities need public ICT facilities which can be used for communication, delivery of services and various capacity building activities, and there is a role for small entrepreneurs, local governments, schools and post offices in this process;

j) that the provision of ICT services and applications by small entrepreneurs in rural and remote areas has the potential to create employment, and these ventures can be supported by financial institutions and receive support from various government schemes;

k) that a well planned maintenance and operation programme in order to keep the infrastructure and associated equipment, including terminal equipment, in good working condition is an essential aspect of the support structures in rural areas;

l) the excellent collaboration between BDT and the Universal Postal Union in promoting the use of post offices as vehicles for the provision of access to telecommunication/ICT services and applications in rural and remote areas;

m) that energy supply is a basic bottleneck for the spread of telecommunications/ICTs in rural and remote areas, and that innovative uses of solar power, mini-hydro power and windmill power sources, sometimes in combination, are being successfully employed in many countries to provide reliable energy sources for mobile base stations,

considering

a) that the provision of telecommunications, ICT services and applications can make significant contribution to the quality of life of the population living rural and remote areas;

b) that stimulation of demand for telecommunications/ICTs through proactive government policies is a key to realizing their benefits;

c) that the accumulation of experiences worldwide on community access institutions (telekiosks, multipurpose community telecentres, multimedia centres) points to the need for proactive and supportive government policies to simulate demand of the services available;

d) that the availability of information should be reinforced by the upgrading of skills and provision of capital in order that information is properly utilized;

e) that access to telecommunications/ICTs for all will maximize social welfare, increase productivity, conserve resources and contribute to safeguarding human rights,

recommends

1 that developing countries should include the provision of telecommunications/ICTs in rural and remote areas in their national development plans;

2 that, in planning infrastructure development in rural and remote areas, it is important to assess all available technologies in the market, taking into consideration the regulatory environment, geographical conditions, climate, costs (capital expenditure and operational expenditure), maintainability, operability, sustainability, etc., based on the results of the site survey and community needs;

3 that community access to ICT facilities and services is particularly important in rural and remote areas: business models which can achieve financial and operational sustainability can be operated by local entrepreneurs supported by a variety of initiatives, and these facilities, where necessary, should also be supported by universal service funds as an essential component of rural communications;

4 that it is important to encourage the use of post offices to provide telecommunication/ICT services, owing to their communicative presence in the lives of the population in rural areas;

5 that local institutions should be involved in planning and implementing ICT facilities;

6 that enhancing local technical expertise and adoption are important for successful implementation of ICT services and applications in rural and remote areas, and attention should thus be paid to training, exchange of information and sharing of maintenance facilities in order to achieve sustainability and viability;

7 that adoption of broadband technology should be encouraged;

8 that keeping equipment in good working condition through effective preventive maintenance programmes is an essential part of making telecommunications in rural areas viable and should be encouraged, while guarding against making developing countries a dumping ground for obsolete technologies;

9 that it is important to take steps to ensure continued reliability of equipment in rural environments, such as developing an appropriate maintenance and operation strategy and encouraging training for technical staff;

10 that it is important to consider small and non-profit community operators, through appropriate regulatory measures that allow them to access basic infrastructure on fair terms, in order to provide broadband connectivity to users in rural and remote areas, taking advantage of technological advances;

11 that it is also important that administrations, in their radio-spectrum planning and licensing activities, consider mechanisms to facilitate the deployment of broadband services in rural and remote areas by small and non-profit community operators;

12 that, given that lack of energy supply is a major bottleneck in the provision of telecommunications/ICTs in rural and remote areas, and taking into consideration environmental issues, renewable energy sources should be used whenever feasible;

13 that, since the high cost of backhaul investment is another bottleneck in the provision of telecommunications/ICTs in rural and remote areas, new regulatory frameworks on shared infrastructure and accelerated licensing processes could help in developing these networks;

14 that collaboration among governments, industry, local agencies and international organizations is desirable in the development of low-cost ICT infrastructure, including renewable energy sources and terminals for the provision of telecommunications/ICTs in rural and remote areas, and should be pursued;

15 that Member States shall promote the best alternatives for the deployment of cost-effective backhaul solutions for broadband access networks in rural and remote areas.

RECOMMENDATION ITU-D 20

Policy and regulatory initiatives for developing telecommunications/ICTs/broadband in rural and remote areas

The World Telecommunication Development Conference (Dubai, 2014),

considering

a) that the significant role of telecommunications/ICTs/broadband in providing services, particularly e-applications, in rural and remote areas of developed countries, countries with economies in transition, developing and least developed countries (LDCs) for the empowerment of their people, promotion of culture, improvement of the quality of life of the rural community, development of the economy, etc.;

b) that ITU-D Study Groups 1 and 2 have continued their study activities to address the challenges faced by the rural and remote areas of the world in general, and LDCs and developing countries in particular, on various issues including, but not limited to, the range of techniques and solutions to provide services and e-applications, based on the inputs by the membership;

c) that Recommendation ITU-D 19 (Hyderabad, 2010) compiled the past Recommendations and consolidated them into a Recommendation based on the results of the studies on techniques and solutions for the development of telecommunications/ICTs/broadband for rural and remote areas since the establishment of the dedicated study Question during WTDC-94 (Buenos Aires),

recognizing

a) that the Telecommunication Development Bureau (BDT), under the activities of ITU-D Study Group 2 Question 10-3/2, conducted a survey to gather detailed information on policy and regulatory measures that have been taken by the governments around the world and economic and business models for telecommunication/ICT/broadband growth in rural and remote areas;

b) that the survey also sought to collect information on the possible impact and analysis of such interventions and initiatives;

c) that the inputs received through the survey were useful for the study of ITU-D Study Group 1 and 2 Questions for the 2010-2014 study period to assist countries in strengthening the capacity to address challenges for the development of telecommunications/ICTs/broadband in rural and remote areas,

taking into account

a) the results of analysis of the survey submitted by BDT to ITU-D Study Group 2;

b) the analysis of case studies submitted to ITU-D Study Group 2 during the 2010-2014 study period;

c) the final report of ITU-D Study Group 2 Question 10-3/2, on telecommunications/ICTs for rural and remote areas (2014);

d) the report of Broadband Commission for Digital development (2012) submitted to ITU-D Study Group 2;

e) the ITU Report on measuring the information society (2012);

f) the fact that, in contrast to the large percentage of the global population that subscribe to basic mobile phone services, Internet connectivity in developing countries and LDCs is still limited, in particular in their rural and remote areas;

g) that many governments have initiated the development of a specific national broadband network plan that would also cater for the needs of their rural and remote areas;

h) that active and passive infrastructure sharing, along with the sharing of spectrum resources, are already included by some countries in their national telecommunication/ICT policy;

i) that new licensees, with the support of the universal service fund and the sharing of active and passive network elements based on reference offers, as well as spectrum resources, can service rural and remote areas with incremental addition of their own network infrastructure elements, billing systems and customer services and independent tariff plans,

noting

a) that the following major interventions/initiatives are observed in the analysis of survey input:

i) the definition of "rural and remote areas" is based on sparse population and harsh geographical conditions, and some countries have licence obligations to cover a certain percentage of the population in such areas;

ii) the majority of the countries that responded to the survey have specific government policies in place for the development of telecommunications/ICTs/broadband in rural and remote areas, including the corresponding instruments, such as universal service provisions, universal access funds, licence obligations and targets for broadband coverage, penetration rate and data speed, defined in their telecommunication law and regulation;

iii) funds are collected by the government ministry or telecommunication regulator of the country as a percentage of annual gross revenue or other scheme in proportion with income/annual net revenue/turnover and also managed and disbursed by the relevant ministry or regulator;

iv) the development and adoption of an appropriate economic model and business model is critical for the development and sustainability of telecommunication/ICT/broadband networks and service provisioning in rural and remote areas, and it has been found that various kinds of economic and business models have been adopted by Member States based on specific country situations and requirements;

v) sharing of backbone network infrastructure in rural and remote areas among operators, rather than building network infrastructure using a specific government budget and through a universal service obligation (USO) fund, is one possible option;

vi) special policy, legal and/or regulatory frameworks for infrastructure sharing in rural and remote areas, for example by using optical fibre cables and base transceiver stations (BTS)/microwave towers and related support infrastructures, is an option worth considering in developing countries and LDCs,

convinced

a) that the development of telecommunication/ICT/broadband services is essential for overall socio-economic and cultural development as well as for the promotion of other sectors;

b) that the development of ICT infrastructure is an important measure to prevent the migration of population to urban areas;

c) that telecommunication/ICT infrastructure is an important tool for measuring factors related to the protection of the environment,

recommends

1 that governments and regulators around the world in general and in the developing countries and LDCs in particular should take regulatory and policy measures to accelerate the development of telecommunications/ICTs/broadband in their rural and remote areas through specific policy and regulatory interventions/initiatives, and include them in their national development plans;

2 that operators and service providers should implement universal telecommunication/ICT service in rural and remote areas;

3 that Sector Members, Associates and Academia should take actions to increase studies on economic, energy-efficient and clean equipment suitable for ICT infrastructure development in rural and remote areas;

4 that the state-of-the-art cost-effective techniques and technologies for broadband infrastructure development most suited for the geographical and economic conditions of rural and remote areas be put in place to enable these areas to access various e-applications, especially those which integrate them into national streams like e-governance, e-health, e-education, e-agriculture, etc. for vitalizing rural community through policy and regulatory interventions/initiatives;

5 that country/area-specific poverty indices published by the United Nations/World Bank may be taken into due consideration in the implementation of universal telecommunication/ICT service in rural and remote areas,

invites the Director of BDT

to continue organizing symposiums, seminars, workshops and related activities on the subject.

RECOMMENDATION ITU-D 21

ICT and climate change

The World Telecommunication Development Conference (Dubai, 2014),

considering

a) that climate change is now an undeniable reality, and global action to reduce greenhouse gas (GHG) emissions is urgent in order to avoid devastating impacts on our societies;

b) that the World Telecommunication Development Conference (Hyderabad, 2010) (WTDC-10) stated that telecommunications/ICTs can make a substantial contribution to monitoring, mitigating and adapting to the adverse effects of climate change;

c) that the World Radiocommunication Conference (Geneva, 2012) (WRC-12) revised Resolution 673 (Rev. Geneva, 2012), on the importance of earth observation radiocommunication applications;

d) that the Plenipotentiary Conference (Guadalajara, 2010) adopted Resolution 182 (Guadalajara, 2010), on the role of telecommunications/ information and communication technologies (ICTs) in regard to climate change and the protection of the environment;

e) that WTDC Resolution 66 (Rev. Dubai, 2014), on information and communication technology and climate change, states that radio-based remote sensing applications on board satellites are the main global observation tools employed by the Global Climate Observing System for climate monitoring, disaster prediction, detection and mitigation of the negative effects of climate change;

f) that the economic costs imposed by extreme climates and disasters on humans, societies and ecosystems are growing;

g) that climate modelling indicates that, in future, continued increases in GHG concentrations may drive more extreme weather events;

h) that, according to Resolution 30 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference, countries, particularly small island developing states, least developed countries (LDCs), landlocked developing countries (LLDCs) and low-lying coastal countries, are vulnerable to global climate change and rising sea levels;

i) that the process established by the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the ongoing negotiations of its Intergovernmental Negotiating Committee are important international actions aimed at addressing the threat of climate change, mitigating its adverse impacts and assisting all ITU Member States, especially LDCs, in adapting to its adverse consequences,

noting

a) that ICTs can facilitate faster development of various social and economic sectors in any country and that they lead to especially perceptible equal opportunities for all mankind;

b) the need for improvement for the most vulnerable parts of society in rural and remote areas, contributing to their inclusive growth of society;

c) that providing assistance to developing countries in formulating national and regional strategies and measures on the use of ICTs can to help mitigate and respond to the devastating effects of climate change;

d) that it is necessary to have an updated map of the potential upheavals that may occur in the long term due to the consequences of the warming of the climate;

e) that mapping areas vulnerable to natural disasters and developing computer-based information systems covering the results of surveys, assessments and observations, as part of the development of adequate response strategies, adaptation policies and measures, can minimize the impact of climate change and climate variability;

f) that assisting developing countries in the use of data from active and passive satellite-based remote sensing systems for climate monitoring, disaster prediction, detection and mitigation of the negative effects of climate change is a key issue for understanding the long-term evolution of the climate;

g) that facilitating Member States' participation in bilateral, regional and global research, assessments, monitoring and mapping of climate impacts can help in the development of response strategies;

h) that we can benefit from the experience of some countries, suffering from extreme weather events, which have already integrated in their strategy against climate change a list of concrete principles and actions;

i) that the World Summit on the Information Society (WSIS) decided to launch projects to promote ICTs in the fields of environment, natural resources, green ICT sector and natural disasters,

recognizing

a) that emissions of global warming gases continue to rise as the world burns ever more coal, oil and gas for energy;

b) that the year 2012 was the tenth warmest year since records began in 1880, with an annually averaged temperature across global land and ocean surfaces 0.57°C above the 1950s average, and around 0.8°C above the 1880 estimated average;

c) that there are changes in rainfall patterns, and wetter regions of the world (mid to high latitudes in the northern hemisphere and tropical regions) are generally getting increasing rainfall, and drier regions less rainfall;

d) that significant temperature increases have been observed over the last 50 years in the Atlantic, Pacific and Indian Ocean basins and that these increases cannot be attributed to changes in solar activity, volcanic eruptions or other natural variations;

e) that, with the operation of ground instruments since 1880 and the operation of remote sensing satellites, the constant increase in the mean sea level is a scientific fact that cannot be challenged;

f) that the increase in the mean sea level is threatening small islands and coastal cities,

recognizing further

a) that telecommunications/ICTs are of critical importance to overall economic, social and cultural development;

b) that countries believe it is essential to develop Internet access and to encourage training in ICTs as part of adaptation to climate change, as insufficient data is gathered at local level and sent for analysis;

c) that some countries want to learn more about the reduction of energy consumption and GHG emissions, and also to learn about ICTs that could operate at lower energy consumption and would require less maintenance, together with the corresponding quantified benefit for climatic change;

d) that some countries would like to learn more about the negative effects or impact of not using "green" ICTs and how can these contribute to helping reduce global warming,

recommends

1 that countries elaborate guidelines and best practices and implement national policies and related measures to facilitate the use of ICT to combat climate-change challenges;

2 that support be provided to help countries invest more in meteorology monitoring services, in order to prevent extreme events that could be devastating, as better prediction would cost relatively little and helps reduce the carnage caused by floods, droughts and tropical cyclones;

3 that, in order to help countries invest in the technologies, they need to know more about climate change in general, and have better access to and understanding of meteorological data (satellite and terrestrial) that are supplied;

4 that countries elaborate training programmes with a view to ensuring better usage of all the monitoring data;

5 that a program be developed, based on real figures, showing the effect of reduced energy consumption and the benefit of ICT;

6 that it is necessary to adopt innovative ICT-enabled strategies to tackle climate-change adaptation and mitigation on the long term;

7 that, as ICTs may need to operate in difficult meteorological conditions (hot weather, high humidity, etc.), it becomes urgent to help countries develop more affordable, as well as more robust and reliable, green ICTs;

8 that better cooperation between countries be established in areas related to the monitoring of meteorological data and for mitigating climate change using ICTs,

recommends further

1 that appropriate steps be taken for the creation of an enabling environment at the national, regional and international levels to encourage development and investment in the ICT sector, in meteorology and in prediction of extreme events by ITU members;

2 that work on further developing the field of ICTs and climate change be continued and treated by countries as a priority and urgent task,

invites the Director of the Telecommunication Development Bureau

1 to continue to contribute actively to enhancing activities related to climate-change mitigation and adaptation;

2 to continue jointly organizing events with other ITU Sectors in order to reduce duplication and enhance sharing of information across the Sectors and Member States.

RECOMMENDATION ITU-D 22

Bridging the standardization gap in association with regional groups of the study groups

The World Telecommunication Development Conference (Dubai, 2014),

considering

a) that Resolution 123 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference, on bridging the standardization gap between developing and developed countries, instructs the Secretary-General and the Directors of the three Bureaux to work closely with each other, in pursuing initiatives that assist in bridging the standardization gap between developing and developed countries, on follow-up and implementation of the operative paragraphs of that resolution supporting coordination in this respect at the regional level through regional offices and organizations;

b) that Resolution 44 (Rev. Dubai, 2012) of the World Telecommunication Standardization Assembly (WTSA), on bridging the standardization gap, instructs the Director of the Telecommunication Standardization Bureau (TSB), in collaboration with the Directors of Telecommunication Development Bureau (BDT) and the Radiocommunication Bureau (BR), within available resources, to provide the support needed for regional mobilization for standardization as well as to conduct workshops and seminars, as appropriate, to disseminate information and increase understanding of new Recommendations, in particular for developing countries;

c) that Resolution 54 (Rev. Dubai, 2012) of WTSA, on creation of, and assistance to, regional groups, instructs the Director of TSB, in collaboration with the Director of BDT, within the allocated or contributed resources that are available, to provide all necessary support for creating and ensuring the smooth functioning of the regional groups,

taking into account

the *further resolves* of Resolution 44 (Rev. Dubai, 2012), which states that ITU regional offices are to:

i) be engaged in the activities of TSB in order to promote and coordinate standardization activities in their regions to support the implementation of the relevant parts of that resolution and to carry out the objectives of the action plan, and launch campaigns to attract new Sector Members, Associates and Academia from developing countries to join ITU-T;

ii) assist the vice-chairmen, within the offices' budgets, in mobilizing members within their respective regions for increased standardization participation;

iii) organize and coordinate the activities of the regional groups of ITU-T study groups;

iv) provide the necessary assistance to the regional groups of ITU-T study groups;

v) provide assistance to the regional telecommunication organizations for the setting-up and management of regional standardization bodies,

recommends

1 that a functional structure for regional offices be implemented to support the activities of the regional groups;

2 that there be a budget allocation to regional offices to support the activities of the regional groups and their leaderships;

3 that the result of the activities of regional groups be sent for use, as appropriate, in the ITU Telecommunication Development Sector,

requests the Director of the Telecommunication Development Bureau

1 to implement a functional structure for the regional offices to support the activities of the regional groups;

2 to facilitate and support chairmen and vice-chairmen of ITU-T study groups from developing countries in promoting standardization activities and mobilizing members in subregional groups through workshops, seminars and forums.

STUDY GROUP QUESTIONS

Buenos Aires Action Plan

Section 5 – Study group Questions

STUDY GROUP 1

QUESTION 1/1

Strategies and policies for the deployment of broadband in developing countries[1]

1 Statement of the situation or problem

In September 2015, the Member States of the United Nations (UN) and the UN General Assembly formally agreed on the Sustainable Development Goals (SDGs), and set out a global agenda for development based on economic prosperity, social inclusion and environmental sustainability, known as the '2030 Agenda for Sustainable Development'.

Broadband is a key input to achieving a people-centred, inclusive and development-oriented information society, including the objectives set by Action Line C7 of the Tunis Agenda for the Information Society and the World Summit on the Information Society (WSIS) and (through them) ITU's role in achieving the SDGs. To benefit from new technologies and services, developing countries need high-speed, high-quality broadband connectivity, not just low-speed broadband. However, in order for this to happen, key framework conditions need to be met. Figures for 2016 indicate that, even though mobile telephony has become commonplace, the digital divide is shifting, too, with attention focusing on the 3.9 billion people – 53 per cent of the world's population – who were still offline at the end of 2016. ITU's Connect 2020 targets call for 60 per cent of the world's population to be online by 2020 –

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

equivalent to bringing another 1.2 billion people online over the next four years, especially in the 48 UN-designated least developed countries (LDCs). Additionally, in developing countries, LDCs and small island developing states (SIDS), a significant percentage of the population lives in less densely populated rural and remote areas where the capital costs of connecting homes and businesses using fixed-line connectivity can be prohibitive.

It was also estimated that there would be 884 million fixed-broadband subscriptions by the end of 2016, up 8 per cent on the previous year. ITU also estimates that the overall global Internet user gender gap has widened slightly, growing from 11 per cent in 2013 to 12 per cent in 2016. Pushing basic connectivity out beyond major urban centres to more remote areas continues to prove a major challenge. Even where people have access to the Internet, access has to be accompanied by a range of relevant services and content to help improve individuals' personal awareness, education and hygiene, as well as development outcomes in health and education at the national level.

The ITU Telecommunication Development Sector (ITU-D), with active participation from Member States and Sector Members, should endeavour to continue to increase the availability of affordable broadband services by carefully analysing the regulatory, policy, technical and economic issues related to broadband deployment, adoption and use. In particular, ITU members and the Telecommunication Development Bureau (BDT) must identify, escalate and address the stated needs of LDCs, SIDS and others in improving broadband deployment and use. Members will benefit from analysing the technical issues

involved in deploying broadband access technologies, including integration of access network solutions with existing or future network infrastructure, as well as asymmetric measures, as appropriate, for operators with significant market power (SMP), to help foster competition on the telecommunication market.

A focus on technical, policy, economic and regulatory aspects of broadband network deployment strategies and approaches will allow members to explore experiences, lessons learned and best practices to help enhance the implementation of national broadband plans and strategies, incentivize competition and investment, and increase broadband connectivity.

Seeking to provide a collaborative study of broadband access policies, implementation and applications, the World Telecommunication Development Conference (Dubai, 2014) (WTDC-14) resolved to begin studying new Question 1/1, entitled "Policy, regulatory and technical aspects of the migration from existing networks to broadband networks in developing countries, including next-generation networks, m-services, over-the-top (OTT) services and the implementation of IPv6". During the 2014-2017 study period, the Rapporteur Group on Question 1/1 prepared the report that can be found on the ITU website. The report includes country experiences and best-practice guidelines to promote affordable broadband networks, services and applications, including those that stimulate demand for broadband such as e-education, m-banking, m-commerce, mobile money transfer and OTT services. It also includes ways to promote broadband deployment through effective competition, public and private investment, inter-platform competition, broadband stimulus, and universal service funds. Examples of experiences and policies facilitating the transition from narrowband to high-speed, high-quality broadband networks, including from IPv4 to IPv6 through the deployment of IPv6, are also featured.

Surveys highlighted the members' satisfaction with the work conducted to date, and proposed some alternative ways forward. Regarding the future of Question 1/1, the results of the surveys carried out by the ITU-D study groups on the current work and the future of Question 1/1 indicate that this Question should continue, but should concentrate on migration to broadband networks.

The work should also take account of the need to build resilient, sustainable infrastructure consistent with WSIS Action Line C2 (Information and communication infrastructure) and the SDGs.

In order to combine all resources and expertise so as to develop coherent policies and strategies that integrate all the issues related to the deployment of broadband in developing countries and access to broadband connectivity, revised Question 1/1 subsumes Question 2/1 on the study of broadband access technologies, excluding OTT and m-services aspects, which are to be addressed under another revised Question.

2 Question or issue for study

a) Policies and regulations that promote increased high-speed, high-quality broadband network connectivity in developing countries.

b) Effective and efficient ways to fund increased broadband access for the unserved and underserved.

c) Ways to remove practical and regulatory barriers to broadband infrastructure deployment and investment, and best practices for improving cross-border connectivity and SIDS' connectivity challenges.

d) The regulatory and market conditions necessary to promote deployment of broadband networks and services, including, as appropriate, the establishment of asymmetric regulation for operators with significant market power (SMP), such as local loop unbundling, if required, for such SMP operators, and organizational options for national regulatory authorities resulting from convergence.

e) Promoting incentives and an enabling regulatory environment for the investments required to meet the growing demand for access to the Internet generally, and bandwidth and infrastructure requirements in particular, for delivering affordable broadband services to meet development needs, including consideration of public, private and public-private partnerships for investment.

f) Methods to implement affordable and sustainable broadband networks, including the transition from narrowband to high-speed, high-quality networks and interconnection and interoperability features.

g) Demand-side factors and practices to generate and increase the usage of ICT devices and services.

h) Factors influencing the effective deployment of wireline and wireless, including satellite, broadband access technologies, including backhaul considerations.

i) Methodologies for migration planning and implementation of broadband technologies, taking into account existing networks, as appropriate.

j) Trends in the various broadband access technologies and deployment and regulatory considerations.

k) National digital policies, strategies and plans which seek to ensure that broadband is available to as wide a community of users as possible.

l) Flexible, transparent approaches to promoting robust competition in the provision of network access.

m) Co-investment and the co-location and shared use of infrastructure, including through active infrastructure sharing.

n) Licensing approaches and business models for covering remote and rural areas that more effectively integrate the use of terrestrial, satellite, backhaul and submarine telecommunication infrastructure.

o) Holistic universal access and service strategies and financing mechanisms, including universal service funds, for both network expansion and connectivity for public institutions and the community, as well as demand stimulation measures, such as end-user subsidies.

p) Policy and technological aspects of the transition from IPv4 to IPv6.

q) Ways to manage access to networks, balancing network performance, competition and consumer benefits.

r) Available procedures, methods and time-frames for the effective transition to IPv6.

s) Guidelines for the adoption of, and migration strategies for, network functions virtualization (NFV) and software-defined networking (SDN).

t) The benefits and challenges to governments, operators and regulators of developing virtualized infrastructure, including costs associated with the adoption of NFV.

u) Case studies of successful NFV platforms and SDN deployment in developed and developing countries, including methods of choosing the infrastructure (data centre and servers) for different virtualized network features.

3 Expected output

Reports, best-practice guidelines, workshops, case studies and recommendations, as appropriate, that take into account the issues for study and the following expected outputs:

a) Strategies/national experiences/guidelines to stimulate investment in broadband networks, including private, public and public-private partnerships, financing mechanisms, universal service funding mechanisms and other ways of bridging the digital divide.

b) National experiences to promote broadband network deployment through effective competition, public and private investment, inter-platform competition and public-private partnerships, and identification of the range of alternative successful business arrangements that have been used to meet growing demand and other changes in the market.

c) Methods of broadband infrastructure deployment, including backhaul and backbone, and national experiences for improving cross-border connectivity and connectivity for SIDS.

d) Strategies/national experiences/guidelines to promote public-private partnerships for investment, and business models for the deployment of broadband networks, including policy and licensing approaches, financial incentives and frameworks to promote the deployment of broadband infrastructure to improve connectivity and access in the use of ICTs for all.

e) Guidelines for making the transition from narrowband to high-speed, high-quality broadband networks (including transition to IMT-2020 networks), taking into account interconnection and interoperability features.

f) Case studies associated with operational and technical issues of deploying broadband networks, including backhaul considerations.

g) Examples of removing practical and regulatory barriers to broadband infrastructure deployment.

h) Options for the deployment of broadband access networks in developing countries, based on ITU Radiocommunication Sector (ITU-R) and ITU Telecommunication Standardization Sector (ITU-T) Recommendations and relevant regulatory considerations.

i) National experiences for co-investment, co-location, local loop unbundling and infrastructure sharing to promote market entry, where appropriate.

j) Regulatory challenges and policies to leverage the rise of new technologies in the digital economy and society, including universal service funds, coverage requirements and alternative means of financing broadband access.

k) Overview of national experiences in the transition from IPv4 to IPv6.

l) Methods of consolidating and coordinating efforts to facilitate the transition to IPv6.

m) Analysis of the factors affecting the adoption of features of virtual network functions in telecommunication company environments.

n) Technical approaches and national experiences on virtual network functions and SDN to facilitate infrastructure roll-out in developing countries.

o) Study on national experiences in the establishment of Internet traffic exchange points at national, regional and international level.

p) Developing a national migration plan from IPv4 to IPv6, including a capacity-building plan, an awareness plan, knowledge sharing and a readiness assessment.

4 Timing

Annual progress reports to Study Group 1.

A final report and guidelines or recommendation(s) are to be submitted to Study Group 1 within four years.

Within two years, a draft report on the subjects should be submitted to Study Group 1.

5 Proposers/sponsors

There was consensus at WTDC (Buenos Aires, 2017) that broadband deployment issues are of extreme importance to all countries, particularly developing countries, and work needs to be continued on this subject under a revised Question in the next study period 2018-2021.

6 Sources of input

1) Results of related technical progress in relevant ITU-R and ITU-T study groups.

2) Contributions from Member States, Sector Members and Associates and from relevant ITU-R and ITU-T study groups, and other stakeholders.

3) Interviews, existing reports and surveys should also be used to gather data and information for the finalization of a comprehensive set of best-practice guidelines.

4) Material from regional telecommunication organizations, telecommunication research centres, manufacturers and working groups should also be used, in order to avoid duplication of work.

5) ITU publications, reports and Recommendations on broadband access technologies.

6) Relevant output and information from study Questions related to ICT applications.

7) Relevant inputs and information from BDT programmes related to broadband and the different broadband access technologies.

7 Target audience

Target audience	Developed countries	Developing countries
Telecom policy-makers	Yes	Yes
Telecom regulators	Yes	Yes
Service providers/operators	Yes	Yes
Manufacturers	Yes	Yes
Consumers/end users	Yes	Yes
Standards-development organizations, including consortia	Yes	Yes

a) Target audience

All national telecom policy-makers, regulators, service providers and operators, especially those in developing countries, as well as manufacturers of broadband technologies.

b) Proposed methods for implementation of the results

The results of the Question are to be distributed through ITU-D interim and final reports. This will provide a means for the audience to have periodic updates of the work carried out and to provide input and/or seek clarification/more information from ITU-D Study Group 1 should they need it.

8 Proposed methods of handling the Question or issue

a) How?

1) Within a study group:

– Question (over a multi-year study period) ☑

2) Within regular BDT activity (indicate which programmes, activities, projects, etc., will be involved in the work of the study Question):

– Programmes ☑

– Projects ☑

– Expert consultants ☑

– Regional offices ☑

3) In other ways – describe (e.g. regional, within other organizations with expertise, jointly with other organizations, etc.) ☐

b) Why?

The Question will be addressed within a study group over a four-year study period (with submission of interim results), and will be managed by a rapporteur group. This will enable Member States and Sector Members to contribute their experiences and lessons learned with respect to policy, regulatory and technical aspects of the migration from existing networks to broadband networks.

9 Coordination and collaboration

The ITU-D study group dealing with this Question will need to coordinate with: relevant ITU-R and ITU-T study groups; the relevant outputs from other ITU-D Questions; relevant focal points in BDT and ITU regional offices; coordinators of relevant project activities in BDT; experts and experienced organizations in this field.

10 BDT programme link

Links to BDT programmes aimed at fostering the development of telecommunication/ICT networks as well as relevant applications and services, including bridging the standardization gap.

11 Other relevant information

As may become apparent within the life of the Question.

QUESTION 2/1

Strategies, policies, regulations and methods of migration to and adoption of digital broadcasting and implementation of new services

1 Statement of the situation or problem

1.1 The migration from analogue to digital broadcasting technologies has been completed in some countries, while others are in the process of completing the transition. The Final Report of Question 8/1 from the study period 2014-2017 indicates that the transition results in a variety of strategies, plans and implementation actions that achieve a successful process to maximize the benefits.

1.2 The ITU Telecommunication Development Sector (ITU-D) can continue playing a role in helping Member States evaluate the technical and economic issues involved in the transition from analogue to digital technologies and services. On these matters, ITU-D has been collaborating closely with both the ITU Radiocommunication (ITU-R) and the ITU Telecommunication Standardization Sector (ITU-T), thus avoiding duplication.

1.3 The use of the "digital dividend" is an important issue, and continues to be widely debated by broadcasters and operators of telecommunication and other services operating in the same frequency bands. The role of the regulatory authorities in this regard is crucial to balancing the interests of users with the demands of growth in all branches of the industry.

1.4 ITU had been working to analyse and identify best practices for the transition from analogue to digital broadcasting. It is important to emphasize the report on ITU-D Question 11-3/2 of the 2010-2014 study period, which identifies public policies that should be applied as means for countries to be able to start the digital transition.

1.5 It is also important to mention the Digital Terrestrial Television Broadcasting Switchover (DSO) database, which contains information on relevant events (e.g. workshops, frequency coordination meetings and seminars), publications (e.g. ITU-R and ITU-D, roadmaps and workshop presentations), websites (e.g. ITU-R and ITU-D, GE-06), contacts and sources of information.

1.6 In addition, the report on ITU-D Question 8/1 of the 2014-2017 study period presented best practices that accelerate the transition and narrow the digital divide by deploying new services, communication strategies for public awareness on digital broadcasting, and radio spectrum issues related to the analogue switch-off process, among other case studies.

1.7 Other issues to consider are the studies from other ITU Sectors, especially taking into account the decisions of the World Radiocommunication Conference (WRC-15) on the exploitation of the digital dividend in the future. In this regard, it is relevant to take into consideration the maintenance of study topics related to technical and economic aspects involved in the transition from analogue to digital broadcasting.

1.8 Finally, another important issue for the future of broadcasting is the emergence of new broadcasting technologies and standards that could be taken into account when developing countries[1] are implementing the digital television transition.

2 Question or issue for study

Studies under the Question will focus on the following issues:

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

2.1 Analysis of methods and issues for the transition to digital terrestrial sound and television broadcasting, including analogue-to-digital and digital-to-digital, allowing the deployment of new services and applications for consumers.

2.2 National experiences on strategies and socio-economic aspects of the introduction of new broadcasting technologies, emerging services and capabilities.

2.3 National experiences on spectrum planning activities in preparation for the analogue switch-off.

2.4 National experiences on interference mitigation measures.

2.5 Analysis of the gradual transition to digital sound broadcasting, study cases, sharing of experiences and strategies implemented.

2.6 Costs of the transition to digital broadcasting and mplications for the various players: broadcasters, operators, technology providers, manufacturers and distributors of receivers, and consumers, among others.

2.7 The use of the digital-dividend frequency bands resulting from the transition to terrestrial digital broadcasting, including technical, regulatory and economic aspects, such as:

a) status of the use of the digital-dividend frequency bands;

b) standards/Recommendations adopted or currently being studied by the other two ITU Sectors related to the topic;

c) sharing of the digital-dividend frequency band;

d) harmonization and cooperation at regional level;

e) the role of the digital dividend in saving financing, cost savings on the transition to digital, and best experience and practice in this regard;

f) use of the digital dividend to help bridge the digital divide, especially for the development of communication services for rural and remote areas;

g) guidelines on the transition to digital sound broadcasting, focusing on the experiences of those countries that have completed this process.

3 Expected output

a) A report reflecting the studies outlined in §§ 2.1, 2.2, 2.3 2.4, 2.5, 2.6 and 2.7 above.

b) Periodic dissemination of relevant data emanating from the organizations and groups listed in § 8 below. Periodic updates on studies taking place in the other ITU Sectors.

c) National experiences on strategies and socio-economic aspects of the introduction of new broadcasting technologies, services and capabilities.

4 Timing

An annual progress report is expected at each study group meeting.

5 Proposers/sponsors

Brazil, Mexico, APT.

6 Sources of input

1) Collection of related contributions and data from Member States and ITU-D Sector Members, and those organizations and groups listed in § 9 below.

2) Updates and outputs of ITU-R and ITU-T study groups; relevant Recommendations and reports related to digital broadcasting.

3) Collection of information on the impact on developing countries of transition to digital broadcasting, re-planning and interactivity.

4) Outputs of WTDC Resolution 9 (Rev. Buenos Aires, 2017), including relevant Recommendations, guidelines and reports.

7 Target audience

Target audience	Developed countries	Developing countries
Telecom policy-makers	Yes	Yes
Telecom regulators	Yes	Yes
Service providers/operators	Yes	Yes
Broadcasting operators	Yes	Yes
ITU-D programme	Yes	Yes

a) Target audience – Who specifically will use the output

Beneficiaries of the output are expected to be middle and higher-level managers in broadcasters, telecommunication/ICT operators and regulators worldwide.

b) Proposed methods for implementation of the results

Activities include conducting technical studies, observing best practices, and developing comprehensive reports serving the target audience's interests.

8 Proposed methods of handling the Question or issue

a) How?

1) Within a study group:

– Question (over a multi-year study period) ☑

2) Within regular BDT activity (indicate which programmes, activities, projects, etc., will be involved in the work of the study Question):

– Programmes ☑

– Projects ☑

– Expert consultants ☑

– Regional offices ☑

3) In other ways – describe (e.g. regional, within other organizations with expertise, jointly with other organizations, etc.) ☐

b) Why?

To be defined in the workplan.

9 Coordination and collaboration

The ITU-D study group dealing with this Question should coordinate closely with:

– Other ITU-R and ITU-T study groups dealing with similar issues, and in particular other relevant ITU-D groups, for example the ITU-D Working Group on Gender Issues

– The Technical Committee of the Inter-Regional Broadcasting Union

– UNESCO and relevant international and regional broadcasting organizations, as appropriate

– The Director of the Telecommunication Development Bureau (BDT) shall, through the appropriate BDT staff (e.g. regional directors, focal points) provide information to rapporteurs on all relevant ITU projects in different regions. This information should be provided to the meetings of the rapporteurs when the work of the programmes and regional offices is in the planning stages and when it is completed.

10 BDT programme link

WTDC Resolutions 10 (Rev. Hyderabad, 2010), Resolution 9 (Rev. Buenos Aires, 2017), Resolution 17 (Rev. Buenos Aires, 2017) and Resolution 33 (Rev. Dubai, 2014)

Links to BDT programmes aimed at fostering the development of telecommunication/ICT networks as well as relevant applications and services, including bridging the standardization gap.

11 Other relevant information

As may become apparent within the life of the Question.

QUESTION 3/1

Emerging technologies, including cloud computing, m-services and OTTs: Challenges and opportunities, economic and policy impact for developing countries[1]

1 Statement of the situation or problem

Emerging technologies, including cloud computing, m-services and over-the-top (OTT) offerings, present new opportunities for economic development, particularly in developing countries. Cloud computing is a concept in the world of multimedia, and one towards which the world is now gradually moving, in view of the many powerful advantages it offers. This concept can be summarized as a model enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g. networks, servers, storage, applications and services) that can be rapidly provisioned and released with minimal management effort or service-provider interaction.

The key characteristics of cloud computing are: broad network access, measured service, multi-tenancy, on-demand self-service, rapid elasticity and scalability, and resource pooling. For many countries, cloud computing represents a possible solution to the lack of adequate computing resources and it has achieved remarkable growth in many of the most developed countries, particularly after the adoption of this trend by mobile-telephone operators and manufacturers. Cloud computing is considered by key industry leaders to be the next technological revolution of the twenty-first century.

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

The main key characteristics of cloud computing are economies of scale (infrastructure sharing) and flexibility of use.

IP-based services are often offered by providers to users over an Internet connection, independent of the telecommunication network operator providing the Internet connection. These services are often referred to as "over-the-top" (OTT) offerings. Consumer demand for such offerings is rapidly growing as consumers want more of, and perceive great benefits from, these offerings. Consumers expect to be able to access legal content, applications and services and want information about their subscriptions. Such offerings create demand for broadband access and services, but are also obliging network operators to seek new business models and arrangements, particularly in developing countries.

The growth in broadband networks also leads to the development and deployment of new services and applications, such as mobile money transfer, m-banking, m-commerce and e-commerce.

In view of the importance of the topic, cloud computing is dealt with by two study groups in the ITU Telecommunication Standardization Sector (ITU-T). ITU-T Study Group 13 develops standards that detail requirements and functional architectures of the cloud-computing ecosystem, covering inter- and intra-cloud computing and technologies supporting XaaS (X as a Service). This work includes infrastructure and networking aspects of cloud-computing models, as well as deployment considerations and requirements for interoperability and data portability. Study Group 13 also develops standards enabling consistent end-to-end, multi-cloud management and monitoring of services exposed by and across different service providers' domains and technologies. Study Group 13's standardization work also covers network aspects of the Internet of Things (IoT), additionally ensuring support for IoT across future networks (FN) as well as evolving next-generation networks (NGN) and mobile networks. Cloud computing in support of IoT is an integral part of this work.

ITU-T Study Group 20 is responsible for studies relating to Internet of Things (IoT) and its applications, and smart cities and communities (SCC). This includes studies relating to big data aspects of IoT and SCC, e-services and smart services for SCC.

Collaboration is therefore required between both Sectors in order to successfully deal with the challenges and opportunities facing the developing countries in terms of access to cloud computing.

2 Question or issue for study

Cloud computing

a) Infrastructure needs for supporting and enabling access to cloud services.

b) Strategies, policies and infrastructure investments to foster the emergence of a cloud-computing ecosystem in developing countries, taking into consideration relevant standards recognized or under study in the other two ITU Sectors.

c) Cloud-computing trends.

d) Features of networks that support effective access to cloud-computing services.

e) Building and developing a sufficient group of existing frameworks to support investment in infrastructure for cloud computing, taking into consideration relevant standards recognized or under study in the other two ITU Sectors.

f) Cost models for the adoption of cloud computing.

g) Continued elaboration of case studies of successful cloud-computing platforms used in developed and developing countries.

M-services

a) Policies, strategies and relevant approaches in the field of m-services.

b) Methods of development and deployment of cross-cutting services such as e-commerce, e-finance and e-governance, including money transfer, m-banking and m-commerce.

c) Strategies for availability, access and use of mobile services and applications.

d) Ways to promote an enabling environment among ICT stakeholders for the development and deployment of m-services.

Over-the-top

a) Impacts of the provisioning of OTTs, including impacts on regulatory frameworks, network infrastructure, economic impacts and business models.

b) Assessments of the competition effect on the market.

c) Identification of policy tools to facilitate the availability of competitive OTT to consumers at the local and national levels.

d) Identification of best practices and policies that create incentives for investment in OTTs.

e) Continued study of issues relating to facilitating access to IP networks, thereby enabling access to OTTs.

f) National case studies and experiences regarding legal frameworks and partnerships seeking to facilitate the development and deployment of OTT.

g) National experiences describing the economic and business model among telecom operators and OTT providers.

3 Expected output

a) Annual progress report on the above study items.

b) A progress report midway through the study cycle.

c) A final report for the Question that includes:

- An analysis of the factors influencing effective access to support emerging technologies, including cloud computing, m-services and OTT offerings.

- A set of guidelines, such as policy or technical approaches, among others, for facilitating infrastructure deployment, which could be delivered, *inter alia*, through training seminars in accordance with the ITU Telecommunication Development Sector (ITU-D) programme on capacity building.

- A handbook on infrastructure and services supporting cloud computing in developing countries, including consideration of strategies and policies that could be implemented.

  This handbook will be the result of study group collaboration between ITU-T Study Groups 3 and 13 and the rapporteur group dealing with this Question under ITU-D Study Group 1.

- Draft Recommendation(s), as appropriate and if justified.

4 Timing

The interim report on this Question is expected by 2019. The final report is expected in 2021 at the end of the ITU-D study period.

5 Proposers/sponsors

Arab States; African States; United States; Mexico

6 Sources of input

1) Results of related technical progress in relevant ITU-T study groups, in particular Study Groups 3 and 13.

2) ITU publications on emerging technologies, including cloud-computing services, m-services and OTT offerings.

3) Relevant reports of national and/or regional organizations in developing and developed countries.

4) Contributions on experiences with providing access to emerging technologies, including cloud computing, m-services and OTT offerings in developed and developing countries.

5) Relevant inputs from service providers and manufacturers.

6) Relevant inputs from Telecommunication Development Bureau (BDT) programmes relating to emerging technologies, including cloud computing, m-services and OTT offerings.

7 Target audience

a) Target audience

Target audience	Developed countries	Developing countries
Telecom policy-makers	Yes	Yes
Telecom regulators	Yes	Yes
Service providers/operators	Yes	Yes
Manufacturers	Yes	Yes
ITU-D programme	Yes	Yes

b) Proposed methods for implementation of the results

The work of the rapporteur group will be conducted and publicized through the ITU-D website as well as through documents and appropriate liaison statements. The results of the work will also be used by relevant BDT programmes as components of the toolkit BDT uses when solicited by Member States and Sector Members to support their efforts to develop and deploy emerging technologies, including cloud computing, m-services and OTT offerings.

8 Proposed methods for handling the Question

The Question will be handled by a rapporteur group of ITU-D Study Group 1.

9 Coordination and collaboration

In order to coordinate effectively and avoid duplication of activities, the study should take into consideration:

– outputs from the relevant ITU-T study groups, in particular those made available by ITU-T Study Groups 3 and 13;

– the relevant outputs from ITU-D Questions;

– inputs from the relevant BDT programmes.

10 BDT programme link

The relevant programme will be the programme on network infrastructure and services.

11 Other relevant information

As may become apparent within the life of the Question.

QUESTION 4/1

Economic policies and methods of determining the costs of services related to national telecommunication/information and communication technology networks, including next-generation networks

1 Statement of the situation or problem

As recognized in the Final Report on study Question 4/1 of the previous study period, the deployment of next-generation networks (NGN) calls for changes to new accounting tools in order to strengthen and increase the benefits that the use of such networks offers end users.

Similarly, the last study period focused on various topics such as new charging methods for services provided over NGN networks, infrastructure-sharing models, consumer price evolution and impact on ICT service usage, methods of determining the cost of licences for the operation of networks and/or the provision of telecommunication services and regulatory accounting in an NGN environment.

Considering the previous study period, Question 4/1 should continue to consider that operators and service providers require access to telecommunication/information and communication technology (ICT) networks and services, including broadband infrastructure, in a converged manner.

Thus, the work programme set out below to guide the activities related to Question 4/1 should cover:

– identification of active collaborators;

– expected outputs of the Question;

– working methods; and

– work programme.

2 Question or issue for study

The Question will cover the following main topics from national perspectives:

1) New charging methods (or models, if applicable) for services provided over NGN networks:

   1.1) Methods for determining the costs of wholesale services.

2) Different models for infrastructure sharing, including through commercially negotiated terms:

   2.1) For what type of infrastructure (or facilities) the provider party is free to negotiate reasonable commercial terms and conditions with a requesting party.

   2.2) The impact of infrastructure sharing on investment cost, local loop unbundling, provision of telecommunication/ICT services, competition and prices to consumers: case studies with quantitative analysis.

3) Consumer price evolution and impact on ICT service usage, innovation, investment and operator revenues:

   3.1) New and innovative business models for services deployed in an NGN environment, including methods encouraging the adoption and use of ICT services.

   3.2) Trends in prices of telecommunication/ICT services, including international mobile roaming.

4) Trends in the development of virtual mobile operators and their regulatory framework.

3 Expected output

Development of best practices for each of the following areas:

a) Promoting appropriate infrastructure sharing

b) Encouraging price/tariff reduction to consumers through competition

c) Stimulating access to and use of these services.

4 Timing

An interim report will be presented to Study Group 1 in 2020. It is proposed that this study should be completed in 2022, when a final report will be submitted.

5 Proposers/sponsors

ITU Telecommunication Development Sector (ITU-D) Study Group 1 proposed the continuation of this Question as modified herein.

6 Sources of input

The major source of input will be the experiences of Member States and Sector Members on costing and pricing issues. Contributions from Member States and Sector Members will be essential to the successful study of the issue.

Interviews, existing reports and surveys should also be used to gather data and information for the finalization of a comprehensive set of best-practice guidelines.

Material from regional telecommunication organizations, telecommunication research centres, manufacturers and working groups should also be used, in order to avoid duplication of work.

Contributions are expected from Member States, Sector Members and Associates, and from relevant ITU Radiocommunication Sector (ITU-R) and ITU Telecommunication Standardization Sector (ITU-T) study groups, in particular ITU-T Study Group 2, and ITU-D study groups, and other stakeholders.

7 Target audience

All the target audiences mentioned below, with particular attention to the needs of developing countries[1].

Target audience	Developed countries	Developing countries
Telecom policy-makers	Yes	Yes
Telecom regulators	Yes	Yes
Service providers/operators	Yes	Yes
Manufacturers	Yes	Yes
ITU-D programme	Yes	Yes

a) Target audience – Who specifically will use the output

All national telecom policy-makers, regulators, service providers and operators, especially those in developing countries, as well as regional and international organizations.

b) Proposed methods for implementation of the results

The results of the Question are to be distributed through ITU-D interim and final reports. This will provide a means for the audience to have periodic updates of the work carried out and to provide input and/or seek clarification/more information from ITU-D Study Group 1 should they need it.

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

8 Proposed methods of handling the Question or issue

Electronic distribution of the report and guidelines to all Member States, Sector Members and their respective national regulatory agencies (NRAs), and ITU regional offices.

Distribution of the report and guidelines at the Global Symposium for Regulators (GSR) and relevant Telecommunication Development Bureau (BDT), Radiocommunication Bureau (BR) and Telecommunication Standardization Bureau (TSB) seminars.

How?

1) Within a study group: ☑

   – Question (over a multi-year study period) ☑

2) Within regular BDT activity:

   – Objective 3 ☑

   – Projects: regional initiatives ☐

   – Expert consultants ☑

9 Coordination and collaboration

The ITU-D study group dealing with this Question will need to coordinate with:

– Relevant ITU-D study group Questions, particularly Question 1/1 and Question 3/1

– Relevant ITU-T study groups, particularly Study Group 3

– Relevant focal points in BDT and ITU regional offices

– Experts and experienced organizations in this field.

10 BDT programme link

ITU-D Objective 3.

11 Other relevant information

Question 4/1 will liaise closely with ITU-T Study Group 3 and its regional groups for Africa (SG3RG-AFR), Asia and Oceania (SG3RG-AO), Arab States (SG3RG-ARB) and Latin America and the Caribbean (SG3RG-LAC), ITU-D Study Groups 1 and 2 and other international and regional organizations concerned with issues relating to costs and tariffs for telecommunication services, and the ITU-D enabling environment programme.

As may become apparent within the lifetime of this Question.

QUESTION 5/1

Telecommunications/information and communication technologies for rural and remote areas

1 Statement of the situation or problem

In order to continue to contribute to achieving the objectives set by the Geneva Plan of Action of the World Summit on the Information Society (WSIS), and to promote attainment of the Sustainable Development Goals (SDGs) defined in September 2015, it is necessary to address the challenge of infrastructure development in the rural and remote areas of developing countries[1], where more than half of the world's population live.

The installation of cost-effective and sustainable basic telecommunication infrastructure in rural and remote areas is an important aspect calling for further studies, and specific outcomes need to be available for the vendor community to develop a suitable solution to meet the challenges in rural and remote areas.

Most of the time, existing network systems are primarily designed for urban areas, where the necessary support infrastructure (adequate power, building/shelter, accessibility, skilled manpower to operate, etc.) for setting up a telecommunication network is assumed to exist. Hence, current systems need to be more adequately adapted to specific rural requirements in order to be widely deployed.

Shortage of power, difficult terrain, lack of skilled manpower, access and transportation, and installation and maintenance of networks are some of the known challenges that developing countries planning to extend information and communication technologies (ICTs) to rural and isolated areas must tackle.

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

More detailed studies addressing the challenges of deploying cost-effective and sustainable ICT infrastructure in rural and remote areas are expected to be undertaken within the study groups of the ITU Telecommunication Development Sector (ITU-D), taking into account the global perspective.

Therefore, the WSIS target, "Connect villages with telecommunications/ICT and establish community access points", should be promoted more intensively, by employing emerging broadband technologies for various e-application services to stimulate social and economic activities in rural and remote areas. Multipurpose community telecentres (MCT), public call offices (PCO), community access centres (CAC) and e-posts are still valid in terms of cost effectiveness for sharing of infrastructure and facilities by community residents, leading to the goal of provision of individual telecommunication access.

2 Question or issue for study

There are still many challenges to spreading telecommunications/ICTs in rural and remote areas. Throughout the studies conducted in past study periods, it has been clear from the experience of many countries that technologies and strategies for rural and remote areas are various and diversified from country to country. Also, the social, economic and technological situation in rural and remote areas is changing rapidly. Therefore, it is important to update the study of telecommunications/ICTs for rural and remote areas and to provide best practices to other developing and developed countries, in respect of the following items:

– Techniques and sustainable solutions that can impact on the provision of telecommunications/ICTs in rural and remote areas, with emphasis on those that employ the latest technologies designed to lower infrastructure capital and operating costs, assist convergence between services and applications, and take into consideration the need to reduce greenhouse gas (GHG) emissions.

– Difficulties in creating or upgrading telecommunication infrastructure in rural areas.

– Difficulties facing fixed and mobile networks for rural deployments in developing and developed countries, and the requirements to be satisfied by such systems.

– Needs and policies, mechanisms and regulatory initiatives to reduce the digital divide by increasing broadband access.

– Quality of the services provided, and the cost effectiveness, degree of sustainability in different geographies and sustainability of the techniques and solutions.

– Business models for sustainable deployment of networks and services in rural and remote areas, taking into consideration priorities based on economic and social indicators.

– Increasing availability of telecommunications/ICTs that provide enhanced connectivity at progressively lower costs, lower energy consumption and lower levels of GHG emissions.

– Experience gained in previous ITU-D study cycles in many parts of the developing world in implementing and refining major rural telecommunication programmes, as more countries respond to particular situations and domestic demand using best practices as outlined in the work of ITU-D.

– The influence of cultural, social and other factors in producing differing and often creative responses to meeting the demand for multimedia services from residents of rural and remote areas of developing and least developed countries (LDCs).

– The steady progress being made on human resources development/ management issues, which are fundamental to establishing sustainable telecommunication infrastructure.

– Identifying the rapid change of technologies which could be utilized in rural and remote areas should be taken into account. Here, coordination with Question 1/1 is needed to avoid duplication.

– Opportunities for and challenges to access to services in locally relevant languages.

– Description of evolving system requirements for rural network systems specifically addressing the identified challenges of rural deployment.

– Analysis of case studies.

During the study carried out on each of these items, the following matters should also be studied and reflected in the outputs of the Question:

– environmental sustainability in deploying the infrastructure and necessary robustness of telecom infrastructure;

– maintenance and operational aspects to provide a quality and continuous service;

– demand-side factors and practices to generate and increase the usage of ICT devices and services;

– efforts to build ICT skill sets for the deployment of broadband services;

– relevant localization of content;

– affordability of services/devices for rural users to adopt so as to fulfil their development needs;

– strategies to maintain and encourage the training of technical staff in order to guarantee the reliability of the telecommunication infrastructure;

– strategies to promote small, non-profit community operators

In addressing the above studies, the work under way in response to other ITU-D Questions, and close coordination with relevant activities under those Questions, in particular Questions 1/1, 3/1 and 4/1 and Questions 2/2, 4/2 and 5/2, are highly relevant. Likewise, the studies shall take into account cases related to indigenous communities, isolated and poorly served areas, LDCs, small island developing states (SIDS) and landlocked developing countries (LLDCs), and highlight their specific needs and other particular situations which need to be considered in developing telecommunication/ICT facilities for these areas.

3 Expected output

The output will be a report on the results of the work conducted for each item studied, together with a handbook, case study analysis reports, and one or more Recommendations and other relevant materials at appropriate times, either during the course of or at the conclusion of the cycle.

Information shall be consolidated and disseminated to the membership to enable them to organize seminars and workshops for sharing best practices on the deployment of broadband infrastructure in rural and underserved areas.

4 Timing

The output will be generated on an annual basis. The output from the first year will be analysed and assessed in order to update the work plan for the next year, and so on.

5 Proposers/sponsors

The Question was originally approved by WTDC-94, and subsequently revised by WTDC-98, WTDC-02, WTDC-06, WTDC-10, WTDC-14 and WTDC-17. Brazil, India, Mexico and Japan.

6 Sources of input

Contributions are expected from Member States, Sector Members and Associates, as well as inputs from relevant Telecommunication Development Bureau (BDT) programmes, particularly those that have successfully implemented telecommunication/ICT projects in rural and remote areas. These contributions will enable those responsible for work on this Question to develop the most appropriate conclusions, recommendations and outputs. The intensive use of correspondence and online exchange of information and experiences is encouraged for additional sources of inputs.

7 Target audience

Target audience	Developed countries	Developing countries
Relevant policy-makers	Yes	Yes
Telecom regulators	Yes	Yes
Rural authorities	Yes	Yes
Service providers/operators	Yes	Yes
Manufacturers, including software developers	Yes	Yes
Vendors	Yes	Yes

a) Target audience

Depending on the nature of the output, upper- to middle-level managers in operators and regulators in developing countries, including relevant rural authorities, are the predominant users of the output. The study outcomes will ensure adequate attention of vendors to focus on their development efforts to meet the needs of developing countries.

b) Proposed methods for implementation of the results

To be decided during the study period.

8 Proposed methods of handling the Question

Within ITU-D Study Group 1.

9 Coordination

The ITU-D study group dealing with this Question will need to coordinate with:

– Focal points of the relevant Questions in BDT

– Coordinators of relevant project and programme activities in BDT

– Regional and scientific organizations with mandates covering the subject matter of the Question

– Other relevant stakeholders (see Recommendation ITU-D 20).

As may become apparent within the life of the Question.

10 BDT programme link

WTDC Resolution 11 (Rev. Buenos Aires, 2017), Resolution 68 (Rev. Dubai, 2014) and Recommendation ITU-D 19.

Links to BDT programmes aimed at fostering the development of telecommunication/ICT networks as well as relevant applications and services, including bridging the standardization gap.

11 Other relevant information

As may become apparent within the life of the Question.

QUESTION 6/1

Consumer information, protection and rights: Laws, regulation, economic bases, consumer networks

1 Statement of the situation or problem

Faced with the rapid evolution of technologies and the appearance on the market of ever more sophisticated equipment, consumers who are not telecommunication/information and communication technology (ICT) experts can find themselves at a loss. Consequently, consumer information and consumer rights have become a priority, and at the World Telecommunication Development Conference (Dubai, 2014) account was taken of the wish of Member States and Sector Members to study the protection of telecommunication/ICT consumers, and that study was included under convergence.

In the majority of meetings organized by the leading telecommunication and ICT players, the issue of consumer protection has become a constant concern, yet neither regulators, operators or service providers nor equipment manufacturers have defined or provided a specific legal basis for the legal consumer-protection instruments that need to be implemented to guarantee universal access to quality telecommunication/ICT services at low cost.

Given the pace of change in telecommunications/ICT, bodies responsible for consumer protection (regulators, public and private agencies) should regularly amend their regulatory frameworks on the basis of the right balance between the interests of operators/service providers and those of users in areas such as subscription agreements, protection of intellectual property rights and management of digital rights, without detriment to innovative models of e-commerce.

One of the key challenges for regulators is to establish a culture of security that promotes trust in telecommunication/ICT applications and services, in which there is effective enforcement of privacy and consumer protection. Therefore, it is essential to implement laws, policies and regulatory practices, and to develop transparent, effective consumer-protection mechanisms in order to build such trust and confidence.

Likewise, for these regulations to limit and prevent fraudulent, deceptive and unfair commercial practices, it is necessary to promote education and adequate dissemination of telecommunication/ICT services for all consumers to make informed choices and benefit from adequate protection and compensation mechanisms when problems arise.

Therefore, it is important for all the parties involved in consumer protection (regulators, consumer-protection bodies, policy-makers and the private sector) to participate in education and awareness-raising for consumers, including persons with disabilities, women and children.

The development of intersectoral competition with the emergence of services resulting from convergence of technologies and telecommunication/ICT services makes it even more essential to enhance transborder cooperation, and for regulators and policy-makers to improve their competences and the tools designed to protect consumers. Furthermore, the question of after-sales service, which is one criterion for consumer choice, will need to be studied.

In view of the foregoing, it is important to bear in mind that the final report on the last study period includes a status review of consumer rights relating to telecommunication services, and existing consumer-protection challenges, including technology innovation, market competition, changing business models, regulator resources and capacities, and the needs of specific groups such as persons with disabilities, women and children, as well as the consumer-rights framework and the economic aspects of consumer protection.

These studies on consumer protection in the context of convergence should nevertheless be completed, focusing on the new challenges.

Member States and Sector Members would continue to benefit from a report and, where applicable, recommendations on the various resources, strategies and tools available to improve enforcement of their national and regional laws, rules and regulations governing consumer information, protection and rights, from the perspective of laws, regulations, economic bases and consumer-protection networks/organizations.

2 Question or issue for study

a) Organizational methods and strategies developed by public consumer-protection agencies with regard to legislation/regulations and regulatory activities.

b) Mechanisms/means put in place by regulators, so that operators/service providers publish transparent, comparable, adequate, up-to-date information on, *inter alia*, prices, tariffs, expenses related to contract termination, and accessing and updating telecommunication services, in order to keep consumers informed and to develop clear and simple offers, as well as best practices for consumer education.

c) Mechanisms/means implemented by the regulators themselves to keep consumers and users informed about the basic features, quality, security and rates of the various services being offered by the operators, enabling them to know and exercise their rights, to use the services properly, and to make informed decisions when contracting services.

d) The role of international, regional and national organizations for the protection of telecommunication/ICT consumers' rights.

e) Any economic and financial measures adopted by national authorities in the interests of consumers of telecommunication/ICT services, in particular specific categories of users (persons with disabilities, women and children).

f) Consumer-protection challenges associated with the provision of new convergent services (transparency of service offers, fluidity of markets, quality and availability of services, value-added services, after-sales service, procedures for dealing with consumers' complaints or concerns, etc.), as well as the policies, regulations and rules established by national regulatory agencies (NRAs) to protect consumers against possible abuses by operators/providers of these convergent services.

g) Best practices and tools to empower users/consumers in managing their data provided to telecommunication service providers.

h) Mechanisms to promote the creation of useful information and practical tools to be used for promoting digital literacy, especially among specific groups such as women, girls, users with disabilities and the elderly.

i) Mechanisms and tools promoted by regulatory bodies to monitor the performance of end-user mobile network services and to assess information on basic features, quality, security and rates of the service received by consumers.

j) Corporate best practices in favour of the consumers of telecommunication services to foster best consumer-education practices.

k) Studies regarding approaches to supporting consumer rights and promoting consumer protection around issues such as quality, security and pricing for telecommunication/ICT services, drawing on best practices and in collaboration with study groups of the ITU Telecommunication Standardization Sector (ITU-T).

l) Identification of best practices for national regulators and operators in the use and management of national telephone numbering resources

3 Expected output

a) A report to Member States and Sector Members, consumer-protection organizations, operators and service providers, setting out guidelines and best practices that will need to be produced to help these actors to find the tools needed for a better culture of consumer protection as regards information, awareness-raising, inclusion of consumers' fundamental rights in laws and national, regional or international regulatory texts, and consumer protection in the provision of all telecommunication/ICT services as well as the use and management of national telephone numbering resources.

b) Organization of regional seminars on consumer protection: consumer information, protection and rights, laws, economic and financial bases, consumer networks.

4 Timing

An interim report will be presented to ITU-D Study Group 1 in 2019. It is proposed that this study should be completed in 2021, when a final report will be submitted, along with any recommendations that may be adopted during the study period.

5 Proposers/sponsors

ITU-D Study Group 1 proposed the continuation of this Question as modified herein.

6 Sources of input

a) Contributions from Member States, Sector Members and interested regional and international organizations, such as the United Nations and its specialized agencies, the Organisation for Economic Co-operation and Development (OECD) and recognized consumer associations

b) Surveys/interviews

c) Regulatory information available through the Telecommunication Development Bureau (BDT)

d) Websites of national telecommunication/ICT regulatory authorities or worldwide, regional and national governmental bodies responsible for consumer protection, and recognized consumer associations

e) Relevant work currently being undertaken in ITU-T and the ITU Radiocommunication Sector (ITU-R)

f) Other relevant sources.

7 Target audience

All the target audiences identified below, with particular attention to the needs of developing countries[1].

Target audience	Developed countries	Developing countries
Telecom policy-makers	Yes	Yes
Telecom regulators	Yes	Yes
Telecommunication/ICT consumer-protection organizations	Yes	Yes
Service providers/operators	Yes	Yes
Manufacturers	Yes	Yes
ITU-D programme	Yes	Yes

a) Target audience – Who specifically will use the output

National telecom policy-makers, regulators, service providers and operators, as well as recognized international, regional and national bodies for the protection of telecommunication/ICT consumers.

b) Proposed methods for implementation of the results

– Electronic distribution of the report and guidelines to all Member States, Sector Members and their respective NRAs, and ITU regional offices

– Distribution of the report and guidelines at the Global Symposium for Regulators (GSR) and relevant BDT, Radiocommunication Bureau (BR) and Telecommunication Standardization Bureau (TSB) seminars.

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

8 Proposed methods of handling the Question or issue

a) How?

1) Within a study group: ☑

– Question (over a multi-year study period) ☐

2) Within regular BDT activity:

– Objective 2 ☑

– Projects: Regional initiatives ☐

– Expert consultants ☐

3) In other ways – describe (e.g. regional, within other organizations, jointly with other organizations, etc.) ☐

Together with recognized international, regional and national bodies for the protection of telecommunication/ICT consumers.

b) Why within a study group?

A study group provides the best vehicle for the widest participation by developing countries both in the work of the Question and in shaping the outcome documents (i.e. best-practice guidelines).

9 Coordination and collaboration

This Question should be coordinated with ITU-D Objective 3 and with Questions relating to persons with disabilities, persons with specific needs and telecommunication/ICT services proposed for study in the study groups.

10 BDT programme link

ITU-D Objective 3

11 Other relevant information

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QUESTION 7/1

Access to telecommunication/information and communication technology services by persons with disabilities and other persons with specific needs

1 Statement of the situation or problem

The World Health Organization (WHO) estimates that one billion persons in the world live with some type of disability. According to WHO, about 80 per cent of persons with disabilities live in low-income countries. Disability appears in different forms and degrees, regarding physical, sensitive or mental aspects. Also, increasing life expectancy results in elderly persons having reduced capabilities. Thus, it is likely that the number of persons with disabilities will continue to rise.

The inclusion in society of persons with disabilities is a policy of Member States. The objective of such policy is to bring about the necessary conditions for persons with disabilities to enjoy the same opportunities in life as the rest of the population. The disabilities policy has evolved, making urban infrastructure accessible and improving health and rehabilitation services for persons with disabilities. Moreover, the principles of equal opportunity and non-discrimination are common policies of Member States.

With respect to telecommunications, at the World Telecommunication Development Conference (Hyderabad, 2010) Member States resolved, by Resolution 20 (Rev. Hyderabad, 2010), that access to modern telecommunication/information and communication technology (ICT) facilities, services and related applications must be provided on a non-discriminatory basis.

The World Summit on the Information Society (WSIS) acknowledged that special attention should be given to the needs of elderly persons and persons with disabilities.

The United Nations General Assembly (UNGA) High-Level Meeting on the overall review of the implementation of the WSIS outcomes acknowledged the need to address the specific ICT challenges facing children, youth, persons with disabilities, older persons, indigenous peoples, refugees and internally displaced persons, migrants and remote and rural communities.

On 13 December 2006, UNGA approved the Convention on the Rights of Persons with Disabilities (CRPD), which came into force on 3 May 2008.

The CRPD establishes basic principles, and also a State's obligations to ensure equal access to telecommunications/ICTs, including Internet, by persons with disabilities.

Resolution 175 (Rev. Busan, 2014) of the Plenipotentiary Conference, on telecommunication/ICT accessibility for persons with disabilities and persons with specific needs, calls for the introduction of mechanisms to enhance the accessibility, compatibility and usability of telecommunication/ICT services, and encourages the development of applications enabling the use of such services by persons with disabilities and persons with specific needs on an equal basis with others.

Resolution 70 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly, on telecommunication/ICT accessibility for persons with disabilities and persons with specific needs, resolves that the ITU Telecommunication Standardization Sector (ITU-T) study groups should consider aspects of universal design, non-discriminatory standards, service regulations and measures for all persons, especially persons with disabilities.

The ITU-G3ict Model ICT Accessibility Policy Report highlights a series of elements relevant to the development of policies on public access to ICTs, mobile communications, TV and video programmes, web access and public procurement. The report also recognizes the need for flexible legislative frameworks that foster equitable access to telecommunications/ICTs for persons with disabilities in a constantly changing technological environment.

ITU-T Study Group 6 has conducted work and studies on multimedia coding, systems and applications, and Study Group 6 of the ITU Radiocommunication Sector (ITU-R) has conducted work on broadcasting services relevant to ICT accessibility for persons with disabilities.

It is also pertinent to mention that broadband access and usage are highly dependent on literacy, and ICT literacy as well. The United Nations Educational, Scientific and Cultural Organization (UNESCO) estimates that 750 million people aged 15 and above worldwide are illiterate, i.e. they cannot read or write; and two-thirds of them are women.

Several issues encountered by both disability groups and illiterate groups of people have common solutions.

1.1 Accessibility standards

Accessibility standards are essential in order to make it possible for equipment and services to be usable by the broadest range of persons, to be interoperable and to provide the required quality services. ITU-T has prepared several Recommendations and documents that provide information on a wide range of accessibility standards.

It is also important to consider stakeholder participation, whereby persons with disabilities should be involved in the process of elaborating legal/regulatory provisions, public policy and standards.

1.2 Information and statistics

It is important to gather information and data addressing many key issues relating to accessibility to telecommunications/ICTs for persons with disabilities. Therefore, a methodology should be developed to assist the information-gathering process.

2 Question or issue for study

Sharing good practices on implementing national ICT accessibility policies, legal frameworks, directives, guidelines, strategies and technological solutions to improve the accessibility, compatibility and usability of telecommunication/ICT services and the use of accessible telecommunications/ICTs to promote the employment of persons with disabilities in order to empower all stakeholders in creating an inclusive environment for persons with disabilities worldwide.

3 Expected output

It is proposed that the Question for study should:

- provide telecommunication/ICT accessibility training to stakeholders, especially policy-makers, on how to engage all national and/or regional stakeholders and share good practices and success stories on the implementation of ICT accessibility policies, regulatory frameworks and services;

- result in a report that identifies good commercial and governmental practices that will support Member States, especially developing[1] and least developed countries (LDCs), in establishing and implementing policies, legal frameworks and strategies on accessible telecommunications/ICTs for persons with disabilities and persons with specific needs

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

The report should:

a) share members' good practices and case studies on how to create political will as a cornerstone for implementing national ICT accessibility policies and strategies to improve the accessibility, compatibility and usability of telecommunication/ICT services;

b) create a roadmap of requirements that national policy-makers should incorporate in their respective legal frameworks, including a range of measures to support the implementation of accessible ICT policies and services;

c) highlight ITU products and services available to the members to empower national stakeholders in providing, in particular, the ITU Telecommunication Development Sector (ITU-D) training on web accessibility (accessible content and accessible websites), with the aim of ensuring that public government websites are accessible to all;

d) identify suitable promotion and dissemination mechanisms, including business models, to ensure that persons with disabilities are aware of and are able to use and be empowered by accessible telecommunications/ICTs;

e) identify mechanisms for the use of telecommunications/ICTs to promote the employment of persons with disabilities, including telework;

f) identify methodologies that make it possible to compile telecommunication/ICT statistics focused on users with disabilities, in order to monitor the impact of the implementation of ICT accessibility policies, practices and technological solutions.

4 Timing

These activities should be included in the programme of activities of ITU-D Study Group 1 for the 2018-2021 study period, as a new Question.

4.1 Mid-term report expected by 2019.

4.2 Final report expected by 2020.

5 Proposers/sponsors

Mexico/CITEL, Bosnia and Herzegovina, and Mali.

6 Sources of input

The following stakeholders are encouraged to supply information for the Question: Member States, Sector Members, relevant international and regional organizations, public and private institutions and civil-society organizations involved in the design of policies and advocacy for the development of technological solutions to alleviate the difficulties faced by persons with disabilities in accessing telecommunications/ICTs.

7 Target audience

Target audience	Developed countries	Developing countries
Telecom policy-makers	Interested	Very interested
Telecom regulators	Interested	Very interested
Service providers/operators	Interested	Very interested
Manufacturers	Interested	Interested

a) Target audience

The result of the study will serve Member States, and particularly administrations of developing countries and LDCs, in designing policies and executing strategies and actions for the implementation of technological solutions that improve accessibility to telecommunications/ICTs for persons with disabilities. Moreover, it will enable Sector Members and service providers located in those countries to design and apply proven and successful commercial practices to meet the needs of persons with disabilities and facilitate their access to telecommunications/ICTs.

b) Proposed methods for implementation of the results

Authorities from Member States could consider designing policies and strategies to implement the most suitable technological solutions in the light of the characteristics of their populations and countries. In this respect, there could be short-term, medium-term and long-term action plans so as to permit implementation in phases.

The report should also be useful for administrations of Member States, Sector Members and service providers to encourage the adoption of commercial practices geared to meeting the needs of persons with disabilities and persons with specific needs.

8 Proposed methods of handling the Question or issue

a) How?

1) Within a study group:

– Question (over a multi-year study period) ☑

2) Within regular BDT activity (indicate which programmes, activities, projects, etc., will be involved in the work of the study Question)

– Programmes: Digital inclusion ☑

– Projects ☐

– Expert consultants ☐

– Regional offices ☐

3) In other ways – describe (e.g. regional, within other organizations with expertise, jointly with other organizations, etc.): To be defined in the work plan. ☐

b) Why?

The Question will be addressed within ITU-D Study Group 1, in close cooperation with ITU-T Study Group 16 (Question 26/16).

9 Coordination and collaboration

Coordination is recommended with relevant international organizations, and with service providers that have adopted best practices to meet the needs of persons with disabilities and persons with specific needs and facilitate their access to telecommunications/ICTs.

10 BDT programme link

To be defined in the workplan.

11 Other relevant information

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STUDY GROUP 2

QUESTION 1/2

Creating smart cities and society: Employing information and communication technologies for sustainable social and economic development

1 Statement of the situation or problem

All areas of society – culture, education, health, transport, trade and tourism – will depend for their development on the advances made through information and communication technology (ICT) systems and services in their activities. ICTs can play a key role in the protection of property and persons; smart management of motor vehicle traffic; saving electrical energy; measuring the effects of environmental pollution; improving agricultural yield; increasing efficiency in global travel and tourism; management of healthcare and education; management and control of drinking water supplies; and solving the problems facing cities and rural areas. This is the smart society. Similarly, as highlighted by the World Summit on the Information Society (WSIS), ICT applications can support sustainable development in public administration, business, education and training, health, the environment, agriculture and science within the framework of national cyberstrategies.

The United Nations 2030 Agenda for Sustainable Development recognizes the enormous possibilities offered by ICTs and calls for significant increase in access to such technologies, which have a decisive contribution to make in support of implementation of all the Sustainable Development Goals (SDGs). ITU therefore deems it a priority to supports its membership in achieving the SDGs, in close collaboration with other associates.

Delivering the promise of the smart society relies on three technological pillars – connectivity, smart devices and software – and on sustainable development principles.

Connectivity encompasses and includes existing and traditional networks as well as new technologies. It is a key enabler and component of machine-to-machine (M2M) communication, the Internet of Things (IoT), and resulting applications and services such as e-government, traffic management and road safety.

IoT constitutes a major advance that promises to change the way people live, work, learn, move around, entertain and provide care by having access to more and better information in real time and to better learning opportunities. Moreover, IoT technologies can be used to tackle global development challenges. It is estimated that at present over 50 per cent of IoT activity is focused on manufacturing, transport, smart cities and user applications, but that in the future all industries will be able to benefit from IoT initiatives, highlighting and enabling new business models and workflow processes.

Smart devices are the things that are connected that create smart societies. Cars, traffic lights and cameras, water pumps, electricity grids, home appliances, street lights and health monitors are all examples of things that need to become smart, connected devices so that they can deliver significant advancements in sustainability and economic and social development. This is especially important in developing countries[1].

[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

Software development connects and enables the first two pillars, such that all three pillars working together support new services that would never have been possible before. These new services are transforming everything from energy efficiency to environmental improvements, road safety, food and water safety, manufacturing and basic government services.

It will be possible for the work carried out under this study Question to be founded on Resolutions 139 (Rev. Busan, 2014), on the use of telecommunications/ICTs to bridge the digital divide and build an inclusive information society, and 197 (Busan, 2014), on facilitating IoT to prepare for a globally connected world, of the Plenipotentiary Conference; Resolutions 44 (Rev. Hammamet, 2016), on bridging the standardization gap between developing and developed countries, and 98 (Hammamet, 2016), on enhancing the standardization of IoT and smart cities and communities (SCCs) for global development of the World Telecommunication Standardization Assembly; and Resolution ITU-R 66 (Geneva, 2015) of the Radiocommunication Assembly, on studies related to wireless systems and applications for the development of IoT.

2 Question or issue for study

1) Discussion of and assistance in raising awareness on methods of improving connectivity to support the smart society, including connectivity to support smart grids, smart cities and ICT applications in public administration, transport, business, education and training, health, the environment, agriculture and science.

2) Examination of best practices for fostering and enabling deployment and use of smart devices, including mobile devices, and the importance of the application of such devices.

3) Survey of methods and examples of how software, both open-source and/or proprietary, enables connectivity of smart devices, thereby supporting smart services, cities and communities.

4) Definition of a measurement and performance benchmark for quality-of-life indicators in smart cities, and possible regulation and communication mechanisms that can be followed for good urban governance.

5) Sharing of experiences and best practices in building smart cities.

6) Promotion of capacity building and the acquisition of knowledge on ICTs for adoption of the skills required for development of a smart society.

7) Promotion of policy approaches that foster the economy, investment, innovation and development of the smart society, to support integration of ICTs in public administration, transport, business, education and training, health, the environment, agriculture and science.

8) Encouraging cooperation between developing and developed countries in order to bridge the digital and knowledge divide through technical and financial assistance, research programmes and voluntary technology transfer on mutually agreeable terms, enabling access to ICT applications in countries and regions where it has not yet been possible.

9) Telecommunication/ICT services for tourism that enhance economic growth in smart societies.

3 Expected output

The output expected from this Question will include:

a) Guidelines on policy approaches to facilitate the development of ICT applications in society, fostering social and economic development and growth.

b) Case studies on the application of IoT, communications and ICT applications in building SCCs, identifying the trends and best practices implemented by Member States as well as the challenges faced, in order to support sustainable development and foster smart societies in developing countries.

c) Increasing awareness among relevant participants regarding the adoption of open-source strategies for enabling access to telecommunications, and studying the drivers for increasing the degree of preparedness to use and develop open-source software to support telecommunications in developing countries, as well as creating opportunities for cooperation between ITU members by reviewing successful partnerships.

d) Analysis of factors affecting the efficient roll-out of connectivity to support ICT applications that enable e-government applications in SCCs.

e) Organization of workshops, courses and seminars for the development of capacities allowing improved uptake of ICT applications and IoT.

f) Annual progress reports, which should include case studies, and a detailed final report containing measurement analysis, information and best practices, as well as any practical experience acquired in the areas of use of telecommunications and other means of enabling ICT applications and connecting devices for development of the smart society.

4 Timing

A preliminary report should be submitted to the study group in 2020. The studies should be concluded in 2021, by which time a final report will be submitted.

5 Proposers/sponsors

The Question was approved for the first time by WTDC-17, on the basis of Questions 1/2 and 2/2.

6 Sources of input

a) Progress on study of the Questions relevant to this issue in the ITU Telecommunication Standardization Sector (ITU-T) and ITU Radiocommunication Sector (ITU-R) study groups.

b) Contributions from Member States, Sector Members, Associates, other United Nations agencies, regional groups and Telecommunication Development Bureau (BDT) coordinators.

c) Progress of BDT initiatives with other United Nations organizations and the private sector on using ICT applications for development of the smart society.

d) Progress on any other relevant activity carried out by the ITU General Secretariat or BDT.

7 Target audience

Target audience	Developed countries	Developing countries
Telecom policy-makers	Yes	Yes
Telecom regulators	Yes	Yes
Service providers/operators	Yes	Yes
Manufacturers (telecommunication/ICT equipment manufacturers, automobile industry, etc.)	Yes	Yes
Corresponding ministries	Yes	Yes
BDT programmes	Yes	Yes

a) Target audience – Who specifically will use the output

Relevant policy-makers, regulators and participants in the telecommunication/ICT and multimedia sectors, as well as manufacturers and service providers.

b) Proposed methods for the implementation of the results

In guidelines for implementing BDT regional initiatives.

8 Proposed methods of handling the Question or issue

Within ITU-D Study Group 2.

9 Coordination and collaboration

– The relevant BDT unit dealing with these issues

– Relevant work in progress in the other two ITU Sectors.

10 BDT programme link

All BDT programmes are concerned by the Question as regards, in particular, aspects relating to information and communication infrastructure and technology development, ICT applications, enabling environment, digital inclusion and emergency telecommunications.

11 Other relevant information

To be identified later during the life of this new Question.

QUESTION 2/2

Telecommunications/information and communication technologies for e-health

1 Statement of the situation or problem

E-health is an integrated system that employs telecommunications/information and communication technologies (ICTs) to improve healthcare delivery, in particular as a substitute for face-to-face contact between medical staff and patient. It includes many applications, such as telemedicine, electronic medical records, medical consultation at a distance, medical consultation between rural medical centres and urban hospitals, etc. E-health provides for transmission, storage and retrieval of medical information in digital form between doctors, nurses, other medical staff and patients for clinical, educational and administrative purposes, both at the local site (your workplace) and at a distance (remote workplaces). In some developing countries[1], the number of mobile phones has overtaken the number of fixed phones, and the mobile telecommunication network could be considered a more attractive platform for the introduction of e-health services.

E-health is playing a very important role in healthcare delivery in developing countries, where the acute shortage of doctors, nurses and paramedics is directly proportional to the enormous unsatisfied demand for health services. Some developing countries have already successfully implemented small pilot telemedicine projects, and they are looking forward to proceeding further by considering the development of e-health master plans, as recommended by the World Health Organization (WHO) in its Resolution WHA58.28 in May 2005, which aims, in particular, at reducing disparities with regard to medical services between urban and rural areas and pays special attention to the least developed countries (LDCs).

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

2 Question or issue for study

Studies under the Question will focus on the following issues:

a) steps to assist in raising the awareness of decision-makers, including health-related ministries, regulators, telecommunication operators, donors and customers, about the role of ICTs in improving healthcare delivery in developing countries;

b) collaboration mechanisms between the telecommunication sector and the health sector in developing countries, in order to maximize the utilization of limited resources on both sides for implementing e-health services;

c) national experiences and best practices with the use of ICTs in e-health in developing countries;

d) information about the conditions and social acceptance, including legal and financial issues, for managing e-health in developing countries;

e) cooperation among developing and developed countries in the field of mobile e-health solutions and services;

f) e-health activities carried out by the Telecommunication Development Bureau (BDT) in cooperation with other UN agencies, such as WHO, in the field of non-infectious disease, infectious disease, including pandemics, and mother and child in particular;

g) in conjunction with the ITU Telecommunication Standardization Sector (ITU-T), providing suitable guidelines on collecting and managing big data for public health crises, as well as using new technologies;

h) introducing and disseminating ITU-T standards related to e-health for developing countries;

i) introducing and disseminating, through ICTs, health information issued by WHO or other UN agencies related to e-health and/or health hazards (for example, the health hazard of children performing burning of a field of waste).

3 Expected output

The outputs expected from this Question will include:

a) Guidelines on how to draft the telecommunication/ICT part of an e-health master plan.

b) Guidelines with regard to the use of mobile telecommunications for e-health solutions in developing countries.

c) Collection and summary of the requirements and effectiveness of telecommunication infrastructure for the successful implementation of e-health applications, taking into account the environment of developing countries.

d) Dissemination of the technical standards related to the introduction of e-health services in developing countries.

e) Collaboration with ITU-T Study Group 16 in order to accelerate the elaboration of technical standards for e-health applications.

f) Collaboration with the relevant BDT programme, if so requested, to support implementation of the telecommunication/ICT component of e-health projects in developing countries, including advice on best practices on how to train developing countries in the use of the telecommunication/ICT component of e-health projects.

g) Sharing and dissemination of best practices on e-health applications in developing countries using the ITU/BDT website, in close collaboration with the relevant BDT programme.

h) Dissemination of advanced information about new e-health applications using new technologies

4 Timing

The work undertaken by the study group can be phased over the next study period. The participation of experts from the group for the provision of assistance in the development of e-health projects in developing countries will be encouraged.

5 Proposers/sponsors

The Question was originally approved by WTDC-98, and subsequently revised by WTDC-02, WTDC-06, WTDC-10, WTDC-14 and WTDC-17.

6 Sources of input

Inputs will be expected from Member States and Sector Members, experts in e-health applications, etc. Contributors and contacts have already been established during the 2002-2006, 2006-2010, 2010-2014 and 2014-2017 study periods, and new contacts will also be invited. This Question has supported the mobile e-health initiative for developing countries launched in 2009.

7 Target audience

Target audience	Developed countries	Developing countries
Telecom regulators	Yes	Yes
Service providers/operators	Yes	Yes
Manufacturers	Yes	Yes
ITU-D programme		
Ministries of health	Yes	Yes
Medical organizations	Yes	Yes
NGOs in the field of health	Yes	Yes

This Question aims at stimulating collaboration between the telecommunication/ICT and health communities, between developed and developing countries, and among developing countries. The experience gained from telecommunications/ICTs for e-health applications in developing countries is also expected to benefit equipment suppliers and service providers in developed countries.

a) Target audience – Who specifically will use the output

Telecommunication/ICT and health communities, between developed and developing countries and among developing countries, as well as telecom regulators, manufacturers, medical organizations, NGOs and service providers.

b) Proposed methods for implementation of the results

Within ITU-D Study Group 2. The outputs of this Question will be made available via the ITU-D website.

8 Proposed methods of handling the Question or issue

a) How?

1) Within a study group:

– Question (over a multi-year study period) ☑

2) Within regular BDT activity (indicate which programmes, activities, projects, etc., will be involved in the work of the study Question):

– Programmes: ICT applications and services ☑

– Projects ☐

– Expert consultants ☐

– Regional offices ☑

3) In other ways – describe (e.g. regional, within other organizations with expertise, jointly with other organizations, etc.) ☐

b) Why?

To take into account the ongoing/planned programmes/regional initiatives and optimize resources.

9 Coordination and collaboration

Coordination between the telecommunication/ICT and health communities, between developed and developing countries and among developing countries, as well as telecom regulators, manufacturers, medical organizations, NGOs and service providers.

10 BDT programme link

Programme: ICT applications and services (Output 4.2)

11 Other relevant information

The activity for the next study cycle can be based on the final report and other initiatives which resulted from Question 14-3/2 of the last study period, on mobile telecommunications for mobile e-health.

QUESTION 3/2

Securing information and communication networks: Best practices for developing a culture of cybersecurity

1 Statement of the situation or problem

The use of telecommunications and information and communication technologies (ICTs) has been invaluable in fostering development and social and economic growth globally. However, despite all the benefits and uses these technologies offer, there are risks and threats to security.

From personal finances to business operations, national infrastructure and public and private services, all transactions are increasingly managed through information and communication networks, making them more vulnerable to some form of attack.

In order to build trust in the use and application of telecommunications/ICTs for applications and content of all kinds, especially those having a major positive impact in economic and social areas where all players exert an effect on the protection of personal data, network security and the actual network user, close collaboration is required between national authorities, foreign authorities, industry, academia and users.

Based on the foregoing, securing information and communication networks and developing a culture of cybersecurity have become key in today's world for a number of reasons, including:

a) the explosive growth in the deployment and use of ICT;

b) cybersecurity remains a matter of concern of all, and there is thus a need to assist countries, in particular developing countries[1], to protect their telecommunication/ICT networks against cyberattacks and threats;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

c) the need to endeavour to ensure the security of these globally interconnected infrastructures if the potential of the information society is to be achieved;

d) the growing recognition, at the national, regional and international levels, of the need to develop and promote best practices, standards, technical guidelines and procedures to reduce vulnerabilities of and threats to ICT networks;

e) the need for national action and regional and international cooperation to build a global culture of cybersecurity that includes national coordination, appropriate national legal infrastructures, watch, warning and recovery capabilities, government/industry partnerships and outreach to civil society and consumers;

f) the requirement for a multistakeholder approach to effectively make use of the variety of tools available to build confidence in the use of ICT networks;

g) United Nations General Assembly (UNGA) Resolution 57/239, on creation of a global culture of cybersecurity, invites Member States "to develop throughout their societies a culture of cybersecurity in the application and use of information technology";

h) UNGA Resolutions 68/167, 69/166 and 71/199, on the right to privacy in the digital age, affirm, *inter alia*, "that the same rights that people have offline must also be protected online, including the right to privacy";

i) best practices in cybersecurity must protect and respect the rights of privacy and freedom of expression as set forth in the relevant parts of the Universal Declaration of Human Rights, the Geneva Declaration of Principles adopted by the World Summit on the Information Society (WSIS) and other relevant international human rights instruments;

j) the Geneva Declaration of Principles indicates that "A global culture of cybersecurity needs to be promoted, developed and implemented in cooperation with all stakeholders and international expert bodies", the Geneva Plan of Action encourages sharing best practices and taking appropriate action on spam at national and international levels, and the Tunis Agenda for the Information Society reaffirms the necessity for a global culture of cybersecurity, particularly under Action Line C5 (Building confidence and security in the use of ICTs);

k) ITU was requested by WSIS (Tunis, 2005), in its agenda for implementation and follow-up, to be the lead facilitator/moderator for Action Line C5 (Building confidence and security in the use of ICTs), and relevant resolutions have been adopted by the Plenipotentiary Conference, the World Telecommunication Standardization Assembly (WTSA) and the World Telecommunication Development Conference (WTDC);

l) UNGA Resolution 70/125 adopted the outcome document of the high-level meeting of the General Assembly on the overall review of the implementation of the WSIS outcomes;

m) the WSIS+10 Statement on the implementation of WSIS outcomes, and the WSIS+10 vision for WSIS beyond 2015, adopted at the ITU-coordinated WSIS+10 high-level event (Geneva, 2014) and endorsed by the Plenipotentiary Conference (Busan, 2014), which were submitted as an input into the UNGA's overall review on the implementation of WSIS outcomes;

n) WTDC Resolution 45 (Rev. Dubai, 2014) supports the enhancement of cybersecurity among interested Member States;

o) Resolution 130 (Rev. Busan, 2014) of the Plenipotentiary Conference resolves to continue promoting common understanding among governments and other stakeholders of building confidence and security in the use of ICTs at the national, regional and international level;

p) WTSA Resolution 50 (Rev. Hammamet, 2016), highlights the need to harden and defend information and telecommunication systems from cyberthreats and cyberattacks, and continue to promote cooperation among appropriate international and regional organizations in order to enhance exchange of technical information in the field of information and telecommunication network security;

q) the conclusions and recommendations set out in ITU Telecommunication Development Sector (ITU-D) Study Group 2's final report on Question 3/2, to the effect that the activities in the current terms of reference be continued and that evolving and emerging technical threats beyond spam and malware be considered for the next study period;

r) there have been various efforts to facilitate the improvement of network security, including the work of Member States and Sector Members in standards-setting activities in the ITU Telecommunication Standardization Sector (ITU-T) and in the development of best-practice reports in ITU-D; by the ITU secretariat in the Global Cybersecurity Agenda (GCA); and by ITU-D in its capacity-building activities under the relevant programme; and, in certain cases, by experts across the globe;

s) governments, service providers and end-users, particularly in least developed countries (LDCs), face unique challenges in developing security policies and approaches appropriate to their circumstances;

t) reports detailing the various resources, strategies and tools available to build confidence in the use of ICT networks and the role of international cooperation in this regard are beneficial for all stakeholders;

u) spam and malware continue to be a serious concern, although evolving and emerging threats must also be studied;

v) the need for simplified test procedures at basic level for security testing of telecommunication networks to promote a security culture.

2 Question or issues for study

a) Discuss approaches to foster the confidentiality, integrity and availability of ICT systems.

b) Discuss approaches and best practices for evaluating the impact of spam and malware within a network, as well as evolving and emerging threats, and provide the necessary input for measures and guidelines, including mitigation techniques and legislative and regulatory aspects that countries can use, taking into account existing standards and available tools.

c) Provide information on current cybersecurity challenges that service providers, regulatory agencies and other relevant parties are facing.

d) Continue to gather national experiences from Member States relating to cybersecurity and child online protection and to identify and examine common themes within those experiences, using that information to provide input for guidelines to assist Member States in developing effective mechanisms for security in the digital environment.

e) Analyse the cybersecurity challenges facing emerging technologies such as Internet of Things (IoT) and artificial intelligence (AI), etc., and measures to address those challenges.

f) Share perspectives regarding how cybersecurity supports the protection of personal data.

g) Promote awareness-raising for users and capacity building regarding cybersecurity.

h) Provide a compendium of relevant, ongoing cybersecurity activities being conducted by Member States, organizations, the private sector and civil society at the national, regional and international levels, in which developing countries and all sectors may participate, including information gathered under d) above.

i) Examine specific needs of persons with disabilities, in coordination with other relevant Questions.

j) Examine ways and means to assist developing countries, with the focus on LDCs, in regard to cybersecurity-related challenges.

k) Foster cooperation between the players involved with a view to holding ad hoc sessions, seminars and workshops to share knowledge, information and best practices concerning effective, efficient and useful measures and activities to enhance cybersecurity, increase confidence and protect data and networks, taking into consideration existing and potential risks for ICTs, using outcomes of the study, to be collocated as far as possible with meetings of ITU-D Study Group 2 or of the rapporteur group for the Question.

l) Work in collaboration with the relevant ITU-T study groups and other standards-development organizations (SDOs), as appropriate, and taking into account information and material available in these entities.

m) Provide guidance on measures to combat spam and malware at national, regional and international level.

n) Collect and share information regarding regulatory policies developed and/or implemented by national competent authorities to build confidence and security in the telecommunication/ICT sector.

3 Expected output

a) Reports to the membership on the issues identified in § 2 a) to n) above. The reports in question will reflect that secure information and communication networks are integral to building the information society and to ensuring the economic and social development of all nations. They will also provide contributions that assist countries in formulating guidelines to address cybersecurity challenges.

Cybersecurity challenges include potential unauthorized access to, destruction of and modification of information transmitted on ICT networks, as well as countering and combating spam and malware. However, the consequences of such challenges can be mitigated by increasing awareness of cybersecurity issues, establishing effective public-private partnerships and sharing successful best practices employed by policy-makers and businesses, and through collaboration with other stakeholders.

In addition, a culture of cybersecurity can promote trust and confidence in these networks, stimulate secure usage, ensure protection of data, including personal data, while enhancing access and trade, and enabling nations to achieve the economic and social development benefits of the information society more effectively.

b) Educational materials for use in workshops, seminars, etc.

c) Accumulation of knowledge, information and best practices on effective, efficient and useful measures and activities to enhance cybersecurity in developing countries resulting from ad hoc sessions, seminars and workshops.

4 Timing

This study is proposed to last four years, with preliminary status reports to be delivered on progress made after 12, 24 and 36 months.

5 Proposers/sponsors

ITU-D Study Group 2, Arab States, Inter-American proposal, Japan, and the Islamic Republic of Iran.

6 Sources of input

a) Member States and Sector Members

b) Relevant ITU-T and ITU-R study group work

c) Relevant outputs of international and regional organizations

d) Relevant non-governmental organizations concerned with the promotion of cybersecurity and a culture of security

e) Surveys, online resources

f) Experts in the field of cybersecurity

g) Global Cybersecurity Index (GCI)

h) Other sources, as appropriate.

7 Target audience

Target audience	Developed countries	Developing countries
Telecom policy-makers	Yes	Yes
Telecom regulators	Yes	Yes
Service providers/operators	Yes	Yes
Manufacturers	Yes	Yes
Academia	Yes	Yes

a) Target audience

National policy-makers and Sector Members, and other stakeholders involved in or responsible for cybersecurity activities, especially those from developing counties.

b) Proposed methods for implementation of the results

The study programme focuses on gathering information and best practices. It is intended to be informative in nature and can be used to raise awareness of cybersecurity issues in Member States and Sector Members and to draw attention to the information, tools and best practices available, the results of which may be used in conjunction with BDT-organized ad hoc sessions, seminars and workshops.

8 Proposed methods of handling the Question or issue

The Question will be addressed within a study group over a four-year study period (with submission of interim results), and will be managed by a rapporteur and vice-rapporteurs. This will enable Member States and Sector Members to contribute their experiences and lessons learned with respect to cybersecurity.

9 Coordination

Coordination is required with ITU-T, in particular ITU-T Study Group 17, which is responsible for building confidence and security in the use of ICTs. Coordination should also include other relevant organizations with expertise in the issue, such as FIRST, APCERT, OAS CICTE, OECD, RIRs, NGOs, M3AAWG, ISOC, GFCE and UCENET. Given the existing level of technical expertise on the issue in these groups, they should be given the opportunity to comment and provide input on all documents (questionnaires, interim reports, draft final reports, etc.) before the documents are submitted to the full ITU-D study group for comment and approval.

10 BDT programme link

The BDT programme under Objective 2 shall facilitate exchange of information and make use of the output, as appropriate, to satisfy programme goals and the needs of Member States.

11 Other relevant information

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QUESTION 4/2

Assistance to developing countries[1] for implementing conformance and interoperability programmes and combating counterfeit information and communication technology equipment and theft of mobile devices

1 Statement of the situation or problem

Question 4/2 will examine the following three items:

i) Conformance and interoperability (C&I)

Inclusion of an ITU Telecommunication Development Sector (ITU-D) study group Question on this matter provides an effective way to further the aims of Resolutions 177 (Rev. Busan, 2014) and 188 (Busan, 2014) of the Plenipotentiary Conference, Resolution 47 (Rev. Buenos Aires, 2017) of the World Telecommunication Development Conference (WTDC), and Resolutions 76 (Rev. Hammamet, 2016) and 96 and 97 (Hammamet, 2016) of the World Telecommunication Standardization Assembly (WTSA).

According to the Buenos Aires Declaration, widespread C&I of telecommunication/ICT equipment and systems allow increased market opportunities as well as the reliability and integration of world trade, which can be achieved through programmes, policies and decisions.

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

Member States and ITU-D Sector Members can assist and guide each other by conducting studies, building tools to bridge the standardization gap, and navigating issues related to matters raised in the above-mentioned resolutions. ITU-D can harness the energy of its membership to examine these important issues.

In this regard, to facilitate safe usage of products and services anywhere in the world, regardless of who is the manufacturer or service provider, it is crucial that products and services be developed in accordance with relevant international standards, regulations and other specifications, and that their compliance be tested.

The Question will ultimately contribute to international community's effort to achieve the Sustainable Development Goals (SDGs), especially the targets on infrastructure[2] (namely 9.1, 9.a, 9.b, and 9.c), by adopting an eco-friendly set of harmonized standards, since C&I regime instruments enable countries to better control and authenticate products.

Conformity assessment increases the probability of interoperability, i.e. equipment built by different manufacturers being capable of communicating successfully. In addition, it helps to ensure that products and services are delivered according to expectations. Conformity assessment builds consumer trust and confidence in tested products and consequently strengthens the business environment and, thanks to interoperability, the economy benefits from business stability, scalability and cost reduction of systems, equipment and tariffs.

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[2] SDG 9: https://sustainabledevelopment.un.org/sdg9

To increase the benefits of C&I, many countries have adopted harmonized C&I regimes at both national and bilateral/multilateral level. However, some developing countries have not yet done so because of a number of major challenges, such as the lack of appropriate/adequate infrastructure and technology development to be in a position to test or to recognize tested ICT equipment (e.g. accredited laboratories).

The availability of high-quality, high-performing products will accelerate widespread deployment of infrastructure, technologies and associated services, allowing people to access the information society regardless of their location or chosen device, and contributing to implementing the SDGs.

Also, simplifying the conformity assessment process will facilitate the homologation of products destined for telecommunications, will give legal certainty to users on compliance in the products they acquire, and will promote adoption of the best technological standards and measures to protect intellectual property.

In addition, this will contribute to raising the quality standards of services, making them more efficient, for the benefit of the population.

ii) Counterfeit telecommunication/ICT equipment

Counterfeit telecommunication/ICT equipment is a growing issue and socio-economic problem. It causes significant negative impact on innovation, levels of foreign direct investment, growth in the economy and levels of employment, and may also redirect resources into organized criminal networks.

iii) Mobile device theft

Preventing and combating the use of stolen mobile devices is another issue. The theft of user-owned mobile devices may lead to the criminal use of telecommunication/ICT services and applications, resulting in economic losses for the lawful owner and user.

Implementing measures to combat counterfeit telecommunication/ICT devices and mobile device theft is a matter of urgency and high interest for developing countries.

2 Question or issue for study

The Question is established in ITU-D Study Group 2, to examine issues related to ICT equipment and systems, a key component for spreading ICT networks, access, services and applications. The work of the Question takes into account the following items:

2.1 In close collaboration with the relevant Telecommunication Development Bureau (BDT) programme(s), identifying and assessing the challenges, priorities and problems for countries, subregions or regions with respect to the application of ITU Telecommunication Standardization Sector (ITU-T) Recommendations and approaches to meeting the need for confidence in the conformity of equipment with ITU-T Recommendations.

2.2 Identifying critical/priority issues in countries, subregions or regions, and related best practices.

2.3 Examining how information transfer, know-how, training and institutional and human capacity development can strengthen the ability of developing countries to reduce risks associated with low-quality equipment and equipment interoperability issues. Examining effective information-sharing systems and best practices to assist in this work.

2.4 Elaborating a methodology for the implementation of this Question, in particular gathering evidence and information regarding current best practices being adopted to create C&I programmes, taking into consideration progress achieved by all the ITU Sectors in this regard.

2.5 Techniques designed to promote harmonization of C&I regimes, to improve regional integration and to contribute to bridging the standardization gap, thereby reducing the digital divide.

2.6 Information regarding the establishment of mutual recognition agreements (MRAs) between countries. Guidance on concepts and procedures to establish and manage MRAs.

2.7 Techniques on market surveillance and maintenance of C&I regimes in order to guarantee the credibility and sustainability of the conformance assessment scheme put in place.

2.8 Assessing the impact of the increase of ICTs, including the Internet of Things (IoT), and providing guidelines to the ITU-D membership for ICT-readiness.

2.9 Techniques and national experiences on combating counterfeit, sub-standard, and tampered devices:

– prepare and document examples of best practices on limiting counterfeit and tampered devices, for distribution;

– prepare guidelines, methodologies and publications to assist Member States in identifying counterfeit and tampered devices and methods of increasing public awareness and restricting trade in these devices, as well as the best ways of limiting them;

– study the impact of counterfeit and tampered telecommunication/ICT devices being transported to developing countries.

3 Expected outputs

In the ITU-D study period 2018-2021, studies of various issues related to C&I, combating counterfeit ICT equipment and theft of mobile devices are to be reported. Outputs are to be prepared in three separate components.

Specifically, the following outputs are envisaged:

C&I programmes

a) Review of guidelines and best practices on technical, legal and regulatory aspects of a C&I regime

b) Feasibility studies regarding the establishment of laboratories in different C&I domains

c) Guidance on the framework and procedures for establishing technical collaboration on C&I and sharing of resources

d) Questionnaire to collect and update the database of current status of C&I regimes established at national, regional or global levels

e) Development of a methodology for assessing the status of C&I regimes in place in the regions (or subregions)

f) Experience-sharing and case study reports on implementation of C&I programmes focusing on efficient and affordable methods to improve the level of conformity.

Combating counterfeit ICT equipment

g) Best practices and guidelines, including methodologies to combat counterfeit ICT equipment.

Mobile device theft

h) Experience-sharing and case-study reports on combating mobiledevice theft.

4 Timing

4.1 Annual progress reports will be submitted to ITU-D Study Group 2.

4.2 A final report will be submitted to ITU-D Study Group 2.

5 Proposers/sponsors

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6 Sources of input

1) Member States, Sector Members and relevant experts.

2) A questionnaire covering relevant C&I matters.

3) Examination of regulations, policies and practices in countries that have created systems to manage these matters.

4) Other relevant international organizations.

5) Interviews, existing reports and surveys should also be used to gather data and information for the finalization of a comprehensive set of best-practice guidelines for administering C&I information. Material from regional telecommunication organizations, telecommunication research centres, manufacturers and working groups should also be utilized in order to avoid duplication of work.

6) Material from regional telecommunication organizations, telecommunication research centres, manufacturers and working groups should also be utilized in order to avoid duplication of work.

7) Close cooperation with ITU-T study groups, in particular Study Group 11 and the Joint Coordination Activity on C&I testing, and with other organizations (e.g. ILAC, IAF, ISO, IEC) involved in C&I activities and other actions within ITU-D is required and extremely important.

7 Target audience

Target audience	Developed countries	Developing countries
Telecom policy-makers	Yes	Yes
Telecom regulators	Yes	Yes
Service providers/operators	Yes	Yes
Manufacturers	Yes	Yes
Consumers/end-users	Yes	Yes
Standards-development organizations, including consortia	Yes	Yes
Testing laboratories	Yes	Yes
Certification bodies	Yes	Yes

a) Target audience

Depending on the nature of the output, policy- and decision-makers, middle to upper-level managers in operators, laboratories, standards-development organizations (SDOs), certification bodies, market-research agencies, regulators and ministries in developed, developing and least developed countries (LDCs) will be the predominant users of the output. Compliance managers at equipment manufacturers and system integrators could also use the output for information.

b) Proposed methods for implementation of the results

The results of the Question are to be distributed through ITU-D interim and final reports. This will provide a means for the audience to have periodic updates of the work carried out and to provide input and/or seek clarification/more information from ITU-D Study Group 2 should they need it.

8 Proposed methods of handling the Question or issue

The Question will be addressed within a study group over a four-year study period (with submission of interim results), and will be managed by a rapporteur and vice-rapporteurs. This will enable Member States and Sector Members to contribute their experiences and lessons learned with respect to conformity assessment, type-approval and interoperability, testing laboratories, recognition of testing reports, as well as combating counterfeit devices.

9 Coordination

9.1 The ITU-D study group dealing with this Question will need to coordinate with:

– Relevant ITU-T study groups, particularly Study Group 11

– Relevant focal points in BDT and ITU regional offices

– Coordinators of relevant project activities in BDT

– SDOs

– Conformity-assessment bodies (including testing organizations and laboratories, accreditation organizations, etc.) and industry consortia

– Consumers/end users

– Experts in this field.

10 BDT programme link

a) WTDC Resolution 47 (Rev. Buenos Aires, 2017)

b) WTSA Resolution 76 (Rev. Hammamet, 2016)

c) Resolution 123 (Rev. Busan, 2014) of the Plenipotentiary Conference

d) ITU C&I Programme

Links to BDT programmes aimed at human capacity development and assistance to operators in developing countries and LDCs, programmes that deal with technical assistance and programmes concerning C&I.

11 Other relevant information

As may become apparent within the life of the Question.

QUESTION 5/2

Utilizing telecommunications/information and communication technologies for disaster risk reduction and management

1 Statement of the situation or problem

1.1 Context

a) Recent natural and man-made disasters, which remain of critical concern to Member States.

b) The importance of telecommunications/information and communication technologies (ICTs) to support disaster mitigation, relief and response is well established.

c) The longstanding role of ITU in supporting the use of telecommunications/ICTs for the purpose of disaster preparedness, mitigation, response and recovery

d) The value of collaborating and sharing experiences, both regionally and globally, in order to support national and regional preparedness

e) The excellent results of the work under ITU Telecommunication Development Sector (ITU-D) Questions 22-1/2 and 5/2 in past study periods, including the compilation of numerous case studies, the development of an online toolkit and Handbook on Emergency Telecommunications, and development the report on ICT experiences and best practices in disaster mitigation and relief and the checklist for emergency telecommunications.

f) Over the last study period 2014–2017, ITU-D study Question 5/2 examined multiple aspects of disaster communications planning, management and response, including country case studies in disaster early warning, prediction and response, with examples of new and evolving technologies, applications, checklists and tools to support disaster management, resilience and redundancy, and disaster communications plans and frameworks that consider and prepare for all potential hazards.

g) The evolution of new technologies for disaster early warning and prediction of disasters.

1.2 Background texts

a) The WSIS action lines and United Nations Sustainable Development Goals (SDGs) further recognize the need to reduce the risk of disasters and build sustainable and resilient infrastructure.

b) Resolution 34 (Rev. Buenos Aires, 2017) of the World Telecommunication Development Conference (WTDC), on the role of telecommunications/ICT in disaster preparedness, early warning, rescue, mitigation, relief and response, as well as to support humanitarian assistance.

c) Resolution 646 (Rev. WRC-15) of the World Radiocommunication Conference (WRC), on the radiocommunication aspects of public protection and disaster relief.

d) Resolution 136 (Rev. Busan, 2014) of the Plenipotentiary Conference, on the use of telecommunications/ICTs for monitoring and management in emergency and disaster situations, and for early warning, prevention, mitigation and relief.

e) WRC Resolution 647 (Rev. WRC-15), on spectrum-management guidelines for emergency and disaster relief radiocommunications.

f) The United Nations International Strategy for Disaster Reduction (UNISDR) Sendai Framework for Disaster Risk Reduction 2015-2030.

1.3 Further provisions

a) Recommendation ITU-D 13.1, which recommends that administrations include the amateur services in their national disaster plans, reduce barriers to effective use of the amateur services for disaster communications, and develop memoranda of understanding (MoU) with amateur and disaster-relief organizations.

b) Recommendation ITU-R M.1637, which offers guidance to facilitate the global circulation of radiocommunication equipment in emergency and disaster-relief situations.

c) Report ITU-R M.2033, which contains information on some bands or parts thereof which have been designated for disaster-relief operations.

d) Recommendations ITU-T E.106 (International Emergency Preference Scheme for Disaster Relief Operations) and ITU-T E.107 (Emergency Telecommunications Service (ETS) and Interconnect Framework for National Implementations of ETS Numbering), which relate to use of public telecommunications by national authorities in emergency and disaster-relief operations.

e) Recommendation ITU-T L.392 (Disaster management for improving network resilience and recovery with movable and deployable information and communication technology (ICT) resource units), which contains an approach to improve network resilience against disasters.

f) Recommendation ITU-T E.108 (Requirement for disaster relief mobile message service), which specifies requirements for a disaster relief mobile message service to save a victim's life.

1.4 Aspects to be considered

a) The complementary work being undertaken by the Telecommunication Development Bureau (BDT) programme(s) and regional offices to provide assistance on disaster communications/emergency telecommunications to ITU Member States.

b) The activities of the Intersectoral Emergency Telecommunications Team, an internal ITU secretariat mechanism to ensure coordination across all the secretariat's activities for emergency telecommunications.

c) The role of ITU Sector Members and relevant international, regional and non-governmental organizations in providing telecommunication/ICT equipment and services, expertise and capacity-building assistance to support disaster-relief and recovery activities throughout the world, particularly through the ITU Framework for International Cooperation in Emergencies (ICE).

d) The ongoing work of the United Nations Emergency Telecommunications Cluster and the Working Group on Emergency Telecommunications (WGET), in which ITU participates, to facilitate the use of telecommunications/ICTs in the service of humanitarian assistance.

e) The ongoing work of the International Maritime Organization (IMO), the International Civil Aviation Organization (ICAO) and ITU related to search and rescue and distress alerting that may be applicable to disaster communications management frameworks.

f) Publications, workshops and forums facilitated by ITU's work on the utilization of telecommunications/ICTs for disaster preparedness, mitigation, response and recovery, including emergency communications, provide information to enhance the preparedness, mitigation and relief capacities of ITU Member States.

g) Developing countries[1] continue to require support in developing disaster communications management expertise.

h) ITU-D Objective 2, in coordination with the regional offices and ITU-D Study Group 2, can continue to assist and guide developing countries in building comprehensive disaster-management plans, setting up early-warning centres, addressing climate-change adaptation, and promoting regional and international cooperation at the time of disasters through coordinated efforts.

i) Ongoing or planned telecommunication/ICT development projects can often be leveraged to address emergency communications requirements and to support relief and recovery operations.

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

j) There is a need for additional information on the effective use of telecommunications/ICTs for disaster preparedness, mitigation, response and recovery, including consideration of how existing systems and infrastructures can be integrated into disaster-management frameworks, how to facilitate rapid deployment of systems and services following a disaster, and how to help ensure redundancies and resiliency of networks and infrastructures from the effects of natural disasters.

2 Question or issue for study

2.1 Continue examination of terrestrial, space-based and integrated telecommunications/ICTs to assist affected countries in utilizing relevant applications for disaster prediction, detection, monitoring, early warning, response and relief, including consideration of best practices/guidelines for implementation, and in ensuring a favourable regulatory environment to enable rapid deployment and implementation.

2.2 Continue gathering national experiences and case studies in disaster preparedness, mitigation and response, and in the development of national disaster communications plans, and examine common themes between them.

2.3 Examine the role that administrations and Sector Members and other expert organizations and stakeholders share in collaboratively addressing disaster management and the effective use of telecommunications/ICTs.

2.4 Examine the implementation of early-warning systems, and related disaster risk reduction and response actions, including safety confirmations in the event of a disaster.

2.5 Examine emergency communications planning, implementation and analysis of disaster communications exercises and drills.

2.6 Examine the enabling environment for more resilient communications networks and for the deployment of emergency communications systems, which includes, but is not limited to, emergency response, preparedness and recovery.

2.7 Develop best practices for the elaboration of national and regional disaster-management plans or frameworks for the use of telecommunications/ICTs in natural and man-made disaster and/or emergency situations, working in coordination with the relevant BDT programmes, regional offices and other partners.

2.8 Continue updating the online toolkit with relevant information and materials collected during the study period.

3 Expected output

The expected output will be a report or reports on the results of the work conducted for each step above, together with one or more Recommendations, as appropriate. Outputs may also include regular updates to the online toolkit, and the development of any additional tools or guidelines to support the implementation of telecommunications/ICTs for use in disaster preparedness, mitigation, response and recovery.

In order to facilitate discussion and to provide more timely outputs for the benefit of Member States, consideration may be given, when developing the work plan, to focusing on certain topics each year of the study period, while maintaining flexibility based on contributions received.

Succinct outputs summarizing case studies and capturing lessons learned, best practices and tools/templates will be prepared and presented to the study Question for approval annually, on an agreed theme. Examples could include, but are not limited to:

– Best practices and country experiences in planning, exercising and deploying early-warning systems for disaster risk reduction, including safety confirmation. The output will consider developed- and developing-country experiences in deploying early-warning systems and offer good practices and implementation guidance on establishing early-warning systems.

– Guidelines for preparing and conducting disaster communications exercises and drills and for assessing and updating plans, policies, and procedures based on lessons learned.

– Best practices regarding the enabling policy environment for the deployment of emergency communications systems. The discussion will address regulatory and policy barriers that exist for the implementation of resilient emergency communications systems, and identify best practices that enable early warning, continuity of communications and more effective response and recovery.

– Seminars and workshops to share knowledge, information and best practices, featuring subject-matter experts, administrations and Sector Members who are able to share expertise and experiences related to the theme from a national and/or regional/global perspective, and collection of case studies related to the theme.

– A summary of contributions received describing new technologies, systems and applications for emergency communications and considerations to support their implementation. The focus will be on both technology examples and also deployment case studies of new and emerging systems and applications for emergency communications and response.

4 Timing

4.1 Annual progress reports should be submitted to ITU-D Study Group 2.

4.2 Succinct outputs/annual reports summarizing case studies and capturing lessons learned, best practices and tools/templates on the agreed themes discussed.

4.3 Draft final reports and any proposed draft Recommendations/guidelines should be submitted to ITU-D Study Group 2 within four years.

4.4 The rapporteur group will work in close collaboration with relevant BDT programme(s), regional offices, regional initiatives and relevant ITU-D Questions, and ensure proper liaison with the ITU Radiocommunication (ITU-R) and Telecommunication Standardization (ITU-T) Sectors.

4.5 The activities of the rapporteur's group will come to an end within four years.

5 Proposers/sponsors

The new text for this revised Question stems from the final report of ITU-D Study Group 2 for 2014-2017.

6 Sources of input

Contributions are expected from Member States, Sector Members and Associates, as well as inputs from relevant BDT programme(s) and relevant ITU-R and ITU-T study groups, and any relevant ITU-D Question. International and regional organizations responsible for the utilization of telecommunications/ICTs for disaster management are encouraged to provide contributions related to experiences and best practices. The intensive use of correspondence and online exchange of information is encouraged for additional sources of inputs.

7 Target audience

a) Target audience

Depending on the nature of the output, middle- to upper-level managers in operators and regulators in developed and developing countries will be the predominant users of the outputs.

Target audience	Developed countries	Developing countries
Telecom policy-makers	Yes	Yes
Telecom regulators	Yes	Yes
Service providers/operators	Yes	Yes
Manufacturers	Yes	Yes

b) Proposed methods for implementation of the results

The results of the Question are to be distributed through ITU-D reports, or as agreed during the study period in order to address the Question for study.

8 Proposed methods of handling the Question

The Question will be addressed within a study group over a four-year study period (with submission of interim results), and will be managed by a rapporteur and vice-rapporteurs. This will enable Member States and Sector Members to contribute their experiences and lessons learned with respect to emergency communications.

9 Coordination

The ITU-D study group dealing with this Question will need to coordinate with:

– Relevant ITU-D Question(s)

– Relevant BDT programme(s)

– Regional offices

– Relevant ITU-R and ITU-T study groups

– Working Group on Emergency Telecommunications (WGET)

– Relevant international, regional and scientific organizations with mandates relevant to this Question.

10 BDT programme link

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11 Other relevant information

As may become apparent within the life of the Question.

QUESTION 6/2

Information and communication technologies and the environment

1 Statement of the situation or problem

1.1 ICT and climate change

The issue of climate change has emerged as a global concern and requires global collaboration by all concerned, in particular the developing countries[1] (which are the most vulnerable group of countries with respect to climate change). International initiatives in this domain are seeking to achieve sustainable development and identify ways and means in which information and communication technologies (ICTs) can monitor climate change and reduce overall global greenhouse gas (GHG) emissions.

Study Group 5 of the ITU Telecommunication Standardization Sector (ITU-T) is the lead study group for study of ICT environmental aspects of electromagnetic phenomena and climate change, including design methodologies to reduce environmental effects, such as recycling related to ICT facilities and equipment; and Study Group 7 (Science services) of the ITU Radiocommunication Sector (ITU-R) is the lead study group for studies related to the use of radio technologies, systems and applications, including satellite systems, for environment and climate-change monitoring and climate-change prediction.

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

In this respect, the outcomes of ITU-T and ITU-R resolutions and Recommendations, and in particular Resolution 73 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly (WTSA) and Resolution 673 (Rev. WRC-12) of the World Radiocommunication Conference, should serve as a basis for the study of this Question.

1.2 Telecommunication/ICT waste material

The growth of telecommunications/ICTs, especially in developing countries, has been exponential in recent years. For instance, between 2002 and 2007, mobile-phone penetration in the Americas region grew from 19 to 70 terminals per 100 inhabitants. Globally, the share of mobile-phone subscriptions in developing countries increased by 20 percentage points, from 44 per cent to 64 per cent over the same period of time.

The growth of electrical and electronic equipment and their peripherals, as well as the continuous updating of technology, has generated a significant growth in telecommunication/ICT waste. It is estimated that between 20 and 50 million tonnes of telecommunication/ICT waste are generated every year worldwide. However, recycling and responsible disposal of telecommunication/ICT waste remain at low levels, making it difficult to even find figures on this issue at regional level.

The consequences of not carrying out proper recycling or disposal are environmental problems of large magnitude, especially for developing countries.

The exponential growth of telecommunication/ICT terminals, the associated high turnover of terminals and advances in technology make it imperative to put forward actions in the immediate future to prevent the environmental catastrophe that would result in developing countries if we fail to produce an adequate regulatory framework and work towards policies that address this problem.

2 Question or issue for study

There are a variety of issues that members will address under this Question in the next four years. It is expected that the following steps for the study will play a major role in the future in order to meet the objective of this Question:

a) In close collaboration with the respective BDT programme(s), identify the regional needs for relevant applications for developing countries.

b) Elaborate a methodology for the implementation of this Question, in particular gathering evidence and information regarding current best practices on how ICTs can help reduce overall GHG emissions, taking into consideration progress achieved by ITU-T and ITU-R in this regard.

c) Consider the role of Earth observation in climate change, as determined by the implementation of Resolution 673 (Rev. WRC-12), on radiocommunication use for Earth observation applications, in order to enhance the knowledge and understanding of developing countries in respect of the utilization and benefits of relevant applications in connection with climate change.

d) Develop best-practice guidelines for the implementation of relevant Recommendations adopted by ITU-T as a result of the implementation of Resolution 73 (Rev. Hammamet, 2016), both for monitoring changes in the climate and reducing the impact of climate change using the action plan in WTSA Resolution 44 (Rev. Dubai, 2012), in particular programmes 1, 2, 3 and 4 thereof.

e) Strategies to develop a responsible approach to, and comprehensive treatment of, telecommunication/ICT waste: policy and regulatory actions required in developing countries, in close collaboration with ITU-T Study Group 5.

3 Expected outputs

The output will be a report or reports on the results of the work concluded for each step identified above, taking into account the specific needs of developing countries. Other outputs could be the organization of workshops and seminars for the developing countries, in relation with the relevant ITU-D programme and in consultation with the relevant ITU-T and ITU-R study groups.

4 Timing

The output will be generated on an annual basis. The output for the first year will be analysed and assessed in order to update the work for the next year, and so on. An interim report will be produced by 2019. The final report is due by the end of 2021.

5 Proposers/sponsors

The Question was approved by WTDC-17.

6 Sources of input

Contributions are expected from:

Member States, Sector Members and Associates, as well as inputs from:

a) Relevant BDT programmes, and particularly ICT initiatives successfully implemented for climate change and to address e-waste.

b) Regional needs as identified by workshops on the subject.

c) Regional and/or national action plans and/or national experiences in ICTs and climate change or e-waste.

d) Progress achieved by ITU-T and ITU-R study groups in this domain, in particular the results of the Joint Coordination Activity on ICTs and climate change (JCA-ICTCC).

e) Progress achieved by the United Nations Intergovernmental Panel on Climate Change (IPCC) and other similar initiative(s).

7 Target audience

Target audience	Developed countries	Developing countries
Telecom policy-makers	Yes	Yes
Telecom regulators	Yes	Yes
Service providers/operators	Yes	Yes
Manufacturers	Yes	Yes

a) Target audience – Who specifically will use the output

The output of this Question will be used by both developed and developing countries, and in particular the least developed countries (LDCs), small island developing states (SIDS), landlocked countries (LLDCs) and countries with economies in transition.

b) Proposed methods for implementation of the results

A set of guidelines and recommendations about strategies for a responsible and comprehensive approach to the treatment of waste related to telecommunications/ICTs: policy and regulatory actions required in developing countries and LDCs.

This guide could be implemented by the developing countries and LDCs, as well as operators and manufacturers, in establishing actions for responsible and integral treatment of waste related to telecommunications/ICTs.

8 Proposed methods of handling the Question or issue

Close coordination is essential with ITU-D programmes, and other relevant ITU-D study Questions, and with ITU-R and ITU-T study groups.

a) How?

1) Within a study group:

– Question (over a multi-year study period) ☑

2) Within regular BDT activity:

– Programmes ☑

– Projects ☑

– Expert consultants ☑

3) In other ways – describe (e.g. regional, within other organizations, jointly with other organizations, etc.) ☑

b) Why?

To ensure that the work and output of this study Question is not duplicated and that there is better collaboration among BDT, the other ITU Sectors, Sector Members and other United Nations agencies.

To elaborate the set of guidelines, it would be necessary to have the experience of different countries, operators and manufacturers, as well as different organizations concerned with the topic which could provide information.

9 Coordination and collaboration

– Regular ITU-D activities

– Other study group Questions or issues

– Regional organizations, as appropriate

– Work in progress in the other ITU Sectors.

10 BDT programme link

Output 4.4.

11 Other relevant information

To be determined during the implementation of this Question.

QUESTION 7/2

Strategies and policies concerning human exposure to electromagnetic fields

1 Statement of the situation or problem

The deployment of different sources of electromagnetic fields (EMF) to cater for the telecommunication and information and communication technology (ICT) needs of urban and rural communities has developed very rapidly over the past years. This has been due to strong competition, ongoing cellular penetration and traffic growth, increased usage of data services, quality of service (QoS) requirements, network coverage and capacity extension, and the introduction of new technologies.

This development has prompted concern as to the possible effects of prolonged exposure to emissions on people's health.

This concern on the part of populations is growing, aggravated by the feeling that they are not being kept informed in regard to the process for deploying these installations in their vicinity. As a consequence of rapid technological development in the field of telecommunications, many complaints have been received by operators and government bodies responsible for radiocommunications/ICTs.

Thus, since the continued development of radiocommunications requires trust on the part of populations, the work carried out in study groups of the ITU Radiocommunication Sector (ITU-R), specifically under new Question 1/239, and in Study Group 5 of the ITU Telecommunication Standardization Sector (ITU-T) under Resolution 72 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly (WTSA), on measurement and assessment concerns related to human exposure to EMF, as well as

Resolution 176 (Rev. Busan, 2014) of the Plenipotentiary Conference, on human exposure to and measurement of EMF, should be complemented by studies on the different regulatory and communication mechanisms developed by countries to make populations more knowledgeable, aware and informed and thus facilitate the deployment and operation of radiocommunication systems.

2 Question or issue for study

The following subjects should be studied:

a) Compilation and analysis of the regulatory policies concerning human exposure to EMF that are being considered or implemented for authorizing the installation of radiocommunication sites.

b) Description of the strategies or methods for raising populations' awareness and knowledge of, and providing them with more information on, the effects of EMF from radiocommunication systems.

c) Proposed guidelines and best practices on this matter.

d) Information on the international (mainly in WHO, ICNIRP and IEEE) activities, including updated limits of exposure levels.

e) Challenges and opportunities of developing technical regulations on the limits for maximum exposure to non-ionizing electromagnetic radiation from radio base stations and specific absorption rate levels in wireless devices.

3 Expected output

A report to the membership presenting guidelines to assist Member States in resolving similar problems faced by regulatory bodies. The report will provide material for workshops and seminars to share experiences on the establishment of limits for maximum exposure to non-ionizing electromagnetic radiation from radio base stations.

4 Timing

A provisional report is to be presented to Study Group 2 in 2019. It is proposed that the study be completed in 2021, at which date a final report containing guidelines will be submitted.

5 Proposers/sponsors

ITU membership.

6 Sources of input

– Member States, Sector Members, Associates and Academia.

– Regional organizations

– ITU Sectors

– World Health Organization (WHO)

– International Commission on Non-Ionizing Radiation Protection (ICNIRP)

– Institute of Electrical and Electronics Engineers (IEEE)

– Telecommunication Development Bureau (BDT) focal points.

7 Target audience

a) Target audience – Who specifically will use the input?

Target audience	Developed countries	Developing countries[1]
Telecom/ICT decision-makers, local authorities	Yes	Yes
Telecom/ICT regulators	Yes	Yes
Service providers/operators	Yes	Yes
Constructors/equipment provider	Yes	Yes

b) Proposed methods for implementation of the results

The results of the Question are to be distributed through ITU-D reports, or as agreed during the study period in order to address the Question for study.

8 Proposed methods of handling the Question or issue

Close coordination is essential with ITU-D programmes, as well as with other relevant ITU-D study Questions and ITU-R study groups dealing with ICT for climate change, and ITU-T Study Group 5.

a) How?

1) Within a study group:

– Question (over a multi-year study period) ☑

2) Within regular BDT activity:

– Programmes ☑

– Projects ☑

– Expert consultants ☑

3) In other ways – describe (e.g. regional, within other organizations, jointly with other organizations, etc.) ☐

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

b) Why?

To ensure that the work and output of this study Question is not duplicated and that there is better collaboration among BDT, the other ITU Sectors, Sector Members and other United Nations agencies.

9 Coordination and collaboration

The ITU-D study group dealing with this Question will need to coordinate with:

– Relevant ITU-D Question(s)

– Relevant BDT programme(s)

– Regional offices

– Relevant ITU-R and ITU-T study groups

– Relevant international, regional and scientific organizations with mandates relevant to this Question.

10 BDT programme link

Objective 2, Output 2.1.

11 Other relevant information

To be defined in the work plan.

PART D

ANNEXES

Annex A – Opening address: Message* from Mr António Guterres, Secretary-General of the United Nations

Ladies and gentlemen,

I am pleased to greet the World Telecommunication Development Conference and I thank the Government of Argentina for hosting.

Let me also commend your focus on how information and communication technologies can support global efforts to achieve the Sustainable Development Goals. Remarkable advances in recent years have shown us how these technologies can empower people and transform lives for the better. But we also know that we need to bridge the digital divide and address the unintended consequences of innovation. We need to do more to protect society from cyberattacks and to address the implications for labour markets, global security, and indeed the fabric of our societies. Information and communication technologies can help us on each and every Sustainable Development Goal. I look forward to working with you to consider the way forward and to harness this great power for the benefit of all.

In that spirit, I wish you a successful conference.

*Transcript from video message

Annex B – Opening address: Message from the Holy Father Pope Francis

Mr Houlin Zhao
Secretary-General of the International Telecommunication Union

His Holiness Pope Francis was pleased to learn of the World Telecommunication Development Conference to take place in Buenos Aires from 9 to 20 October 2017, and he sends warm greetings to you and to all those gathered for this occasion. As you reflect on communication technologies and their contribution to social and economic development, His Holiness encourages you to deepen your commitment to "constructive forms of communication that reject prejudice towards others and foster a culture of encounter, helping all of us to view the world around us with realism and trust" (Message for the 51st World Communication Day, 24 January 2017). It is his ardent hope that in your discussions you will explore ways in which access to telecommunication technology can help to promote the dignity of every person, especially in the poorest and the most marginalized sectors of society. Assuring you and all present of his spiritual closeness, Pope Francis prays that the Almighty may bless and guide your efforts.

Cardinal Pietro Parolin
Secretary of State

Annex C – Opening address: Mr Brahima Sanou, Director, Telecommunication Development Bureau, ITU

Excellency Mr Andrés Ibarra, Minister of Modernization, Argentina,

Honourable Prime Minister of Vanuatu,

Honourable Deputy Prime Minister of Slovenia and Deputy President of Comoros,

Honourable ministers here present,

Other heads of delegation representing Member States and ITU-D Sector Members and Academia,

All other dignitaries here present,

Distinguished delegates, ladies and gentlemen,

It is my great honour and pleasure to welcome all of you to this World Telecommunication Development Conference, WTDC-17.

I would like to express my gratitude to the Government and the people of Argentina for their warm and kind hospitality. I would also like to express my deep appreciation to the Ministry of Modernization, and in particular to His Excellency Minister Ibarra, for the support and for all the work done in the lead-up to the conference to ensure a successful WTDC.

Indeed, the first WTDC held after the establishment of the ITU Telecommunication Development Sector (ITU-D) took place here in Buenos Aires, from 21 to 29 March 1994.

I wonder how many of you, in this room, were at WTDC-94? Please raise your hand if you were there! *Thank you very much.* Your commitment and dedication has greatly contributed to the success of ITU-D. I am glad you are here to celebrate the 25th Anniversary of ITU-D with us this week.

Distinguished delegates, ladies and gentlemen,

Since the creation of ITU-D by the Additional Plenipotentiary Conference in 1992, the world has evolved significantly. Over the past 25 years, there has been unprecedented growth in the ICT sector. The introduction of new technologies has contributed to economic growth and has improved all sectors of life.

I must add that since 1992, the ITU Telecommunication Development Sector has been supporting countries in their efforts to use telecommunications/ICT as a catalyst for development. This includes the provision of assistance on infrastructure development, capacity building, cybersecurity, emergency telecommunications and gender mainstreaming, as well as support in creating an enabling environment, addressing the urban-rural digital divide, measuring the information society and other related topics.

The accomplishments are many and I have personally witnessed the radical changes that ICTs have brought to people from all walks of life whom I meet across the world.

People's stories and experiences continue to inspire our work so that one day everyone will be empowered by the full potential of ICTs to promote socio-economic development and peace in the world.

Our mission of connecting the world and ensuring that everyone has access to the same opportunities offered by ICTs makes everyone an active player in the digital economy.

The Sustainable Development Goals (SDGs), adopted in 2015, present us with a tremendous opportunity to ensure that ICTs play a central role in people's lives.

The SDGs have broadened our horizons. We are now required not only to provide broadband and universal access to ICT services at affordable price but, equally importantly, to make ICTs work for other sectors such as health, education, agriculture and trade.

Our actions must go beyond the ICT sector to embrace the new ICT ecosystem. For me, and I am sure you will agree, the new ecosystem is about people. It is about the 3.9 billion people still to be connected. It is about us in this room and our families. It is about everyone in the world, regardless of their race, gender, religion, age, national origin or economic status.

I am very proud of what the ITU Telecommunication Development Sector (ITU-D) has accomplished. ITU-D has become a strong and relevant neutral platform to further development while putting a human face on ICTs, thanks to the commitment of the Member States and Sector Members.

I would also like to thank the ITU staff, and in particular the staff of the Telecommunication Development Bureau (BDT), for their enthusiasm and hard work in carrying out the mandate of ITU-D.

Let me also seize this opportunity to pay a special tribute to my predecessors, the former Directors of BDT: Mr Arnold Djiwatampu, Mr Ahmed Laouyane, Dr Hamadoun Touré and Mr Sami Al Basheer, who have kindly accepted my invitation to join us here for the celebration of the 25th Anniversary of ITU-D.

Distinguished participants, ladies and gentlemen,

I am convinced that WTDC-17 will be a memorable experience. To make this happen we all need to continue improving the level of mutual trust that we have fostered so successfully thus far. It is through that trust that consensus will be achieved. The world is watching us and placing in us the hope that we will provide high-quality telecommunication and ICT services to stimulate development. This is the underlying essence of the theme of the conference – "ICTs④SDGs".

At the end of WTDC-17, we will adopt a development plan inspired by the world we want to see tomorrow.

I am sure that you are as excited and energized as I am by this conference and the enormous opportunities that it presents to our sector.

As we gather here for the next two weeks, let us ask ourselves: How can we build on the results achieved so far? What do we want the future to look like? How do we envision our world in 2030? What is the legacy that we want to leave to our children and grandchildren?

Let us answer these questions together. They will be our collective contribution to the Sustainable Development Goals.

I thank you.

Annex D – Opening address: Mr Marcos Peña, Chief of the Cabinet of Ministers of the Argentine Republic

Good morning. Welcome to Buenos Aires, welcome to Argentina!

I want to convey very warm regards from our President, Mauricio Macri, and from our Mayor, Horacio Rodríguez Larreta, in welcoming you to this conference.

We are delighted that this meeting is taking place here, for many reasons.

First, because we are convinced that at this time of change which Argentina is experiencing – a time of enthusiasm and of transformation – becoming fully a part of the world and being a venue for such events as this enables us to offer all the warmth, all the commitment to dialogue and coming together, that have always been a feature of our society and our country.

Before long this will also be the venue for the WTO Ministerial Conference; we will be assuming the presidency of the G20; we will be hosting the Youth Olympics later next year, in keeping with the spirit that we sought to embody in our message, and which is at the heart of the G20: the notion of "*building consensus and sustainable development*". This is the spirit which we would like you to find at this conference. A conference where you feel comfortable and at ease, and where, we hope, you will find time during your stay here to see something of this beautiful city and this great country which is so eager to welcome visitors from all over the world.

Secondly, we are deeply convinced that a better world is a more connected world, and that this exhilarating revolution and transformation of humanity, which is being driven by communications, must reach every inhabitant of our planet if we are to achieve the Sustainable Development Goals set by the United Nations.

We believe that greater digital inclusion and better access to a wider range of communications for everyone means greater freedom, greater democracy, and greater transparency, and this can build a better world. We are convinced that we must take a positive view of technological developments as tools that will enable us to tackle and resolve the problems of humanity we are facing, which include poverty and inequality, the challenges posed by climate change, the quest for peace and the defence of human rights.

And we believe that the quality of democracy is enhanced if citizens are connected and able not only to receive information but also, and above all, to create information. We believe that here in Argentina, the enterprising spirit of our people has much to contribute, and this has been demonstrated by the entrepreneurial ecosystem of communication and technology companies that have developed here – often under difficult circumstances – which can serve as an example, now that Argentina is on a path to growth and transformation, for other countries and for young people in every one of these communities seeking a better future for themselves and their families.

Lastly, I would like to say that Argentina is committed to seeking ways of reducing violence, of combating the scourges of terrorism and drug trafficking, and other activities that all too often exploit technology for evil ends. We will continue to work together with all nations to improve tools against cyberterrorism, cyberbullying, and any other expression of hatred or violence that seeks to exploit technology.

We are optimistic and enthusiastic by definition, and we want to be a driving force in this wonderful 21st century in which we live. In that spirit I would like once again to welcome you most warmly to Argentina and to this meeting, and wish you every success in the days of work ahead in helping us all to achieve these goals together.

Many thanks to you, and enjoy your day!

Annex E – Opening address: Mr Houlin Zhao, Secretary-General, ITU

Excellencies, distinguished delegates, ladies and gentlemen.

It is my great pleasure to welcome you to the seventh World Telecommunication Development Conference (WTDC) here in Buenos Aires, where the first WTDC after the establishment of ITU's Telecommunication Development Sector (ITU-D) was held 23 years ago.

I would like to express my sincere gratitude to the Argentine Republic and the City of Buenos Aires for hosting WTDC-17, and for showing the world once again that information and communication technologies (ICTs) and sustainable development must go hand in hand. I would expect no less from a country that has implemented major initiatives like *"Argentina Conectada"* and *"Argentina Innovadora 2020"*.

ITU and Argentina have a long and rich history of cooperation. Over the years, Argentina has made valuable contributions to ITU activities. It is fitting to be back in Buenos Aires the year we celebrate the 25th Anniversary of ITU-D.

And on this occasion, we are very fortunate to have a message from His Holiness Pope Francis, who wanted to address our conference. It was a real honour and a privilege for me to meet with the Holy Father just a few weeks ago, on 1 September. His Holiness Pope Francis underlined the important role of ICTs and new technologies in bringing humanity closer together.

The role of ICTs was also at the heart of the video address by UN Secretary-General António Guterres, who reminded us that ICTs can empower people and transform lives for the better.

This is essential at a time when 3.9 billion people are still not connected to the Internet.

What can we do for them, especially those in the most vulnerable areas and developing countries?

We must pursue every avenue to bring more people online. Digital inclusion can only be meaningful and effective if and when everyone feels empowered to use the technology – and when the technology is affordable, attractive and safe.

The theme of WTDC-17 – ICT for Sustainable Development Goals – is very timely, because now, more than ever, we need ICTs to drive development and accelerate achievement of the SDG vision to leave no one behind.

What we achieve here in Buenos Aires in the next two weeks will shape not just the next four years, but the next 13 years – all the way to 2030, the year set by the international community to achieve the SDGs.

Distinguished delegates, ladies and gentlemen,

On this collective journey, four principles based on infrastructure, investment, innovation and inclusion (the "4 I's") must guide our work.

First: Infrastructure is a backbone for the digital economy.

Building the next generation of ICT infrastructure will power the evolution of smart, sustainable cities and communities all around the world. We must connect not just all people but also things.

Second: Investment is a key enabler for sustainable development.

ICTs are enablers; which can fast-forward progress on the SDGs. But we need to create a better environment for investment. We need to develop innovative financing mechanisms and creative public-private partnerships that cut across industries and sectors – in particular in those hard-to-reach areas with no Internet access.

Third principle: Innovation is a creator of opportunity.

Since the last time we met, efforts have focused on developing emerging technologies like big data, 5G, cloud computing, the Internet of Things and artificial intelligence. We have also promoted ICT entrepreneurship, facilitated digital innovation ecosystems and accelerated the digital transformation.

At the forefront of both industry disruption and economic growth, in developed and developing markets alike, entrepreneurs and small and medium enterprises (SMEs) are critical in this new ecosystem. They are an important source of economic growth, job creation and innovation – and we need to improve and strengthen our cooperation with them.

Finally: Inclusion (the last "I") is a foundation for prosperity and peace.

More than 2 billion adults still do not have a formal bank account, most of them in developing economies. But 1.6 billion of these unbanked people have access to a mobile phone and potentially empowering digital financial services.

Digital financial inclusion is one of many examples. It can act as a multiplier for poverty eradication, job creation, gender equality and women's empowerment.

As we explore how to unleash the power of ICTs for the SDGs, let us remember what a difference a mobile phone can make in the lives of humans across the globe.

Ladies and gentlemen,

Let us remember that we are stronger together – that together we can make the most of ICTs to realize the 2030 Agenda and keep its promise of a life of dignity for all.

Let all these principles guide our work during this conference.

It is our responsibility to bring the power of ICTs to all nations, all people and all segments of society.

Your Excellency Marcos Peña,

Thank you for honouring this opening ceremony with your presence.

On behalf of all conference participants, allow me to close by reiterating our deepest gratitude to you, and through you, to the people of Argentina, for the warm welcome and your extraordinary hospitality.

I wish you all a successful and productive WTDC-17!

Thank you for your attention.

Annex F – Opening address: His Excellency Mr Andrés Horacio Ibarra, Minister of Modernization of the Argentine Republic

After 23 years, the World Telecommunication Development Conference has returned to Argentina. This is a further sign of the confidence that the world is expressing in this new era in Argentina: an era of wisdom, of clear rules of the game and of deeper integration for the generation of investment and growth that are enabling us to progress towards one of our main objectives: a country with zero poverty.

Argentina and telecommunications

For the first time in Argentina we are developing a strategic digital plan and a strategic agenda which includes:

– a digital government that is using technology to serve each and every citizen in accordance with his or her needs, providing more and better services of uniform quality in every corner of the country;

– an open government which fosters participation and transparency to enhance citizen creativity and innovation;

– a digital economy that is modernizing small, medium-sized and large businesses to make them more competitive, providing working tools to entrepreneurs and boosting the skills of national digital industries to ensure their regional and global integration;

– digital citizens capable of accessing the goods and services provided by the new technologies, including knowledge, culture, training and online procedures.

In order for these areas to be developed, we have to ensure:

– universal access to the competencies demanded by the digital economy;

– a quality technology infrastructure that enables the whole country to participate in digital development, eliminating geographic and economic divides and thereby paving the way for new opportunities for regional economies;

– a regulatory framework that stimulates the digital ecosystem, promotes confidence in the digital economy by guaranteeing consumer protection, fosters competition in digital services to ensure the affordability of products and services, protects personal data and safeguards human rights within the Internet.

All of these measures are geared towards combating the digital divides we have in the area of connectivity, on the one hand in terms of numbers of people having access, and on the other in terms of speed.

There are currently 7 000 000 households with Internet access. Our aim is to achieve higher speeds for 3 500 000 of them, and to provide access to 2 000 000 further households.

We aim to move from the current speed of 6.5 Mbps to an average 20 Mbps, which will bring us on a par with the developed countries of the European Union.

We have made a good deal of progress in these 20 months of government, but much still remains to be done. In line with the objectives to which I have referred, we have deployed a series of strategic plans that are transforming the reality of our country in each of the areas concerned.

Our objective, through the National Plan for Digital Inclusion, is to bring a further one million people each year into the digital world.

We cannot conceive of a country developing without the ICT industry. Here we may well quote the words of Roosevelt: "A great democracy has got to be progressive or it will soon cease to be great or a democracy".

In that spirit, we are undertaking various initiatives in the sector with the aim of developing a strong and vigorous industry:

– We are working on a convergence project with the dynamism and balance that is needed to make them the key to Argentina's ICT development.

– We are including in our public works projects the deployment of networks and optical fibre in order to improve access capacity.

– Protection of investment in optical fibre in the private sphere.

– Making as many public buildings as possible available for the installation of antennas and development of networks.

– To make quality of service the guiding principle in all of this. What is important here is to ensure that people enjoy high-quality services, and we are working towards this goal together with the Secretariat for Communications and ENACOM.

– To ensure predictability and embark on a policy of increasing spectrum, in accordance with ITU recommendations.

– To produce a federal agreement with the provinces (Federal Commitment).

– We shall be creating conditions conducive to the development of 5G and IoT.

– Development of a satellite policy that will complement the deployment of optical fibre in order to bring the Internet to every corner of the country.

We will continue to work together, engaging in dialogue, meeting, creating all the conditions for quality of service and infrastructure which Argentinians demand and deserve.

We will continue creating and improving conditions for long-term investment that will create employment including skilled jobs, generating value and knowledge.

We will create facilities for the development of ICTs and connectivity in all parts of the country so that all citizens can have adequate broadband to improve their quality of life.

Of course, as I said before, all this will be part of a proper digital agenda strategy, in which the state Digital Country policy and Digital Inclusion Plan will be the pillars for sustainable development.

I should like to acknowledge the work done by the major companies that brought Argentina onto the world stage, as well as the SMEs which are the job creators everywhere. The Ministry undertakes to create a suitable framework for the sustainable development of the sector.

WE WILL BE ACTIVE PLAYERS IN THE DIGITAL FUTURE.

I thank you, and hope you will enjoy your stay in our country.

Annex G – 25th Anniversary celebrations

In accordance with Resolution 55 (Nice, 1989), adopted by the Nice Plenipotentiary Conference in 1989, Member States established the High Level Committee to examine how ITU could respond effectively to the challenges of a changing telecommunication environment, based on a review of the structure and functioning of ITU. The committee concluded its work with a report entitled "Tomorrow's ITU: The challenges of change", which recommended that the substantive work of ITU was to be organized in three Sectors: Radiocommunication, Standardization and Development. The recommendations contained in the report were adopted by the 1992 Additional Plenipotentiary Conference held in Geneva, Switzerland.

In the framework of the World Telecommunication Development Conference (Buenos Aires, 2017) (WTDC-17), several activities were planned to celebrate the 25th Anniversary of the ITU Telecommunication Development Sector (ITU-D). These activities included:

– **Ministerial roundtables**: Two ministerial roundtables were held on 11 October and featured thought leaders who discussed the impact of information and communication technologies (ICTs) for the Sustainable Development Goals (SDGs) and debated on the future of the digital economy. High-level interventions at the minister and head of regulatory authority level were enriched by contributions from representatives of the private sector, civil society, technical community and academia.

– **Gala Dinner**: A Gala Dinner, open to all WTDC-17 participants, was held on 11 October at the Hotel Alvear Icon, Buenos Aires. The evening featured a special interactive programme accompanied by several performances.

– **Awards**: During the Gala Dinner, the former Directors of BDT since the creation of ITU-D received awards in recognition of their contribution to socio-economic development: Mr Arnold Ph. Djiwatampu from Indonesia, Mr Ahmed Laouyane from Tunisia, Dr Hamadoun I. Touré from Mali and Mr Sami Al-Basheer from Saudi Arabia. Awards were also given to long-standing Sector Members of ITU-D: ''VEON Armenia'' CJSC (formerly ArmenTel CJSC); Orange; PT. Telekomunikasi Indonesia Tbk; Sudatel Telecom Group; Telecomunicaciones de México and Telkom SA SOC Ltd. The following selected stakeholders received awards in recognition of their past and current contributions to ITU-D projects: the Department of Communications and the Arts, Australian Government; and the European Commission.

ITU-D's 25th Anniversary celebrations were graciously supported by the Kingdom of Saudi Arabia (Platinum sponsor), Communications Regulatory Authority of the State of Qatar (Gold sponsor), Burkina Faso (Silver sponsor), Côte d'Ivoire (Silver sponsor) and Ministry of Internal Affairs and Communications of Japan (Silver sponsor); along with discretionary sponsors: Postal and Telecommunications Regulatory Authority of Zimbabwe, Communication and Information Technology Regulatory Authority of the State of Kuwait, Ministry of Post, Telecommunications, Technologies and Digitalization of Algeria, Ministry of Transport, Communications and High Technologies of Azerbaijan, Ministry of Communications and Information Technology of Egypt, Rwanda Utilities Regulatory Authority (RURA), EMEA Satellite Operators Association (ESOA) and Sudatel Telecom Group.

Annex H – Statements by delegations

1 Ninth Plenary Meeting

Statement by the delegation of the Syrian Arab Republic

The Syrian Administration highly appreciates the efforts and contribution of the International Telecommunication Union to reconstruct telecommunication networks affected by wars. We call upon ITU to continue this noble action and to allocate the necessary funds for this purpose.

Statement by the delegation of the Kingdom of Saudi Arabia

Mr Chairman,

Ladies and gentlemen,

The International Telecommunication Union is a long-standing organization whose name has been associated with worldwide praise for its civilizational and humanitarian achievements. The Union must remain a specialized organization in the field of telecommunications and information technology, and should not be utilized as a tool and means to achieve political goals and purposes.

Mr Chairman,

The Kingdom of Saudi Arabia does not accept to discuss in this conference any matters related to the Syrian crisis, which has been going on for seven years and which, we believe, should be discussed and settled by means of a political solution based on the Geneva 1 Declaration and Security Council Resolution 2254.

Ladies and gentlemen,

The Kingdom of Saudi Arabia has not overlooked the humanitarian and developmental aspect of this crisis, and has welcomed hundreds of thousands of Syrians, not as refugees, but as brothers and sisters entitled to enjoy all the facilities needed to enjoy a normal life and benefit from all medical and educational services. I should not omit in this regard to recall what is provided within Syria by the King Salman Humanitarian Aid and Relief Centre.

Mr Chairman,

The international society has paid due attention to this aspect, and several summits have been held to raise funds amounting to billions of dollars. My country has been honoured to be one of the major contributors. Accordingly, we reiterate that the Union should not be driven into such discussions and should not be utilized as a tool to achieve any political goals and purposes.

2 Eleventh Plenary Meeting

Statement by the delegation of Estonia

Estonia would like to make a statement on behalf of the European Union and its Member States. The European Union and its Member States fully support the work of the International Telecommunication Union to assist countries in special need. The European Union will be ready to assist in the reconstruction of Syria only when a comprehensive, genuine and inclusive political transition, negotiated by the Syrian parties in the conflict on the basis of UN Security Council Resolution 2254 (2015) and the 2012 Geneva Communiqué, is firmly under way.

Statement by the delegation of the People's Republic of China

China noticed that domestic telecommunication infrastructures in Syria had suffered extensive damages. Rebuilding and improving those infrastructures is essential in promoting the wellbeing of the Syrian people. For this reason, China is in favour of ITU taking necessary measures under its mandates and together with the international community to provide assistance to the rebuilding of critical telecommunication infrastructures in Syria.

Statement by the delegation of the People's Democratic Republic of Algeria

The request made by the Syrian delegation concerns support for the development of telecommunication infrastructures, the principal beneficiary of which is the Syrian people.

The peoples of Syria are suffering enough from tragedies and wars which risk being further exacerbated by their isolation in terms of telecommunications. This assistance will undoubtedly help to offer them a chance to live a normal, tranquil and, above all, peaceful life.

Based on the sacred principle of non-interference in the domestic affairs of countries, and the principle that the peoples of all regions can and must themselves determine their destinies, and themselves resolve their domestic problems peacefully, without violence and through dialogue, no consideration should be used as an argument for refusing the support and assistance that have been requested.

Recalling ITU's commitment to connect all the world's people, wherever they live and whatever their means, and to protect and support everyone's fundamental right to communicate, Algeria expresses its support for the Syrian people, endorses the proposal of the Syrian delegation, and calls for consensus in the interests of the innocent peoples of that country.

Statement by the delegation of the Russian Federation

Dear Mr Chairman

The Russian Federation fully shares the efforts of the ITU Telecommunication Development Sector to assist developing countries in restoring destroyed communication infrastructure. We are convinced that similar assistance should be given to the Syrian Arab Republic, where the appropriate conditions are met and in accordance with the provisions of Resolution 25, as revised at WTDC-17.

We request that the secretariat include this declaration in the Final Report of this conference.

Statement by the delegation of the United States of America

The Syria crisis is a highly political issue, and the United States of America does not believe that the World Telecommunication Development Conference should consider matters that entail an active, hostile conflict and unresolved political process that is to be addressed by measures endorsed by the UN Security Council. A political solution to the Syria crisis can only be achieved through full implementation of UN Security Council Resolution 2254 and a credible political process leading to a genuine political transition that can be supported by a majority of the Syrian people. Until that process is complete, the United States of America does not support recovery and reconstruction efforts for the Government of Syria.

Statement by the delegation of the United Arab Emirates

The State of the United Arab Emirates extends its thanks to the International Telecommunication Union and commends its efforts to provide assistance to developing countries, in particular least developed countries and countries facing difficulties and in need of special assistance. The State of the United Arab Emirates affirms its support for the Union’s role in this area, and it has consistently assisted countries with special needs at various levels.

The State of the United Arab Emirates affirms that the International Telecommunication Union is a specialized organization in Telecommunications/ Information and Communication Technology, and that its work must not in any case include political issues.

The State of the United Arab Emirates expresses its deep concern about the discussions that have taken place at the eighth and ninth plenary meetings and their implications, specifically on the third item of the agenda of the eighth and ninth plenary meetings and its implications.

3 Twelfth Plenary Meeting

Statement by the delegation of the United States of America on the Buenos Aires Declaration

The United States of America disassociates from paragraph 22 to the extent that it could promote technology transfer that is not mutually agreed and voluntary. For the United States, any such language will have no standing in future negotiations. The United States continues to oppose language that we believe undermines intellectual property rights.

Annex I – BDT Director Closing Speech

Brahima Sanou, Director of the ITU Telecommunication Development Bureau

20 October 2017, Buenos Aires, Argentina

Representatives of Member States, Sector Members and Academia,

Ladies and gentlemen:

The end of WTDC-17 marks a new beginning. A new journey is about to start and it will pave the way to new opportunities to achieve socio-economic development.

Over the two weeks, we welcomed here in Buenos Aires almost 1 400 delegates from 134 countries and 91 other entities. We considered more than 300 proposals.

Starting the preparatory process of WTDC-17 earlier by working on the draft output documents has helped us to advance on many issues. This has also helped to stimulate substantive discussions on reshaping the future of the ICT Sector and repositioning the ICT Sector in the new ecosystem. I am very happy that this conversation is taking place in the neutral and multi-stakeholder setting of WTDC.

The Buenos Aires Declaration we adopted at this WTDC is our vision for the future. It sends a strong message from the ICT community to the world about our contribution to the attainment of the SDGs.

The Strategic Plan we endorsed will strategically guide us to implement the Declaration, while the Buenos Aires Action Plan will shape our daily work.

We adopted five Regional Initiatives per region that will be cascaded into concrete projects, that I am deeply convinced, will make the difference in the lives of people on the ground.

We organized 13 side-events on themes related to ICT for SDGs, and we celebrated the 25th anniversary of ITU-D. I would like to thank all the sponsors for their support, particularly Saudi Arabia, the platinum sponsor.

Our Members organized exhibitions on ICT solutions for SDGs.

Ladies and gentlemen,

We have achieved tangible results during these two weeks. This would not have been possible without the quiet but firm voice of Helena Fernandes of Mozambique, Chairman of Committee 2 (Budget Control); the calm strength of Dr Ahmad Sharafat of Iran, Chairman of Committee 3 (Objectives); the quiet guiding authority of Mr Majed Al-Mazyed of Saudi Arabia, Chairman of Committee 4 on ITU-D Working Methods; and the kind but authoritative presence of Ms Hassina Laredj of Algeria, Chairman of the Editorial Committee. Or without the tireless efforts and the wisdom of Mr Fabio Bigi, Chairman of the Working Group of the Plenary on the Strategic Plan and Declaration.

All of them were assisted and supported by highly competent and committed Vice-Chairmen, not to mention all those who chaired ad hoc and drafting groups.

Last but not least, our esteemed Chairman Oscar Martín González. Your patience, calm demeanour and kindness enabled this conference to reach a successful conclusion. We are proud of you, and we thank your country for appointing so worthy a son to lead WTDC-17. I would also like to thank the conference Vice-Chairmen who assisted you in that role.

I would like to thank all the ITU staff, and particularly BDT staff, for their dedication and enthusiasm in carrying out BDT's mission.

My thanks also go to the interpreters, technicians, and all those who worked anonymously to make this conference a success.

To Mr Andrés Ibarra and Mr Hector Huici: many thanks to you, to the Government of Argentina, and to all those who were involved in the preparations for WTDC-17 and helped to make it run smoothly.

Before I conclude I would like to invite you to Hammamet in Tunisia, our next destination, for the 15th ITU World Telecommunication/ICT Indicators Symposium (WTIS) where we will launch the IDI.

I would like now to conclude with a video to highlight the key moments of this WTDC to remember the good time together in Buenos Aires.

Mr Houlin Zhao, the Secretary-General, has had to catch his flight. He requested me to present his apologies to you.

On his behalf I would like to express our high appreciation to you. I wish on behalf of ITU to award you with the ITU medal and the Certificate.

Annex J – Secretary-General Closing Speech

Mr. Houlin Zhao, Secretary-General, ITU

20 October 2017, Buenos Aires, Argentina

Mr. Chairman,

Minister Ibarra, delegates, colleagues, ladies and gentlemen,

After two weeks of very hard work, we are happily coming to the closing time.

It is good to see so many of you here today at the Plenary and Closing Ceremony.

It shows how much you care about our mission and the ITU family. I have noted some delegations have their members working in shift. Some joined us during the first week, some come this week. However, many of you have stayed with the Conference over the two weeks, including some Ministers and Vice Ministers, Heads of Regulatory Agencies. I appreciate your efforts to support our Conference.

Thank you to Minister of Modernization Andrés Ibarra, who honours us with his presence at this Closing Session.

I would like to express my sincere gratitude to the Government of Argentina and to the City of Buenos Aires for hosting WTDC-17.

Mr. Brahima Sanou, Director of BDT, has just summarized the main results. I am in agreement with him. The results have paved the base and the way forward for ITU's work on development for the next four years. Let me congratulate each of you for your marvellous contributions to this success.

It is a testament to the spirit of COOPERATION and of a family that prevailed during the Conference.

ICT has achieved a lot over the last decade.

And we still have a lot of challenges ahead of us.

I am very much grateful to UN Secretary-General António Guterres for his message that "ICT is a powerful tool to help us achieve EACH AND EVERY SINGLE Sustainable Development Goal."

This is his appreciation to ICT, as I understand it, his encouragement for us to work more, not only on our own ICT development, but to work together with all eco-systems to reach SDGs by 2030. With his work and our collective work, we will see in the future.

Infrastructure will be strengthened, Investment will be increased. Innovation will be developed, and inclusion will be fostered and the better ICT will bring a better life to all without leaving anyone behind.

Ladies and Gentlemen,

Let me thank the Chairmen and Vice-Chairman of the Conference, of all the Committees, of the Working Group of the Plenary, the Chairs of the Ad-hoc groups for their hard work, dedication and leadership – that shaped the fruitful outcomes of this Conference.

I want to thank the BDT staff and their Director, Mr. Brahima Sanou for their efficient and productive preparations for the Conference and for their tireless work during these two weeks. I congratulate them for the success of this Conference.

I want to thank the ITU Staff who have engaged with WTDC-2017, prior to it or during these two weeks in Buenos Aires or in Geneva, every single one of them, for their work behind the scenes. I am proud of you! In particular, I wish to express my appreciation to Mr. Arnaud Guillot, ITU Legal Advisor who has been sick the whole week with a temperature and could not sleep for several days but has stayed with the Conference all the time, providing his valued advice to the meeting.

I wish to thank all local staff, including police team, security staff, protocol staff, voluntary staff and others, all have enthusiastically supported our Conference, and have demonstrated their high level of professionalism and hospitality.

The WTDC-2017 core teams of our host, including their staff from the Ministry of Modernization, the Foreign Affairs Ministry, Regulatory Agencies should be commended. We are grateful to each of them.

The last but not least, Mr. Chairman, I wish to thank you for your leadership. Your profound understanding of ICT business within the UN context, your professional management skills, your extraordinary personality, all contributed to the excellent role of Chair of the Conference with which you have been entrusted. To express our high appreciation, I wish, on behalf of ITU, to award you with the ITU Medal and my Certificate.

We thank you!

Thank you, everyone. And have a safe journey home.

Annex K – Chairman of WTDC Closing Speech

Mr Oscar González,
Chairman of WTDC-17

Now that we are about to conclude the work of the Conference, I would just like to say that it has been a real honour for me to work with all of you. I would like to express once more my thanks for having been appointed chairman of this world conference, and I am particularly grateful to the Government of my country, which trusted me personally with this enormous responsibility.

This world conference has confirmed the Argentine Republic's strong commitment to ITU and its various organizational instances.

At this conference, we have worked on information and communication technologies as a tool for achieving the 2030 Agenda for Sustainable Development, which includes the 17 Sustainable Development Goals adopted by the United Nations in 2015.

Broad sectors of the world's population lack access to networks or do not have good enough Internet access to achieve full integration in the forms of production and wealth generation of the new digital economy – problems which are aggravated and in greater evidence in the least developed countries.

And there precisely lies the importance of our conference, at which we Member States, Sector Members and academia have come together over these past two weeks to delineate the work to be carried out by ITU and its Development Sector over the coming years, pledging to universalize ICT access for underserved communities, contribute to narrowing the digital divide, and expand the potential of the digital economy to ensure progress for our societies.

I know that despite some difficulties, I always like to look on the positive side, we have made decisions on some topics which at the first instance seemed to be very difficult and sometimes we didn't really have consensus at the beginning.

The tasks ahead and in the different committees reflected in these committees and from a personal point of view I really persevered to try and complete the work of the Conference to ensure that the greatest success possible.

I would like to thank all of the chairs of the Working Group of the Plenary, of the different committees, all of the ITU staff, the Secretary-General, the Director of the Telecommunication Development Bureau and of the Radiocommunication Bureau. I would also like to thank the Secretary-General, who was obliged to leave. We can forgive him for this, because we really had to extend our time.

To close, I would like to thank all of the staff of the ITU and the Government of Argentina, for having involved a large team of people in the organization of this event. This is also a very complex part of the work to make sure we have a successful event. Today, the Director of the Telecommunication Bureau announced that there were almost 1400 participants.

Once again, I feel we have achieved some important outcomes: the Declaration, the Strategic Plan, the Action Plan, the reduction to four goals for the Sector, resolutions, as we said before, topics which initially seemed quite complex but upon which we were able to reach consensus. We look very positively on this event. There is always space to continue to work and to make progress amongst all issues.

We are a very diverse organization, with representatives from all over the world, where each person has their own culture, their own language and momentum and often it is not possible to meet. Sometimes we cannot meet in the same place.

But once again thank you very much everyone.

Annex L – List of resolutions abrogated by WTDC-17

Number	Title
Resolution 32 (Rev. Hyderabad, 2010)	International and regional cooperation on regional initiatives (Merged with Resolution 17)
Resolution 35 (Rev. Hyderabad, 2010)	Support for development of the African information and communication technology sector (Merged with Resolution 75)
Resolution 39 (Istanbul, 2002)	Agenda for connectivity in the Americas and Quito Action Plan (Abrogated)
Resolution 50 (Dubai, 2014)	Optimal integration of information and communication technologies (Merged with Resolutions 37 and 54)
Resolution 54 (Dubai, 2014)	Information and communication technology applications (Merged with Resolutions 37 and 50)
Resolution 68 (Dubai, 2014)	Assistance to indigenous peoples within the activities of the Telecommunication Development Bureau in its related programmes (Merged with Resolution 46)

Annex M – New numbering and allocation of study group Questions

Study Group 1

New number	Title	Origin
Q1/1	Strategies and policies for the deployment of broadband in developing countries	Merger of former Questions 1/1 and 2/1
Q2/1	Strategies, policies, regulations and methods of migration to and adoption of digital broadcasting and implementation of new services	Continuation of Question 8/1
Q3/1	Emerging technologies, including cloud computing, m-services and OTTs: Challenges and opportunities, economic and policy impact for developing countries	Merger of former Questions 1/1 and 3/1
Q4/1	Economic policies and methods of determining the costs of services related to national telecommunication/information and communication technology networks, including next-generation networks	Continuation of Question 4/1
Q5/1	Telecommunications/information and communication technologies for rural and remote areas	Continuation of Question 5/1
Q6/1	Consumer information, protection and rights: Laws, regulation, economic bases, consumer networks	Continuation of Question 6/1
Q7/1	Access to telecommunication/information and communication technology services by persons with disabilities and other persons with specific needs	Continuation of Question 7/1

Study Group 2

New number	Title	Origin
Q1/2	Creating smart cities and society: Employing information and communication technologies for sustainable social and economic development	Continuation of Question 1/2
Q2/2	Telecommunications/information and communication technologies for e-health	Continuation of Question 2/2
Q3/2	Securing information and communication networks: Best practices for developing a culture of cybersecurity	Continuation of Question 3/2
Q4/2	Assistance to developing countries for implementing conformance and interoperability programmes and combating counterfeit information and communication technology equipment and theft of mobile devices	Continuation of Question 4/2
Q5/2	Utilizing telecommunications/information and communication technologies for disaster risk reduction and management	Continuation of Question 5/2
Q6/2	Information and communication technologies and the environment	Merger of former Questions 6/2 and 8/2
Q7/2	Strategies and policies concerning human exposure to electromagnetic fields	Continuation of Question 7/2

Annex N – Status of resolutions, Recommendations and decisions

Resolutions

Res.	Title	First approved	History	Status
1	Special Programme of Assistance for the Least Developed Countries (LDCs)	Buenos Aires, 1994	–	Obsolete
1	Adoption of AF-RTDC-96 resolutions and recommendations	Valletta, 1998	Abr. Istanbul, 2002	Abrogated
1	**Rules of procedure of the ITU Telecommunication Development Sector**	**Doha, 2006**	**Rev. Hyderabad, 2010; Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
2	Establishment of study groups	Buenos Aires, 1994	Replaced by Res. 3 (Valletta, 1998)	Abrogated
2	Mechanisms for monitoring, evaluation and progress review of conference resolutions	Valletta, 1998	Abr. Istanbul, 2002	Abrogated
2	**Establishment of study groups**	**Doha, 2006**	**Rev. Hyderabad, 2010; Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
3	Procedures to be applied by study groups	Buenos Aires, 1994	Replaced by Res. 4 (Valletta, 1998)	Abrogated
3	Establishment of study groups	Valletta, 1998	Rev. Istanbul, 2002; Replaced by Res. 2 (Doha, 2006)	Abrogated
4	Telecommunication Policies and Strategies	Buenos Aires, 1994	–	Obsolete

Res.	Title	First approved	History	Status
4	Procedures to be applied by study groups	Valletta, 1998	Rev. Istanbul, 2002; Replaced by Res. 1 (Doha, 2006)	Abrogated
5	"Buenos Aires Initiative" – Non-Discriminatory Access to Modern Telecommunication Facilities and Services	Buenos Aires, 1994	–	Obsolete
5	**Enhanced participation by developing countries in the activities of the Union**	**Valletta, 1998**	**Rev. Istanbul, 2002; Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
6	Cooperation between the ITU/BDT and regional organizations	Buenos Aires, 1994	Replaced by Res. 21 (Valletta, 1998)	Abrogated
6	Telecommunication Development Advisory Group working group on private-sector issues	Valletta, 1998	Rev. Istanbul, 2002; Rev. Doha, 2006; Abr. Hyderabad, 2010	Abrogated
7	Disaster communications	Buenos Aires, 1994	Replaced by Res. 19 (Valletta, 1998)	Abrogated
7	Gender and telecommunication policy in developing countries	Valletta, 1998	Abr. Istanbul, 2002	Abrogated
8	Telecommunication support for the protection of the environment	Buenos Aires, 1994	–	Obsolete

Res.	Title	First approved	History	Status
8	**Collection and dissemination of information and statistics**	**Valletta, 1998**	**Rev. Istanbul, 2002; Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
9	Membership, Rules of Procedure and Working Methods of the Telecommunication Development Advisory Board	Buenos Aires, 1994	–	Obsolete
9	**Participation of countries, particularly developing countries, in spectrum management**	**Valletta, 1998**	**Rev. Istanbul, 2002; Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
10	Coordination of the advisory bodies	Buenos Aires, 1994	–	Obsolete
10	**Financial support for national spectrum-management programmes**	**Valletta, 1998**	**Rev. Istanbul, 2002; Rev. Doha, 2006; Rev. Hyderabad, 2010**	**In force**
11	Venue of the Regional Development Conferences	Buenos Aires, 1994	–	Obsolete
11	**Telecommunication/information and communication technology services in rural, isolated and poorly served areas and indigenous communities**	**Valletta, 1998**	**Rev. Istanbul, 2002; Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**

Res.	Title	First approved	History	Status
12	Telecommunication financing and trade	Valletta, 1998	Abr. Istanbul, 2002	Abrogated
13	Resource mobilization and partnerships for accelerating telecommunication/information and communication technology development	Valletta, 1998	Rev. Istanbul, 2002; Rev. Doha, 2006; Rev. Hyderabad, 2010; Abr. Dubai, 2014	Abrogated
14	Telecom Africa	Valletta, 1998	Abr. Istanbul, 2002	Abrogated
15	**Applied research and transfer of technology**	**Valletta, 1998**	**Rev. Istanbul, 2002; Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Buenos Aires 2017**	**In force**
16	**Special actions and measures for the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition**	**Valletta, 1998**	**Rev. Istanbul, 2002; Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Buenos Aires 2017**	**In force**
17	**Implementation of regionally approved initiatives at the national, regional, interregional and global levels**	**Valletta, 1998**	**Rev. Istanbul, 2002; Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**

Res.	Title	First approved	History	Status
18	**Special technical assistance to Palestine**	**Valletta, 1998**	**Rev. Istanbul, 2002; Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
19	Telecommunication resources for disaster mitigation and relief operations	Valletta, 1998	Abr. Istanbul, 2002	Abrogated
20	**Non-discriminatory access to modern telecommunication/ information and communication technology facilities, services and related applications**	**Valletta, 1998**	**Rev. Istanbul, 2002; Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Buenos Aires 2017**	**In force**
21	**Coordination and collaboration with regional and subregional organizations**	**Valletta, 1998**	**Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Buenos Aires 2017**	**In force**
22	**Alternative calling procedures on international telecommunication networks and identification of origin in providing international telecommunication services**	**Valletta, 1998**	**Rev. Istanbul, 2002; Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
23	**Internet access and availability for developing countries and charging principles for international Internet connection**	**Istanbul, 2002**	**Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**

Res.	Title	First approved	History	Status
24	**Authorization for the Telecommunication Development Advisory Group to act between world telecommunication development conferences**	**Istanbul, 2002**	**Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Dubai, 2014**	**In force**
25	**Assistance to countries in special need: Afghanistan, Burundi, Central African Republic, Democratic Republic of the Congo, Eritrea, Ethiopia, Guinea, Guinea-Bissau, Haiti, Liberia, Rwanda, Sierra Leone, Somalia and Timor-Leste**	**Istanbul, 2002**	**Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Buenos Aires 2017**	**In force**
26	**Assistance to countries in special need: Afghanistan**	**Istanbul, 2002**	**Rev. Doha, 2006**	**In force**
27	**Admission of entities or organizations to participate as Associates in the work of the ITU Telecommunication Development Sector**	**Istanbul, 2002**	**Rev. Doha, 2006; Rev. Hyderabad, 2010**	**In force**
28	Strengthening the use of electronic document handling for the work of ITU-D study groups	Istanbul, 2002	Abr. Doha, 2006	Abrogated
29	ITU Telecommunication Development Sector initiatives on Sector Member issues	Istanbul, 2002	Rev. Doha, 2006; Abr. Hyderabad, 2010	Abrogated
30	**Role of the ITU Telecommunication Development Sector in implementing the outcomes of the World Summit on the Information Society, taking into account the 2030 Agenda for Sustainable Development**	**Istanbul, 2002**	**Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**

Res.	Title	First approved	History	Status
31	**Regional preparations for world telecommunication development conferences**	**Istanbul, 2002**	**Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Buenos Aires 2017**	**In force**
32	International and regional cooperation on regional initiatives	Istanbul, 2002	Rev. Doha, 2006; Rev. Hyderabad, 2010	Abrogated
33	**Assistance and support to Serbia for rebuilding its destroyed public broadcasting system**	**Istanbul, 2002**	**Rev. Doha, 2006; Rev. Dubai, 2014**	**In force**
34	**The role of telecommunications/information and communication technology in disaster preparedness, early warning, rescue, mitigation, relief and response**	**Istanbul, 2002**	**Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
35	Support for development of the African information and communication technology sector	Istanbul, 2002	Rev. Doha, 2006; Rev. Hyderabad, 2010; Abr. Buenos Aires, 2017	Abrogated
36	**Support for the African Telecommunication Union**	**Istanbul, 2002**	**Rev. Doha, 2006; Rev. Hyderabad, 2010**	**In force**
37	**Bridging the digital divide**	**Istanbul, 2002**	**Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
38	Development of the Youth Forum in the Telecommunication Development Bureau	Istanbul, 2002	Rev. Doha, 2006; Rev. Hyderabad, 2010; Abr. Dubai, 2014	Abrogated

Res.	Title	First approved	History	Status
39	Agenda for connectivity in the Americas and Quito Action Plan	Istanbul, 2002	Abr. Buenos Aires, 2017	Abrogated
40	**Group on capacity-building initiatives**	**Istanbul, 2002**	**Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
41	E-health (including telehealth/telemedicine)	Istanbul, 2002	Abr. Doha, 2006	Abrogated
42	Implementation of tele-education programmes	Istanbul, 2002	Abr. Doha, 2006	Abrogated
43	**Assistance for implementing International Mobile Telecommunications and future networks**	**Istanbul, 2002**	**Rev. Doha, 2006; Rev. Hyderabad, 2010; Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
44	Mainstreaming gender in ITU-D programmes	Istanbul, 2002	Abr. Doha, 2006	Abrogated
45	**Mechanisms for enhancing cooperation on cybersecurity, including countering and combating spam**	**Doha, 2006**	**Rev. Hyderabad, 2010; Rev. Dubai, 2014**	**In force**
46	**Assistance to indigenous peoples and communities through information and communication technology**	**Doha, 2006**	**Rev. Buenos Aires 2017**	**In force**
47	**Enhancement of knowledge and effective application of ITU Recommendations in developing countries, including conformance and interoperability testing of systems manufactured on the basis of ITU Recommendations**	**Doha, 2006**	**Rev. Hyderabad, 2010; Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**

Res.	Title	First approved	History	Status
48	**Strengthening cooperation among telecommunication regulators**	**Doha, 2006**	**Rev. Hyderabad, 2010; Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
49	Special actions for the least developed countries and small island developing states	Doha, 2006	Abr. Hyderabad, 2010	Abrogated
50	Optimal integration of information and communication technologies	Doha, 2006	Rev. Hyderabad, 2010; Rev. Dubai, 2014; Abr. Buenos Aires, 2017	Abrogated
51	**Provision of assistance and support to Iraq to rebuild and re-equip its public telecommunication systems**	**Doha, 2006**	**Rev. Hyderabad, 2010**	**In force**
52	**Strengthening the executing agency role of the ITU Telecommunication Development Sector**	**Doha, 2006**	**Rev. Hyderabad, 2010; Rev. Dubai, 2014**	**In force**
53	**Strategic and financial framework for the elaboration and implementation of the Dubai Action Plan**	**Doha, 2006**	**Rev. Hyderabad, 2010; Rev. Dubai, 2014**	**In force**
54	Information and communication technology applications	Doha, 2006	Rev. Hyderabad, 2010; Rev. Dubai, 2014; Abr. Buenos Aires, 2017	Abrogated
55	**Mainstreaming a gender perspective for an inclusive and egalitarian information society**	**Doha, 2006**	**Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
56	Creation of a new Question in Study Group 1 regarding access to telecommunication services for persons with disabilities	Doha, 2006	Abr. Hyderabad, 2010	Abrogated

Res.	Title	First approved	History	Status
57	**Assistance to Somalia**	**Doha, 2006**	**Rev. Hyderabad, 2010**	**In force**
58	**Telecommunication/information and communication technology accessibility for persons with disabilities and persons with specific needs**	**Hyderabad, 2010**	**Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
59	**Strengthening coordination and cooperation among the three ITU Sectors on matters of mutual interest**	**Hyderabad, 2010**	**Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
60	**Assistance to countries in special situations: Haiti**	**Hyderabad, 2010**	**–**	**In force**
61	**Appointment and maximum term of office of chairmen and vice-chairmen of study groups in the ITU Telecommunication Development Sector and of the Telecommunication Development Advisory Group**	**Hyderabad, 2010**	**Rev. Dubai, 2014**	**In force**
62	**Assessment and measurement of human exposure to electromagnetic fields**	**Hyderabad, 2010**	**Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
63	**IP address allocation and facilitating the transition to IPv6 deployment in the developing countries**	**Hyderabad, 2010**	**Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
64	**Protecting and supporting users/consumers of telecommunication/information and communication technology services**	**Hyderabad, 2010**	**Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
65	Improving access to healthcare services by using information and communication technologies	Hyderabad, 2010	Abr. Dubai, 2014	Abrogated

Res.	Title	First approved	History	Status
66	**Information and communication technology and climate change**	**Hyderabad, 2010**	**Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
67	**The role of the ITU Telecommunication Development Sector in child online protection**	**Hyderabad, 2010**	**Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
68	Assistance to indigenous peoples within the activities of the Telecommunication Development Bureau in its related programmes	Hyderabad, 2010	Rev. Dubai, 2014; Abr. Buenos Aires, 2017	Abrogated
69	**Facilitating creation of national computer incident response teams, particularly for developing countries, and cooperation between them**	**Hyderabad, 2010**	**Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
70	Regional initiative for Central and Eastern Europe on "E-accessibility (Internet and digital television) for persons with disabilities"	Hyderabad, 2010	Abr. Dubai, 2014	Abrogated
71	**Strengthening cooperation between Member States, Sector Members, Associates and Academia of the ITU Telecommunication Development Sector, and the evolving role of the private sector in the ITU Telecommunication Development Sector**	**Hyderabad, 2010**	**Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
72	More effective utilization of mobile communication services	Hyderabad, 2010	Abr. Dubai, 2014	Abrogated

Res.	Title	First approved	History	Status
73	**ITU centres of excellence**	**Hyderabad, 2010**	**Rev. Dubai, 2014; Rev. Buenos Aires 2017**	**In force**
74	More effective adoption of e-government services	Hyderabad, 2010	Abr. Dubai, 2014	Abrogated
75	**Implementation of the Smart Africa Manifesto**	**Dubai, 2014**	**Rev. Buenos Aires 2017**	**In force**
76	**Promoting information and communication technologies among young women and men for social and economic empowerment**	**Dubai, 2014**	**Rev. Buenos Aires 2017**	**In force**
77	**Broadband technology and applications for greater growth and development of telecommunication/information and communication services and broadband connectivity**	**Dubai, 2014**	**Rev. Buenos Aires 2017**	**In force**
78	**Capacity building for countering misappropriation and misuse of ITU Telecommunication Standardization Sector numbering resources**	**Dubai, 2014**	**Rev. Buenos Aires 2017**	**In force**
79	**The role of telecommunications/information and communication technologies in combating and dealing with counterfeit telecommunication/ information and communication devices**	**Dubai, 2014**	**Rev. Buenos Aires 2017**	**In force**

Res.	Title	First approved	History	Status
80	Establishing and promoting trusted information frameworks in developing countries to facilitate and encourage electronic exchanges of economic information between economic partners	Dubai, 2014	Rev. Buenos Aires 2017	In force
81	Further development of electronic working methods for the work of the ITU Telecommunication Development Sector	Dubai, 2014	Rev. Buenos Aires 2017	In force
82	Preserving and promoting multilingualism on the Internet for an inclusive information society	Dubai, 2014	–	In force
83	Special assistance and support to the Government of Libya for rebuilding its telecommunication networks	Buenos Aires, 2017	–	In force
84	Combating mobile telecommunication device theft	Buenos Aires, 2017	–	In force
85	Facilitating the Internet of Things and smart cities and communities for global development	Buenos Aires, 2017	–	In force
86	Use in the ITU Telecommunication Development Sector of the languages of the Union on an equal footing	Buenos Aires, 2017	–	In force

Recommendations

Rec.	Title	First approved	History	Status
1	Application of telecommunications to health and other social services	Buenos Aires, 1994	–	Obsolete
1	Role of World Telecommunication Development Conferences	Valletta, 1998	Abr. Istanbul, 2002	Abrogated
2	Development partnership with international education agencies	Buenos Aires, 1994	–	Obsolete
2	Future membership and functions of the Telecommunication Development Advisory Board	Valletta, 1998	Abr. Istanbul, 2002	Abrogated
3	Application of information and communication technologies for development	Valletta, 1998	Abr. Istanbul, 2002	Abrogated
4	Liberalization and competitive business environment	Valletta, 1998	Abr. Istanbul, 2002	Abrogated
5	Role of telecommunications in economic, social and cultural development of indigenous peoples	Valletta, 1998	Abr. Istanbul, 2002	Abrogated
6	Information Infrastructure	Valletta, 1998	Abr. Istanbul, 2002	Abrogated
7	Role of telecommunication and information technologies in the protection of the environment	Valletta, 1998	Rev. Istanbul, 2002; Abr. Doha, 2006	Abrogated
8	Timely implementation of Global Mobile Personal Communications by Satellite (GMPCS)	Valletta, 1998	Rev. Istanbul, 2002; Abr. Hyderabad, 2010	Abrogated
9	Telemedicine	Valletta, 1998	Abr. Istanbul, 2002	Abrogated

Rec.	Title	First approved	History	Status
10	The importance of partnerships in support of human resources initiatives: The example of the TEMIC declaration	Valletta, 1998	Abr. Istanbul, 2002	Abrogated
11	Operational planning in the International Telecommunication Union	Valletta, 1998	Abr. Istanbul, 2002	Abrogated
12	Consideration of disaster telecommunication needs in telecommunication development activities	Istanbul, 2002	Abr. Doha, 2006	Abrogated
13	Requests for technical assistance for developing countries	Istanbul, 2002	Rev. Doha, 2006; Abr. Hyderabad, 2010	Abrogated
14	Pilot integration project for information and communications technologies	Istanbul, 2002	Abr. Doha, 2006	Abrogated
15	**Models and methods to determine the cost of national telecommunication services**	**January 2002**	**–**	**In force**
16	**Tariff rebalancing and cost-oriented tariffs**	**January 2002**	**–**	**In force**
17	**Sharing of facilities in rural and remote areas**	**January 2002**	**–**	**In force**
18	Potential benefits for rural telecommunications	Doha, 2006	Abr. Hyderabad, 2010	Abrogated
19	**Telecommunications for rural and remote areas**	**March 2010**	**Rev. Dubai, 2014**	**In force**
20	**Policy and regulatory initiatives for developing telecommunications/ ICTs/broadband in rural and remote areas**	**Dubai, 2014**	**–**	**In force**

Rec.	Title	First approved	History	Status
21	ICT and climate change	Dubai, 2014	–	In force
22	Bridging the standardization gap in association with regional groups of the study groups	Dubai, 2014	–	In force

Decisions

Dec.	Title	First approved	History	Status
1	Minimum budget for ITU-D study groups in 2006	Doha, 2006	Abr. Hyderabad, 2010	Abrogated

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ISBN 978-92-61-25601-2 SAP id 41727

Printed in Switzerland
Geneva, 2017
Photo credit: Shutterstock