# ITU COUNCIL CONTRIBUTION TO THE HIGH-LEVEL POLITICAL FORUM ON SUSTAINABLE DEVELOPMENT (HLPF) 2021

**2021 Theme**: ***"Sustainable and resilient recovery from the COVID-19 pandemic that promotes the economic, social and environmental dimensions of sustainable development: building an inclusive and effective path for the achievement of the 2030 Agenda in the context of the decade of action and delivery for sustainable development"***

**SDGs under review:** The HLPF in 2021 will discuss Sustainable Development **Goal 1** on no poverty, **Goal 2** on zero hunger, **Goal 3** on good health and well-being, **Goal 8** on decent work and economic growth, **Goal 10** on reduced inequalities, **Goal 12** on responsible consumption and production, **Goal 13** on climate action, **Goal 16** on peace, justice and strong institutions, and **Goal 17** on partnerships in depth.

## General Introduction

The International Telecommunication Union (ITU) is the United Nations specialized agency for information and communication technologies (ICTs). ITU allocates global radio spectrum and satellite orbits, develops the technical standards that ensure networks and technologies seamlessly interconnect, and strive to improve access to and use of ICTs to underserved communities worldwide. ITU is committed to connecting all the world's people - ensuring that everyone, regardless of age, gender, ability, location, or financial means have available, accessible and affordable access to (ICTs).

Through ITU's work, we support everyone's fundamental right to communicate.

The Sustainable Development Goals (SDGs) and targets stimulate global action in the coming years in areas of critical importance for humanity and the planet. As acknowledged by the 2030 Agenda for Sustainable Development, "The spread of information and communications technology and global interconnectedness has great potential to accelerate human progress, to bridge the digital divide and to develop knowledge societies, as does scientific and technological innovation across areas as diverse as medicine and energy".

Increased connectivity, digital technologies, information systems, digital skills and Internet use have the potential to reduce poverty and create jobs through applications and services, such as e-agriculture and digital finance; help end poverty and hunger; monitor and mitigate climate change and sustaining our natural resources; as well as improved efficiency and transparency. All three pillars of sustainable development – economic development, social inclusion and environmental protection – need ICTs as key catalysts. The development potential of ICT as crosscutting enablers must therefore be fully harnessed for achieving the SDGs.

To enable this vision, ITU and its members have adopted the ITU Strategic Plan for 2020-2023 (Resolution 71, Rev. 2018, Dubai) and the Connect 2030 Agenda (Resolution 200, Rev. 2018, Dubai) which are based on 5 ITU strategic Goals. Each Goal has its own indicators that measure the progress towards this shared vision.

In line with UN Resolution A/70/1 and Resolution A/70/125, ITU, in collaboration with more than 30 UN agencies, is continuously working towards strengthening the alignment of the WSIS Process implementation activities with the 2020 Agenda for Sustainable Development, thereby highlighting the direct linkages between WSIS Action Lines and SDGs.

## A. Impacts of the COVID-19 pandemic on the implementation of the SDGs under review in the 2021 HLPF from the vantage point of your intergovernmental body, bearing in mind the interlinkages with other SDGs

If there was ever a reminder needed of the importance of the digital connectivity to the implementation of the SDGs, the COVID-19 pandemic has provided a powerful one. In 2020, our ability to continue our social and economic lives has become crucially dependent on the access to the meaningful connectivity.

ITU's recent study on "How broadband, digitization and ICT regulation impact the global economy" establishes a clear link between the development of the digital infrastructure and the economic development. This study suggests that 10 per cent increase in fixed broadband penetration results in 0.77 per cent increase in GDP per capita on average across the world, and the same increase in mobile broadband results in 1.5 per cent increase in GDP per capita. At the same time, 10 per cent increase in the Development Index of the Digital Ecosystem (an indicator of the broader digitization) adds 1.33 per cent to the GDP per capita. Digitization boosts labour productivity – 10 per cent digitization yields an increase of 2.62 per cent, and it yields an increase of 2.28 per cent in total factor productivity.

With the above in mind, ITU has conducted a significant amount of work to assess and quantify the relationship between the impact of COVID-19 and digital infrastructure. This work includes the following reports:

- Outcomes report from a roundtable of leading economic experts gathered by the ITU (ITU Economic Experts Roundtable) on the "Economic Impact of COVID-19 on Digital Infrastructure"; and

- "Pandemic in the Internet Age: communications industry responses".

Based on the reports referred to above, together with other relevant material, ITU would like to provide the following insights on the impact of the COVID-19 pandemic:

Following the initial wave of the fear of contagion and the implementation of prophylactic measures, evidence immediately emerged, suggesting that digital technologies could contribute to counteracting the isolation implied by social distancing measures, increasing the awareness of virus prevention measures, and allowing economic and social systems to continue to operate, at least partially.

The COVID-19 crisis has highlighted the critical role of ICTs for the continued functioning of the society and economy. The TeleGeography Network Impact Report[1], released in the wake of COVID-19, has shown a significant data traffic growth globally, underpinning the importance of digital infrastructure and date traffic under the COVID-19-related lockdowns. At the same time, the pandemic has starkly demonstrated the impact of the digital inequalities between and within countries.

While overall telecommunication networks have exhibited consistent resilience in the face of the changes in traffic associated with COVID-19-related lockdowns and similar measures[2], accessible ultra-broadband technologies such as fibre communications (FTTx) appear to be better prepared to respond to spikes in broadband traffic. Countries with the largest deployments of accessible ultra-broadband have exhibited less slowdown in latency and download speed.[3] Regretfully, however, fibre telecommunications household penetration is very uneven - e.g., in Sub-Saharan Africa it is only 0.6 per cent, while in OECD countries FTTx household penetration is at 34.61 per cent.[4]

Impact on the telecommunications networks has effects beyond the sector. The participants of the ITU's Economic Experts Roundtable fully agreed on the capacity of digital infrastructure to enhance social and economic resilience in the face of the pandemic. While research on the contribution of digitization to mitigate the impact of pandemics is limited, emerging evidence is compelling about its positive effects. In the medium term (e.g. 2021), countries with top connectivity infrastructure could mitigate up to half of the negative economic impact.

An analysis of the relationship between the digitization of production index and GDP downward adjustment from COVID-19[5] was examined by assessing a correlation between the IMF GDP downward adjustments and an index of digitization of production. While these correlations indicated that while digitization had no apparent impact on a country's ability to mitigate the recession in 2020, countries with higher digitization of their economy tended to be associated with a smaller downward GDP adjustment in 2021, as forecasted by the IMF.

The economic fallout of COVID-19 includes a considerable disruption and contraction in economic activity, a steep decline in government and business revenues, losses in jobs as well as livelihoods, especially for informal daily wage earners. For instance, the average GDP for the Asia-Pacific region could contract by 4 per cent; the highest contraction on record. Several Asia-Pacific countries have already announced a range of unprecedented policy measures to stem the decline and eventually initiate economic recovery. Further efforts will be needed to ensure that such measures and recovery are not focused on reviving economic growth only, but are in line with inclusive, sustainable, resilient and low-carbon pathways.

A crucial role of digital technologies in the context of COVID-19 has been felt across many areas of social and economic lives. For instance, supercomputers analyse thousands of drug

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[1] https://www2.telegeography.com/network-impact.

[2] Sinibaldi, G. (2020). COVID-19 is revolutionizing digital communications and testing providers' reliability and ability to innovate. Analysys Mason, April.

[3] Katz, R., Jung, J. and Callorda, F. (2020). Can digitization mitigate COVID-19 damages? Evidence from developing countries. SSRN.

[4] Source: Prorated IDATE and other public sources of FTTx penetration for 2019.

[5] Katz et al (2020), *op. cit.*

compounds to identify candidates for treatments and vaccines. E-commerce platforms enable households to access staples and medical supplies, while videoconferencing platforms enable education, remote working as well as continuation of the general economic activity. This transition to digital platforms and services is mainly enjoyed by the people with good connectivity. The others, especially vulnerable groups without the access to the Internet, have suffered job losses as well as severe restrictions to their lives.

Countries' lockdown and school closures have resulted in students being compelled to attend classes remotely. In this context, a critical question is the potential social impact of this move to home schooling supported by access to technology. As stated by a participant of our Economic Experts Roundtable: "As a high percentage of the world's students are out of formal classes at the moment, the availability of remote learning for some students, but not others will create new digital divides which will impact the future career paths of students, particularly those in school-leaving years. The main cause of this new digital divide is a lack of affordable bandwidth, particularly outside major cities. But a secondary cause is a lack of suitable devices for remote learning, and a need to share them between several members of a family." The impact is likely to be long term with the loss of six month's education having a knock-on effect on future schooling, although the effects would be regional, with some areas suffering more than others. LDCs would likely fall into the category of areas which would suffer mostly. This will clearly have a significant impact not only on Goal 4 on quality education, but also such goals under review as Goal 1 and Goal 8.

It is also pertinent to examine teleworking's impact on the labour market and its social implications (directly related to Goal 8). In Chile, for example, 56.4 per cent were either not allowed to go to work or could not continue to work by telecommuting.[6] In South Africa this number was 60.1 per cent.[7]

Beyond the impact on distance education and telecommuting, the digital divide is exacerbating the disadvantage of unserved or non-digitally literate populations, limiting their access to payments and commerce (for the unbanked) or healthcare services and information.

A key challenge for enterprises, especially small and medium-sized enterprises (SMEs), in LDCs in adapting to the challenges associated with COVID-19, have been their lack of access to digital tools. For example, the use of the Internet for business purposes in Sub-Saharan Africa is as low as 7 per cent on average.[8]

Ensuring that everyone has access to digital tools, importance of which has been particularly emphasized by the pandemic, requires substantial financial resources. ITU's recent "Connecting Humanity: Assessing investment needs of connecting humanity to the Internet by 2030" report estimates that achieving universal access to broadband will require bringing over three billion people online in the next ten years, at an estimated cost of US$428 billion.

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6 Katz, R., Jung, J. and Callorda, F. (2020). Facing the COVID-19 pandemic: digitization and economic resilience in Latin America. CAF Development Bank for Latin America, April.

7 Katz, R., Jung, J. and Callorda, F. (2020). Digitization: a resiliency plan for developing countries facing pandemics. Presentation to the International Finance Corporation.

8 OMDIA (2020). Telecoms regulation COVID-19 Tracker.

At the same time, the pandemic is making the task of making such investments harder, as the telecommunications industry has not been spared by it. A recent report from Analysys Mason[9] has suggested that the telecommunications industry will see a US$43 billion fall in 2020, and it will take until 2023 to recover to the levels of 2019.

Furthermore, the increase in traffic, associated in particular with the pandemic-related lockdowns, has resulted in an acceleration of telecommunications operators' capital expenditure (CAPEX) related to the expansion of capacity (i.e. operations and maintenance CAPEX). Consequentially, spending not related to an increase in capacity (i.e. network modernization) is being postponed, especially among emerging countries. While the top five African operators spent US$5.5 to 6 billion in 2019, it is expected that this would drop to US$4.5 to 5 billion in 2020. This will have a clear impact on investment facilitation targets of Goal 17.

Additional specific telecommunications-related impact will likely be felt by countries that used to have a high inflow of tourism. As tourist traffic decreases, it is reducing revenues from the international mobile roaming, which in some countries may be a significant source of foreign currency. Juniper Research[10] predicts up to US$25 billion in global losses to the mobile industry from the reduction in roaming revenues.

While a number of economic experts convened by us agreed with the need for counter-cyclical interventions, they raised the question as to whether developing country governments would have funds needed for investments into the digital infrastructure.

One expert also pointed to the industry exit by low-cost carriers in developing countries. These budget telecommunication operators originally entered the market with offers particularly targeted to low-income populations. Their business model could become stressed by the reduction in consumer spending.

The COVID-19 pandemic had also a clear and multidimensional adverse impact on the implementation of the Goal 3 related to health and wellbeing, not only due to the direct threat to health from the virus but also due to the wide-ranging disruptions of healthcare systems. Many countries had to discontinue preventive programmes and interventions. This has slowed down the progress achieved in the past years. The pandemic has highlighted, however, the relevance of digital platforms and solutions for maintaining the continuity of services and providing support and advice to populations and communities that are difficult to reach with conventional means. In particular, in many countries, digital health solutions were used to keep people connected to ensure social and business continuity, spread timely and verified warning information, remotely provide health services and automate diagnosis, gather data to monitor and contain virus spread, support adherence to safety measures (e.g. quarantine) and analyse data to aid research and to optimize response measures. This has provided an impetus for some digitization efforts that could have positive longer-term impact. For example, it seems to have resulted in the acceleration of investments into and adoption of digital health, with McKinsey Global Institute estimating a rise in the global digital-health revenues from US$350 billion in 2019 to US$600 billion in 2024[11]. The demand for digital-health as well as other digital services is evident at the level of individual countries as well. For example, as ITU has reported in the

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9 https://www.totaltele.com/view.aspx?ID=508040.

10 https://www.juniperresearch.com/document-library/white-papers/coronavirus-the-impact-on-mobile-roaming.

11 https://www.economist.com/business/2020/12/02/the-dawn-of-digital-medicine.

recent "Measuring digital development. Facts and figures 2020" report, in Brazil, a big increase was reported in Internet users searching for health information, in addition to the increase in the use of other digital services as well, including performing some form of public service; consulting, making payments or conducting other financial transactions; and buying products or services online.

Additionally as the threat of misinformation has been highlighted in the official statement of the UN Secretary General and the need to address the "infodemic" linked to COVID-19, digital health tools and solutions provided cost-efficient means to address the rise in mis- and dis-information surrounding the pandemic.

Finally, in the "Facts and figures 2020" report, ITU reports some infrastructure-strengthening effects of the pandemic-induced challenges. As networks around the world were put to the test during the COVID-19 pandemic, increased Internet traffic first caused first a temporary drop in speed in many countries, but international bandwidth usage is estimated to have grown globally by 38 per cent, exceeding the growth rate of the previous year by 6 percentage points. Encouragingly, growth of international bandwidth usage in developing countries outstripped the growth in developed countries.

The role played by digital technologies in mitigating the impact of COVID-19 crisis has re-emphasized the importance of digital infrastructure, especially in terms of universal access and digital inclusion, and drew attention to such attributes of it as quality, resilience, security, and affordability. The increased reliance on digital infrastructure and services under the COVID-19-related lockdowns has been unprecedented and so has been the response of the information and communications technologies (ICT) sector. ICT sector policy makers, regulators, industry and academia have together contributed to meet the expectations placed on them by the newly rediscovered crucial role of the digital infrastructure in sustaining our economies and societies.

## B. Actions, policy guidance, progress, challenges and areas requiring urgent attention in relation to the SDGs and to the theme within the area under the purview of your intergovernmental body

As noted in the 2020 edition of the State of Broadband report, produced by the Broadband Commission for Sustainable Development:

- COVID-19 has simultaneously underlined the importance of connectivity and inequality. COVID-19 has demonstrated the unquestionable centrality of connectivity as many adults and children have shifted towards remote work, learning, and communication. At the same time, the pandemic is highlighting inequality among and within countries along a contour line between those with access and those without.

- Commitment towards a more inclusive and sustainable recovery is needed. At this pivotal point for the world, it is important to redouble the commitment to the advocacy targets of the Broadband Commission, promoting universal broadband, if the SDGs are to come within reach. Collaboration, partnering and the development of inclusive and sustainable models are more essential than ever as we leverage the power of broadband to promote a faster and better recovery for all.

- Enabling policies are essential. While some countries have successfully implemented a number of policy reforms echoed by the Broadband Commission to advance broadband universality, the opportunity remains for countries to further their efforts to improve the broadband ecosystem in their countries by continuing to adopt more of the recommendations put forth by the Commission, with a focus on implementation.

The State of Broadband Report 2020 underlines an urgent need for creating enabling policy and regulatory frameworks that can play a facilitating role, including through the government policies needed to prioritize broadband as basic infrastructure, as essential for the development in the digital age as transport, energy and water networks. However, in order to make broadband ubiquitous, as noted above in response to question (A), a substantial investment, estimated at US$428 billion, is required.

COVID-19 has demonstrated the need to accelerate digitization of economies in ways that are inclusive of all people, everywhere. ITU works actively towards ensuring inclusive, equal access and use of ICTs for all, by supporting its membership in the formulation and implementation of policies and strategies that promote the digital inclusion of all, including people with specific needs, such as: children, youth, older persons, women, persons with disabilities and indigenous communities, while at the same time, supporting local communities through multi-stakeholder partnerships, collaborations, and initiatives, to implement scalable roadmaps to reduce the digital divide.

The 2020 State of Broadband report provides a global and authoritative read-out on progress towards the SDGs as far as the digital infrastructure is concerned. As only a decade remains to reach the SDGs, its assessment of the Broadband Commission's advocacy targets provides a direction for essential actions that need to be taken to spur achievement of the sustainable development agenda:

1) Advocacy Target 1 - Making broadband policy universal: By 2025, all countries should have a funded national broadband plan or strategy or include broadband in their universal access and service (UAS) definition. Assessment: currently, 174 countries worldwide have a broadband plan, with several countries currently in the process of adopting one. This is an increase from 102 countries in 2010.

2) Advocacy Target 2 - Making broadband affordable: By 2025, entry-level broadband services should be made affordable in developing countries at less than 2 per cent of monthly Gross National Income (GNI) per capita. Assessment: The latest data from the ITU's May 2020 report on "Measuring Digital Development: ICT Price Trends 2019" demonstrated that 95 countries worldwide (of which 51 were developing, including four LDCs) met the 2 per cent affordability threshold for entry-level mobile-broadband service cost (for 1.5 GB of data) in 2019. While prices had been on the decline over the previous six years, for at least 40 countries, predominantly LDCs, entry-level mobile broadband services cost 5 per cent or more of average monthly GNI per capita. For 19 of those countries, the average cost is at alarming levels, greater than 10 per cent and 20 per cent. In terms of entry-level fixed-broadband service, 64 countries worldwide meet the 2 per cent threshold for 5 GB of data. However, no LDCs meet the threshold. For 37 developing countries, including 26 LDCs, fixed-broadband price levels are above 10 per cent of monthly GNI per capita. While broadband is becoming more affordable, other barriers, such as skills and literacy, continue to act as gating factors for non-users. In all areas of broadband accessibility and use, women and girls are left behind.

3) Advocacy Target 3 - Getting people online: By 2025, Broadband-Internet user penetration should reach: (i) 75 per cent worldwide; (ii) 65 per cent in developing countries; and (iii) 35 per cent in Least Developed Countries. Assessment: According to latest ITU data, overall global Internet user penetration stands at 51 per cent. That figure drops to 44 per cent in developing countries, and to just 19 per cent in the world's Least Developed Countries (LDCs), falling well below the Broadband Commission's advocacy Target 3.

4) Advocacy Target 4 - Digital skills and literacy: By 2025, 60 per cent of youth and adults should have achieved at least a minimum level of proficiency in sustainable digital skills. Assessment: Less than half of the world's population even have the basic skills for computer-based activities, including sending e-mails with attachments, moving files, using copy and paste, and transferring files between devices. The figure demonstrates that across the world in 2017, less than 30 per cent of the world's population was proficient in standard ICT skills (using basic formulas in a spreadsheet; and finding, downloading, installing and configuring software).

5) Advocacy Target 5 - Digital financial services: By 2025, 40 per cent of the world's population should be using digital financial services. Assessment: Currently, two billion adults are still without access to a bank account, but some 1.6 billion in this group have access to a mobile phone, presenting the opportunity to explore strategies that leverage the widespread use of mobile phones to offer financial inclusion options. According to the World Bank's Global Findex database, the number of people worldwide who have utilized digital financial systems in the previous 12 months increased from 41 per cent of the global population (above the age of 15) in 2014 to 52 per cent in 2017 (with women representing 46 per cent and men 54 per cent).

6) Advocacy Target 6 - Getting businesses online: By 2025, improve connectedness of Micro-, Small- and Medium-sized Enterprises (MSMEs) by 50 per cent, by sector. Assessment: Data from the World Bank's Enterprise Surveys shows that worldwide, on average, 44.5 per cent of enterprises have a website and 68 per cent utilize e-mail, however, this ranges widely by country and between regions.

7) Advocacy Target 7 - Achieving gender equality in access to broadband by 2025: By 2025, gender equality should be achieved across all targets Assessment: ITU's comparisons of the gender gap in Internet adoption around the world and the progress between 2013 and 2019 shows that the gender gap appeared to have widened significantly. Currently 52 per cent of men are connected, whilst only 46 per cent of women are able to benefit from access to the digital connectivity.

Noteworthy, in some ways the progress towards achieving universal connectivity has been stalling. As per the ITU's "Facts and figures 2020" report, the total number of mobile-cellular telephone subscriptions declined for the first time in history. Further research is needed to understand whether this is caused by the disruptions related to the COVID-19 pandemic, or whether this can be explained by other socio-economic forces. In the middle of 2020, there were an estimated 105 mobile-cellular subscriptions per 100 inhabitants, down from 108 in 2019. This decline was driven by developing countries, where the number of subscriptions went down from 103 in 2019 to 99 in the middle of 2020.

The number of active mobile-broadband subscriptions stood at 75 per 100 inhabitants in 2020. After substantial growth in previous years, this was only 1.1 per cent higher than in 2019. Growth in fixed-broadband subscriptions slowed down as well, to 2.7 per cent in 2020.

Having regard to the importance of the digital infrastructure for the sustainable development, it is clear that decisive actions are needed for the world to progress towards ensuring that everyone can benefit from the enabling power of digital connectivity.

With the above in mind, the Broadband Commission for Sustainable Development has issued a Global Goal of Universal Connectivity Manifesto, in which it calls on world leaders and heads of industry to put universal connectivity at the very forefront of sustainable development efforts and recognize its central role in 2030 Agenda. The Commission is convinced that achieving affordable universal connectivity is essential for achieving the 17 Sustainable Development Goals (SDGs). The pandemic and its socio-economic impacts have underscored the urgency of concrete, coordinated actions across all sectors and geographies. With less than ten years remaining until 2030, now is the time to establish digital connectivity as the foundational pillar for our shared Global Goals. This goal of universal connectivity will require collective, collaborative efforts by all stakeholders. This Broadband Commission's Manifesto is a rallying cry, calling for collaboration in:

- Establishing a baseline for universal digital connectivity;
- Identifying and supporting public-private financing of universal broadband, pioneering innovative hybrid and/or complementary, replicable and sustainable financing and investment models for all types of networks, and catalyzing impactful partnerships;
- Advocating for enabling ICT regulatory environments, ICT capacity building and online safety and security, especially for children, as integral to efforts to achieve the Global Broadband Targets 2025 and the SDGs.

Connecting the unconnected is also one of the main Goals of ITU's strategy, as agreed by Member States in the framework of the Connect 2030 Agenda. Indeed, Goal 1 specifically focuses on enabling and fostering access to and increased use of telecommunications/ICT in support of the digital economy and society.

It is also important to note that the **ICT accessibility** implementation at global level is key to ensure that everyone's right to communicate and be part of the digital world is fulfilled – during and beyond the global COVID-19 pandemic. That means, ensuring that digital information is designed and developed considering all users' needs and/or abilities to perceive it, regardless the ICT tools used to access it. Efforts on this require: (1) involving Persons with Disabilities in development, promoting and monitoring digital accessibility policies and programs; (2) adopting standards for accessibility; and (3) promoting the understanding of disability and training and certification of accessibility professionals.

The question of how to ensure children's online safety in the age of COVID-19 is now more pressing than ever. ITU recently launched the new Guidelines on Child Online Protection, as a very timely tool to safeguard the well-being, integrity, and safety of all children around the world.

ICTs can enhance education, reduce youth unemployment and promote social and economic development. However, for youth to benefit from this transformative power of ICTs, they must be equipped with a range of digital skills and have affordable access to connectivity. In this

regard, ITU recently launched Generation Connect, the overarching initiative of the ITU Youth Strategy which is structured around three main pillars: Supporting youth empowerment by creating a community of young leaders; Bringing young people together to engage with ITU and its members; and Fostering youth dialogue and participation in ITU activities and decision-making processes.

There is a growing demand for digital health programmes and initiatives such as telemedicine and virtual care solutions as an efficient strategy for mitigating the disruptions caused by COVID-19. Capacity development efforts and tools to support governments and private sector in establishing national digital health platforms and solutions need to be made readily available to encourage the adoption, integration and scale up of such initiatives.

The proliferation of mis- and dis-information through digital communication channels needs to be addressed. The COVID-19 is the first pandemic in history where technology and social media are being used on a massive scale to keep people safe, productive and connected while being physically apart. At the same time, the networks we rely on to keep ourselves connected are enabling and amplifying an "infodemic." To address that "infodemic", more collaboration with Mobile Network Operators and Social Media platforms, as well as building technical capacities for more effective use of such mass media communication channels are needed.

Governments everywhere need to accelerate the deployment and scaling up of impactful public service citizen-centric digital solutions and innovations in support of COVID-19 economic recovery and the SDGs. To achieve that, governments need to lay out their overall digital government transformation strategies and to build common and reusable digital platforms and systems that can scale and integrate services around the needs of citizens and businesses.

ITU would also like to note that the COVID-19 pandemic has caused a number of challenges to statistical operations in countries (which are covered by Goal 17). In addition to problems such as staff sickness, and lockdowns, there are also problems specific to measuring people's ICT use: this should normally be achieved via face-to-face interviews, since contacting interviewees via ICTs (phone or Internet) could bias the results obtained. However, face-to-face surveys have been cancelled in many countries for health reasons.

ITU Membership has stepped up and engaged in activities that have proven essential in saving lives and sustaining economies (please see information on such measures at the ITU's REG4COVID platform). ITU is helping countries to fully utilize digital technologies to respond to and recover from the COVID-19 pandemic and to build preparedness for future global emergencies. Now more than ever, the world needs to promote universal, secure, reliable and affordable connectivity and access.

## C. An assessment of the situation regarding the principle of "ensuring that no one is left behind" at the global, regional and national levels against of background of the COVID-19 pandemic in achieving the 2030 Agenda and the SDGs, within the respective area addressed by your intergovernmental bodies

The COVID-19 crisis has dramatically illustrated the vital importance of broadband networks and services in driving robust, resilient and well-functioning societies and economies. Yet today, 3.7 billion people remain offline. Lack of affordability, constrained access to infrastructure and

devices, poor digital skills and/or the absence of relevant content mean they, and billions of other marginalized people struggling with poor connectivity, are unable to leverage the power of digital transformation in a way that could catalyze seismic shifts in development outcomes.

The disparities in connectivity are affecting some countries, some areas within countries and some groups of people more starkly than others – specifically:

- The digital divide has been highlighted as a critical barrier to the mitigation value of digitization. While in developed countries, 87 per cent of individuals used the Internet in 2019, in developing countries this number stood at 44 per cent, and in the least developed countries (LDCs) only 19 per cent were connected.[12]

- The headline divide in usage is even starker when we look at the underlying infrastructure. For example, a user in an LDC has access to 9 times less international Internet bandwidth available than one in a developed country[13].

- ITU's "Facts and figures 2020" reveals that people in rural areas continue to face greater challenges than people in urban areas in terms of remaining connected during the lockdown, especially in developing economies. According to 2019 data, globally about 72 per cent of households in urban areas has access to the Internet at home, almost twice as much as in rural areas (38 per cent). Large swathes of the rural landscape are still not covered by mobile broadband networks, and fewer households in these areas have access to the Internet. While virtually all urban areas in the world are covered by a mobile-broadband network, worrying gaps in connectivity and Internet access persist in rural areas. Lack in rural connectivity infrastructure has a clear impact on the implementation of Goal 2.

- The urban-rural gap was small in developed countries, but in developing countries urban access to the Internet was 2.3 times as high as rural access. In Africa, only 28 per cent of households in urban areas had access to the Internet at home, but that was still 4.5 times as high as the percentage in rural areas, which stood at 6.3 per cent.

- Connectivity gaps in rural areas are particularly pronounced in least developed countries (LDCs). In LDCs, 17 per cent of the rural population has no mobile coverage at all, and 19 per cent of the rural population is only covered by a 2G network. About a quarter of the population in LDCs and LLDCs, and about 15 per cent of the population in SIDS do not have access to a mobile-broadband network.

- There is a pronounced inequality between men and women in terms of the internet connectivity. While 52 per cent of men are connected, only 46 per cent of women are. In LDCs this numbers stand at 28 per cent and 15 per cent respectively.

Importance of those issues have already been recognized in the ITU's Connect 2030 Agenda. Its Strategic Goal 2 ("Bridge the digital divide and provide broadband access for all") confirms ITU's commitment to ensuring that everyone without exception benefits from telecommunications/ICTs. It focuses on global telecommunication/ICT inclusiveness, fostering telecommunication/ICT access, accessibility, affordability and use in all countries and regions

12 https://itu.foleon.com/itu/measuring-digital-development/home/.

13 *Ibid.*

and for all peoples, including women and girls, youth and marginal and vulnerable populations, people from lower socio-economic groups, indigenous peoples, older persons and persons with disabilities.

An important barrier in the uptake and effective use of the Internet is a lack of ICT skills. In 40 per cent of the countries for which data are available, less than 40 per cent of individuals reported having carried out one of the activities that compose basic skills in the last three months, e.g. sending an e-mail with an attachment. In 70 per cent of the countries, less than 40 per cent of individuals had done one of the standard skills components, such as creating an electronic presentation with presentation software. In only 15 per cent of the countries had more than 10 per cent of individuals written a computer program using a specialized programming language in the last three months.

Affordability is also a key barrier to the ability to use broadband services. Broadband Commission for Sustainable Development has set broadband costs affordability threshold at 2 per cent of GNI. In developed countries such services cost 0.8 per cent of GNI. However, in developing countries this figure is 5.5 per cent, and in LDCs – 12.1 per cent.

While large enterprises benefit from access to well-established digital solutions in place (collaboration tools, employee devices, cloud, VPN, etc.) and connectivity, this is not the case for a large portion of small and medium-sized enterprises (SMEs), particularly in developing countries. The use of the Internet for business purposes in Sub-Saharan Africa is as low as 7 per cent on average. South Africa has the highest Internet use by informal enterprises (24 per cent), followed by Senegal (20 per cent). Internet use by informal enterprises in Ghana and Mozambique is slightly higher than the overall average, at 8 per cent and 7 per cent respectively, but in Kenya (4 per cent) and Uganda (4 per cent) it is far lower. In Rwanda, only 1 per cent of informal entrepreneurs are using the Internet.

People unserved or underserved by broadband cannot benefit from distance learning for children, telecommuting, access to e-commerce and healthcare information. Importantly, the digital divide exacerbates other inequalities, even more so in this crisis. For example, broadband has been supporting the ability to telework for 20-40 per cent of the workforce across various countries, with those not able to telework usually in lower paid jobs and of lower educational attainment. This clearly will have longer term economic consequences, as income disparities will only be made more significant. Closure of schools also means that educational opportunities for the unconnected children would be affected even more than before the pandemic.

## D. Cooperation, measures and commitments at all levels in promoting sustainable and resilient recovery from the COVID-19 pandemic

The COVID-19 crisis has underscored the urgent need for the global digital cooperation. It is now more urgent than ever that we leverage ICTs to connect everyone everywhere and achieve the United Nations Sustainable Development Goals (SDGs). Cooperation among ITU Members and partners, including sister UN agencies, is central to ITU's multi-stakeholder response to the COVID-19 pandemic. There is a clear need to increase digital cooperation, across borders and sectors, and accelerate the development of digital societies,

As part of the effort, ITU has been actively engaged in and contributed to the UN Secretary-General's activities on digital cooperation, which promote the development of ICTs to support

achieving the SDGs as well as using ICTs to respond to the such global crises as the COVID-19 pandemic. The UN Secretary-General António Guterres, in his recently released 'Roadmap for Digital Cooperation (A/74/821)', calls for the improved global connectivity as a prerequisite for all other subjects in digital cooperation, and highlights that "in the present crisis, connectivity needs to be prioritized as foundation to ensure the continuation of critical services, enable digital literacy and promote social inclusion." ITU has been working closely with the office of Under Secretary-General and Special Advisor to the Secretary-General, working on digital cooperation, Fabrizio Hochschild, sister UN agencies and other stakeholders to develop the UN-wide strategies on digital cooperation, by leading the development of action plans to implement key actions and recommendations outlined in the Roadmap, especially focusing on the areas of global connectivity and digital capacity building.

This crisis has also highlighted the importance of the work of the ITU in the framework of its Strategic Goal 3 of the Connect 2030 Agenda, i.e. "manage emerging risks, challenges and opportunities resulting from the rapid growth of telecommunications/ICT". In particular, ITU focuses on enhancing the quality, reliability, sustainability and resilience of networks and systems as well as building confidence and security in the use of telecommunications/ICTs, all key issues during the COVID-19 crisis. Accordingly, the Union is working to make it possible to seize of opportunities presented by telecommunications/ICTs while working towards minimizing the negative impact of undesired collaterals.

ITU, including in partnership with other organizations, have conducted substantial work aimed to set a direction for action, collect best practices and provide comprehensive recommendations on policies and regulatory frameworks in the area of digital technologies, to enhance resilience, mitigate impact of COVID-19 as well as aid recovery. Such work includes:

1) Global Network Resiliency Platform (REG4COVID), which has collected over 400 regulatory, policy and industry responses that countries and other stakeholders have taken in ensuring that digital networks and services continue to serve people and businesses in the face of COVID-19 The platform includes a collection of regulatory practices and lessons learned in keeping the networks, the whole world is now relying on, up and running, as well as examples of how key public and private sector stakeholders from countries across the world are working together to meet the unprecedented demand for the digital connectivity;

2) Agenda for Action for Faster and Better Recovery of the Broadband Commission for Sustainable Development, which outlined immediate measures that governments, industry, the international community, and civil society could take to shore-up digital networks, strengthen capacity at critical connectivity points like hospitals and transport hubs, and boost digital access and inclusion;

3) COVID-19 Crisis Response Digital Development Joint Action Plan and Call for Action by ITU, World Bank, World Economic Forum and GSMA outlining a number of immediate and short-term measures to make affordable and better use of digital technologies and connectivity for citizens, governments and businesses during global lockdowns;

4) Guidelines for the development and implementation of national emergency telecommunication plans (NETPs), which aim to help countries take immediate actions, especially as the pandemic underlined the need to be prepared;

5) Partnership Dialogue for Connectivity Joint-Statement on "Accelerating Digital Connectivity in the Wake of COVID-19", which set out relevant recommendations to national governments and other stakeholders;

6) Virtual WSIS TalkX explored an aspect of the global response to COVID-19, providing WSIS Stakeholders with a platform to create partnerships for on-the-ground action. More than 30 physical and virtual sessions have been conducted, which have all been adapted to podcasts and are available to listen and download at WSIS TalkX Podcast here.

7) The Coronavirus (COVID-19) Response – ICT Case Repository. As part of the WSIS Stocktaking ongoing efforts to promote the good use of ICTs in making social impact, and in order to provide useful, replicable and actionable information to all WSIS community and beyond, the Coronavirus (COVID-19) Response – ICT Case Repository was initiated for collecting projects and activities on how ICTs are assisting stakeholders in their everyday life, work, and combating challenges caused by this extraordinary pandemic. A draft zero version of the special ICT Case Repository: The Coronavirus Response is now available.

8) COVID-19 related workshops at WSIS Forum 2020. More than 70 workshops organised by various stakeholders highlighted issues and efforts related to the topic of COVID-19 at the WSIS Forum 2020. Many emphasised the importance of ICTs, in particular internet access and connectivity for all during the COVID-19 pandemic.

9) CYB4COVID, a comprehensive repository of cybersecurity expertise related to COVID-19, to assist countries, businesses and citizens in their response to amplified and new threats in the digital space during the COVID-19 pandemic;

10) The latest version of ITU's Guidelines for Parents, Carers, Guardians, and Educators for Child Online Protection, which offers tips for parents to minimize online risk in the current pressing situation of online safety. Furthermore, in partnership with UNICEF, UNESCO, UNODC and others, ITU collaborated in the launch of "COVID-19 and its implications for protecting children online", a technical note that established some of the key priorities and recommendations on how to mitigate those risks and promote positive online experiences for children in this specific context;

11) BeHealthy BeMobile collaboration with WHO and UNICEF, which has been leveraged to ensure that reliable and trustworthy information on COVID-19 reaches people not only via the broadband Internet but also 2G mobile networks, and has been successful in sending COVID-19 notifications to millions of people;

12) Smart Villages platform, which has been leveraged to establish interactive voice services on COVID-19 to everyone in Niger. The service, created in collaboration with operators and SMEs, is available via the short code 701 in the five local languages in Niger. Through the service, citizens are able to access important messages from the Ministry of Health regarding prevention and diagnosis of COVID-19;

13) SATCOM Emergency telecommunication capacity upgrade conducted under the project funded by the ITU's ICT Development Fund as well as external partners. Through this project ITU Regional Office for Asia and the Pacific was able to assist 9 countries in developing strategic resources of satellite connectivity equipment (in total 93 satellite terminals in C, Ku and Ka band) that can be mobilized or utilized during emergency response. The impact of partnership project has been widely covered by media, and

further partners like the Asian Development Bank have shown interest in continuing to build on the project successes. In the Pacific, ITU provided over 90 units of satellite ground terminal equipment and several hybrid solar power solutions for remote sites with no electricity, in collaboration with satellite service providers. The equipment was primarily intended for rural satellite connectivity and development of emergency telecommunications capacity, but advanced applications, such as e-health, e-government, long distance education and financial transfers, have also been used by the communities. In order to assist the countries in measuring the impact of the above project and providing them options for a sustainable operational model of the deployed ICT connectivity, ITU has conducted a study on the project impact assessment. Information and data for the study was not only compiled from the information provided by ministries and regulators involved in the project, but also end users and communities, which have been remotely consulted, to identify comprehensive demand and supply scenarios. The information is expected to inform the ICT sector as well as national disaster management agencies and other relevant stakeholders of importance of the impact of mainstreaming digital technology;

14) Digital Transformation Centres Initiative, through which ITU, in collaboration with Cisco, will offer a free-of-charge programme providing trainers with tools and skills on how to conduct remote teaching, which is especially relevant in the wake of COVID-19;

15) Digital Skills Assessment Guidebook, launched by the ITU to assist Member States in addressing the critical importance to rapidly improve access to digital skills training, particularly for vulnerable nations and communities;

16) The AI for Good Global Summit was conducted fully virtual as an all-year round event. ITU was drawing upon expertise from the AI for Good Global Summit community and launched its AI for Good webinar series delving into promising use cases of artificial intelligence in healthcare and other global challenges, including how to combat COVID-19;

17) A series of webinars on "Digital Cooperation during COVID19 and beyond", launched in collaboration with the UN Under Secretary General and Special Advisor to the Secretary-General, Fabrizio Hochschild, with the aim of identifying the challenges and their root causes, and finding immediate possible solutions and strategies for safe, stable and inclusive digital connectivity during the COVID-19 pandemic. ITU Regional Office for Asia and the Pacific is now developing the Connect2Recover initiative with the support of the Government of Australia, as ITU Members in the Asia-Pacific region have requested the Telecommunication Development Bureau to provide assistance in their fight against COVID-19 and to assist in building back better. Recognizing the special requirements of LDCs, SIDS and LLDCs in building their digital infrastructure and services ecosystem and incorporating the lessons from COVID-19, the ITU and Australia's Department of Infrastructure, Transport, Regional Development and Communications have agreed to undertake a project to provide technical assistance to four Asia-Pacific countries;

18) ITU and Asian Development Bank (ADB) jointly organized a webinar on ICT connectivity as an opportunity for sharing and discussing advances in tackling the digital divide in the Asia-Pacific region. Equitable information and communications technology (ICT) connectivity around the Asia-Pacific region remains a development bottleneck as is a particular concern in the context of the COVID-19 pandemic which has accelerated digitalization trends and requires policy makers, development partners and investors to

review their strategies, fiscal space and investment priorities. ADB and ITU experts presented their views and recent initiatives in this space and invited experts presented relevant analysis and solutions that can help better understand and bridge the digital divide. This meeting was attended by public policy makers, regulators, private sector representatives, development partners, special interest groups, experts and academics;

19) ITU together with the Ministry of Foreign Affairs of the Republic of Estonia (MFA Estonia), The Federal Ministry of Economic Cooperation and Development of the Federal Republic of Germany (BMZ), and the Digital Impact Alliance (DIAL) at the UN Foundation are collaborating to accelerate digital transformation and digitalization of government services for the achievement of Sustainable Development Goals (SDGs) particularly in low-resource settings. The collaboration will establish a global high-level framework for digital government cooperation to assist countries in learning and implementing scalable digital services and applications in a cost efficient, accelerated and integrated manner and that are built applying best software development principles and best countries' experiences and practices.

A number of ITU initiatives have been supporting development of resilient infrastructure, including:

1) Connect2Recover – an ITU initiative, launched with the kind support of governments of Saudi Arabia and Japan, to help less connected countries strengthen their digital infrastructures and ecosystems so that they are able to better cope with COVID-19, reinforce their recovery efforts and better prepare for the 'new normal'.

2) *GIGA* – a joint initiative of UNICEF and ITU to connect every school to the internet, and every young person to information, opportunity, and choice. Giga is working in partnership with governments to map school connectivity and develop financial models to make connectivity affordable and sustainable. Need to respond to the challenges of the COVID-19 pandemic led to added Giga's focus on health centres as well as extending connectivity to communities around schools.

3) *Policy and Regulation Initiative for Digital Africa (PRIDA)*, implemented by ITU as per the appointment of the European Union. PRIDA's overall objective is to foster universally accessible and affordable broadband across the continent to unlock future benefits of internet-based services.

4) ICT Infrastructure Business Planning Toolkit as well as the forthcoming Last-Mile Internet Connectivity Solutions Guide.

5) Broadband Maps, a cutting-edge ICT-data mapping platform, taking stock of the national broadband connectivity.

ITU has also produced several reports to determine the latest trend analysis in response to COVID-19:

- Economic impact of COVID-19 on digital infrastructure, which reports on the outcomes of the ITU Economic Experts Roundtable and argues that the digital infrastructure is crucial for COVID-19 response and recovery.

- Pandemic in the Internet Age: communications industry responses, which provides ITU's analysis of key initiatives in response to COVID-19 and describes key short-term

regulatory and commercial initiatives by national regulatory bodies, operators, content and online providers, collected through ITU's Global Network Resiliency Platform (REG4COVID). The paper has formed the basis of further analysis and discussion to help countries in their response to the COVID crisis;

- First overview of key initiatives in response to COVID-19, which provided a short overview of initiatives and formed as basis of further analysis and discussion papers to help countries in their response to the COVID crisis.

- Last mile connectivity in the context of COVID-19, a new ITU REG4COVID discussion paper, which analyses measures taken in the COVID19 context to address Last Mile Connectivity (LMC) issues, and identifies best practices in this regard. It examines market aspects of last-mile connectivity, with a view towards promoting and developing sustainable infrastructure solutions, and provides guidance for private sector and civil society stakeholders to act upon the LMC opportunities available today.

- How broadband, digitization and ICT regulation impact the global economy, the ITU's latest report on how broadband, digitization and ICT regulation impact the global economy offers important and practical guidance both for developing and developed countries on how to maximize the economic impact of strategic ICT investment decisions. The report is based on recent high-quality data, is global in scope, and offers four clear high-level recommendations.

Specific challenges related to ensuring equal ability to access and make us of digital technologies irrespective of gender are addressed by EQUALS Global Partnership for Gender Equality in the Digital Age - a committed group of corporate leaders, governments, businesses, not-for-profit organizations, academic institutions, NGOs and community groups around the world dedicated to promoting gender balance in the technology sector by championing equality of access, skills development and career opportunities for women and men alike. In the context of the EQUALS, the ITU and the Enhanced Integrated Framework (EIF) have launched a cooperative project to enhance the digital ecosystem and build digital skills for women in LDCs.

Connecting rural populations and empowering them with digitally-enabled services is a powerful and highly cost-efficient catalyst of positive rural transformation and to mitigate the effects of the disruptions caused by COVID-19 (e.g. closure of local agricultural markets, failures of supply chains, closure of schools, and growing burden on the very scarce healthcare facilities). Through the broader Smart Villages project piloted in Niger, ITU advocates for a whole-of-government approach for rural digital transformation to provide meaningful connectivity and ICT infrastructure to remote rural communities as a sustainable and scalable strategy to provide better access to the essential social services to the populations that need them the most.

ITU is actively engaging in collaboration with other UN agencies in promoting digital tools and solutions that could be effectively used to deliver timely and reliable health information to people through the ITU-WHO joint Mobile Health initiative "Be Healthy, Be Mobile", with an aim to induce positive health behaviour change and that they are not mis- or dis-informed.

ITU also supported the G20 Digital Economy Ministers in their commitment to sharing information in a secure manner and encouraging the research and development of digital technologies for health. The meeting highlighted importance of communication infrastructure and network

connectivity for all, including those in underserved areas, and for pledging to work together with private sector and business entities to maximize the delivery of ICT services.

Recognizing how small-scale producers have been severely affected by the disruptions caused by COVID-19 due to decreased purchasing power, loss of income and increased indirect costs imposed by the pandemic which have inevitably exacerbated the global challenges of poverty and hunger (Goal 2), supporting agriculture should become a key component of the global effort to build back better. ITU is working closely with FAO and other relevant stakeholders to support scaling up of digital technologies and innovations for agriculture that can produce tremendous benefits to empower agriculture workers to monitor their crops and livestock, timely detect pests and diseases, optimise the use of water and fertilisers, better forecast demand for their products, and gain access to new markets at more favourable financial conditions.

Furthermore, and specifically in relation to ICT accessibility and inclusion (related to Goal 10), ITU has actively participated in the emergency time-bound working group "Covid-19 and Disability" to ensure the implementation of the recommendations, in a coordinated manner, outlined in the UNSG's a policy brief on persons with disabilities and COVID-19. This WG was created with the main objective of identifying specific priorities and entry points and take action to strengthen disability inclusion in the mainstream COVID-19 response and recovery, at HQ and country levels. It has established four workstreams which are undertaking concrete actions to support greater inclusion of persons with disabilities across the following areas: 1. Funding, including mainstream COVID-19 funding mechanisms; 2. Health response and recovery; 3. Socio-economic response and recovery; 4. Humanitarian response and recovery. One of the outcomes of the workstream on Health response and recovery, led by WHO, will be the first WHO-ITU Standard for accessibility of telehealth and e-health applications which is expected to be published in 2021.

ITU also participated in the COVID-19 funding mechanisms workstream, which produced a checklist on what needs to be considered to ensure that COVID-19 funds are disability inclusive, and a mapping of target funds within the UN and World Bank to assist in defining which funds should be approached.

Aligned with UNDIS commitments to achieve sustainable and transformative progress on disability inclusion, ITU has been also working with ILO on the project "Accessibility of Online Job Application and Recruitment Systems" to provide guidance and develop the capacity of governments and UN agencies. This project will be implemented in 2021.

ITU has also been working closely with the United Nations Inter-Agency Network on Youth Development (UN IANYD), and among other, ITU together with other organizations of this network, launched a call to action through a statement on COVID-19 and Youth, to create strong and sustainable partnerships with young people during and after the pandemic, recognize their role in advancing the fight against the pandemic, and understanding the specific impacts it can have on youth while ensuring the responses are inclusive of their specific needs.

Finally, ITU's Information Services Department, has been able to successfully deliver business continuity, and ensure that its staff and delegates had connectivity for all virtual and hybrid meetings, council consultations, workshops, trainings and other events that have been convened since March 2020. ITU staff was able to effectively telework during the pandemic. The business continuity initiative ensured that all the ITU Sectors were able to continue their mandate of supporting its Member States.

## E. Various measures and policy recommendations on building an inclusive and effective path for the achievement of the 2030 Agenda in the context of the decade of action and delivery for sustainable development

Having regard to a call in the Broadband Commission's for Sustainable Development Global Goal of Universal Connectivity Manifesto, and aiming to bring the UN Secretary-General's Roadmap for Digital Cooperation into practice, ITU suggests that the universal connectivity is put at the very forefront of sustainable development efforts and its central role in 2030 Agenda is recognized. To support this objective we suggest that:

- a baseline for universal digital connectivity is established;
- public-private financing of universal broadband, pioneering innovative hybrid and/or complementary, replicable and sustainable financing and investment models for all types of networks are identified and supported, and impactful partnerships are catalyzed;
- enabling ICT regulatory environments, ICT capacity building and online safety and security, especially for children are advocated for, as integral to efforts to achieve the Global Broadband Targets 2025 and the SDGs.

Partnership Dialogue for Connectivity Joint-Statement on "Accelerating Digital Connectivity in the Wake of COVID-19" sets out recommendations in this domain to national governments and other stakeholders. This statement has been developed and agreed within the framework of the UN75 Global Governance Forum, by a multi-stakeholder group convened by the ITU, namely representatives from EMEA Satellite Operators Association, Facebook, GSMA, Loon, Microsoft, SpaceX, UN Global Compact, UNICEF and the World Economic Forum. In this Joint-Statement, the Partnership Dialogue agreed to collaborate to amplify the impact of individual initiatives of partners; support digital connectivity efforts of others by leveraging partner experiences; and identify and promote good practices on accelerating connectivity including through an upgraded REG4COVID platform. While efforts of all stakeholders are crucial in bridging the connectivity gap, the Joint-Statement recognizes that governments play an especially critical role in enabling and facilitating such efforts, and calls on national governments to:

- Give due recognition to the crucial role of network infrastructure and services in underpinning the global recovery from the COVID-19 pandemic;
- Ensure that their digital development plans are updated;
- Take a holistic, multi-sectoral and pragmatic approach to expanding connectivity, recognizing the key role that all digital technologies play in the provision of health, education, financial and public services; the role for supporting infrastructures, especially energy; and the fundamental need for digital inclusion to be an integral part of an overarching social and economic inclusion;
- Reduce existing and refrain from erecting new and unnecessary barriers to investment in, development, deployment and use of digital infrastructure;
- Support digitalization efforts of local businesses.

The Joint-Statement also highlights the role of responsible business practices in securing a genuinely sustainable recovery, and notes the importance to encourage adherence to the Ten Principles of the UN Global Compact, including the guidance they provide in such areas as human rights, labour, environment and anti-corruption.

# ANNEX: IN-DEPTH VIEW OF THE ROLE OF ICTS AND ITU'S CONTRIBUTIONS TO GOALS 1, 2, 3, 8, 10, 12, 13, 16 and 17

**(SDG MAPPING OF ITU'S STRATEGIC AND OPERATIONAL PLANS)**

**Goal 1. End poverty in all its forms everywhere**

*ICTs are a key enabler to achieve SDG-1, for example, by providing timely and accurate information services which will help ensure equal rights to economic resources, as well as ownership and control over different forms of property, as well as enabling services such as mobile banking for micro-credit, which have already brought direct benefits to millions of people who were previously unbanked.*

**ITU contributes to SDG1 Targets 1.4, 1.5 and 1.a:**

- Target 1.4 - By promoting access to basic ICT services for all men and women, in particular the poor and the vulnerable; by monitoring, collecting and disseminating data on access to basic ICT services, including households with broadband Internet access in urban and rural areas; by ensuring the radio frequency spectrum, a natural resource, is accessed everywhere and by all, equally and at the lowest possible price;
- Target 1.5 - By providing expertise through assistance and technical publications in the development of affordable ICT infrastructure to deal with the challenges and system requirements of fixed and mobile networks for rural and remote areas as well as broadcasting networks; by reducing vulnerability to disasters and to the effects of climate change through the development of National Emergency Telecommunication Plans, the establishment of early warning systems and business continuity plans, among other relevant activities relates to disaster risk reduction; through the management of spectrum resources and the development of standards and best practices on radiocommunications and disseminating the related information and know-how, ensuring more accurate weather predictions, climate change monitoring and mitigation, public protection and disaster relief, as well as search and rescue;
- Target 1.a - By the mobilization of resources through partnerships with various stakeholders from the ICT ecosystem for the implementation of ICT development activities, projects and initiatives in developing countries, including through developing strategies and related tools and services (databases, sponsorship packages, dedicated websites, concept notes, promotional vehicles, etc.), by scaling up special initiatives such as GIGA, Connect2Recover, Smart Villages, Digital Transformation Centers, others.

**Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture**

*ICTs give farmers new ways of accessing information and services. Extension agents improve their services through mobile access to digital information services, online education, and business planning tools, allowing them to record service delivery events and solicit farmer feedback using mobile devices*

*Government ministries can remotely monitor extension agent capacity building and service delivery efforts, and evaluate results with an eye to improving services over time. Rural business productivity and effectiveness tend to increase once farmers and smallholders gain access to ICTs, enabling them to access market information, weather forecasts, and availability*

*of fertilizers, as well as many programmes now springing up giving improved access to extension agents.*

**ITU contributes to SDG2 Targets 2.1, 2.3, 2.4, 2.5 and 2.a:**

- By supporting countries to develop their e-agriculture strategy as a framework to identify and develop sustainable ICT in agriculture services and solutions, in close collaboration with FAO. E-agriculture offers a strong potential for driving economic growth and raising incomes among the rural population through increased efficiency of agricultural production, improved livelihoods and value chain development;
- By facilitating creation of digital innovation ecosystem in field of agriculture, fast forwarding digital transformation of the sector.
- By providing spectrum and standards and the dissemination of the related information and know-how for Internet of Things (IoT), unmanned aircraft systems (UAS), radionavigation, meteorology and Earth-exploration satellite systems, for the development and sustainability of e-agriculture.
- By providing technical standards addressing ICTs for agriculture, smart farming, and smart greenhouses.

**Goal 3. Ensure healthy lives and promote well-being for all at all ages**

*Connectivity provided by data and telecommunication networks enable health workers to be connected to information and diagnostic services and allow them to form support networks and communicate with doctors and nurses within clinics and hospitals. Mobile phones allow community health workers to learn and prepare for disease outbreaks, identify patient symptoms, follow established treatment protocols, perform remote diagnostics, access expert support, refer patients to clinics, send patient reminders, record delivery of health services, and receive mobile payments for those services. Social media helps to provide advice and support, and allows health workers and patients alike to benefit from shared best practice, and to obtain important information about disease outbreaks and the availability of health services. Analytics provide the capabilities needed to produce snapshots, analyse trends, and make projections about disease outbreaks, health service usage, and patient knowledge, attitudes, and practices regarding their health – all within time frames critical to eradicating disease and reducing mortality rates.*

**ITU contributes to SDG3 Targets 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.a, 3.d:**

- By combating diseases through the establishment of monitoring systems using mobile networks;
- Targets 3.1, 3.2, 3.7 and 3.8 - By sharing information and documenting ICT best practices on how eHealth applications can play an essential role in meeting the SDG targets for women's and children's health. Additionally, ITU contributes by supporting countries through regional capacity building workshops and direct technical assistance, in collaboration with WHO, to develop their national eHealth strategies to better harness ICT for health, particularly for women's and children's health;
- Target 3.3 and 3.d - Through its ongoing project on ICT Applications Against Ebola Disease (being implemented in West Africa);
- ITU contributes to the implementation of broadband networks which provide the underpinnings of optimal service delivery calling for high quality and safety requirements. In addition ITU is providing information about electromagnetic field (EMF) issues for the protection of the population;
- In the framework of the ITU Interactive Transmission Map, ITU is enhancing awareness of developing countries on the existing telecommunication/ICT infrastructure (including

broadcasting networks) that are being taken into consideration when designing new networks for early warning and risk reduction;

- Targets 3.4, 3.5, 3.6 and 3.a - Through the joint initiative with WHO "Be Healthy Be Mobile", using mobile technology to help member states combat the growing burden of non-communicable diseases (cancer, stroke, heart disease, lung disease and diabetes) and their risk factors (tobacco use, an unhealthy diet, physical inactivity and the harmful use of alcohol). This initiative supports governments who are seeking to bring mobile health services to scale within national health systems, by providing technical expertise on implementing mobile health interventions. It also promotes a highly multisectoral approach to ensure that the programmes are sustainable. The initiative has established partnerships with its target 8 countries from a range of low-, middle- and high-income countries. The established mHealth Innovation Hub of ITU, WHO and EC, serves as a platform to share best practice and provide a one-stop shop to access guidance on mobile health implementation.
- Target 3.6 - By providing spectrum and standards and disseminating the related information and know-how for Intelligent Transport Systems (ITS), radionavigation-satellite systems and IoT;
- Target 3.8, 3.9, 3.d - By providing globally harmonized spectrum and standards and disseminating the related information and know-how, ITU enables the development of mobile broadband and its wider penetration, thus permitting E-medicine to become available throughout the world. By providing spectrum and standards for weather forecasting, Earth Exploration satellites, sound and television broadcasting and mobile networks, ITU contributes to early detection of natural disasters and other health risks, timely information of populations and mitigation decisions;
- Technical standardization of multimedia systems and capabilities for e-health applications, for personal health systems/devices including conformity, security aspects of using telebiometrics for e-health and telemedicine, and e-health systems using IoT.

**Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all**

*ICT skills have already become a prerequisite for almost all forms of employment, and ICT capacity-building must therefore be prioritized in national youth employment and entrepreneurship strategies in all countries. It is not simply that most jobs and businesses now require ICT skills, but also that ICTs themselves are transforming the way that business is being done everywhere and creating new employment opportunities.*

**ITU contributes to targets 8.1, 8.2, 8.3, 8.5 8.a and 8.b through:**

- Through technological upgrading and innovation by encouraging young people to learn to code, and publishing research on coding boot camps, and offering training workshops on coding boot camp methods, management and instruction, and scaling up strategic regional initiatives such as Africa Can Code, Americas Can Code etc.;
- Assisting countries in the development of better understanding of strategic importance of digital skills, digital literacy frameworks, new methods of teaching and learning in view of digital developments as well as new capacity building concepts and initiatives in the digital age.
- Based on developed tools, such as Guidebooks, Assessment toolkits, others, providing technical assistance to Member States aiming at development of national digital skills strategies and carrying out the national digital skills assessments, that determine the existing supply of a digitally skilled cohort at a national level, assess skills demand from

industry and other sectors, identify skills gaps, and develop policies to address future digital skills requirements.
- Providing assistance and training on migration to converged networks (NGN) to allow adaptability and long term operation of telecommunication/ICT networks, the transition from IPv4 to IPv6, the adoption of IXP, and introducing digital broadcasting and developing Spectrum Management Master Plans. Developing and providing online training on ICT-enabled entrepreneurship and encouraging young men and women to learn coding and other digital skills in light of the skills shortfall for people with high-level digital skills;
- Reducing the proportion of youth not in employment, education or training by leading the Digital Skills Thematic Area of the Global Initiative on Decent Jobs for Youth;
- Collaboration with ILO, leading the Digital Skills for Decent Jobs Campaign as part of the Global Initiative on Decent Jobs for Youth in order to foster decent and inclusive employment and entrepreneurship opportunities in line with the SDGs;
- Promoting the involvement of young people in the field of cybersecurity, to address the field's worldwide workforce shortage, through the Youth4Cyber initiative. Youth4Cyber aims to introduce and expose young people to the cybersecurity domain, engage them to better understand the opportunities it holds and ultimately encourage them to take on the cybersecurity challenges of tomorrow.
- Promoting the use of new and existing telecommunication technologies for enhanced trade, in particular in Least Developed Countries;
- The contribution of radiocommunication networks, notably broadband mobile, to overall growth is well demonstrated. Increased mobile broadband access, as impulse by ITU fosters economic growth and increases efficiency of work.
- Standards for telecommunication/ICT operators, network and service providers, and equipment manufacturers, in particular when addressing and providing security and trust, contribute to sustainable economic growth.

**Goal 10. Reduce inequality within and among countries**

*ICTs have the potential to help reduce inequality both within and between countries by enabling access to information and knowledge to disadvantaged segments of society – including those living with disabilities, as well as women and girls. However, by the end of 2016, almost half of the world's population – 3.7 billion people – were not yet using the Internet and access was uneven between genders and geographically. Reducing inequalities cannot be achieved without addressing these underlying issues.*

**ITU contributes to targets 10.2, 10.3, 10.c through:**

- Advocate, raise awareness, provide advice, develop and make available resources and guidelines to support countries and stakeholders' efforts to digitally include all people regardless their gender, age, ability or location and thus build inclusive digital environments and societies;
- Promoting women and girls to take up ICT careers, youth to learn basic and advanced digital skills, sharing good practices on coding boot camps and promoting accessible ICTs which enable persons with disabilities to engage in economic activities;
- Eliminating discriminatory laws and policies and practices through its ongoing projects of "Support for Harmonization of ICT Policies in the Caribbean" and "Support for Capacity Building and ICT Policies, Regulatory and Legislative Frameworks in the Pacific Island Countries (ICB4PAC II)";
- Supporting Member States in elaborating and implementing enabling ICT regulatory policies paving the way for the establishment of cross-sectoral institutional and legal

frameworks that are transparent, are conducive to investment and growth, foster fair and greater competition as well as innovation, stimulate the deployment of infrastructure, promote the development of new services, are security conscious, and protect and benefit consumers;

- Enhancing broadband access and core networks responsible for carrying international flows of information, including secure digital finance data, which are crucial to reducing transaction costs;
- Providing globally harmonized spectrum and standards, ITU enables the development of mobile broadband and its wider penetration, thus permitting social, economic and political inclusions of all;
- Organizing the Global Symposium for Regulators (GSR) which brings together heads of national telecom/ICT regulatory authorities from around the world and has earned a reputation as the global annual venue for regulators to share their views and experiences on the most pressing regulatory issues they have identified;
- Assist ITU members to better understand the ICT accessibility needs of persons with disabilities and related technical requirements and available solutions as well as the policy and regulatory measures that they can take to ensure that the digital information products and services are widely available and inclusive to everyone at affordable prices;
- Develop activities and key resources on ICT/Digital accessibility, including guidelines on inclusive digital communication, capacity-building trainings, video tutorials and programmes for ITU Members and stakeholders, such as programmes, trainings, toolkits and other relevant resources to support Member States and stakeholders in monitoring digital accessibility implementation process in their countries or regions;
- Encourage governments and other stakeholders to promote “ICT accessibility for all” and to mainstream ICT accessibility as a cross-cutting development issue to further guarantee digital inclusion of everyone including for persons with disabilities.
- To support the global efforts in building inclusive digital societies ITU also developed regional knowledge development platforms in the topic of Digital Accessibility, encompassing: forums to enable tailored regional discussion and provision of advice on policies, regulations and strategies as well as facilitate sharing of good practices; strengthen/development of capacities; promotion of innovative digital accessible solutions; development and dissemination of resources to support regional implementation and monitor progress; as well as to build strategic multi- stakeholders partnership to jointly work with ITU towards achieving this overarching goal. The ITU-Accessible Americas and Accessible Europe – ICT for ALL, already in place for years now, are inspirational role models towards achieving an inclusive world by ALL.
- Raise awareness and advocate on inclusiveness by considering “Universal Design” as defined in the UN Convention on the Rights of Persons with Disabilities (UNCRPD) and has developed standardization guidelines to produce solutions that are inherently accessible to persons with and without disabilities. ITU proactively address accessibility and human factors in their standardization work by ensuring that the needs of persons with disabilities and persons with specific needs are taken into account, and by mainstreaming accessibility features in telecommunication/ICT accessibility standards for the inclusion of persons with disabilities and persons with specific needs, including age-related disabilities, those with illiteracy, women, children, and indigenous people. Multimedia telecommunication relay services based on ITU standards support inclusiveness for persons with disabilities, allowing them to be able to use telecommunications services with a level of functionality and ease of use that is similar to the way people use mainstream voice telecommunications services;

- Key partnerships (e.g. FILAC) in the implementation of tailored capacity building programme for indigenous people to best adapt to their interest and specific needs to ensure socio-economic development and self-sustainability of their communities
- International Girls in ICT Day, an ITU initiative which aims to Creating a global environment that empowers and encourages girls and young women to consider careers in the growing field of ICTs through the annual celebration of the International Girls in ICT Day;
- Promoting awareness, building political commitment, leveraging resources and knowledge, harnessing the capacities of partners, and supporting real action through international flagship partnerships such as EQUALS that seeks to achieve digital gender equality and through this, to improve the livelihoods of millions around the world. Under EQUALs partnership, ITU and partners are:
    - Organizing a series of workshops with the support of many different partners, by establishing Girls can code Initiatives are reaching many girls in different countries.
    - Ensuring child online protection measures to be implemented by governments in coordination with relevant stakeholders such as civil society, international organizations, and private sector companies.
- Enhancing digital learning and training opportunities to equip girls and women with the necessary digital skills to use technology and be active participants of the digital environment. Building capacity of women junior professionals wishing to enter or thrive in the field of cybersecurity with the Women in Cyber Mentorship Programme. This programme aims to build a specialized women workforce by providing women graduates and junior professionals with role models, training and guidance from mentors.
- Online training for indigenous peoples on “Indigenous Radio/Communication Networks - Communication Innovative Tools for the strengthening of Indigenous Communities of the Americas Region” as well as blended course to build the capacity of Indigenous technicians to ensure the self-sustainability of indigenous community-related networks; The curricula of both trainings was enriched with modules on communication during crisis and emergency such as the pandemic COVID19.
- Ensuring meaningful youth empowerment implementing comprehensive ITU Youth Strategy mainstreaming youth engagement and participation in the work of ITU to support the achievement of the overall goals of the Union; encouraging youth participation in ITU programs, events and activities, as well as contribute to the decision-making processes; promoting ICT youth-related policies within ITU Member States to ensure inclusiveness and empower youth, particularly in developing countries; engaging in regular dialogue and consultations with youth and undertake concrete actions; incorporating youth perspective in the implementation of the ITU strategic plan.
- Scaling up the Generation Connect initiative aiming at engaging global youth and encouraging their participation as equal partners alongside the leaders of today’s digital change, empowering young people with the skills and opportunities to advance their vision of a connected future and contributing to shaping of the future digital development agendas.
- Rolling out new global Guidelines on Child Online Protection, a comprehensive set of concrete recommendations for children, parents and educators, industry and policy-makers on how to contribute to the development of a safe and empowering online environment for children and young people.

- Development of guidelines resource to assist countries in developing or revising their ICT related policies and strategies to take into account aging and related socio-economic impact, as well as on the challenges and opportunities that can result from appropriate policies and strategies on digital inclusion of older persons.
- Leading efforts to improve the capacity of developing countries to participate in the development and implementation of international ICT standards, using the vehicle provided by ITU's Bridging the Standardization Gap (BSG) programme.
- Technical standards addressing accessibility for persons with impairments and special needs, on relay services, accessibility profiles for IPTV.

**Goal 12. Ensure sustainable consumption and production patterns**

*ICTs and responsible consumption and production are linked in two ways: increased dematerialization and virtualization as well as innovative ICT applications enabling sustainable production and consumption. Cloud computing, smart grids, smart metering, and reduced energy consumption of ICTs all have a positive impact on reducing our consumption. However, ICTs themselves require energy consumption. Therefore, effective policies are needed to ensure the negative impacts of ICTs, such as e-waste, are minimized. ITU is committed to tackling the challenges of e-waste by developing global strategies and policies which aim to reduce the adverse environmental effects of e-waste. ITU develops reports, toolkits and educational material to raise awareness on e-waste among its member states, sector members and academia on e-waste. It also provides direct assistance in planning and implementation of e-waste management techniques.*

**ITU contributes to SDG12 Targets 12.2, 12.3, 12.4 and 12.5:**

- ITU has been given a mandate to "assist developing countries in undertaking proper assessment of the size of e-waste and in initiating pilot projects to achieve environmentally sound management of e-waste through e-waste collection, dismantling, refurbishing and recycling." To this end ITU is developing e-waste guidelines to help countries identify best policies. It is also carrying out an electronic waste management project, and recently launched a new partnership, The Global E-waste Statistics Partnership (GESP), to help improve global e-waste statistic, issuing regular E-waste Monitors, providing trainings and developing knowledge base through publications, reports and strategic analysis. Country case studies on the management of waste, electrical and electronic equipment (WEEE), have continued under the broader umbrella of ICTs and the environment analysing strategies to develop a responsible approach to and comprehensive treatment of e-waste.
- To support WEEE policies development, ITU provides technical assistance in the mapping of stakeholders, and with stakeholder consultations and the drafting of a national policy on the management of WEEE. New toolkit for developing countries and emerging markets will cover the building blocks required for the establishment of a fair and equitable, well-communicated and sustainably financed system of extended producer responsibility (EPR) for the management of WEEE. A tailored e-learning modules support technical assistance in the development of WEEE policy.
- The UN E-waste Coalition is a UN system-wide group of agencies, programmes and organs with a common vision to tackle the global WEEE challenge. Through this coalition ITU, together with partners, aims at to increase collaboration, build partnerships and more efficiently provide support to Member States to address the e-waste challenge.

- Through the Circular Electronics Partnership, ITU, together with other partners aims to shift the playing field of the electronics industry towards contributing to the SDGs through circular economy principles.
- ITU promotes innovative ICT solutions in the domain of e-waste, and develops green ICT standards to reduce their negative impact. Studies on circular economy, including e waste, in support of SDG 12.4, address lifecycle and rare-metal recycling approaches for ICT equipment to minimize the environmental and health impact of e waste, on how to use ICTs to help countries and the ICT sector to adapt to the effects of environmental challenges, including climate change, in line with the SDGs. Needs are being identified for more consistent and standardized eco-friendly practices for the ICT sector (e.g. labelling) including assessment of the sustainability impact of ICT; circular economy, environmentally sound management of e waste, energy efficiency and climate change to achieve the SDGs (including the Paris Agreement, Connect 2020 Agenda, SDGs, etc.). Several Recommendations were produced that help deal with e-waste procedures for recycling rare metals and life-cycle management in ICT goods, as well as external universal power adapter and green battery solutions, aiming to extend the life cycle and possibility of avoiding device duplication to reduce the demand on raw materials, limit the amount of e-waste and increase usability. The ITU Global Portal on e-Waste features external resources on e-waste, including municipal waste, directed towards empowering institutional and governmental capabilities.
- ITU, in support of SDG target 12.4, studies to combat counterfeiting products including telecommunication/ICT and mobile device theft. ITU technical work to combat ICT counterfeiting continues to gain momentum with new standards under development, supported by ongoing studies into the scale and dynamics of the counterfeiting challenge.
- By providing globally harmonized spectrum and standards and promoting their adoption, ITU enables the development of mobile and IoT, which contribute to reduce waste generation in production, distribution and consumption.
- By providing technical standards, which aim to reduce e-waste, such as on universal power adapter/charger solutions and on green battery solutions; providing guidance on circular economy, and on measuring and managing e-waste and circular economy impacts, on life-cycle management of and recycling materials in ICT goods, on green ICT procurement.

**Goal 13. Take urgent action to combat climate change and its impacts**

*ICTs, including satellite monitoring, play a crucial role in earth monitoring, sharing climate and weather information, forecasting, and early warning systems. ICTs therefore enable both the global monitoring of climate change as well as strengthen resilience by helping mitigate the effects of climate change through forecasting and early warning systems.*

**ITU contributes to targets 13.1, 13.3, 13.6, 13.a and 13.b through:**

- Developing and delivering training programmes on ICT and climate change. It also contributes by increasing resilience through the development and establishment of monitoring and early warning systems, in partnership with other stakeholders.
- Implementing a project on restoring connectivity through the use of the movable and deployable ICT resource unit.
- The implementation of projects on climate change adaptation, developing satellite communications capacity and emergency communications solutions for the Pacific Islands.

- ITU's work on environment, climate change and circular economy is responsible for studies on methodologies for examining the potential role of ICTs in climate change related activities. ITU has published various guidelines and Recommendations on how ICTs are fundamental for monitoring climate change, mitigating and adapting to its effects and assisting in the transition towards a green and circular economy.
- Raising awareness of the role of ICTs, ITU is promoting transformative solutions that can ensure a sustainable future for all and reduce the impacts of unforeseen disasters, and serves as a platform to discuss the appropriateness of specific ICT technologies and solutions.
- In order to achieve target 13.6, the traffic management systems need to be implemented by 2019. ITU Collaboration on ITS Communication Standards CITS has a coordination function. CITS catalyses work in ITU study groups.
- Spectrum and standards provided by ITU for Earth observation systems to ensure monitoring and timely warning of natural and environmental disasters, accurate climate prediction and a detailed understanding, are essential to strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries. Sound and television broadcasting, PPDR and commercial mobile broadband networks, IoT, search and rescue satellite systems, as enabled by ITU activities, are also key enablers to ensure timely awareness and rescue of populations in case of climate-related hazards and natural disasters.
- Disseminating Handbooks and reports and organizing seminars and workshops, ITU contributes to improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.
- The Global E-waste Monitor, a joint effort of the ITU, the United Nations University (UNU) and the International Solid Waste Association (ISWA), provides the most comprehensive overview of global e-waste statistics and an unprecedented level of detail, including an overview of the magnitude of the e-waste problem in different regions.
- ITU standards for International Emergency Preference Scheme (IEPS) for disaster relief operations and for Emergency Telecommunications Services, and for communicating disaster alerts and public warnings provide specifications for the use of public telecommunications for emergency and disaster relief operations and enable telecommunications in the case of emergency and disaster situations.
- Technical standards with terms and definitions for disaster relief systems, network resilience and recovery including emergency telephone numbers; International Emergency Preference Scheme (IEPS) for disaster relief operations and telecommunication networks for natural disasters; principles of methodologies for assessing the environmental impact, environmental life cycle assessments, and energy consumption and greenhouse gas emissions impact of ICTs and for smart sustainable cities; guidelines on Connect 2020 greenhouse gases emissions and GHG emissions trajectories for the ICT sector compatible with the UNFCCC Paris Agreement; guidelines and best practices on how countries can utilize ICTs to adapt to the effects of climate change; the Common Alerting Protocol;

**Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels**

*ICTs can play an important role in crisis management, humanitarian aid and peacebuilding, and have proved to be a powerful aid in areas such as electoral monitoring. The growing use of open data by governments increases transparency, empowers citizens, and helps to drive*

*economic growth. ICTs are also essential in terms of record-keeping and tracking government data and local demographics.*

*When natural or man-made disasters occur, ICTs are crucial in obtaining, communicating and transmitting accurate and timely crisis information, allowing appropriate responses to be made. In the future, big data analysis and data mining should allow better use to be made of the vast amount of data that is already openly accessible online.*

**ITU contributes to targets 16.7, 16.9, 16.10 and 16.a through:**

- Committed to promoting broadband, and mobile broadband in particular, to enable citizens to access any content, anytime, anywhere in the global information society. Enabling ICT regulatory policies promote innovative services and technologies enhancing such access and driving social and economic progress.
- The monitoring of Target 16.10 by collecting and disseminating data on Internet access and usage, a key indicator for public access to information.
- Providing high-quality data, research, analyses, and tools (to support membership in implementing and reviewing strategies, policies, and legal and regulatory frameworks as well as in moving towards evidence-based decision-making to achieve digital transformation.
- Capacity building initiatives in areas such as international Internet governance and training in cybersecurity. ITU also contributes to this target by providing institutional capacity support to Centres of Excellence and Internet training Centres.
- The creation and ongoing capacity building of ICT regulatory authorities. ITU regular activities such as the Global Symposium for Regulators allow to have a constructive discussion on topical regulatory issues and identify best practice guidelines while ad hoc targeted assistance intervenes to leverage on those and provide for policy choices opening ways to new digital opportunities.
- Developing various platforms for developing a common understanding, vision and strategy on ICTs and multiple collaboration mechanisms are put in place to further the dialogue among regulatory authorities as well as with industry, consumers and other stakeholders.
- Acting as a partner to ICT regulators and policy makers as well as to the private sector to further ICT development and social inclusion, by facilitating and creating partnerships, such as private-public-partnerships (PPP), with aid-donors, governments, ministries and NGOs, in particular to meet universal access goals for rural, remote and unserved areas and for people with special needs.
- Promoting and facilitating international cooperation on specialized fields such as cybersecurity, together with other UN agencies, in order to contribute to the achievement of peace and international security.
- Monitoring commitment to cybersecurity worldwide, through the ITU Global Cybersecurity Index (GCI), assessing national cybersecurity strategies, national plans or policies, capacity development questions, response teams and technical aspects, specific legislation to counter the threats as well as cooperation amongst Member States.
- Providing assistance to countries in field of legislation, national cybersecurity strategies (NCS), computer incident response teams (CIRTs), awareness and capacity development to communicate the strategies, and capabilities and programmes in the field of cybersecurity through annual Global Cyberdrill events.
- Rolling out the Global Child Online Protection Guidelines worldwide, ensuring the mainstreaming of the set of recommendations for all relevant stakeholders on how to

contribute to the development of a safe and empowering online environment for children and young people.
- Providing globally harmonized spectrum and standards, ITU enables the development of mobile broadband, satellite and terrestrial sound and television broadcasting and their wider penetration, thus facilitating public access to information and protection of fundamental freedoms.
- Standardizing technical specifications and solutions for identity management in (heterogeneous) in next generation networks for interoperable identification and authentication (SDG target 16.9).

**Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development**

*ICTs are specifically mentioned as a means of implementation under SDG17, highlighting the cross-cutting transformative potential of ICTs. Indeed, ICTs are crucial in achieving all of the SDGs, since ICTs are catalysts that accelerate all three pillars of sustainable development – economic growth, social inclusion and environmental sustainability – as well as providing an innovative and effective means of implementation in today's inter-connected world. Paragraph 15 of the 2030 Agenda for Sustainable Development highlights that "the spread of information and communication technology and global interconnectedness has great potential to accelerate human progress, to bridge the digital divide and to develop knowledge societies…"*

**ITU contributes to targets 17.3, 17.6, 17.7, 17.8, 17.9, 17.11, 17.16 and 17.19 through:**

- The ITU World Telecommunication Development Conference 2021, to be held from 8-19 November 2021 in Addis Ababa, Ethiopia, will provide a unique opportunity to develop innovative approaches and new models of collaboration for connectivity and digital solutions in this final Decade of Action to achieve the SDGs. WTDC will mobilize the global community around the power of digital transformation and reshape the connectivity agenda to achieve the SDGs.
- The implementation of ITU Strategic Plan, linked to the ITU Connect 2030 Agenda, and WTDC Action Plan will contribute in achieving the SDGs. Based on key policy and regulatory developments which impact innovation and investment, including and in particular through implementation of the Regional Initiatives and to implement the SDGs where ICTs can play a decisive role, including health, education, gender equality, agriculture, governance, e-waste and emergency telecommunications. Mapping of activities between other Sectors is conducted and calendar of events which facilitates collaboration and coordination between Sectors is developed.
- The "World Telecommunication and Information Society Day" celebrated annually on 17 May, to raise awareness of the possibilities that the use of the Internet and other ICTs can bring to societies and economies, as well as ways to bridge the digital divide. Since 2020, aligned with the Decade of Action, themes are focused on promoting the Connect 2030 Agenda to follow the progress of ITU membership to deliver on its goals and targets (in line with the SDGs), and to share the guidance of ITU and the contribution of the membership towards connecting the world.
- Study groups that provide an opportunity for all Member States and Sector Members, Associates and Academia, to share experiences, present ideas, exchange views and achieve consensus on appropriate strategies to address ICT priorities.
- Mobilizing in-cash and in-kind resources through partnership with various stakeholders from the ICT ecosystem for the implementation of ICT activities, projects and initiatives in developing countries at national and regional levels, including by developing

strategies and related tools and services (databases sponsorship packages, dedicated websites, concept notes, promotional vehicles, etc.).

- Strengthening the global ICT innovation ecosystem through activities such as know-how sharing (e.g. Global Innovation Forum, WSIS, Digital World, Broadband Commission for Sustainable Development), and co-creating grassroots projects based on new global and local partnerships. In addition newly established International Centre of Digital Innovation (I-CoDI), will provide assistance to the Member States facilitation integration of telecommunication/ICT innovation into their national development agendas.
- Promoting and scaling up actions at the global level aiming at adopting whole-of-government approaches for investing in shared digital infrastructure that can lead to more rapid scale-up of digital services at less cost and greater return on investment, and how to coordinate investment to make digital public goods available that can enable digital transformation for SDGs.
- Strengthening the means of implementation and enhancing access to science, technology and innovation by strengthening international cooperation and knowledge sharing on key ICT topics through its dedicated study groups.
- Providing a neutral platform for international cooperation towards building a harmonized and coordinated approach to fast-forward the evolution of the information society.
- Monitoring of Target 17.6 by collecting and disseminating data on Internet access and usage, in particular fixed broadband access, which is a key requirement for enhanced access to science, technology and innovation networks.
- The establishment of Mutual Recognition Agreements for a common and harmonized Conformance and Interoperability (C&I) programme at international and regional levels. Through the share and efficient use of C&I infrastructures – as laboratories, accreditation bodies and regulatory practices – technical requirements can be harmonized and the transit of ICT goods and services can be facilitated, increasing trade and regional development.
- The deployment of broadband technology and network infrastructures for multiple telecommunication services and applications, and to the evolution to all IP-based wireless and wired next-generation networks (NGNs), introducing digital broadcasting, which is opening up opportunities for the dissemination of environmentally sound solutions.
- The monitoring of Target 17.8 by collecting and disseminating a number of relevant ICT indicators that enable STI capacity building in least developed countries, including on Internet access and usage, international bandwidth and ICT prices. Activities are carried out in close collaboration with the Partnership on Measuring ICT for Development.
- Bringing together key stakeholders to discuss international cooperation on ICT through its annual Global Symposium for Regulators, regional economic forums and dialogues and the World Telecommunication/ICT Indicators Symposium (WTIS), organised by ITU.
- Promoting ICT regulatory policies enhancing policy coherence, notably by making knowledge exchange tools and platforms available, raising awareness about the importance of an enabling environment.
- Building harmonized regulatory frameworks within and across regions, and establishing a broader and inclusive dialogue and enhanced cooperation among all stakeholders.
- Enhancing the global partnership for sustainable development by working with governments, through their policy making and development of institutional frameworks for the ICT sector as well as with the private sector, to lay the foundation of modern digital economies.

- Further scaling up a series of strategic initiatives aiming at acceleration of achievement of diverse SDGs thanks to ICTs, such as Connecting Every School to the Internet (GIGA), International Center of Digital Innovation (I-CoDI), Connect2Recover, Digital Transformation Centres, EQUALS, Girls can Code, Be He@lthy Be Mobile, Big Data for Measuring the Information Society, Financial Inclusion Global Initiative (FIGI).
- Encouraging and promoting effective public, public-private and civil society partnerships by partnering with a range of stakeholders to empower women, girls, youth, children, indigenous peoples and persons with disabilities(e.g. for example by leading the Thematic Area on Digital Skills of the Global Initiative for Decent Jobs for Youth, and through the ITU-ILO Digital Skills Campaign for Decent Jobs for Youth; by leading the International Girls in ICT Campaign; by hosting EQUALS: the global partnership to bridge the gender digital divide or by contributing to the regional initiatives and events in ICT accessibility – ICT for all)
- An ongoing track record of inviting experts from developing countries to ITU meetings, workshops etc. Also the Focus Group on Innovation studied cases of ICT innovations for developing countries and developed proposals for new standardization activities for ITU study groups and the ICT Innovation Panel.
- Developing and disseminating best practices on the use of radiocommunications and organizing seminars and workshops, ITU contributes to enhance the use of enabling technologies, in particular information and communications technologies.

  Cooperation and coordination with other standards developing organizations, such as through ITU Focus Groups, workshops and seminars, liaison activities etc.

- The annual WSIS Forum continues to be a key platform for multistakeholder networking and collaboration to develop inclusive and development-oriented information and knowledge societies. The Forum brings together high-level officials, academics, practitioners, ICTs experts, youth, business, and civil society leaders to engage in addressing issues on ICTs for development. The WSIS Forum 2021 has started with a series of virtual events and will be concluded in the final week from 17 to 21 May 2021. The AGENDA and outcome of the forum are strategically align to the WSIS Action Lines and the SDGs. (www.wsis.org/forum)

- Creation of the WSIS Action Lines and SDG matrix, coordinated by ITU and developed by a number of United Nations agencies at the WSIS Forum 2015, and ever since used as a tool to map how ICTs may contribute to the implementation of SDGs. The Matrix serves as an easy reference for stakeholders engaged in shaping the future of both, the SDGs and the WSIS processes (www.wsis.org/sdg)