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**Progress made in the implementation of and follow-up to the
outcomes of the World Summit on the Information Society at
the regional and international levels**

Report of the Secretary-General

Summary

This report has been prepared in response to Economic and Social Council resolution 2006/46, which requested the Secretary-General of the United Nations to inform the Commission on Science and Technology for Development about the implementation of World Summit on the Information Society outcomes. The report highlights major developments and activities by stakeholders in 2020. It was prepared by the secretariat of the United Nations Conference on Trade and Development, based on information provided by entities in the United Nations system, international organizations and other stakeholders.

* E/2021/1.



Introduction

1. This report has been prepared in response to Economic and Social Council resolution 2006/46. It includes information provided by 29 entities in the United Nations system, international organizations and other stakeholders in response to a letter from the Secretary-General of the United Nations Conference on Trade and Development (UNCTAD) requesting contributions on trends, achievements and obstacles in the implementation of World Summit on the Information Society (WSIS) outcomes.¹ The report summarizes developments and activities in 2020.

I. Key trends

A. The pandemic

2. The year 2020 was a testing ground for progress towards the people-centred, inclusive and development-oriented information society envisaged at WSIS. Efforts to address the health-related and economic impacts of the coronavirus disease of 2019 (COVID-19) pandemic were the focus of the United Nations, international organizations, Governments and other stakeholders throughout the year, as shown by the many programmes, initiatives and publications cited in this report.

3. Digital technologies have played a crucial role in addressing the pandemic and enabling resilience. The use of big data and artificial intelligence has contributed to public health interventions and vaccine development. Governments and health authorities have used new media to spread information and digital services to expedite infection monitoring and testing. Restrictions on movement, introduced to curb the spread of infection, have required millions of businesses and employees to work remotely, using the Internet and videoconference platforms. Schools and colleges have closed their campuses and many young people have been receiving education online. The trend towards electronic commerce (e-commerce) has accelerated, in both international and domestic markets.² The use of online entertainment platforms has also expanded. These developments seem likely to continue after the pandemic, accelerating changes arising from digitalization that were already apparent in economic, social and cultural areas.

4. Information and communications technologies (ICTs) have helped to mitigate the impacts of the pandemic, yet the economic impact has nevertheless been severe and the extent of mitigation unequal. The world economy is estimated to have shrunk by more than 4 per cent in 2020,³ exacerbating inequalities and adding to the challenge of achieving the

¹ African Union Commission; Association for Progressive Communications (APC); Council of Europe; Economic and Social Commission for Asia and the Pacific (ESCAP); Economic and Social Commission for Western Asia (ESCWA); Economic Commission for Europe (ECE); Economic Commission for Latin America and the Caribbean (ECLAC); Food and Agriculture Organization of the United Nations (FAO); International Federation of Library Associations and Institutions (IFLA); Internet Governance Forum (IGF) secretariat; Internet Society (ISOC); International Telecommunication Union (ITU); International Trade Centre (ITC); Organization for Economic Cooperation and Development (OECD); UNCTAD; United Nations Children's Fund (UNICEF); United Nations Development Programme (UNDP); United Nations Department of Economic and Social Affairs (DESA); United Nations Educational, Scientific and Cultural Organization (UNESCO); United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women); United Nations Environment Programme; United Nations Group on the Information Society; United Nations Industrial Development Organization; United Nations Office on Drugs and Crime; World Bank; World Health Organization (WHO); World Intellectual Property Organization (WIPO); World Meteorological Organization (WMO); World Trade Organization (WTO). See [https://unctad.org/publications-search?f\[0\]=product%3A667](https://unctad.org/publications-search?f[0]=product%3A667).

Note: All websites referred to in footnotes were accessed 24 February 2021.

² See https://unctad.org/system/files/official-document/dtstictinf2020d1_en.pdf.

³ <https://www.imf.org/en/Publications/WEO/Issues/2020/09/30/world-economic-outlook-october-2020>.

Sustainable Development Goals. Those who lack affordable connectivity have been disadvantaged in comparison with those that have such connectivity; manual and casual workers have been less able to work online than others; and children without access to computers and connectivity have been disadvantaged with regard to receiving education. Families without connectivity have been unable to shop online. The pandemic has thereby emphasized the crucial value of affordable access to digital resources for full participation in society.

5. Other challenges have also emerged. Increased demand has put greater pressure on communications infrastructure, although networks have proven more resilient than expected. Alongside reliable information about the pandemic, there has been widespread misinformation and disinformation, amounting to what WHO has called an infodemic.⁴ The role of health-related and other data in disease control has raised new issues related to privacy and data protection. The growing use of ICTs across all sectors has raised new threats to cybersecurity.

6. The COVID-19 pandemic has thus posed challenges for all stakeholders concerned with WSIS outcomes and the Sustainable Development Goals. The accelerated use of ICTs provides an opportunity to learn lessons from experiences that can help optimize opportunities, mitigate risks and enable stakeholders and societies to rebuild better as the crisis recedes.

B. Connectivity, access and usage

7. Access to the Internet and broadband networks has continued to increase worldwide, but significant challenges remain in fulfilling the target under the Goals of universal connectivity. In developed countries, nearly the entire population can now access fourth generation networks, yet less than half of those in the least developed countries have such coverage.

8. Worldwide, the level of domestic Internet access is twice as high in urban areas as in rural areas and there is a significant gender gap in access to and use of the Internet; 55 per cent of men and 48 per cent of women are estimated to use the Internet, yet the gap is much greater in the least developed countries, in which only 15 per cent of women are estimated to be online. Connectivity alone is insufficient for inclusion in the information society. Limited digital skills prohibit the effective use of Internet-based resources. The quality, speed, reliability and affordability of connectivity are also crucial. Data remains expensive in over half the world's economies, compared with the target of the Broadband Commission for Sustainable Development that entry-level broadband services should cost less than 2 per cent of monthly gross national income per capita.⁵

9. The issue of affordability is manifold. Investment in and roll-out of infrastructure, including electricity; spectrum pricing set by Governments and regulators; insufficient competition among telecommunications operators; and taxation on ICT-related services all affect the price of connectivity.⁶ Low revenue potential due to low demand, particularly in rural, sparsely populated areas, can drive up the price.⁷ In addition, low levels of disposable income raise costs in relative terms. Governments therefore have a critical role to play in connecting the unconnected.

10. Advances in technology tend to become available first in countries and among individuals that already benefit and can readily afford digital resources. The pandemic has reinforced the concern that the lack of digital equality may increase inequalities in social and economic opportunities and outcomes. More sophisticated monitoring of digitalization and its impact is essential in achieving the goals of WSIS and the Sustainable Development

⁴ <https://www.who.int/news/item/11-12-2020-call-for-action-managing-the-infodemic>.

⁵ <https://www.itu.int/en/ITU-D/Statistics/Pages/facts/default.aspx>.

⁶ <https://www.itu.int/en/myitu/Publications/2020/09/18/07/52/The-State-of-Broadband-2020>;
<https://www.gsma.com/spectrum/resources/effective-spectrum-pricing/>;
<https://www.itu.int/en/mediacentre/backgrounders/Pages/affordability.aspx>.

⁷ <https://unctad.org/webflyer/internet-broadband-inclusive-digital-society>.

Goals. This will require greater cooperation for digital inclusion, with the aim of enabling full participation in the information society by all individuals and communities worldwide.

C. Digital cooperation

11. A new approach to digital cooperation was set out in the *Report of the Secretary-General: Road Map for Digital Cooperation*, which built on work by the High-Level Panel on Digital Cooperation and broad consultations.⁸ The Road Map responds to complex changes and rapid developments in digital technology and their impacts on economies and societies. The emergence of new and frontier technologies has intensified debate about their contributions in the future. There is great interest in potentially transformative impacts on developmental challenges, but also concern about ethical issues, including with regard to human rights, therefore increasing the need for digital cooperation. The Road Map outlines the convening role of the United Nations and outlines priorities for global connectivity, digital public goods, inclusion, capacity-building, human rights, trust and security and emerging new technologies. It suggests reforms to IGF to increase its responsiveness to digital issues and proposes establishing a multi-stakeholder advisory body on artificial intelligence.

D. New challenges in digital governance

12. New governance challenges continually emerge as technology advances. Critical issues, including complex questions of sovereignty and accountability, arise from the growing reliance of administrations on data sets and algorithms and from the concentration of digital resources in global digital platforms, data management and infrastructure businesses. Three issues of governance became increasingly important in 2020.

13. Each step towards the information society increases the importance of cybersecurity. Digital engagement requires trust in the integrity of systems, from the security of network infrastructure to the need for fraud prevention and the protection of personal data. Each innovation in technology holds the potential for new types of cyberthreats. The proliferation of devices and services creates opportunities for everyday users but also for criminals. In addition, increased dependence on digital resources during the pandemic has exacerbated risks. Governments, businesses and other stakeholders have worked together in diverse forums to address new threats and build responsive governance modalities.

14. Economic relationships and structures are changing rapidly as digitalization increases. The rapidly evolving roles of platforms, global data management and business models built around economies of scale in leveraging data have been particularly notable. Governments in many countries are exploring frameworks for the regulation and accountability of platforms, including their relationships with local businesses, issues of competition policy and the extent to which global businesses should contribute, through taxation, to national development priorities.

15. Environmental aspects of digitalization have become increasingly important. Growing volumes of digital devices, applications, data traffic and digitalization have increased energy consumption, which contributes to climate change. Digital optimization through smart systems for managing utilities and services, however, has the potential to facilitate reductions in energy consumption in other sectors. In addition, large volumes of electronic waste are generated through rapid technological improvements. Governments and businesses are seeking ways to maximize environmental gains from digitalization while minimizing and mitigating environmental costs.

⁸ <https://www.un.org/en/content/digital-cooperation-roadmap/>; <https://digitalcooperation.org/>.

II. Implementation and follow-up at the regional level

A. Africa

16. The African Union adopted the Digital Transformation Strategy for Africa 2020–2030 to spur innovative, inclusive and sustainable growth.⁹ The African Union Commission is developing its implementation and evaluation architecture with support from the World Bank.

17. The Economic Commission for Europe *Economic Report on Africa 2020: Innovative Finance for Private Sector Development in Africa* focused on leveraging financial technology innovation to support progress towards sustainable development.

18. The World Bank published a report on the growing digital economy in Africa and completed two diagnostic studies under its digital economy for Africa initiative.¹⁰

19. ISOC and the African Network Information Centre, the regional Internet registry, launched a project to measure the resilience of the Internet environment in Africa.¹¹ IGF in Africa was held online in November 2020 and work continued on developing national and regional IGFs and national Internet governance schools.

B. Asia and the Pacific

20. ESCAP and ITU co-hosted a regional review session on the Asia-Pacific information superhighway, which aims to improve the connectivity of landlocked developing countries, promote universal broadband and improve disaster preparedness.¹² ESCAP worked to improve connectivity and overcome regulatory barriers in subregions through studies of infrastructure co-deployment in South Asia and Internet traffic management in South-East Asia; and worked with ISOC on an operational model to improve Internet exchange points in the Pacific.¹³

C. Western Asia

21. ESCWA promoted development in online services and infrastructure in the Arab region, to overcome barriers arising from the pandemic, ongoing conflicts, poor infrastructure and cybersecurity challenges. *Arab Digital Development Report 2019: Towards Empowering People and Ensuring Inclusiveness* focused on efforts to facilitate inclusion and empowerment. ESCWA supported Governments in developing national digitalization strategies, compiling national digital development reports and publishing readiness guides on big data. In addition, ESCWA worked with the League of Arab States to develop an Arab ICT strategy, including a proposed Arab digital agenda, and is preparing a study on open government in partnership with OECD.

D. Europe

22. The European Commission issued “Shaping Europe’s digital future”, a digital strategy document aimed at supporting technology in a competitive digital economy and an

⁹ <https://au.int/en/documents/20200518/digital-transformation-strategy-africa-2020-2030>.

¹⁰ https://www.ifc.org/wps/wcm/connect/publications_ext_content/ifc_external_publication_site/publications_listing_page/google-e-conomy; <https://www.worldbank.org/en/programs/all-africa-digital-transformation>.

¹¹ <https://www.internetsociety.org/blog/2020/11/measuring-internet-resilience-in-africa/>.

¹² <https://www.unescap.org/events/fourth-session-asia-pacific-information-superhighway-ap-steering-committee-and-wsis-regional>.

¹³ <https://www.unescap.org/resources/study-costing-operational-principles-and-modalities-proposed-south-pacific-internet>.

open, democratic and sustainable society; and prepared new legislative frameworks for digital markets and services.¹⁴

23. ECE coordinates the United Nations Centre for Trade Facilitation and Electronic Business, which develops trade facilitation recommendations and electronic standards for commercial and government business. The subregional innovation policy outlook supported innovation policy in Eastern Europe, as well as Armenia, Azerbaijan and Georgia. ECE worked with ESCAP to promote sustainable innovation in Central Asia.

24. The Council of Europe prioritized work on freedom of expression, the impact of misinformation and disinformation and the implications of artificial intelligence for human rights.

25. The European Dialogue on Internet Governance was held online, focused on the sustainable development of the Internet, and issued a review of virtual implementation along with messages arising from the discussions.¹⁵

E. Latin America and the Caribbean

26. ECLAC serves as the technical secretariat for the digital agenda for Latin America and the Caribbean agreed by regional ministers in 2020, which has eight focus areas, namely, infrastructure, the digital economy, digital government, inclusion and digital skills, emerging technologies, trust and digital security, the regional digital market and digital regional cooperation.¹⁶ ECLAC prepared reports on digitalization in response to the pandemic, the pandemic's impact on e-commerce and the importance of universalizing digital access, as well as a report on tracking the digital footprint in Latin America and the Caribbean that identified lessons from using big data to assess the digital economy.¹⁷ ECLAC maintains a regional broadband observatory¹⁸ and is planning a digital economic observatory supporting ICT measurement.

27. OECD published *Latin American Economic Outlook 2020: Digital Transformation for Building Back Better*.

III. Implementation and follow-up at the international level

A. United Nations Group on the Information Society

28. The United Nations Group on the Information Society coordinates the inter-agency implementation of WSIS outcomes across the United Nations system.¹⁹ The Group launched a dialogue on the role of digitalization in the decade of action to implement the Sustainable Development Goals, with contributions from the heads of United Nations agencies, and held an event on this theme during the High-Level Political Forum on Sustainable Development.²⁰ The Group also launched a digital transformation repository as a reference guide to ICTs and the Goals.

¹⁴ https://ec.europa.eu/info/publications/communication-shaping-europes-digital-future_en;
<https://ec.europa.eu/digital-single-market/en/digital-services-act-package>.

¹⁵ <https://www.eurodig.org/messages-2020/programme-2020/>.

¹⁶ <https://conferenciaelac.cepal.org/7/en/documents>.

¹⁷ <https://www.cepal.org/en/publications/45939-universalizing-access-digital-technologies-address-consequences-covid-19>; <https://www.cepal.org/en/publications/45484-tracking-digital-footprint-latin-america-and-caribbean-lessons-learned-using-big>.

¹⁸ <https://www.cepal.org/es/observatorio-regional-de-banda-ancha>.

¹⁹ <https://www.itu.int/net4/wsis/ungis/About>.

²⁰ <https://unctad.org/topic/ecommerce-and-digital-economy/ungis-dialogue>.

B. General Assembly and Economic and Social Council

29. The General Assembly adopted a resolution on ICTs for sustainable development.²¹ The Economic and Social Council adopted a resolution on assessment of the progress made in the implementation of and follow-up to the outcomes of WSIS.²²

C. Commission on Science and Technology for Development

30. The twenty-third session of the Commission focused on harnessing rapid technological change for inclusive sustainable development and on evolving space technologies. It also reviewed progress on WSIS implementation.²³

D. Facilitation and coordination of multi-stakeholder implementation

31. WSIS Forum 2020, marking 15 years since WSIS, was held through a series of weekly programmes in June–September, with the theme of “Fostering digital transformation and global partnerships: WSIS action lines for achieving the Sustainable Development Goals”. Participants from some 150 countries took part in about 160 online sessions covering a wide range of subjects. The ministerial-level round table focused on bridging the digital divide and lessons learned from the pandemic and high-level policy sessions considered cybersecurity, climate change, the digital economy and ethical dimensions of information and knowledge societies. Special discussions addressed gender mainstreaming, disabilities and the interests of youth and the elderly. The WSIS stocktaking platform, maintained by ITU, provides information on more than 12,000 ICT-related and development activities undertaken by diverse stakeholders across the different WSIS action lines. ITU published a global report and six regional reports on stocktaking, as well as a compendium of success stories and a report summarizing the submissions made to a repository of responses to the pandemic.²⁴

32. The Broadband Commission reviewed its decade of work and reaffirmed commitment to broadband deployment and connectivity within the framework of the *Report of the Secretary-General: Road Map for Digital Cooperation*. The Commission published *The State of Broadband: Tackling Digital Inequalities – A Decade for Action*, as well as reports on school connectivity, artificial intelligence in health care and disinformation in relation to freedom of expression; and launched working groups on financing models for broadband, epidemic management and digital learning. It adopted an agenda for action on the pandemic, centred on resilient connectivity, affordable access and safe use and addressing both immediate challenges and post-crisis recovery.²⁵

E. Civil society, business and multi-stakeholder partnerships

33. Many activities that support WSIS objectives are implemented by businesses, civil society, academic and technical communities and multi-stakeholder partnerships.

34. The International Chamber of Commerce coordinates WSIS-related activities through its business action to support the information society initiative and contributes to international discussions, including at IGF and the WSIS Forum.²⁶

²¹ A/RES/75/202.

²² E/RES/2020/12.

²³ E/2020/31-E/CN.16/2020/4.

²⁴ <https://www.itu.int/net4/wsis/forum/2020/Home/Outcomes>.

²⁵ <https://www.broadbandcommission.org/COVID19/Pages/default.aspx>.

²⁶ <https://iccwbo.org/global-issues-trends/digital-growth/internet-governance/business-action-to-support-the-information-society-basis/>.

35. The Global System for Mobile Communications Association (GSMA) represents mobile communications businesses. It published its annual report on the mobile economy, *The Mobile Economy 2020*, including seven regional reports, as well as *The State of Mobile Internet Connectivity 2020* and *State of the Industry Report on Mobile Money 2019*.²⁷

36. IFLA supports access to the Internet through libraries and public facilities, many of which moved their services online during the pandemic. The Partnership for Public Access, including the Alliance for Affordable Internet, IFLA and ISOC, issued a declaration on the role of libraries.²⁸

37. ISOC provides a forum for the technical and professional Internet community and others concerned with Internet development and management. Its technical focus includes support for community networks, Internet exchange points, local network operator groups and national education and research networks. ISOC issued an Internet impact assessment toolkit to help stakeholders assess the impacts of policies, technologies and trends on Internet functionality.²⁹

38. The World Wide Web Consortium develops standards for the web. The World Wide Web Foundation promotes principles for improving the impact of the web and hosts the Alliance for Affordable Internet.

39. APC, an international network of civil society organizations concerned with development, rights and gender, focused on rights issues associated with the pandemic and the promotion of community networks.³⁰ Its global information society watch project is addressing the environmental impact of ICTs.

F. Facilitation of action lines and selected implementation of activities by United Nations entities

1. Implementation of action lines

40. Implementation of WSIS outcomes is aligned with implementation of the 2030 Agenda for Sustainable Development through General Assembly resolutions 70/1 and 70/125. In 2005, 11 action lines were agreed for multi-stakeholder implementation of the outcomes. Action line facilitators review implementation annually using an agreed matrix of the action lines and the Goals.³¹ An online meeting of facilitators was held during the WSIS Forum, as well as meetings on individual action lines, focusing on pandemic-related outcomes and issuing an assessment of 15 years of action line implementation.³²

(a) The role of public governance authorities and all stakeholders in the promotion of information and communications technologies for development (C1)

41. The value of multilateral, multi-stakeholder and multidisciplinary engagement has been central to the implementation of WSIS outcomes and reiterated in the *Report of the Secretary-General: Road Map for Digital Cooperation*.

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