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INTERNATIONAL TELECOMMUNICATION UNION BACKGROUND GUIDE 2018

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Dear Delegates,

Welcome to the 2018 National Model United Nations New York Conference (NMUN•NY)! We are pleased to welcome you to the International Telecommunications Union (ITU). This year's staff are: Patrick Sandmann (Conference A) and Leah Schmidt (Conference B), and Assistant Directors Alliyah Edwards (Conference A) and Mariam Bojang (Conference B). Patrick holds a MBA and a master's degree in EU Studies. He currently works as a senior financial advisor in a Munich-based consultancy. Leah worked with the Permanent Mission of Canada to the UN, and is currently reading for her MPhil at the University of Cambridge. Alliyah studies at the University of South Florida majoring in political science and social science education. Mariam graduated from the University of Texas at and holds a master's in Political Science and Government. Mariam currently works for the Seattle Downtown Emergency Service Center, and acts as the spokesperson survivor representative for the Global Woman P.E.A.C.E. foundation.

The topics under discussion for the International Telecommunications Union are:

1. Promoting Digital Citizenship among Youth
2. Using ICTs to Promote Gender Equality and the Empowerment of Women
3. Advancing Human Rights and Development through Artificial Intelligence

The ITU is a specialized agency of the United Nations that acts to provide guidance and expert recommendations on information and telecommunications technology (ICTs). As the only UN body to support the development and globalization of ICTs, the ITU occupies a unique and effective space within the international community. The ITU helps to support the billions of users of mobile phones, television, satellite services, and Internet, among others, and as such, the ITU helps to solve challenges that threaten the effectiveness of global communication. In order to accurately stimulate the committee, it will be key for delegates to understand ITU's role as the facilitator of multi-sector dialogue and regulations, and the establisher of global best practices and standards.

This Background Guide serves as an introduction to the topics for this committee. However, it is not intended to replace individual research. We encourage you to explore your Member State's policies in depth and use the Annotated Bibliography and Bibliography to further your knowledge on these topics. In preparation for the Conference, each delegation will submit a [Position Paper](#) by 11:59 p.m. (Eastern) on 1 March 2018 in accordance with the guidelines in the [NMUN Position Paper Guide](#).

Two resources, to download from the [NMUN website](#), that serve as essential instruments in preparing for the Conference and as a reference during committee sessions are the:

1. [NMUN Delegate Preparation Guide](#) - explains each step in the delegate process, from pre-Conference research to the committee debate and resolution drafting processes. Please take note of the information on plagiarism, and the prohibition on pre-written working papers and resolutions. Delegates should not start discussion on the topics with other members of their committee until the first committee session.
2. [NMUN Rules of Procedure](#) - include the long and short form of the rules, as well as an explanatory narrative and example script of the flow of procedure.

In addition, please review the mandatory [NMUN Conduct Expectations](#) on the NMUN website. They include the Conference dress code and other expectations of all attendees. We want to emphasize that any instances of sexual harassment or discrimination based on race, gender, sexual orientation, national origin, religion, age, or disability will not be tolerated.

If you have any questions concerning your preparation for the committee or the Conference itself, please contact the Under-Secretaries-General for the Development Department, Moritz Müller (Conference A) and Maximilian Jungmann (Conference B), at usg.development@nmun.org.

We wish you all the best in your preparations and look forward to seeing you at the Conference!

Conference A

Patrick Sandmann, Director
Alliyah Edwards, Assistant Director

Conference B

Leah Schmidt, Director
Mariam Bojang, Assistant Director



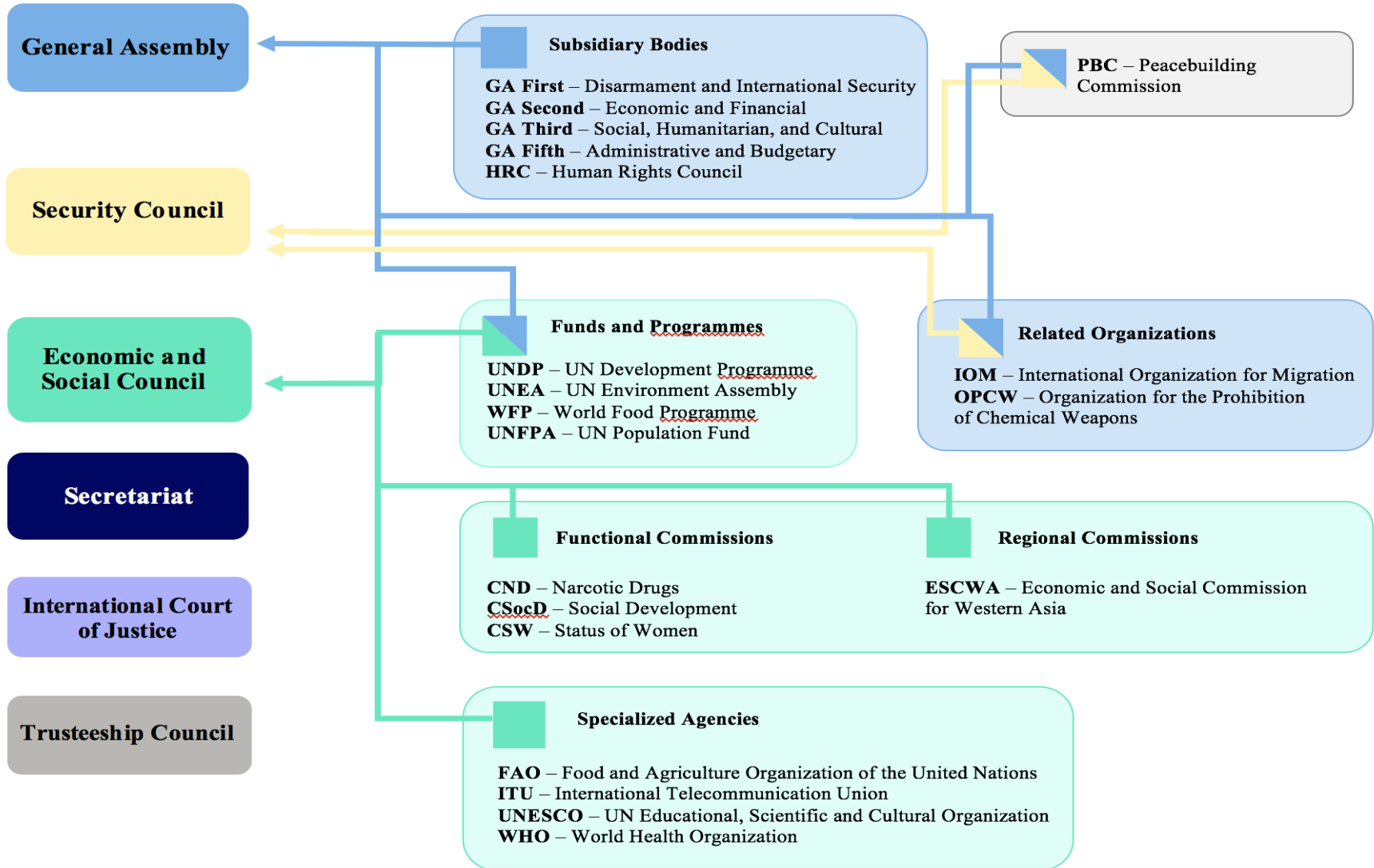
Table of Contents

United Nations System at NMUN•NY.....	2
Abbreviations.....	3
Committee Overview.....	5
Introduction.....	5
Governance, Structure, and Membership.....	6
Mandate, Functions, and Powers.....	7
Recent Sessions and Current Priorities.....	8
Conclusion.....	8
Annotated Bibliography.....	9
Bibliography.....	10
I. Promoting Digital Citizenship Among Youth.....	13
Introduction.....	13
International and Regional Framework.....	13
Role of the International System.....	15
Youth and Digital Skills.....	17
Women and Girls.....	18
Conclusion.....	19
Further Research.....	19
Annotated Bibliography.....	19
Bibliography.....	21
II. Using ICTs to Promote Gender Equality and the Empowerment of Women.....	24
Introduction.....	24
International and Regional Framework.....	24
Role of the International System.....	25
Challenges Facing Women and Access to ICTs.....	27
Successful Usage of ICTs for Gender Equality and the Empowerment of Women.....	28
Conclusion.....	30
Future Research.....	30
Annotated Bibliography.....	30
Bibliography.....	32
III. Advancing Human Rights and Development Through Artificial Intelligence.....	37
Introduction.....	37
International and Regional Framework.....	37
Role of the International System.....	38
Artificial Intelligence in Human Rights and Development.....	40
Case Study: AI and Healthcare in Developing Countries.....	41
Case Study: XPRIZE.....	42
Conclusion.....	43
Further Research.....	43
Annotated Bibliography.....	43
Bibliography.....	46



United Nations System at NMUN•NY

This diagram illustrates the UN system simulated at NMUN•NY and demonstrates the reportage and relationships between entities. Examine the diagram alongside the Committee Overview to gain a clear picture of the committee's position, purpose, and powers within the UN system.





Abbreviations

ABI	Anita Borg Institute for Women and Technology
AfDB	African Development Bank
AI	Artificial Intelligence
APC	Association for Progressive Communication
ATIC	National Association of Private ICT Companies
BSG	Bridging the Standardization Gap
CEDAW	<i>Convention on the Elimination of All Forms of Discrimination against Women</i>
COP	Child Online Protection Initiative
CRC	<i>Convention on the Rights of the Child</i>
CSO	Civil Society Organization
CTSD	Commission on Science and Technology for Development
ECOSOC	Economic and Social Council
ECWT	European Centre for Women and Technology
EIA	Ericsson's Innovation Awards
EQUALS	The Global Partnership for Gender Equality in the Digital Age
GDP	Gross domestic product
GEM	Gender Equality and Mainstreaming
GESCI	Global e-Schools and Communities Initiative
GKO	Global Kids Online
GPS	Global Positioning Systems
GSS	Global Standards Symposium
HLPF	High-Level Political Forum on Sustainable Development
ICCPR	<i>International Covenant on Civil and Political Rights</i>
ICESCR	<i>International Covenant on Economic, Social and Cultural Rights</i>
ICT	Information and communication technology
ILO	International Labour Organization
ITU-D	International Telecommunication Union, Telecommunication Development Sector
ITU-R	International Telecommunication Union, Radiocommunication Sector
ITU-T	International Telecommunication Union, Telecommunication Standardization Sector
LCFI	Leverhulme Centre for the Future of Intelligence
MDG	Millennium Development Goal
MSI	Multi-Stakeholder Initiative
NCWIT	National Center for Women and Information Technology
NGO	Non-governmental organization
OECD	Organisation for Economic Co-operation and Development
OHCHR	Office of the United Nations High Commissioner for Human Rights
SDG	Sustainable Development Goal
STEM	Science, technology, engineering, and math
STI	Science, technology, and innovation
UDHR	<i>Universal Declaration of Human Rights</i>
UN	United Nations
UN DESA	United Nations Department of Economic and Social Affairs
UN DESA	United Nations Department of Economic and Social Affairs,
DSD	Division for Sustainable Development
UN-Women	United Nations Entity for Gender Equality and the Empowerment of Women
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization



UNPAN	United Nations Public Administration Network
W4C	Wireless for Communities
WEF	World Education Forum
WEMTECH	Women Empowerment in Technology
WFP	World Food Programme
WHO	World Health Organization
WISE	Women in World Standardization Expert Group
WPAY	<i>World Programme of Action for Youth</i>
WRC	World Radiocommunication Conference
WSIS	World Summit on the Information Society
WTPF	World Telecommunication Policy Forum
WTSA	World Telecommunication Standardization Assembly
YWCL	Youth Crime Watch Liberia

Committee Overview

Introduction

The International Telecommunication Union (ITU) is the United Nations (UN) specialized agency for telecommunications.¹ With the signing of the first *International Telegraph Convention* in Paris on 17 May 1865, the International Telegraph Union, the first embodiment of the ITU, was established.² It had the mandate to supervise subsequent amendments to the agreement, which regulates international legislation on telephony.³ The union in the following decades witnessed and guided the global technical and industrial progress, in particular developments in the field of radio-frequency.⁴ This accumulated in 1932 when the ITU received its current name to reflect the full scope of its responsibilities.⁵ The organization has continued to establish technical standards in this field, covering sound and vision broadcasting beginning in 1949, frequencies for space communication as of 1963 as well as standards for telecommunication infrastructure and access technologies that paved the way for the Internet.⁶

The global impact of ITU's work on the social, cultural and economic development of humanity cannot be dismissed, making the organization and its services a matter of policy for Member States and their citizens.⁷ Information and communication technologies (ICTs) have helped create the digital revolution and the dissemination of information in unprecedented pace.⁸ Mobile broadband subscriptions are globally reaching 4.3 billion by the end of 2017.⁹ While this has led to the spread of ICTs around the world, vast parts of the world remain excluded from these developments and the opportunities linked to it, leading to a digital divide between rich and poor regions.¹⁰

This resulted in the creation of the World Summit on the Information Society (WSIS) as endorsed by UN General Assembly resolution 56/183 of 2001.¹¹ The summit was organized in two phases: the first one in Geneva in December 2003, which worked towards establishing the foundation of an Information Society for all and resulted in the adoption of the *Geneva Declaration of Principles and Geneva Plan of Action*.¹² The second phase took place in Tunis in November 2005, with the aim of putting Geneva's *Plan of Action* into movement.¹³ In order to follow-up on the implementation of the decisions made at the Summit, a high-level meeting of the General Assembly took place in 2015 and reiterated the goal of building a people-centered, inclusive and development-oriented information society.¹⁴ The meeting also highlighted the role of ICTs for connectivity and innovation, which looked to help achieve the *2030 Agenda for Sustainable Development*.¹⁵

ITU has spearheaded efforts in regard to the advancement and dissemination of technology for mobile phones, setting a major milestone at the World Radiocommunication Conference (WRC) in 1993, where radio-frequency spectrum allocations for 2G mobile telephony were negotiated.¹⁶ Agreeing on technical specifications for third-generation systems at the WRC in Istanbul in 2000, allowed full interoperability of mobile systems, paving the way for the first time for new, high-speed wireless devices such as smartphones and mobile PCs, which have greatly impacted private and business relations of today's generation.¹⁷

¹ UN NGLS, *International Telecommunication Union (ITU)*, 2015.

² UN ITU, *Overview of ITU's History*, 2017.

³ Ibid.

⁴ Ibid.

⁵ Ibid.

⁶ Ibid.

⁷ Ibid.

⁸ UN ITU, *Why a Summit on the Information Society*, 2006.

⁹ UN ITU, *ICT: Facts and Figures 2017*, 2017.

¹⁰ UN ITU, *Why a Summit on the Information Society*, 2006.

¹¹ UN General Assembly, *World Summit on the Information Society (A/RES/56/183)*, 2001.

¹² UN ITU, *Basic Information: about WSIS*, 2006.

¹³ Ibid.

¹⁴ UN General Assembly, *Outcome document of the high-level meeting of the General Assembly on the overall review of the implementation of the outcomes of the World Summit on the Information Society (A/RES/70/125)*, p. 2.

¹⁵ Ibid., p. 3.

¹⁶ UN ITU, *Overview of ITU's History*, 2017.

¹⁷ Ibid.

Governance, Structure, and Membership

The Plenipotentiary Conference is the top policy-making body and held every four years, the last taking place in Busan, Republic of Korea in 2014.¹⁸ This meeting of the Member States has several functions: adopt ITU's general policies, determine its structures and activities, adopt financial plans, and revise the Constitution and Convention if needed.¹⁹ Moreover, the conference serves as a platform to elect the senior management team of the organization, the members of Council, and the members of the Radio Regulations Board.²⁰ Between the Plenipotentiary Conferences, the ITU Council is the governing body of the organization and operates its strategic and daily business.²¹ The Council consists of 48 members allocated by region: the Americas having 9 seats, Western Europe having 8 seats, Eastern Europe and Northern Asia having 5 seats, Africa having 13 seats, and Asia and Australasia having 13 seats.²²

ITU works through conferences and meetings, each with a well-defined purpose and outcome.²³ Assemblies are responsible for guiding the activities of ITU's standardization and radiocommunication sectors and adopt the recommendations.²⁴ World and regional radiocommunication conferences serve as a platform to review and revise regulation concerning the use of the radio-frequency spectrum.²⁵ Exhibitions like TELECOM World bring together governments and the representatives of the telecommunications and ICT industry to discuss trends and new technologies.²⁶ Other important events are the Telecommunication Development Conference for concerns of developing countries and the World Telecommunication Policy Forum (WTPF) to discuss changes in the telecommunication environment, which encompasses the technologies itself as well as global ICT-trends and undertakings of government administrations.²⁷ Others are the World conferences on international telecommunications to revise provisions and operation of public telecommunication services and the WSIS to review the progress in creating a global information society.²⁸

ITU is managed by the General Secretariat, which is in charge of the administrative and financial aspects of the organization's activities.²⁹ The key objectives of the work is providing information to the members on activities regarding the financial status, intersectoral coordination of activities and enabling international cooperation and agreements.³⁰ The legal representative of the union and responsible for the management of ITU is the Secretary-General, a position taken since 2015 by Mr. Houlin Zhao.³¹ The Deputy Secretary-General, currently Mr. Malcolm Johnson, assists the Secretary-General with his duties.³² Several strategic and administrative departments within the General Secretariat, such as the Conferences and Publications Department, support its work.³³ 193 Member States are currently members of ITU.³⁴ Additionally, over 700 private sector entities and academic institutions are part of ITU.³⁵ The membership of ITU, moreover, includes telecommunication policy-makers and regulators, network operators, equipment manufacturers, hardware and software developers, regional standard-making organizations and financing institutions.³⁶

¹⁸ UN ITU, *About PP-14*, 2014.

¹⁹ UN ITU, *Brief Guide to ITU Conferences, Assemblies and Events*, 2012, p. 1.

²⁰ UN ITU, *About PP-14*, 2014.

²¹ UN ITU, *ITU Council Overview*, 2017.

²² UN ITU, *ITU Council Membership*, 2017.

²³ UN ITU, *Brief Guide to ITU Conferences, Assemblies and Events*, 2012, p. 1.

²⁴ Ibid.

²⁵ Ibid.

²⁶ Ibid., p. 2.

²⁷ Ibid., pp. 2-3.

²⁸ Ibid.

²⁹ UN ITU, *General Secretariat of ITU*, 2017.

³⁰ Ibid.

³¹ UN ITU, *Office of the Secretary-General*, 2017.

³² UN ITU, *ITU Deputy Secretary-General*, 2017.

³³ UN ITU, *General Secretariat Departments*, 2017.

³⁴ UN ITU, *List of Member States*, 2017.

³⁵ UN ITU, *ITU Membership Overview*, 2017.

³⁶ UN NGLS, *International Telecommunication Union (ITU)*, 2015.

Mandate, Functions, and Powers

The mandate of ITU is “to maintain and extend international cooperation among all its Member States for the improvement and rational use of telecommunications of all kinds.”³⁷ The constitution mandates ITU to promote the extension of the benefits of new ICT technologies to all people.³⁸ The organization serves as a platform for governments and actors from the private sector to coordinate the operation of telecommunication networks and services and advancing ICTs.³⁹ On a global level, ITU is recognized as the organization responsible for harmonizing national policies in this area, finding solutions to overcome technological differences between Member States, and facilitating the availability of ICTs.⁴⁰

ITU consists of three sectors: Radiocommunication (ITU-R), Telecommunication Standardization (ITU-T), and Telecommunication Development (ITU-D).⁴¹ ITU-R is the sector responsible for the global management of the radio-frequency spectrum and satellite orbits.⁴² This includes fixed, mobile, broadcasting, amateur, space research, emergency telecommunications, meteorology, global positioning systems, environmental monitoring and communication services.⁴³ ITU-R is mandated to create an environment that allows the effective and free operation of existing and new radiocommunication systems.⁴⁴ Study Groups within ITU-R develop global standards and provide the technical background on which decisions are afterwards taken at World Radiocommunication Conferences.⁴⁵ Moreover, ITU-R is responsible for the coordination of space systems and earth stations, space-related assignment or allotment plan, and accommodates the launch of new satellites.⁴⁶

ITU-T is governing all efforts to develop international standards for the operation of ICTs, the so-called ITU-T Recommendations.⁴⁷ The recommendations are required to ensure that technologies and networks for voice, video or data message exchange in different countries operate in conjunction.⁴⁸ The general strategy and structure of the sector is determined every four years at the World Telecommunication Standardization Assembly (WTSA), which also establishes the supporting study groups and determines the staffing.⁴⁹ The Study Groups do the actual standardization work within the numerous areas of international telecommunication.⁵⁰ A special feature of ITU-T is the *Technology Watch Report*, which surveys upcoming ICTs and reviews them in terms of impact on developed and developing countries and if standardization activities are needed for regulation purposes.⁵¹

The third sector, ITU-D, is in charge of providing technical assistance and support to developing countries in order to foster the development and improvement of telecommunication and ICT equipment and networks.⁵² This facilitates the digital inclusion of developing countries into today’s information age.⁵³ Bridging the digital divide is the focus of the World Telecommunication Development Conferences, which have taken place since 1985 as well as regional conferences such as Connect the World.⁵⁴ Connect the World is a series of regional conferences, which aim to organize human, financial and technical resources for telecommunication development.⁵⁵ The access to telecommunications correlates with economic growth, making the promotion of ICTs in developing countries crucial

³⁷ UN ITU, *Collection of the basic texts adopted by the Plenipotentiary Conference*, 2015, p. 3.

³⁸ *Ibid.*, p. 4.

³⁹ UN NGLS, *International Telecommunication Union (ITU)*, 2015.

⁴⁰ *Ibid.*

⁴¹ UN ITU-R, *Welcome to ITU-R*, 2017; UN ITU-T, *ITU-T in brief*, 2017; UN ITU-D, *About the ITU-D and the BDT*, 2017.

⁴² UN ITU-R, *Welcome to ITU-R*, 2017.

⁴³ *Ibid.*

⁴⁴ *Ibid.*

⁴⁵ UN ITU-R, *Radiocommunication Study Groups*, 2017.

⁴⁶ UN ITU-R, *Welcome to ITU-R*, 2017.

⁴⁷ UN ITU-T, *ITU-T in brief*, 2017.

⁴⁸ *Ibid.*

⁴⁹ UN ITU-T, *The framework of ITU-T*, 2017.

⁵⁰ *Ibid.*

⁵¹ UN ITU-T, *Technology Watch*, 2017.

⁵² UN ITU-D, *About the ITU-D and the BDT*, 2017.

⁵³ UN ITU, *Overview of ITU's History*, 2017.

⁵⁴ *Ibid.*

⁵⁵ UN ITU-D, *Connect the World*, 2017.

for economic and social progress.⁵⁶ Since 1952, ITU participates in the UN Expanded Programme of Technical Assistance, which now forms United Nations Development Programme (UNDP) through promoting the expansion of networks and initiatives for capacity building.⁵⁷ An important effort by ITU is Bridging the Standardization Gap (BSG), which tackles the difficulties of developing countries to access, implement and influence technical standards.⁵⁸

Furthermore, ITU is leading efforts on cybersecurity, activities related to the protection of consumer rights and privacy protection of children online, endorsing multilingualism on the Internet, international Internet connectivity, and investment in adequate ICT infrastructure.⁵⁹ Additionally, ITU is collaborating with other UN agencies to promote the use of ICTs, for example with UNESCO, through the Broadband Commission for Digital Development, which advocates the use of broadband-based technologies.⁶⁰ ITU and UNIDO are cooperating in efforts to reach Sustainable Development Goal 9, “Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation,” by designing actions plans for innovative policies, actions, standards and technologies.⁶¹

Recent Sessions and Current Priorities

The current work of ITU is guided by *The Strategic Plan for the Union for 2016-2019*, which was adopted at the 2014 Plenipotentiary Conference in Busan, Korea.⁶² At the conference, the members also adopted the *Connect 2020 Agenda for Global Telecommunication/ICT Development*, in which Member States agree to work towards the same targets as listed in the Strategic plan by 2020, in order to create “an information society, empowered by the interconnected world, where telecommunications/ICTs enable and accelerate social, economic and environmentally sustainable growth and development for everyone.”⁶³

An important event that took place in 2017 was the AI for Good Global Summit, which looked for ideas to bring together the development and democratization of AI (Artificial Intelligence) solutions with global challenges such as poverty and environmental issues.⁶⁴ ITU has also placed great emphasis on gender equality and the empowerment of women and girls through ICTs, as highlighted in ITU resolution 70 (Rev. Busan, 2014).⁶⁵ Girls in ICT Day, which is celebrated the 4th Thursday in April every year, aims to encourage girls and young women to look for a career in the area of ICTs.⁶⁶ Young people are the concern of Digital Skills for Decent Jobs for Youth, a campaign by ITU and the International Labour Organization (ILO) that wants to train 5 million young people with job-ready digital skills, starting with how to search and apply for vacancies online as well as advanced skills such as coding.⁶⁷

Conclusion

ITU, as the UN specialized agency for ICTs, is responsible for the digital connectivity of billions of people worldwide, thus playing a critical role in improving lives and creating opportunities.⁶⁸ Split into three sectors, ITU participates in a great range of technical and political topics concerning ICTs and digital connectivity.⁶⁹ The various conferences and meetings are the foundation of the work of ITU and allow Member States, NGOs, hardware and

⁵⁶ UN ITU, *The Missing Link: Report Of The Independent Commission For World Wide Telecommunications Development*, 1985, p. 9.

⁵⁷ UN ITU, *Overview of ITU's History*, 2017.

⁵⁸ UN ITU-T, *Bridging the Standardization Gap (BSG)*, 2017.

⁵⁹ UN ITU, *Overview of ITU's History*, 2017.

⁶⁰ Broadband Commission, *Overview*, 2017.

⁶¹ UNIDO, *UNIDO and ITU partnership to accelerate the achievement of 2030 Agenda*, 2017.

⁶² UN ITU, *Strategic plan for the Union for 2016-2019*, 2015, p. 3.

⁶³ UN ITU, *Connect 2020 Agenda for global telecommunication/information and communication technology development*, 2015, p. 3.

⁶⁴ UN ITU-T, *AI for Good Global Summit*, 2017.

⁶⁵ UN ITU, *Mainstreaming a gender perspective in ITU and promotion of gender equality and the empowerment of women through information and communication technologies* [Resolution 70 (Rev. Busan, 2014)], p. 3.

⁶⁶ UN ITU-D, *Girls in ICT Portal*, 2017.

⁶⁷ ITUNews, *Digital skills: ITU and ILO launch global campaign to train 5 million youths*, 2017.

⁶⁸ UN ITU, *ICT: Facts and Figures 2017*, 2017.

⁶⁹ UN ITU-R, *Welcome to ITU-R*, 2017; UN ITU-T, *ITU-T in brief*, 2017; UN ITU-D, *About the ITU-D and the BDT*, 2017.

software developers and civil society to become engaged.⁷⁰ With mobile broadband subscriptions globally reaching 4.3 billion by the end of 2017, the initiatives and efforts of ITU are crucial to position ICTs as tools to increase economic and social development, and bridge the digital divide between rich and poor regions.⁷¹

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International Telecommunication Union. (2012). *Brief Guide to ITU Conferences, Assemblies and Events* [Background Note]. Retrieved 17 July 2017 from:

<https://www.itu.int/en/history/Documents/GuideToConferencesAssembliesEvents.pdf>

This document briefly explains how the work of ITU is organized through conferences and meetings. It explains the different characteristics and outcomes of the events in which the Members participate in in order to progress the operation of global telecommunication services. These include the Plenipotentiary Conference, Assemblies, the Telecommunication Development Conference and the World Summit on the Information Society. The document is an easy introduction for delegates to understand the function of this unique body and how it influences information and telecommunication technologies.

International Telecommunication Union. (2015). *Collection of the basic texts adopted by the Plenipotentiary Conference* [Report]. Retrieved 26 July 2017 from:

<http://search.itu.int/history/HistoryDigitalCollectionDocLibrary/5.21.61.en.100.pdf>

This comprehensive document entails the basic texts which established the binding, global framework for international telecommunications. Within it, delegates can find information on the structure of ITU, membership and activities. In particular, the sections providing information on the three sectors of Radiocommunication, Standardization, and Development are of great help to understand what the mandate of the organization encompasses. In order to prepare for the conference delegates should consult this document to get a profound understanding of this body.

International Telecommunication Union. (2015). *Strategic plan for the Union for 2016-2019*. Retrieved 17 July 2017 from:

<https://www.itu.int/en/connect2020/PublishingImages/Pages/default/Strategic%20Plan%20for%20the%20Union%202016-2019.pdf>

The Strategic plan is the document guiding the work of the ITU for the period 2016-2019. The strategy contains four goals (Growth, Inclusiveness, Sustainability, Innovation and partnership), which each have several targets, that, for example, aim to improve access to the Internet or make ICT services more affordable. The implementation of the goals is supposed to be obtained through several objectives, which each vary within the different sectors. Delegates might find this document useful as it explains the different problems that ITU can address, and how the organization and its members try to solve them.

International Telecommunication Union. (2017). *ICT: Facts and Figures 2017* [Report]. Retrieved 15 August 2017 from: <https://www.itu.int/en/mediacentre/Pages/2017-PR37.aspx>

The ICT: Facts and Figures document is the annual, summarizing fact sheet for all activities of the organization. It includes detailed information on numbers of broadband users, revenue in the telecommunications sector, and technology developments. The document also highlights persisting challenges such as the digital gender gap in order to provide an overview of the state of affairs of ICTs. Delegates will find this report useful to get a quick understanding of recent developments in this field, and to see the work of ITU underlined by empirically reliable data, which can be used to justify further activities and decisions of the body.

International Telecommunication Union. (2017). *What does ITU do?* [Website]. Retrieved 17 July 2017 from: <https://www.itu.int/en/about/Pages/whatwedo.aspx>

⁷⁰ UN ITU, *Brief Guide to ITU Conferences, Assemblies and Events*, 2012.

⁷¹ UN ITU, *ICT: Facts and Figures 2017*, 2017.

This section of the ITU website explains the three main areas of activity of the organization, the so-called “sectors.” Radiocommunication, Standardization and Development are the pillars, which each are linked to a variety of actions, conferences, and key points. The website is the starting point for access to all information related to the past and previous activities of the body and is updated on a regular basis. Delegates will find this source useful to start their research in order to become familiarized with the operative business of the organization and the different issues within ITU’s scope of work.

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<https://www.itu.int/en/connect2020/PublishingImages/Pages/default/Connect-2020.pdf>

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<https://www.itu.int/en/connect2020/PublishingImages/Pages/default/Strategic%20Plan%20for%20the%20Union%202016-2019.pdf>

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International Telecommunication Union. (2017). *ICT: Facts and Figures 2017* [Report]. Retrieved 15 August 2017 from: <https://www.itu.int/en/mediacentre/Pages/2017-PR37.aspx>

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I. Promoting Digital Citizenship Among Youth

Introduction

Technological innovations and advancements such as the Internet, cell phones, and wireless Internet have made the world a better-connected and diverse, but also complex, place to live.⁷² Being able to cope with rapid progress is visible through digital literacy, which refers to the ability to navigate telecommunication both analytically and effectively, and to be able to create and evaluate information through a variety of technologies.⁷³ A derivative of this is digital citizenship, which is described as “the norms of appropriate, responsible technology use.”⁷⁴ Today’s youth and generations to follow will aid in the success of the future use of various information and communication technologies (ICTs).⁷⁵ According to the United Nations (UN) Educational, Scientific and Cultural Organization (UNESCO), youth is considered to be individuals between the ages of 15 to 24 years old.⁷⁶ Almost half the world is under the age of 25.⁷⁷ Of those individuals under the age of 25, a quarter is between the ages of 12 to 24.⁷⁸ Forty percent of individuals 12 to 24 live on less than \$2 a day.⁷⁹ Consequently, there are many young people who are not able to attain the same resources as others, partly due to a lack of education in the area of ICT.⁸⁰ Promoting digital citizenship among young people is essential to change the lives of youth all over the world.⁸¹ It allows for young people to become educated in ICT-based jobs and create a more inclusive world in which they can participate in regional and global developments.⁸²

In order to promote digital citizenship, it is important to understand that digital inclusion works closely with digital literacy.⁸³ The UN has created initiatives on this topic, implementing policies that ensure accessibility for young people, as well as adequate access to education in the areas of ICTs.⁸⁴ In 2016, the UN General Assembly adopted resolution 68/167 on “The right to privacy in the digital age,” in which was emphasized the rights to freedom of speech regardless of age.⁸⁵ This is imperative, as youth are considered to be the voice of the future.⁸⁶ Digital citizenship will support them in their future education, healthcare, and socio-economic status.⁸⁷ The UN International Telecommunication Union (ITU) believes in the significance of discussing the access of youth to digital citizenship, digital literacy, ICTs, and other topics related to digital access.⁸⁸

International and Regional Framework

Several different documents and conferences have discussed issues related to the topic of youth or digital issues.⁸⁹ The 1948 *Universal Declaration of Human Rights (UDHR)* approached the rights of children in Articles 25 and 26.⁹⁰ The 1965 *Declaration on the Promotion Among Youth of the Ideals of Peace, Mutual Respect, and Understanding Between Peoples* discussed the differences between children and youth.⁹¹ The 1989 *Convention on the Rights of the*

⁷² UNICEF, *Guidelines for Industry on Child Online Protection*, 2014, p. 12.

⁷³ UN ITU-D, *Digital Opportunities: Innovative ICT Solutions for Youth Employment*, 2014, p. 29.

⁷⁴ Ribble, *Digital Citizenship*, 2017.

⁷⁵ UN DESA DSPD, *Youth and ICT*.

⁷⁶ Ibid.

⁷⁷ Ibid.

⁷⁸ Ibid.

⁷⁹ Ibid.

⁸⁰ UNESCO, *What do we mean by “youth”?*, 2017.

⁸¹ Ibid.

⁸² Ibid.

⁸³ UN ITU-D, *Digital Opportunities: Innovative ICT Solutions for Youth Employment*, 2014, p. 29.

⁸⁴ UN DPI, *UN Digital*, 2014.

⁸⁵ UN General Assembly, *The right to privacy in the digital age (A/RES/68/167)*, 2013.

⁸⁶ UNESCO, *What is youth?*, 2017.

⁸⁷ UN DESA DSPD, *Youth and ICT*.

⁸⁸ UN ITU-D, *Youth and Children*, 2017.

⁸⁹ UN ITU, *Plenipotentiary Conferences*, 2017.

⁹⁰ UN General Assembly, *Universal Declaration of Human Rights (A/RES/217 A (III))*, 1948.

⁹¹ UN General Assembly, *Declaration on the Promotion Among Youth of the Ideals of Peace, Mutual Respect and Understanding Between Peoples (A/RES/2037 (XX))*, 1965.

Child (CRC) includes information on the right to access to education and training.⁹² In 1995, the General Assembly met to celebrate the 10th anniversary of the International Youth Year, held in 1985, which called for international attention on the contribution of young people to the development of the world.⁹³ At the 1995 meeting, the UN allowed for the creation of the *World Programme of Action for Youth* (WPAY).⁹⁴ WPAY is a framework to better implement initiatives to improve youth's role and rights around the world.⁹⁵ Some of the points within it discuss education through ICTs to help youth become better global citizens, as they will be aware of world issues and collaborate to create solutions.⁹⁶ This means improving transparency with others around the world, as well as providing equal opportunities when pursuing future careers.⁹⁷

In 2014, in Busan, Korea, the ITU met for its 19th Plenipotentiary Conference.⁹⁸ A major outcome was ITU resolution 200, *Connect 2020 Agenda for Global Telecommunication/Information and Communication Technology Development*; it is a global agenda with four goals, one addressing inclusion in particular.⁹⁹ This goal is important because it emphasizes the need for youth and individuals to have fair access to information and adequate access to new technological advancements, as well as creating an open door for new innovations to be made in the area of ICTs.¹⁰⁰ ITU resolution 198 from the same conference ensures that youth empowerment is unified within all their programs, management methods, and human development activities.¹⁰¹ The resolution expands into academia within ITU for more inclusiveness of youth, as academia is another important partner in digital citizenship.¹⁰² By educating youth in the areas of ICTs, as discussed in the resolution, young people feel increasingly connected and education is more inclusive for all.¹⁰³ The resolution further calls for Member States to adopt youth delegate programs that aim to raise awareness and promoting interest in ICTs among youth.¹⁰⁴

The UN Sustainable Development Goals (SDGs), found in the *2030 Agenda for Sustainable Development* (2015), consist of 17 goals determined to diminish a wide array of global issues present today.¹⁰⁵ Member States believe that the 17 SDGs will encourage action in areas of critical importance for humanity and the planet within the next 15 years.¹⁰⁶ The initiative ICT4SDG connects ICTs and SDGs by targeting four of the 17 goals.¹⁰⁷ These are SDG 4, which references quality education; SDG 8, which talks about ensuring the right for quality work and economic improvement; SDG 9, which references industry innovation and infrastructure; and SDG 11, which emphasizes the need to have sustainable cities and communities.¹⁰⁸ In reference to SDG 4, ICTs allow for more efficient ways to learn about digital devices and programs to make education more mobile.¹⁰⁹ When talking about SDG 8, ICTs are said to be a “prerequisite” for most jobs, as they include basic literacy skills and can help grow small businesses, which in turn helps to grow the economy while providing work.¹¹⁰ SDG 9 discusses how ICTs and the increase in access to the Internet would assist with digital infrastructure, which has become the foundation for today's business

⁹² UN General Assembly, *Convention on the Rights of the Child (A/RES/44/25)*, 1989.

⁹³ UN General Assembly, *Outcome document of the High-level Meeting of the General Assembly on Youth: Dialogue and the Mutual Understanding (A/RES/65/312)*, 2011, p. 9.

⁹⁴ European Youth Forum, *The World Programme is 20 years old!*, 2015.

⁹⁵ Ibid.

⁹⁶ Ibid.

⁹⁷ Ibid.

⁹⁸ UN ITU, *Plenipotentiary Conferences*, 2017.

⁹⁹ Ibid.

¹⁰⁰ Ibid.

¹⁰¹ UN ITU, *Empowerment of youth through telecommunication/information and communication technology (Resolution 198)*, 2014.

¹⁰² Ibid.; UN ITU, *Youth, Innovation and Academia*, 2017.

¹⁰³ UN ITU, *Empowerment of youth through telecommunication/information and communication technology (Resolution 198)*, 2014.

¹⁰⁴ Ibid.

¹⁰⁵ UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.

¹⁰⁶ Ibid.

¹⁰⁷ UN ITU, *ICTs for a Sustainable World: #ICT4SDG*, 2017.

¹⁰⁸ Ibid.

¹⁰⁹ Ibid.

¹¹⁰ Ibid.

world.¹¹¹ SDG 11 explains the importance of ICTs, as they are essential to managing large cities and helping with the creation of more eco-friendly ways to provide energy in large cities and produce less waste.¹¹²

Role of the International System

In July 2011, the General Assembly met to discuss the endorsement on the affirmation on promoting youth in the areas of respect and peace, as well as youth and development.¹¹³ Enabling young people to reach their full potential in academics and technology was deemed essential to success.¹¹⁴ It was also determined through General Assembly resolution 65/312 that the areas of unemployment, skill development, and promotion of entrepreneurship were lacking awareness, and that Member States should promote these areas to ensure success for youth.¹¹⁵ When it comes to the role of the international system outlined in the resolution, it holds all Member States accountable for their work in regard to youth and digital citizenship.¹¹⁶ This is important, as digital citizenship and attaining digital literacy impact the areas of education and healthcare.¹¹⁷ Youth living in difficult situations lack adequate access to technology, thus making it hard to find employment or truly thrive in their respective communities.¹¹⁸

In November 2008, ITU created the Child Online Protection Initiative (COP) to promote an online environment that was both safe and suitable for children.¹¹⁹ The initiative was deemed to be one of great importance as one of its main purposes was to bring together actors from all over the global community, with the goal to create a digital environment that is safe for children.¹²⁰ The COP initiative was introduced on the ITU agenda in 2008, and was later validated by former Secretary-General Ban Ki-moon and ITU Secretary-General, Houlin Zhao, who has said that “promoting access to ICTs is ITU’s core mandate.”¹²¹ This initiative is essential to the promotion of digital citizenship, as it pushes for there to be safe precautions while youth work towards digital citizenship.¹²² The COP ensures that safety measures are executed by creating essential proposals and benchmarks to upkeep the overall security of children online.¹²³ ITU is additionally continuing to provide digital opportunities for young people, by making available training resources to help the current 73 million unemployed young people today.¹²⁴ They do so by creating on-the-job training programs, as well as blended programs (online and in-person) to teach young people computer-based skills to help them become more digitally literate.¹²⁵

The International Forum on ICT and Education 2030 is a forum that was organized by UNESCO from 10 to 11 July 2017.¹²⁶ At this forum, Member States discussed *Education 2030: The Incheon Declaration and Framework for Action*, which upholds the idea of ICTs and their far-reaching power in terms of education and inclusion of all people, including youth.¹²⁷ One of the targets includes action plans that aim to leverage ICTs as a way to boost education.¹²⁸ It also discusses the affordability of ICTs and how it has vastly improved growth in digital devices as well as applications, in particular in developing countries.¹²⁹ Essentially, individuals who have a lower income can

¹¹¹ UN ITU, *ICTs for a Sustainable World: #ICT4SDG*, 2017.

¹¹² *Ibid.*

¹¹³ UN General Assembly, *Outcome document of the High-level Meeting of the General Assembly on Youth: Dialogue and the Mutual Understanding (A/RES/65/312)*, 2011, p. 3.

¹¹⁴ *Ibid.*, p. 2.

¹¹⁵ *Ibid.*, p. 9.

¹¹⁶ *Ibid.*, p. 3.

¹¹⁷ *Ibid.*, p. 1.

¹¹⁸ *Ibid.*, p. 2.

¹¹⁹ UN ITU, *About the Child Online Protection Initiative*, 2017.

¹²⁰ *Ibid.*

¹²¹ *Ibid.*

¹²² *Ibid.*

¹²³ *Ibid.*

¹²⁴ UN ITU-D, *Youth Employment and Entrepreneurship*, 2017.

¹²⁵ *Ibid.*

¹²⁶ UNESCO, *International Forum on ICT and Education 2030*, 2017.

¹²⁷ *Ibid.*

¹²⁸ *Ibid.*

¹²⁹ *Ibid.*

afford these services as they are provided for low to no cost.¹³⁰ The outcome of this forum, moreover, targets to establish regional conferences to consult with leaders of the World Education Forum (WEF).¹³¹

UNESCO has stated that it will apply both a full and future-oriented concept recognizing youth as mediators of change, social transformations, peace and sustainable development.¹³² This was to be achieved through initiatives such as the World of Press Freedom Day, and Memory of the World.¹³³ At these events, the ideas of youth and their exposure to global news and information were pertinent for them to be globally aware and better citizens in the community.¹³⁴ UNESCO also looks into providing prizes for students who have taken the necessary steps to acquire skills in ICTs and help their community.¹³⁵ ITU and UNESCO also created the Broadband Commission for Digital Development, now known as the Broadband Commission for Sustainable Development.¹³⁶ Started in 2010, the Commission works to enhance the availability of broadband.¹³⁷ This is achieved by educating more people on ICTs as well as working with developed countries to assist with the implementation of broadband.¹³⁸ The Commission in this regard acts as an advocate for developing countries in need of broadband.¹³⁹ The members of the Commission have their own sets of targets geared towards ensuring access, which include “making broadband policy universal and affordable, connecting homes to broadband, getting people online, and achieving gender equality in access to broadband.”¹⁴⁰ Equal access to broadband means lessening the gap between men and women in terms of accessibility of the Internet.¹⁴¹ If all Member States have equal access, it will consequently ensure equal opportunities for youth in the areas of education, employment, and healthcare.¹⁴² UNESCO also has mandated education and learning to be one of their number one priorities in the areas of ICTs.¹⁴³ The educational practices target in particular women, girls, and young children.¹⁴⁴ UNESCO designed E-Learning ideas, which they believe are central to promoting information for free.¹⁴⁵

On May 2016, the UN World Summit on the Information Society (WSIS) met and discussed “Global Kids Online (GKO) - Children’s Rights in the Digital Age.”¹⁴⁶ The GKO is a research initiative from the UN Children’s Fund (UNICEF), the London School of Economics, and EU Kids Online.¹⁴⁷ The researchers collect and compare data on children and their Internet use.¹⁴⁸ Consequently, this data is used to find more effective ways to ensure transparency and access to the Internet for children.¹⁴⁹ More specifically, Member States discussed the linkage and correlation between children using the Internet and the promotion of both local and international policies.¹⁵⁰ Some of the topics include: how to continue the process of using indicators to monitor how many young women and men have access to the Internet, how to carefully analyze the current data about access to the Internet, and to ensure that “no child is left behind,” one of the key aspects of the SDGs.¹⁵¹ An important idea is to be able to better understand what opportunities and risks youth have through digital access, as well as how Internet use varies by region.¹⁵² This was

¹³⁰ UN DESA DSPD, *Youth and ICT*.

¹³¹ UNESCO, *International Forum on ICT and Education 2030*, 2017.

¹³² UNESCO, *UNESCO Operational Strategy on Youth 2014-2021*, 2014, p. 6.

¹³³ *Ibid.*

¹³⁴ UNESCO, *International Forum on ICT and Education 2030*, 2017.

¹³⁵ UNESCO, *ICT in Education Prize*, 2017.

¹³⁶ UN ITU & UNESCO, *Broadband Commission*, 2017.

¹³⁷ *Ibid.*

¹³⁸ *Ibid.*

¹³⁹ *Ibid.*

¹⁴⁰ *Ibid.*

¹⁴¹ *Ibid.*

¹⁴² UNESCO, *E-Learning*, 2017.

¹⁴³ *Ibid.*

¹⁴⁴ *Ibid.*

¹⁴⁵ *Ibid.*

¹⁴⁶ UN WSIS, *Global Kids Online - Children’s Rights in the Digital Age*, 2016.

¹⁴⁷ *Ibid.*

¹⁴⁸ *Ibid.*

¹⁴⁹ *Ibid.*

¹⁵⁰ *Ibid.*

¹⁵¹ *Ibid.*

¹⁵² *Ibid.*

led by a growing concern that children’s educational experiences could be enhanced or hampered based on Internet use, especially for regions that have less Internet access.¹⁵³

Youth and Digital Skills

An estimated 50% of children, who often are unable to go to school and are of primary age, live in conflicted areas.¹⁵⁴ Within conflicted areas, youth are exposed to violence and depletion of their land, which hinders these individuals from profiting from technological advancements and access to ICTs.¹⁵⁵ Considering that the Internet is the most widely used source of communication for youth, it is important that they have access to education on skills in regards to ICTs.¹⁵⁶ These skills include using the Internet, basic web searches, and research to analyze data, all things required in employment.¹⁵⁷ Possessing an adequate set of digital skills makes young people feel empowered.¹⁵⁸ It has been found that the feeling of empowerment is limited when youth are at a disadvantage to obtain adequate access to computers, cell phones, and other forms of telecommunications.¹⁵⁹ Although technology and the access to ICTs have increased, there are still many regions, for example in South Asia or sub-Saharan Africa, that lack adequate access.¹⁶⁰ It is therefore vital to make sure that transparency, protection, and overall access is equal across all genders, ages, and regions, to ensure efficient promotion of digital citizenship.¹⁶¹ It is also important to ensure that youth are engaged in discussions on Internet governance.¹⁶²

The Global e-Schools and Communities Initiative (GESCI) is a West African initiative, currently operating to provide leadership in ICTs.¹⁶³ They achieve this by providing classes to teach young people the use of ICTs and the importance of these technologies for their socio-economic position.¹⁶⁴ GESCI is a non-governmental organization (NGO) that is partnered with organizations such as Ministries of African Education: ICT and the African Development Bank (AfDB).¹⁶⁵ Also, the International Labour Organization (ILO), alongside ITU, is undertaking the Teaching Digital Skills to Youth campaign.¹⁶⁶ This campaign aims to train youth with both basic and advanced digital skills.¹⁶⁷ These skills include basic typing skills and sending and responding to emails, and the training takes place both in and out of school.¹⁶⁸ The training provides young people with the digital skills pertaining to computer literacy and basic knowledge of software and data entry necessary to be hired for decent part-time jobs.¹⁶⁹ The concern for many is that they only occupy part-time jobs, but with better skills in computer literacy and telecommunication, this can lead to full-time employment.¹⁷⁰ While fulfilling better inclusion for youth as well as accessibility for jobs, the campaign aims to also help enhance the success of SDG 4.¹⁷¹ The objectives of the campaign are to train more than five million young men and women, promote an environment that facilitates access to job opportunities, and create new job opportunities.¹⁷²

¹⁵³ UN WSIS, *Global Kids Online - Children’s Rights in the Digital Age*, 2016.

¹⁵⁴ WAY, *Youth and ICT*, 2017.

¹⁵⁵ *Ibid.*

¹⁵⁶ *Ibid.*

¹⁵⁷ *Ibid.*

¹⁵⁸ *Ibid.*

¹⁵⁹ *Ibid.*

¹⁶⁰ *Ibid.*

¹⁶¹ *Ibid.*

¹⁶² UN IGF, *Youth Initiatives*.

¹⁶³ UN DPI, *African Leadership in ICT for Knowledge Society Advancement*, 2016.

¹⁶⁴ *Ibid.*

¹⁶⁵ *Ibid.*

¹⁶⁶ UN ITU-D, *ILO-ITU Digital Skills for Decent Jobs for Youth Campaign to train 5 million youth with job-ready digital skills*, 2017.

¹⁶⁷ *Ibid.*

¹⁶⁸ *Ibid.*

¹⁶⁹ *Ibid.*

¹⁷⁰ *Ibid.*

¹⁷¹ *Ibid.*

¹⁷² *Ibid.*

In 2014, a study in India supported the initiative Wireless for Communities (W4C).¹⁷³ The study took place in two Indian villages, Bhanwargarh and Mamoni, and consisted of 60 young people, of which were 30 boys and 30 girls.¹⁷⁴ This experiment showed that women living in rural areas were not able to attain the same technological resources than those living in urban areas, as well as the stigma that can exist that women and girls do not need an education.¹⁷⁵ This experiment further showed the imbalance when it comes to men and women who live in rural areas and their exposure to ICTs.¹⁷⁶ Young people living in rural areas had a difficult time accessing ICTs, which in turn made it difficult to receive assistance from their local government, making it consequently more difficult to create and implement programs.¹⁷⁷ In the end it was concluded that the impact on youth in the two villages was affected by their living situation.¹⁷⁸ In general terms, ICTs can empower youth by making the distance between countries seem smaller, promoting communication and accessibility.¹⁷⁹

Women and Girls

ICTs are considered to be essential towards the empowerment of women and girls in improving their social and economic status.¹⁸⁰ ICTs support job training, access to education, promoting healthcare reforms and practices, as well as an understanding of basic human rights.¹⁸¹ Ehealth is known as the use of ICTs for health, as defined by the World Health Organization (WHO).¹⁸² Women having improved knowledge of ICTs and their benefits in healthcare would allow for an easier collection of data and thus more effective ehealth.¹⁸³ Allowing young women and girls to have access to ICTs will also help promote gender equality among men and women.¹⁸⁴ Accessibility for both genders increases the competitiveness for jobs and makes pay more balanced, as both genders will have skills and knowledge pertaining to ICTs.¹⁸⁵ Additionally, ICTs help improve women's political participation, enhance their safety and welfare, and expand their economic opportunities.¹⁸⁶

When addressing the role of women and girls and the importance of ICTs and digital citizenship, it is important to recall ITU resolution 70 (2010), which was created at the annual Plenipotentiary Conference.¹⁸⁷ The resolution underlines the importance of promoting ICTs for women as it would increase their interests and skillset in the workforce.¹⁸⁸ ITU has put together many initiatives, such as the Girls in ICT Day, to ensure digital access for women and girls.¹⁸⁹ Girls in ICT Day aims to empower girls and young women to build the skills and confidence necessary to be successful in the field of ICTs and digital citizenship.¹⁹⁰ As of 2017, over 300,000 young women and girls have taken part in this initiative.¹⁹¹ This number also includes over 9,000 celebrations of this initiative in over 166 countries.¹⁹²

¹⁷³ DEF, *Delhi University student Masot Zingkhai studies wireless for communities project in Baran for her dissertation.*

¹⁷⁴ *Ibid.*

¹⁷⁵ *Ibid.*

¹⁷⁶ *Ibid.*

¹⁷⁷ *Ibid.*

¹⁷⁸ *Ibid.*

¹⁷⁹ WAY, *Youth and ICT*, 2017.

¹⁸⁰ UN ITU-D, *Women and Girls*, 2017.

¹⁸¹ *Ibid.*

¹⁸² WHO et al., *Information and Communication Technologies for Women's and Children's Health*, 2009, p. 8.

¹⁸³ *Ibid.*

¹⁸⁴ UN ITU-D, *Women and Girls*, 2017.

¹⁸⁵ UN ITU, *Gender equality and the empowerment of women and girls through ICTs*, 2014.

¹⁸⁶ UN-Women, *ICTs for Women's Empowerment: The Big Picture*.

¹⁸⁷ UN ITU, *Gender mainstreaming in ITU and promotion of gender equality and the empowerment of women through information and communication technologies (Resolution 70)*, 2010.

¹⁸⁸ UN ITU, *Promoting information and communication technologies among young women and men for social and economic empowerment (Resolution 76)*, 2014.

¹⁸⁹ UN ITU-D, *What is Girls in ICT Day?*, 2017.

¹⁹⁰ *Ibid.*

¹⁹¹ *Ibid.*

¹⁹² *Ibid.*

Conclusion

It is important for young people to have digital skills and access to ICTs, as they have proven to foster growth in healthcare, education, and employment. Various initiatives have been organized by organizations and Member States to promote digital assistance and opportunities for youth.¹⁹³ Though inclusion is becoming more common, there is still much work to be done. With the continuous efforts of all Member States, together with ITU and partner organizations, ICTs and digital citizenship will allow for a more digital and inclusive world for young people.¹⁹⁴

Further Research

When analyzing the topic, delegates can consider the following questions: How does the promotion of youth benefit Member States? How can Member States promote gender equality in their countries to ensure young women and men have equal access to ICTs? What are other initiatives on this topic? How will the idea of inclusion for youth be represented across the world? Are there any other unique ways for the idea of digital citizenship to be promoted globally? How do ICTs and their benefits help youth long-term? Can more be achieved outside of work and education in regards to ICTs and the skills they can provide?

Annotated Bibliography

Ribble, M. (2017). *Digital Citizenship* [Website]. Retrieved 26 July 2017 from:

<http://www.digitalcitizenship.net/home.html>

This source provides delegates with definitions pertaining to the topic such as digital citizenship, digital etiquette, and digital literacy. Ribble provides a good overview of what types of digital themes will guide delegates towards better understanding what digital citizenship is, and how it pertains to youth. The nine elements he discusses include digital access, digital commerce, digital communication, digital literacy, digital etiquette, digital law, digital rights and responsibilities, digital health and wellness, and digital security (self-protection). The nine elements also include examples on how the theme either has or can be applied in the real world.

United Nations, Department of Economic and Social Affairs, Division for Social Policy and Development, Focal Point on Youth. (n.d.) *Youth and ICT* [Fact Sheet]. Retrieved 10 November 2017 from:

www.un.org/esa/socdev/documents/youth/fact-sheets/youth-icts.pdf

This source allows delegates to search different issues in relation to youth in the areas of inclusion information and communication technologies (ICTs), finances, and more. When delegates explore the different resources (web links) in the document, they will see issues that have risen in regards to youth. The document showcases ways the United Nations has provided services in the areas of ICTs to young people. These include working with the Broadband Commission, the World Summit on the Information Society, and others.

United Nations, Educational, Scientific and Cultural Organization. (2014). *UNESCO Operational Strategy on Youth 2014-2021* [Report]. Retrieved 24 August 2017 from: <http://unesdoc.unesco.org/images/0022/002271/2/enga27150e.pdf>

This source offers information on the strategic plan set forth by the UN Educational, Scientific and Cultural Organization (UNESCO) for the period 2014-2021. The plan goes into depth and references problems that have occurred in the past, but it also provides plans moving forward in the future. Some of these plans of action include engaging youth in UNESCO's initiatives, which is geared towards youth and social transformations in the areas of peace and development.

United Nations, General Assembly, Sixty-fifth session. (2011). *Outcome document of the High-level Meeting of the General Assembly on Youth: Dialogue and Mutual Understanding (A/RES/65/312)* [Resolution]. Adopted without reference to a Main Committee (A/65/L.87). Retrieved 22 August 2017 from: <http://undocs.org/A/RES/65/312>

This resolution is one of the key documents regarding youth and their rights. Member States agree to foster and educate young women and men about the ideals of the United Nations, including

¹⁹³ UN ITU-D, *What is Girls in ICT Day?*, 2017.

¹⁹⁴ Ibid.

peace, freedom, justice, human rights, and solidarity. Additionally, the General Assembly stresses the importance of promoting youth development. The Member States identify several methods of doing that, one being to strengthen the use of ICTs in order to enhance and improve the quality of the lives of youth. Delegates should consult this source to get an idea about the several ways the socio-economic situation of youth can be improved.

United Nations, Internet Governance Forum. (n.d.). *Youth Initiatives* [Website]. Retrieved 19 July 2017 from: <http://www.intgovforum.org/multilingual/content/youth-initiatives>

This is a helpful resource because it allows delegates to see initiatives that have been created for young people in relation to Internet governance. It includes links and articles that provide information on various old and current initiatives. An example is Girls ICT, which allows for girls to learn the proper techniques and skills to better equip themselves and others when it comes to literacy and education. This is helpful because it shows delegates how the inclusion of women and girls benefits others.

United Nations, International Telecommunication Union. (2014). *Promoting information and communication technologies among young women and men for social and economic empowerment (Resolution 76)*. Retrieved 26 August 2017 from: https://www.itu.int/en/ITU-D/Digital-Inclusion/Documents/Resolutions/Resolution76_WTDC_DUBAI_14.pdf

This source is important, as delegates begin their research, for understanding the background and foundation of where the ideas of inclusion of youth are derived from and what actions have been taken to ensure this. This resolution talks about the promotion of ICTs for youth, as well as women in particular. There is a strong emphasis not only on ICTs but equality in gender, and the resolution also aims to create future plans to aid in the enhancement of inclusion. This source contains several examples of how women and youth benefit from ICTs.

United Nations, International Telecommunication Union. (2017). *About the Child Online Protection Initiative* [Website]. Retrieved 1 November 2017 from: http://www.itu.int/en/cop/Pages/about_cop.aspx

This source discusses the protocols set forth by the ITU to ensure children are protected while being online. Children who are exposed to the Internet are exposed to many dangers including cyber hacking, cyber-bullying, and exposure to possible recruitment from extremist groups. This source outlines many of the detriments that youth have been exposed to, and what future plans are put in place to ensure a safer world for children online. This source will allow delegates to see what initiatives have already been created for the protection of children while they are online.

United Nations, International Telecommunication Union. (2017). *Youth, Innovation and Academia* [Website]. Retrieved 26 August 2017 from: <http://www.itu.int/en/action/youth/Pages/Default.aspx>

This page includes operational plans for the private and public sectors. This source is important as it will introduce delegates to ITU resolution 198, which reinforces youth activities set forth by the ITU. The Busan 2014 forum was an important forum and adopted the Connect 2020 Agenda. The agenda includes several goals pertaining to inclusion and teaching of skills to enable the education and future employment of young people.

United Nations, International Telecommunication Union, Telecommunication Development Sector. (2014). *Digital Opportunities: Innovative ICT Solutions for Youth Employment* [Report]. Retrieved 24 September 2017 from: https://www.itu.int/en/ITU-D/Digital-Inclusion/Women-and-Girls/Girls-in-ICT-Portal/Documents/Digital%20opportunities%20youthreport_2014.pdf

This source outlines solutions that have been put in place to create a more cohesive and efficient process for youth when they become exposed to youth employment. Many of the solutions discuss training methods in regards to digital skills like typing and research to better equip youth in ICT-based jobs. This source also refers to the positive outcomes that youth become exposed to when they have acquired skills in regards to ICTs and other forms of technology. Overall, this source will provide statistics as well as examples of ICT-based jobs.

United Nations, International Telecommunication Union, Telecommunication Development Sector. (2017). *Youth and Children* [Website]. Retrieved 25 August 2017 from: <http://www.itu.int/en/ITU-D/Digital-Inclusion/Youth-and-Children/Pages/Youth-and-Children.aspx>

This source will provide delegates with insight on the importance of young people in the area of ICTs and creating equal accessibility. It explains initiatives such as the ILO-ITU Digital Skills Job Campaign, which helps young people to learn basic digital skills in their own community to have increased changes in the job market. This source allows for delegates to see initiatives firsthand. This will provide delegates with real-world examples of recent initiatives that have been created with youth and ICTs.

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II. Using ICTs to Promote Gender Equality and the Empowerment of Women

Introduction

According to the United Nations (UN) Department of Economic and Social Affairs (DESA), “Gender equality is not only a fundamental human right, but a necessary foundation for a peaceful, prosperous and sustainable world and supported by SDG 5 (Achieve Gender Equality).”¹⁹⁵ However, the equal participation of women in technological sustainable development processes, especially with information and communication technologies (ICTs), which the World Bank defines as infrastructure and components that enable modern technologies to reshape the world’s economies, governments, and societies, remains a critical area of concern.¹⁹⁶ Currently women and girls make up the majority of the 60% of the world’s population that do not have access to ICTs.¹⁹⁷ According to the UN Entity for Gender Equality and the Empowerment of Women (UN-Women), 14% fewer women compared to men have a cell phone, and women are 25% less likely to have access to the Internet.¹⁹⁸ Commemorating the 2017 International Girls in Information and Communication Technologies Day, UN-Women estimated that there would be a gross domestic product (GDP) increase of about \$13 to \$18 billion dollars for 144 developing countries if there was an increase of access to the Internet for 150 million women.¹⁹⁹

The International Telecommunication Union (ITU) is the primary UN agency in charge of supporting ICT innovation through the setting of international standards, hosting stakeholder discussions, supporting technical experts, and developing best practices.²⁰⁰ According to ITU, the inclusion of women and addressing barriers to inclusion is vital for sustainable development to be achieved.²⁰¹ ITU works through the process of gender mainstreaming, which is “a globally accepted strategy for promoting gender equality.”²⁰² It is important for the international community to utilize gender mainstreaming, and for organizations such as ITU to determine the best means to use ICTs to promote gender equality and the empowerment of women.²⁰³

International and Regional Framework

The UN focused on the advancement of women and girls with its adoption of the *Universal Declaration of Human Rights* (UDHR) in 1948, particularly through the UDHR’s Article 2, which bans discrimination on the basis of sex.²⁰⁴ The UN General Assembly adopted the *Convention on the Elimination of All Forms of Discrimination against Women* (CEDAW) in 1979.²⁰⁵ CEDAW established the use of agendas for national action to end all forms of discrimination against women.²⁰⁶ Articles 10 and 11 of CEDAW further addressed the importance of policy planning in support of the rights of women to education, employment, and social activities as vital contributions to achieving development.²⁰⁷ In 1995, the UN held the Fourth World Conference on Women in Beijing, which marked “a significant turning point for the global agenda for gender equality.”²⁰⁸ The resulting document, the *Beijing Declaration and Platform for Action* (1995), serves as a foundational global document for gender equality policy,

¹⁹⁵ UN DESA, *Gender Equality: Why it Matters*, 2016, p. 2.

¹⁹⁶ World Wide Web Foundation, *ICTs for Empowerment of Women and Girls: A research and policy advocacy initiative on empowering women on and through the web in 10 countries*, 2014, p. 15.

¹⁹⁷ UN Fourth World Conference on Women, *Beijing Declaration and Platform of Action*, 1995, p. 9; World Wide Web Foundation, *ICTs for Empowerment of Women and Girls: A research and policy advocacy initiative on empowering women on and through the web in 10 countries*, 2014, p. 15.

¹⁹⁸ UN-Women, *Statement: Vast gains for young women and girls with the right ICT skills and assets*, 2017.

¹⁹⁹ *Ibid.*

²⁰⁰ UN ITU, *Promoting gender equality in ITU Telecommunication Standardization Sector activities*, 2016, p. 1.

²⁰¹ *Ibid.*

²⁰² UNDP, *Gender Inequality Index (GII)*, 2016; UN-Women, *Gender Mainstreaming*, 2017.

²⁰³ UN ITU, *Gender equality and the empowerment of women and girls through ICTs*, 2014; Dyck, *The Digital Gender Divide is an Economic Problem for Everyone*, *GE Reports*, 2017; Baller et al., *The Global Information Technology Report 2016: Innovating in the Digital Economy*, 2016, p. 4.

²⁰⁴ UN-Women, *World Conferences on Women*; UN General Assembly, *Universal Declaration of Human Rights (A/RES/217 A(III))*, 1948.

²⁰⁵ UN General Assembly, *Convention on the Elimination of All Forms of Discrimination against Women (A/RES/34/180)*, 1979.

²⁰⁶ *Ibid.*

²⁰⁷ *Ibid.*

²⁰⁸ UN-Women, *Report of the Fourth World Conference on Women (A/CONF.177/20/Rev.1)*, 1995.

and also created strategic objectives that address the advancement of women and girls.²⁰⁹ The *Beijing Declaration* was followed by several five-year review conferences that help improve and monitor the outcomes, advancements, and implementation of gender equality goals by Member States under the Declaration.²¹⁰

In 2015, Member States adopted the *2030 Agenda for Sustainable Development*, which consists of 17 Sustainable Development Goals (SDGs) and 169 targets to achieve sustainable development.²¹¹ SDG 5 specifically focuses on gender equality and the empowerment of women and girls, and encourages the “use of enabling technology, in particular information and communications technology, to promote the empowerment of women,” while highlighting gender mainstreaming and the use of ICTs.²¹² The High-Level Political Forum on Sustainable Development (HLPF), held annually, reviews and reports on the progress of the 2030 Agenda by providing guidance, recommendations, leadership, and other resources to Member States.²¹³ The HLPF also monitors Member States’ progress on SDG targets, and in 2017, HLPF agreed on a state-led voluntary review to be conducted regularly by the Forum to track the progress of gender mainstreaming in the field of technology and the facilitation of equal access to ICTs and ICT-related jobs.²¹⁴

In 2014, ITU adopted ITU resolution 70 on the implementation of gender mainstreaming in ITU and ICTs as a way to approach gender equality and the empowerment of women and girls.²¹⁵ Adopted during the 2014 Plenipotentiary Conference, ITU resolution 70 calls for the implementation of frameworks adopted at the 2014 World Summit on the Information Society (WSIS) by the ITU Gender Task Force, focusing specifically on digital inclusion and the advancement of women and girls.²¹⁶ These documents provide Member States with additional policy implementation strategies that support gender-equal access, participation, and contributions to achieving universal access to ICTs.²¹⁷ In partnership with other UN agencies, the UN Educational, Scientific and Cultural Organization (UNESCO) adopted *Education 2030: Incheon Declaration and Framework for Action* in 2015.²¹⁸ The framework focuses on gender equality and gender mainstreaming in academia, including ICT education and equal technological access for women.²¹⁹ The framework promotes gender equality through the use of ICTs, and notes the ability of ICTs to further strengthen and facilitate effective learning opportunities for women and girls.²²⁰

Role of the International System

To achieve gender equality using ICTs and address the global digital gender divide, cooperation and collaboration of the international community is required.²²¹ The UN Economic and Social Council (ECOSOC) adopted ECOSOC resolution 2014/2 of 2014 on “Mainstreaming a gender perspective into all policies and programmes in the UN system” and resolution 2011/5 of 2011 on “The role the UN plays in executing the internationally agreed goals and reviewing Member States commitments with regards to gender equality and the empowerment of women.”²²² These resolutions highlight the importance of reviewing the progress of Member States and civil society on issues affecting

²⁰⁹ UN Fourth World Conference on Women, *Beijing Declaration and Platform of Action*, 1995.

²¹⁰ UN-Women, *Five-year Review of the implementation of the Beijing Declaration and Platform for Action (Beijing +5)*, 1995.

²¹¹ UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.

²¹² *Ibid.*

²¹³ UN DESA, *High-level Political Forum 2017*, 2017.

²¹⁴ *Ibid.*

²¹⁵ UN ITU, *Mainstreaming a gender perspective in ITU and promotion of gender equality and the empowerment of women through information and communication technologies (Resolution 70)*, 2014.

²¹⁶ *Ibid.*

²¹⁷ UN General Assembly, *Annotated preliminary list of items to be included in the provisional agenda of the seventy-second regular session of the General Assembly (A/72/100)*, 2017, pp. 47-197.

²¹⁸ UNESCO, *Education 2030: Incheon Declaration and Framework of Action*, 2015, p. 5.

²¹⁹ *Ibid.*, p. 14.

²²⁰ *Ibid.*

²²¹ UN ITU, *About International Telecommunications Union*, 2017; UN General Assembly, *Annotated preliminary list of items to be included in the provisional agenda of the seventy-second regular session of the General Assembly (A/72/100)*, 2017, pp. 47-197.

²²² UN ECOSOC, *Mainstreaming a gender perspective into all policies and programmes in the United Nations system (E/RES/2014/2)*, 2014.

gender equality and technology.²²³ They further stress the importance of gender mainstreaming and the elimination of all forms of discrimination against women and girls.²²⁴

In 2013, ITU implemented its Gender Dashboard project that shows Member State progress and tracks gender and technology initiatives worldwide.²²⁵ ITU also introduced its Gender Equality and Mainstreaming (GEM) Policy in 2013, which ensures that the benefits of ICTs are available regardless of gender.²²⁶ Through ITU's Telecommunication Development Sector (ITU-D), ITU is able to design programs such as the Girls in ICT Portal, community ICT centers for women's empowerment, and the Digital Skills for Decent Jobs for Youth campaign, which prioritizes the promotion of ICT accessibility and provision to young women.²²⁷ At the World Telecommunication Standardization Assembly (WTSA) and the Global Standards Symposium (GSS) held in Tunisia in 2016, ITU launched its first ever Women in World Standardization Expert Group (WISE), after its introduction in resolution 55 (2012) of the ITU Telecommunication Standardization Sector (ITU-T).²²⁸ WISE organizes workshops, meetings, and practical skill trainings on ways by which Member States can effectively promote gender equality and women's empowerment through the use of ICTs.²²⁹

In addition to ITU's work on ICTs and women's empowerment, UN-Women established a 2015 initiative called Planet 50-50 by 2030: Step It Up for Gender Equality Media Compact, which calls on governments to make national commitments to increasing women's representation in media and technology.²³⁰ In a 2016 partnership with UN-Women, ITU established an initiative called The Global Partnership for Gender Equality in the Digital Age (EQUALS), which brings together governments, the private sector, and civil society to create awareness through knowledge and resources and to promote general partnerships of the international community, calling for "bring[ing] women to tech and tech to women."²³¹ With EQUALS, women in Pakistan have access to innovative technology, such as digital platforms and virtual marketplaces for woman-owned small businesses.²³² In Rwanda, the program has benefitted about 3,500 women farmers who have been introduced to information, markets, and finances through EQUALS-supported technology.²³³

Moreover, UN DESA's Division for Sustainable Development (DSD) established the Partnership for Sustainable Development's Multi-Stakeholder Initiative (MSI), which was adopted under the *2016 Partnership for Sustainable Development* report.²³⁴ The MSI identifies gender equality as a top priority and encourages the private sector, governments, and non-governmental organizations (NGOs) to discuss the main causes of gender inequality, establish frameworks, and implement policies and strategies, with the aim of mainstreaming gender in all aspects of life, including technology.²³⁵

Through the introduction of literacy programs such as the Malala Fund for Girls' Right to Education, UNESCO is able to help address the gender gap in technological literacy through more inclusive education, and to support girls in ICT education.²³⁶ Through its ICT training and literacy programs such as mobile technology literacy and numeracy, UNESCO is further able to provide education on ICTs and promote gender equality and women's empowerment in developing states.²³⁷ In 2011, UNESCO also launched Better Life Better Future: Global

²²³ UN ECOSOC, *The role of the United Nations system in implementing the internationally agreed goals and commitments in regard to gender equality and the empowerment of women (E/RES/2011/5)*, 2011.

²²⁴ *Ibid.*

²²⁵ UN ITU, *ITU Gender Dashboard*; UN ITU, *About International Telecommunications Union*, 2017.

²²⁶ UN ITU, *ITU's new Gender Equality & Mainstreaming Policy (GEM)*, 2013.

²²⁷ UN ITU-D, *Digital Inclusion: Women and Girls, 2017*; UN ITU, *ITU and UN-Women announce 'EQUALS': The Global Partnership for Gender Equality in the Digital Age*, 2016.

²²⁸ UN ITU-T, *WTSA-16, 2016*; UN ITU, *WTSA-16 Highlights: ITU Launches Women in Standardization Expert Group*, 2016.

²²⁹ UN ITU, *WTSA-16 Highlights: ITU Launches Women in Standardization Expert Group*, 2016.

²³⁰ UN-Women, *Step It Up for Gender Equality Media Compact*.

²³¹ *Ibid.*; UN ITU, *ITU and UN Women announce 'EQUALS': The Global Partnership for Gender Equality in the Digital Age*, 2016.

²³² UN-Women, *Reshaping the future: Women, girls, ICTs and the SDGs*, 2017.

²³³ *Ibid.*

²³⁴ UN DESA DSD, *Partnership for Sustainable Development Goals*, 2016.

²³⁵ *Ibid.*, p. 23.

²³⁶ UNESCO, *Better Life Better Future - Global Partnership for Girls' and Women's Education*.

²³⁷ UNESCO, *Education 2030: Incheon Declaration and Framework of Action*, 2015, p. 18.

Partnership for Girls' and Women's Education, an initiative set up to promote equal access to education, including ICT training, to break cycles of injustice and poverty.²³⁸

Regionally, the European Commission in 2016 commemorated Girls in ICT Day, an initiative of ITU with the purpose of encouraging women and girls to take up careers in science, technology, engineering, and math (STEM).²³⁹ The European Commission and the U.S Department of Labor have predicted a gender gap of 800,000 jobs in Europe and 1.4 million jobs in the United States in the fields of communication and technology by 2020.²⁴⁰ The participation of civil society as well as other non-UN international actors has significant influence in the use of ICTs to achieving gender equality.²⁴¹ In 2012, the World Bank Group established a three-year ICT for Greater Development Impact initiative to support gender equality and the empowerment of women, which details the World Bank Group's plan to promote the use of ICTs.²⁴² The plan concentrates on areas such as growth, poverty reduction, implementing new ICT strategies, and transforming service delivery methods so as to boost social and economic growth.²⁴³ With the European Centre for Women and Technology (ECWT), the full participation of women is supported through education and learning, entrepreneurship, workforce and recruitment, and e-leadership and e-skills.²⁴⁴ The American civil society initiative Anita Borg Institute for Women and Technology (ABI) is further focused on expanding the involvement and influence of women in technology through tools and programs that are designed to boost government recruitment of women leaders at all levels in the field of technology, as well as educating male allies.²⁴⁵

Challenges Facing Women and Access to ICTs

According to the Organisation for Economic Co-operation and Development (OECD), women constitute more than half of the world's population and are more than one-half of the human capital of the world's economy; however, they remain statistically underrepresented in the fields of science and technology.²⁴⁶ One of the many challenges faced by women is the belief that gender equality is only pertinent to women.²⁴⁷ According to the National Center for Women and Information Technology (NCWIT), skilled positions in the STEM fields are in high demand, but in 2016 women only consisted of 26% of the computing industry in the United States.²⁴⁸ UN DESA has stated that another major challenge is the issue of adequate funding for projects and initiatives for women in ICTs.²⁴⁹ Providing adequate funding does have a substantial impact on women's access to technology, as seen in the Telecentros Virtual Community Project, which provided mobile phones for rural women in Senegal and introduced further innovations to support women's participation in ICTs.²⁵⁰

Education is another important aspect of using ICTs in sustainable development, but the high technological illiteracy rate among women and girls has made it difficult to bridge the digital gender gap.²⁵¹ The problem with ICT illiteracy among women and girls can be associated with a lack of capacity-building opportunities, gender awareness, and the presence of cultural beliefs that undermine the importance of education for girls.²⁵² The availability of telecommunication infrastructure and facilitating affordable access of ICTs has also been a challenge for many

²³⁸ UNESCO, *Better Life Better Future - Global Partnership for Girls' and Women's Education*.

²³⁹ European Commission, *Girls in ICT Day*.

²⁴⁰ UN-Women, *International Girls in ICT Day*, 2017.

²⁴¹ World Bank Group, *ICT for Greater Development Impact*, 2012, p. 1.

²⁴² *Ibid.*, p. 3.

²⁴³ *Ibid.*

²⁴⁴ Bickford, *Empowering Girls and Women through ICTs*, 2017; ECWT, *Our Story*.

²⁴⁵ Anita Borg Institute, *Advancing Women Technologists into Positions of Leadership: Strategies for cultivating confident women leaders*, 2017, p. 6.

²⁴⁶ OECD, *Gender and Sustainable Development: Maximising the Economic, Social, and Environmental Role of Women*, 2008, pp. 11-23; USAID, *Gender Equality and Women's Empowerment*, 2017.

²⁴⁷ UN DESA, *Gender Equality and Empowerment of Women Through ICTs*, 2005, p. 5.

²⁴⁸ NCWIT, *We Need You: Here's Why*, 2017.

²⁴⁹ UN DESA, *Gender Equality and Empowerment of Women Through ICTs*, 2005, p. 6.

²⁵⁰ *Ibid.*, p. 9.

²⁵¹ UNDAW, *Information and communication technologies and their impact on and use as an instrument for the advancement and empowerment of women*, 2002, p. 6.

²⁵² *Ibid.*

women.²⁵³ The cost of accessing ICTs prevents people in developing regions who live on under \$2 a day from using this technology, as these costs can exceed 20% of an average low-income earner's monthly income, and even up to 48% for individuals in Colombia and 90% for those in Zimbabwe.²⁵⁴ According to ITU, access to the Internet costs about 11% to 30% of an average monthly salary in developing countries, and over half the monthly income in least-developed countries.²⁵⁵ This has made access to ICTs a challenge for many households, particularly for women who face further gender-based economic marginalization.²⁵⁶ With the income of women being about 30 to 50% less than that of men globally on average, the lack of affordability of ICTs significantly affects women's access.²⁵⁷ Worldwide, the number of women with access to ICTs and ICT devices is 12% lower than the number of men.²⁵⁸ In Africa alone, where many rural regions have limited connectivity and higher service costs, the number of women with access to ICTs is 25% lower than that of men, giving only one out of seven women access to ICTs.²⁵⁹ The World Wide Web Foundation has indicated that these high costs have limited women's access to ICTs, information, and knowledge, which further increases their exclusion from the global digital economy.²⁶⁰ Moreover, the gap between rural and urban technological frameworks also provides an obstacle to introducing ICTs to women and girls in rural areas.²⁶¹ Women in these regions may find it more difficult to get connectivity.²⁶² However, international programs such as the women-only tele-centers run by the World Bank Group aim to address issues such as these, and have been successful in providing rural women with access to ICTs.²⁶³

Successful Usage of ICTs for Gender Equality and the Empowerment of Women

Research has shown that increased ICT access for women can “boost the productivity of countries and better meet women's economic and social needs.”²⁶⁴ While challenges still remain to reducing the global digital divide on ICTs, several programs at both regional and local levels have achieved success in using ICTs to provide empowerment for women and serve as the path to achieving gender equality.²⁶⁵ Through the adoption of initiatives and the implementation of policies that also include male allies, Member States, private stakeholders, and civil society are able to overcome many of the challenges in providing ICT access to women.²⁶⁶ The African Women's Network of the Association for Progressive Communication (APC) is a program that seeks to facilitate a dialogue between women to share their experiences, concerns, and knowledge on technological issues.²⁶⁷ The network gives them a platform where they can participate in diverse ICT initiatives that they may not otherwise have access to.²⁶⁸ The network also organizes training workshops to support women's electronic networking programs, which have been noted by the UN Public Administration Network (UNPAN) as being particularly successful.²⁶⁹ Another civil society program, the Multimedia Caravan Project, is an initiative that facilitates the travel of trailers with computers around Senegal, which help to introduce and teach people about ICTs.²⁷⁰ Through this program, women in the rural areas of

²⁵³ Jorge, *The Economics of ICT: Challenges and Practical strategies of ICT use for Women's Economic Empowerment*, 2002, p. 2.

²⁵⁴ World Wide Web Foundation, *ICTs for Empowerment of Women and Girls: A research and policy advocacy initiative on empowering women on and through the web in 10 countries*, 2014, p. 16.

²⁵⁵ UN ITU-D, *ICT Facts and Figures 2017*, 2017, p. 3.

²⁵⁶ Ibid.

²⁵⁷ World Wide Web Foundation, *ICTs for Empowerment of Women and Girls: A research and policy advocacy initiative on empowering women on and through the web in 10 countries*, 2014, p. 16.

²⁵⁸ UN ITU-D, *ICT Facts and Figures 2017*, 2017, p. 3.

²⁵⁹ Ibid.

²⁶⁰ World Wide Web Foundation, *ICTs for Empowerment of Women and Girls: A research and policy advocacy initiative on empowering women on and through the web in 10 countries*, 2014, p. 16.

²⁶¹ Danjuma et al., *Prospects and Challenges for Women in Nigeria*, 2015, p. 314.

²⁶² Ibid.

²⁶³ World Bank Group, *Information and Communication Technologies for Women's Socio-Economic Empowerment*, 2009, p. 22.

²⁶⁴ UN-Women, *Remarks of Phumzile Mlambo-Ngcuka, UN Women Executive Director, at the UN Broadband Commission Working Group on Gender*, New York, 20 September 2013, 2013.

²⁶⁵ World Wide Web Foundation, *ICTs for Empowerment of Women and Girls: A research and policy advocacy initiative on empowering women on and through the web in 10 countries*, 2014, p. 4.

²⁶⁶ Ibid.

²⁶⁷ Jain, *ICTs and Women's Empowerment*, 2017.

²⁶⁸ Ibid.

²⁶⁹ Ibid.

²⁷⁰ Ibid.

Senegal have been given the opportunity “to develop their own ideas on how ICT can be used to meet their development needs and goals.”²⁷¹

With hopes of addressing the issue of the digital gender gap and promoting gender mainstreaming, the Swedish company Ericsson's international awards competition, the Innovation Awards (EIA), has empowered women and girls to participate in ICT competitions.²⁷² The competition brings together women and girls on the International Girls in ICT Day and encourages them to invent means through which technology can be used to eradicate social issues, such as hunger.²⁷³ In collaboration with the UN Development Programme (UNDP) and the UN Industrial Development Organization (UNIDO), the Youth Crime Watch Liberia was established in 2004 and has taken up the initiative to create a Girls in ICT Project for women in Liberia through ICT education.²⁷⁴ Through the program, women are able to attend free ICT classes that teach them how to complete small business loans and how to set up and promote their businesses online.²⁷⁵

The Cherie Blair Foundation for Women is an organization established to support women to be financially independent and confident in starting up their own businesses to improve their standard of living.²⁷⁶ The foundation generated a 2012 report that addresses the importance of women’s access to mobile phones for business purposes.²⁷⁷ The report indicates that the increase in mobile ownership and usage by women can generate the advancement of the social and economic conditions of a Member State.²⁷⁸ The report also noted that over 300 million women are currently lacking access to mobile phones, which represents a loss in revenue of approximately \$13 billion for mobile operators.²⁷⁹ The Foundation is trying to address this gender gap with its innovative mWomen program, which is designed to bring mobile phones and the benefits of mobile usage to about 150 million women, as mobile phone access helps gender equality and the empowerment of women.²⁸⁰ Additionally, initiated by UN-Women in 2014, HeForShe is a solidarity campaign that urges men and boys to be agents of change for the advancement of women.²⁸¹ Through the initiative, the government of Iceland is working with local news agencies, film industries, and advertising companies to recruit more women in STEM fields.²⁸² To achieve this, a comprehensive domestic action plan was established highlighting the main target solutions to achieve women’s empowerment and increasing the participation of women in media and other technological fields.²⁸³

According to President Paul Kagame of Rwanda, his vision is to transform Rwanda into “a knowledge-based middle income economy by 2020 and in order to achieve this, a strong ICT sector is key.”²⁸⁴ The government of Rwanda introduced a Gender Equality Mainstreaming plan to address this.²⁸⁵ This strategy prioritizes government funding of programs that increase the rates of girls’ enrollment in ICT, like the Smart Rwanda Master Plan (2015-2020) and the Women Empowerment in Technology (WEMTECH) program.²⁸⁶ WEMTECH, an initiative designed to empower women through the use of ICTs, increases their access and participation in the different economic sectors and allows women to market their products and conduct business digitally, including with international buyers.²⁸⁷ Furthermore, UN-Women Moldova, in collaboration with Moldova’s eGovernment Center, the National Association of Private ICT Companies (ATIC), and Novateca, have partnered to set up the GirlsGoIT initiative that makes IT and entrepreneurial skills available to women and girls in order to train them for careers in ICT.²⁸⁸ Similarly, the Mozilla

²⁷¹ Jain, *ICTs and Women’s Empowerment*, 2017.

²⁷² Ericsson, *EIA: Girls Who Innovate*, 2017.

²⁷³ *Ibid.*

²⁷⁴ YCWL, *Girls in ICT Project*, 2017.

²⁷⁵ *Ibid.*

²⁷⁶ Cherie Blair Foundation, *Women and Mobile: A Global Opportunity*.

²⁷⁷ *Ibid.*

²⁷⁸ *Ibid.*

²⁷⁹ *Ibid.*

²⁸⁰ *Ibid.*; UNCTAD, *Target 5.b: Women empowerment through ICT*.

²⁸¹ UN-Women, *Head of State Impact Champions*, 2016.

²⁸² *Ibid.*

²⁸³ *Ibid.*

²⁸⁴ HeForShe, *Head of State IMPACT Champion: Paul Kagame: President Rwanda*, 2016.

²⁸⁵ UN-Women, *Head of State Impact Champions*, 2016.

²⁸⁶ *Ibid.*

²⁸⁷ *Ibid.*

²⁸⁸ UN-Women, *Women breaking barriers and optimizing opportunities in a digital world*, 2016.

Clubs, a joint initiative by the Mozilla Foundation and UN-Women in Kenya and South Africa, has provided safe spaces for women and girls to learn web design, content creation, coding, and other digital marketing skills while being trained to be active participants, leaders, and inventors in the digital world.²⁸⁹

Conclusion

ICTs are a key means for achieving global sustainable development, and in order to fully include women in this field by 2030, new techniques, policies, and tools need to be introduced to ensure equal gender access.²⁹⁰ Even though the international community has discussed the problems of gender inequality and the empowerment of women, there is still immense work that needs to be done to reduce the global digital gender divide.²⁹¹ With gender equality and the empowerment of women being an important aspect of the SDGs, as well as a means to achieving more responsive and transparent governments and key to meeting the goal of attaining sustainable development, ITU has continued to lead the international community on achieving gender-equal ICTs usage.²⁹²

Future Research

As delegates prepare for the conference, they should reflect on the following questions: How do ICTs improve global gender equality and women's empowerment? What are some of the ways in which resources can be used to promote the use of ICTs by women? What are some of the main barriers to reducing the global digital gender divide of ICTs? In what ways can increased gender equality through ICTs help accelerate the SDGs? How can the participation of young women and girls in ICT initiatives and web literacy be promoted? How can UN agencies, governments, civil society, private stakeholders, and other participants work together in implementing policies and introducing projects that support gender mainstreaming through technology?

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Baller, S., et al. (2016). *The Global Information Technology Report 2016: Innovating in the Digital Economy*. World Economic Forum. Retrieved 15 July 2017 from:

http://www3.weforum.org/docs/GITR2016/WEF_GITR_Full_Report.pdf

This report provides useful information on the current progress by Member States on access to information and communication technologies (ICTs). The report also examines different approaches to innovation in relation to ICTs. Delegates should be familiar with the basic ideas covered in this report as it provides important recommendations. In reading the report, delegates should also focus on the section on the private sector and civil society.

Bickford, K. (2017, April 4). Empowering Girls and Women through ICTs. *Oxfam*. Retrieved 19 July 2017 from: <https://views-voices.oxfam.org.uk/gender/2017/04/empowering-girls-and-women-through-icts/>

The article breaks down important aspects of achieving gender equality and empowering women and girls through ICTs, and explains how the lack of access to ICTs affects different Member States. By examining and reviewing the different economic costs and expenses that are accumulated as a result of the gender gap in the digital world, the article also addresses the gender gap issues in ICTs and provides information on how the issues can be resolved. This is a useful source of information for delegates as it discusses not only the challenges faced, but also provides recommendations that will support global advancement and access to ICTs.

Cherie Blair Foundation for Women. (n.d.). *Women and Mobile: A Global Opportunity* [Website]. Retrieved 28 August 2017 from: <http://www.cherieblairfoundation.org/women-and-mobile-a-global-opportunity/>

The Cherie Blair Foundation was established to secure financial independence for women. This website demonstrates strategies that the international community is taking in addressing the issue of gender inequality. Through its different partnerships with many UN agencies, the website is able to guide delegates on the strategies being taken to bridge the gender digital gap at the local

²⁸⁹ UN-Women, *Empowering Women and Girls through Web Literacy*, 2016.

²⁹⁰ UN ITU, *Building the Information Society: A global challenge in the new Millennium*, 2005.

²⁹¹ Cherie Blair Foundation, *Women and Mobile: A Global Opportunity*.

²⁹² IANWGE, *Resolutions on Gender Equality*.

level. This source further demonstrates the importance of technological devices and explains how they can be used to empower women.

European Centre for Women and Technology. (n.d.). *Our Story* [Website]. Retrieved 13 August 2017 from: <http://www.ecwt.eu/en/our-story>

As a leading European-level platform in addressing the gender gap in science, technology, engineering, and math (STEM) fields, the European Centre for Women and Technology website provides detailed information on the progress of stakeholders and provides expert strategies on spreading awareness, research, and training in achieving gender equality using ICTs. The website provides information on integrating a number of women in Europe in the fields of science and technology, as well as research, innovation, and production using ICTs between the year 2010 and 2020. It is a great resource for delegates since it provides information on how the organization helps to train women in the use of ICTs.

Ericsson. (2017). *EIA: Girls Who Innovate* [Website]. Retrieved 5 August 2017 from: <https://www.ericsson.com/en/careers/student-young-professionals/girls-who-innovate>

Ericsson is one of the telecommunication companies making global technological communications available to all. The company's website introduces a diverse array of initiatives and strategies promoting gender mainstreaming that the company is involved in, thereby demonstrating the involvement of the private sector in achieving SDG 5. The website provides delegates with information on how women and girls can be supported to further engage in ICTs.

The Global Partnership for Gender Equality in the Digital Age. (2017). *About Us* [Website]. Retrieved 28 August 2017 from: <http://equals.org/about-us/>

EQUALS is a global initiative formed by the partnership of corporate leaders, governments, non-profit organizations, communities, and individuals working together to bridge the digital gender divide. This is done through the "bringing women to tech, and tech to women" initiative. With its main aim being to create awareness, EQUALS is a great starting point for research for delegates to further elaborate upon their knowledge on the topic. The website provides delegates with information on resource building for ICTs, establishing partnerships, and supporting real action. The website also addresses the digital gender divide and provides ways in which digital gender equality and the improvement of livelihoods of millions around the world can be achieved.

United Nations Conference on Trade and Development. (n.d.). *Target 5.b: Women empowerment through ICT* [Website]. Retrieved 18 July 2017 from: http://stats.unctad.org/Dgff2016/people/goal5/target_5_b.html

The website provides key information on the relationship between ICTs and how they can accelerate the SDGs. Specifically addressing SDG 5, the website helps frame different initiatives and policies that address the barriers that deter women from accessing ICTs. The website serves as an important tool for delegates to explore information on how social norms and other socio-economic factors affect women's access of technology. This source further provides delegates with in-depth information on some of the regional barriers affecting each Member State and how to overcome those barriers.

United Nations, Economic and Social Council. (2011). *The role of the United Nations system in implementing the internationally agreed goals and commitments in regard to gender equality and the empowerment of women (E/RES/2011/5)* [Resolution]. Retrieved 14 July 2017 from: <http://www.un.org/en/ecosoc/docs/2011/res%202011.5.pdf>

In this resolution, ECOSOC gives detailed information on the role of the UN system, its plans to address gender inequality, and its support in empowering women. The resolution provides references to a number of initiatives, as well as the stances taken by UN bodies in relation to ICTs and the involvement of women. The resolution serves as a guide for delegates to understand the roles of the other UN agencies with regards to ICTs and women's empowerment. Delegates will be able to use this resolution to gain a better understanding of the topic and what roles the UN system plays, and what specific approaches are put in place to promote gender equality and the empowerment of women using ICTs.

United Nations, International Telecommunication Union. (2017). *Gender equality and the empowerment of women and girls through ICTs* [Website]. Retrieved 16 July 2017 from: <https://www.itu.int/en/action/gender-equality/Pages/default.aspx>

This website serves as an important source of information on ICTs and the topic under discussion. The contents found on this website are mainly tools through which ICTs can be advanced, equally distributed, and made easily accessible. The website highlights the role of ICTs in promoting gender equality and women's empowerment. One of the ways this is done is by encouraging women and girls to further their careers in ICT-related fields, and promote their use of ICTs for their social and economic empowerment. The website also encourages Member States, as well as the private sector, to review their policies related to the information society to ensure the inclusion of a gender perspective in all activities.

World Bank Group. (2012). *ICTs for Greater Development Impact*. Retrieved 21 August 2017 from: https://siteresources.worldbank.org/EXTINFORMATIONANDCOMMUNICATIONANDTECHNOLOGIES/Resources/WBG_ICT_Strategy-2012.pdf

The World Bank Group is one of the leading organizations in the quest for achieving gender equality and women's empowerment. This document serves as a sector strategy on ICT for the World Bank Group. The organization has invested in over 1,300 projects, "financing IT companies, supporting grassroots technology entrepreneurship, and supporting public-private programs aimed at developing ICT skills." With the information provided in the report, delegates will gain information on how financial support can be attained to support small- and large-scale ICT projects, especially in developing countries.

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III. Advancing Human Rights and Development Through Artificial Intelligence

*“AI innovation will be central to the achievement of the United Nations’ Sustainable Development Goals (SDGs) and will help in solving humanity’s grand challenges...It is therefore important that all stakeholders work together to evaluate the opportunities presented by AI, ensuring that AI benefits all of humanity.”*²⁹³

Introduction

During the Artificial Intelligence (AI) for Good Global Summit, held from 7 to 9 June 2017, the United Nations (UN) International Telecommunication Union (ITU) defined AI as machines that gain “the ability to learn, improve and make calculated decisions in ways that will enable them to perform tasks previously thought to rely on human experience, creativity, and ingenuity.”²⁹⁴ Fundamental to understanding AI’s potential is acknowledging its technological capacity to address key global issues facing humanity, including challenges to the two central and indivisible pillars of the international community: human rights and development.²⁹⁵ The UN standard definition of human rights are “rights inherent to all human beings, regardless of race, sex, nationality, ethnicity, language, religion, or any other status;” and development is defined by the UN as the promotion of “economic prosperity and economic opportunity, greater social well-being, and protection of the environment.”²⁹⁶ AI has significant capacity to address existing global challenges with the potential to, for instance, operate in environments hazardous for human health, or produce predictive algorithms for crisis situations.²⁹⁷ This potential such, that ITU has declared AI as “central to the achievement of the UN Sustainable Development Goals [SDGs].”²⁹⁸

While AI may hold significant potential to help humanity solve great challenges, it also comes with many risks.²⁹⁹ AI represents an inherently different form of emerging technology, for its potential to exemplify something as fundamentally human as intelligence.³⁰⁰ The removal of human control over powerful new technology can create future issues for determining the legal responsibility of decisions, and challenges the global community’s existing funding and technical expertise capabilities.³⁰¹ These risks must be addressed through dialogue on the feasibility of regulating future AI developments, and exploring other means to ensure that the benefits of AI outweigh the risks.³⁰² Ultimately, AI presents significant opportunities for the international community to improve human rights and development through new technological innovation.³⁰³ This guide will discuss how the UN can best harness AI to advance human rights and development through first establishing the foundational framework, and then providing an in-depth discussion of the challenges and opportunities of using AI in human rights and development work.

International and Regional Framework

A foundational document within the international human rights framework is the *Universal Declaration of Human Rights* (UDHR), adopted in 1948, which provides a pivotal list of fundamentally-protected human rights, such as the right to shared benefits from new science and technology in Article 27.³⁰⁴ Other key human rights documents include the *International Covenant on Civil and Political Rights* (ICCPR) (1966) and the *International Covenant on*

²⁹³ UN ITU, *ITU Briefing on “Artificial Intelligence (AI) for Good”*, 2017.

²⁹⁴ UN ITU, *Artificial Intelligence*, 2017.

²⁹⁵ *Ibid.*

²⁹⁶ UN DPI, *Human Rights*, 2017; UN DPI, *Promote Sustainable Development*, 2017; UNDG, *Chronology of UN Milestones for Human Rights and Development*, 2015.

²⁹⁷ UN DPI, *At first ‘playable’ UN conference, tech experts, gamers drive new thinking on global development*, 2017; Adams, 10 *Powerful Examples of Artificial Intelligence in Use Today*, *Forbes*, 2017; Soltau, *Automation and artificial intelligence - what could it mean for sustainable development?*, 2016, p. 1.

²⁹⁸ UN ITU, *Artificial Intelligence*, 2017; XPRIZE, *AI Solving Sustainable Development Goals*, 2017.

²⁹⁹ UN ITU, *ITU Briefing on “Artificial Intelligence (AI) for Good”*, 2017; UNODA, *AI for Global Good Summit: Plenary 1: State of Play*, 2017; *Human-Compatible AI: Design Principles to Prevent War Between Machines and Men*, itunewslog, 2017.

³⁰⁰ Deangelis, *The Upside of Artificial Intelligence Development*, *Wired*, 2015.

³⁰¹ UNICRI, *Robotics and Artificial Intelligence*, 2017.

³⁰² *Ibid.*

³⁰³ UN ITU, *ITU launches global dialogue on Artificial Intelligence for good: AI for Good Global Summit aims to ensure that AI benefits humanity*, 2017.

³⁰⁴ UN General Assembly, *Universal Declaration of Human Rights (A/RES/217/A (III))*, 1948.

Economic, Social and Cultural Rights (ICESCR) (1976).³⁰⁵ The ICCPR serves to establish the notion of non-discrimination and equality for all; the ICESCR was created to ensure the protection of self-determination, as well as equal gender rights, the right to work, and the right to security, among others.³⁰⁶ Together, the UDHR, the ICCPR, and the ICESCR form the International Bill of Human Rights, and are pivotal for all human rights work globally, including their application to emerging technologies such as AI.³⁰⁷ ITU's *Declaration of Principles on Building the Information Society* (2003), adopted for the UN's World Summit on the Information Society (WSIS) in 2003, built on the UDHR, referencing in particular the "right to freedom of opinion and expression," and expanding the UDHR's definition of "community" to also recognize digital communities.³⁰⁸

The SDGs, established on 25 September 2015 within the *2030 Agenda for Sustainable Development*, represent the key strategic development framework for the UN from 2015 to 2030.³⁰⁹ The goal of the SDGs is to build on the work of the Millennium Development Goals (MDGs), the now-finished 2000 to 2015 UN global blueprint on development issues, and to emphasize the interconnectedness of economic equality, environmental protection, and social needs.³¹⁰ Member States will implement the SDGs through domestic frameworks, ensuring progress, accountability, and review.³¹¹ Emerging technology is critical to all 17 SDGs, such as providing increasingly responsive education programs (SDG 4 on "Quality Education"); developing clean energy technologies (SDG 7 on "Affordable and Clean Energy"); and staying ahead of cyber threats (SDG 16 on "Peace, Justice, and Strong Institutions"), among others.³¹²

Role of the International System

AI is already in use in the private sector, with examples ranging from driverless cars to speech recognition software; however, AI is still a new topic within the UN, with ITU being the first organization to analyze the thematic and practical applications of AI from a global policy perspective.³¹³ ITU, which was created to support the fundamental right of communication, has a long history of enabling new technology to best support the UN's commitment to human rights and development.³¹⁴ Specifically, ITU's role as a neutral facilitator of dialogue between public and private stakeholders on emerging technologies demonstrates its unique ability to support the increasing applicability of AI in human rights and development work.³¹⁵ As information and communication technologies (ICTs) increasingly support the functioning of humanitarian response, from resource supplies to emergency services, ITU has an increasingly relevant role to play in improving the UN's ability to address threats against humanity.³¹⁶ Already, ITU has supported AI's potential to contribute to the SDGs, including utilizing AI data analysis of poverty (SDG 1), reducing the digital gender gap (SDG 5), and improving satellite monitoring of ocean species (SDG 14).³¹⁷

While AI was discussed in the 2016 ITU Kaleidoscope Academic Conferences, and was a key focus of a series of ITU talks at the 2016 World Telecommunication Standards Assembly, the first major ITU event on the future of AI, the AI for Good Global Summit, was held from 7 to 9 June 2017 in Geneva.³¹⁸ Emerging from a September 2016 partnership between ITU and XPRIZE, a non-profit partner, the summit featured over 500 delegates and a broad range of speakers, including academics, high-level UN representatives, and leaders in the private sector.³¹⁹ The goal

³⁰⁵ UN General Assembly, *International Covenant on Civil and Political Rights (A/RES/2200 (XXI))*, 1966; UN General Assembly, *International Covenant on Economic, Social and Cultural Rights (A/RES/2200 (XXI))*, 1966.

³⁰⁶ *Ibid.*; UN General Assembly, *Optional Protocol to the International Covenant on Civil and Political Rights (A/RES/2200 (XXI))*, 1966.

³⁰⁷ CCLA, *Summary: International Covenant on Civil and Political Rights (ICCPR)*, 2015.

³⁰⁸ UN ITU, *World Summit on the Information Society: Declaration of Principles*, 2003, p. 1.

³⁰⁹ UN General Assembly, *The Sustainable Development Goals: 17 Goals to Change our World*, 2017.

³¹⁰ UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.

³¹¹ *Ibid.*

³¹² *Ibid.*; *Accelerating the UN's Sustainable Development Goals through AI*, itublog, 2017.

³¹³ UN ITU, *AI for Good Global Summit*, 2017.

³¹⁴ UN ITU, *About International Telecommunication Union (ITU)*, 2017.

³¹⁵ UN ITU, *Our Vision*, 2017.

³¹⁶ UN ITU, *Overview*, 2017.

³¹⁷ UN DESA DSD, *High-Level Political Forum on Sustainable Development*, 2017.

³¹⁸ UN ITU, *AI for Good Global Summit*, 2017; UN ITU, *WTSA-16*, 2017; UN ITU, *The ITU Kaleidoscope Academic Conferences*, 2017.

³¹⁹ UN ITU, *The ITU Kaleidoscope Academic Conferences*, 2017; UN ITU, *AI for Good Global Summit - Speakers*, 2017.

of the Summit was to provide a neutral platform to discuss the “ethical, technical, societal and policy issues related to AI,” as well as to support global AI innovation and create recommendations for future AI development.³²⁰ Multiple UN organizations partnered with ITU and XPRIZE to support the event, including the World Health Organization (WHO) and the World Food Programme (WFP), among others.³²¹ The event included plenary sessions on different sectors’ views on the future of AI and breakout sessions targeted towards discussing AI ethics, sustainable living, and poverty reduction.³²² Since the summit, increasing dialogue on AI has continued within ITU, with ITU’s blog publishing new articles from external partners, the creation of an ITU-run LinkedIn Group for AI professionals, and ITU opening a “Call for Papers” for the new ITU Journal *ITU Discoveries*’ 2017 first special issue on AI, in addition to their 2017 publication of the “AI for Social Good”-themed semi-annual ITUNews magazine.³²³

The UN General Assembly Second Committee also focuses on ICT as it relates to development, and the UN General Assembly Third Committee addresses how technology impacts human rights and humanitarian affairs.³²⁴ While the UN General Assembly has yet to address AI formally, it has held discussions on the role of ICTs in development, including November 2012 discussions on “Communication for Development: Using ICT and Broadband to Accelerate Social and Economic Development.”³²⁵ General Assembly resolution 70/213 of 2015 on “Science, Technology and Innovation for Development” was created in response to the SDGs and the WSIS, and emphasizes the importance of integrating emerging science, technology, and innovation (STI) approaches into domestic and global policy, in addition to stressing the importance of STIs in achieving the SDGs.³²⁶ Additionally, UN General Assembly resolution 70/184 (2015) emphasized the potential of ICTs to provide new solutions to development, sustainability, and human rights challenges through increased social inclusion and equitable economic growth, and underlined the importance of regional approaches to reducing the “digital divide,” particularly for lesser-developed countries.³²⁷

ITU reports to the UN Economic and Social Council (ECOSOC), and ECOSOC champions innovative technological approaches to human rights and development issues.³²⁸ In February 2012 at the ECOSOC Segment on Operational Activities for Development, speakers called for effective governance of “currently ungoverned spaces, such as genetic engineering and artificial intelligence,” noting that the rapid development of science and technology represents a simultaneous threat to the global order and a means to further it.³²⁹ The UN Commission on Science and Technology for Development (CSTD), a subsidiary body of ECOSOC, has also demonstrated commitment to spreading awareness of AI’s potential through publishing interviews and reports from experts on the opportunities this new technology presents.³³⁰ In May 2017, the UN High-Level Political Forum on Sustainable Development (HLPF) held a discussion forum on science, technology, and innovation for the SDGs, which discussed stakeholder involvement in global scientific cooperation, and proposed that new approaches to development based on AI should be explored by the global community and included in national planning for Member States.³³¹ The HLPF, created in 2012 by the outcome document of the UN Conference on Sustainable Development (Rio+20), meets annually and serves as the main UN platform on the review of the SDGs.³³² The HLPF has highlighted the work of ITU,

³²⁰ UN ITU, *AI for Good Global Summit*, 2017; UN ITU, *AI for Good Global Summit - Speakers*, 2017.

³²¹ UN ITU, *AI for Good Global Summit*, 2017.

³²² UN ITU, *Draft Programme of Global Summit on Artificial Intelligence for Good (CL-17/14)*, 2017.

³²³ *Call for Papers Open for New ITU Journal: ICT Discoveries*, itunewslog, 2017; UN ITU-T, *Daily Highlights and In-Depth Interviews: Videos from the AI for Good Global Summit*, itunewslog, 2017; LinkedIn, *ITU: AI for GOOD*, 2017.

³²⁴ UN General Assembly, *Economic and Financial: Second Committee*, 2017; UN General Assembly, *Social, Humanitarian & Cultural: Third Committee*, 2017; UN General Assembly Third Committee, *Third Committee: Joint Meeting of the Second and Third Committees*, 2017.

³²⁵ UN General Assembly, *Economic and Financial: Second Committee*, 2017.

³²⁶ UN General Assembly, *Science, technology and innovation for development (A/RES/70/213)*, 2015.

³²⁷ UN General Assembly, *Information and communications technologies for development (A/RES/70/184)*, 2015.

³²⁸ UN ECOSOC, *About Us*, 2017.

³²⁹ UN Office of the Secretary-General, *Deputy Secretary-General’s remarks at 2017 ECOSOC Segment on Operation Activities for Development [as delivered]*, 2017.

³³⁰ UN CTD, *Q&A with Dhesi Baha Raja, Epidemiologist and Chief Scientist, Artificial Intelligence in Medical Epidemiology*, 2017.

³³¹ UN HLPF, *Summary Record of the Multi-stakeholder forum on science, technology and innovation for the Sustainable Development Goals (E/HLPF/2017/4)*, 2014, p. 7.

³³² UN DESA DSD, *High-Level Political Forum on Sustainable Development*, 2017.

particularly in regards to SDG 9 (“Infrastructure, Industrialization, and Innovation”), in connecting people in lesser-developed countries to the Internet.³³³

AI is also becoming a topic of discussion in the UN Human Rights Council (HRC), with the September 2017 session including debates on AI in diverse human rights discussions ranging from eHealth, to the rights of the elderly, to human rights on the Internet.³³⁴ Additionally, the Office of the UN High Commissioner for Human Rights (OHCHR) released a 2016 report to HRC where they requested that HRC implement standards to ensure that AI does not perpetrate existing social biases around gender and age.³³⁵ Moreover, WHO collaborates with policy and medical professionals to work towards meeting global healthcare needs, and technology plays a central role in this work.³³⁶ In particular, WHO has been a large proponent of eHealth, the use of ICTs for health by multiple private and public stakeholders, including the release of a 2015 *Atlas of eHealth profiles* and a 2016 report on the *Global Diffusion of eHealth*.³³⁷ WHO has also tentatively supported the emerging use of AI in the healthcare sector, while cautioning against AI’s funding and electrical power limitations, particularly in remote developing regions.³³⁸

Artificial Intelligence in Human Rights and Development

Salil Shetty, Secretary-General of Amnesty International, noted at the AI for Good Global Summit, that “When we think about HR [human rights], often we only think about political and civil rights, but economic-social rights include health, education, water, so the applicability of AI for making education accessible, and making health accessible and affordable is phenomenal.”³³⁹ AI, while still in its early stages, has already been utilized in areas such as agriculture, where AI has the capability to increase the yield of farmland under tillage or efficiently identify disease in crops.³⁴⁰ For instance, while technologies such as Global Positioning Systems (GPS) have already increased agricultural yield, AI opens the door for more advanced options such as specialized autonomous seeding drones, and building advanced datasets on environmental conditions.³⁴¹

According to global indicators, extreme poverty and maternal mortality are overall on the decline; however, economic inequality continues to rise.³⁴² As the prevalence of smart technology increases, new job opportunities emerge, particularly ones that require skilled technical labor, which then in turn demand more opportunities for higher education and a means to reduce the global digital divide.³⁴³ In fact, at the AI for Good Global Summit, it was noted that AI may represent the next industrial revolution; the Accenture Institute for High Performance has released data noting that AI has the potential to double annual gross domestic product (GDP) growth in developed economies by 2035.³⁴⁴ The Organisation for Economic Co-operation and Development (OECD) stated at the November 2016 Technology Foresight Forums that as of 2016, AI coordinates 50% of global financial transactions, and ITU has predicted that by 2018, 62% of the world’s organizations will be using AI, with more than 3 million workers globally being remotely supervised by a “robo-boss,” or a supervisor whose primary interactions are only through technology.³⁴⁵

³³³ Zhao, How ICTs can fast forward progress on the SGDs, *UN DESA DSD*, 2017.

³³⁴ UN HRC, *Report of the Independent Expert on the enjoyment of all human rights by older persons (A/HRC/36/48)*, 2017; Bertelloni & Brown, Internet rights at the Human Rights Council 36th Session, *Association for Progressive Communications News*, 2017.

³³⁵ World Wide Web Foundation, *UN Human Rights Council Must REACT to Close the Gender Digital Divide*, 2017.

³³⁶ WHO, *About WHO*, 2017.

³³⁷ WHO, *eHealth*, 2017.

³³⁸ WHO, *Speech by Director-General of the World Health Organization Dr. Margaret Chan Opening remarks at the Artificial intelligence for good global summit on 7 June 2017, in Geneva*, 2017.

³³⁹ *Daily Highlights and In-Depth Interviews: Videos from the AI for Good Global Summit*, itunewslog, 2017.

³⁴⁰ Rimmer, AI in Developing Countries: Artificial Intelligence isn’t just for self driving cars, *Innovation Enterprise*, 2017.

³⁴¹ Pickup, Instant Diagnosis by Smartphone: How Artificial Intelligence can save lives, *The Telegraph*, 2016.

³⁴² Shetty, Artificial Intelligence for Good, *Amnesty International*, 2017.

³⁴³ *Ibid.*

³⁴⁴ *Daily Highlights and In-depth Interviews: Videos from the AI for Good Global Summit*, itunewslog, 2017; Rimmer, AI in Developing Countries: Artificial intelligence isn’t just for self driving cars, *Innovation Enterprise*, 2017.

³⁴⁵ OECD, *Technology Foresight Forum 2016 on Artificial Intelligent (AI)*, 2017; UN ITU, *AI for Good Global Summit*, 2017; UN ITU, *AI for Social Good*, 2017.

The strongest drivers of AI research and implementation remain the private sector and academia.³⁴⁶ In 2014, companies such as Facebook, Netflix, Google, Yahoo, and Spotify began making significant investments in deep learning technology; and in 2015, Google Research published a paper called “Massively Multitask Networks for Drug Discovery,” which discusses how deep learning software can evaluate datasets and then introduce new conclusions, such as accelerating medical treatment discovery for low-income medical facilities.³⁴⁷ In January 2017, the high-profile Partnership on Artificial Intelligence to Benefit People and Society announced that it would expand its membership to include organizations like the University of California and Google, demonstrating the unique interconnectedness of businesses, non-profits, and academia in developing an innovative approach to human rights policy through AI.³⁴⁸

However, the rise of intelligent technology also presents risks.³⁴⁹ The inability of AI to replicate human emotional intelligence, such as empathy, presents an ethical dilemma, particularly because human-generated AI algorithms are prone to human-generated bias.³⁵⁰ This can be seen in deep learning AI, which is created to simulate the complex neural networks of a human brain, but becomes difficult to audit due to the inherent complexity of large datasets.³⁵¹ This means that boundaries of privacy may be crossed when sharing information, and the accountability and transparency of decisions may suffer.³⁵² Similarly, these phenomena point to the idea that AI may reinforce existing marginalization by targeting already vulnerable social groups during predictive analytics for voting or financial decisions.³⁵³ Through building on existing model regulations such as the ITU’s Telecommunication Standardization Sector’s (ITU-T) Recommendation Series, and the Regulatory Assessment Toolkit, ITU can ensure that the responsibilities of AI’s users and private developers are standardized and adhere to the principles of international human rights when used in development work.³⁵⁴

Case Study: AI and Healthcare in Developing Countries

SDG 3 establishes that health is an important piece of building prosperous societies, as it depends on and furthers productivity in other sectors such as agriculture, industry, and education.³⁵⁵ However, with epidemics like HIV/AIDS and malaria, inequalities in healthcare access, rising demands for family planning resources, and new challenges such as antimicrobial resistance, healthcare needs are not being met globally.³⁵⁶ Currently, only 50% of women in developing regions receive access to essential health services, and children born into poverty have almost a doubled chance of dying before the age of five, compared to children from wealthier families.³⁵⁷

At the AI for Good Global Summit, WHO spoke to the capabilities of smart technologies to address some of these challenges through analyzing patient samples, organizing data, and improving healthcare, particularly in developing countries.³⁵⁸ Developers are already discussing early-diagnosis technology for contagious diseases, using point-of-care tests in resource-limited settings, and speeding prescription ordering.³⁵⁹ Using AI for medical support has already had successes, with the first alert for the recent swine flu outbreak in Mexico coming from public officials

³⁴⁶ OECD, *Technology Foresight Forum 2016 on Artificial Intelligent (AI)*, 2017.

³⁴⁷ Sawers, How Google’s using big data and machine-learning to aid drug discovery, *VentureBeat*, 2015.

³⁴⁸ Gershgorn, A massive AI partnership is tapping civil rights and economic experts to keep AI safe, *Quartz*, 2017.

³⁴⁹ Shetty, Artificial Intelligence for Good, *Amnesty International*, 2017.

³⁵⁰ Elsayed-Ali, Artificial intelligence: how it impacts human rights and what we should do about it, *Medium*, 2017.

³⁵¹ Ibid.

³⁵² Shetty, Artificial Intelligence for Good, *Amnesty International*, 2017.

³⁵³ Ibid.

³⁵⁴ *Daily Highlights and In-depth Interviews: Videos from the AI for Good Global Summit*, itunewslog, 2017; UN ITU, *ICT Regulation Toolkit*, 2017; UN ITU, *ITU-T Recommendation Series Structure*, 2017.

³⁵⁵ UN DPI, *Good Health and Well-Being: Why it Matters*, 2017, pp. 1-2; WHO, *World Health Statistics 2017*, 2017, p. 1.

³⁵⁶ UN DPI, *Good Health and Well-Being: Why it Matters*, 2017, pp. 1-2; UN DPI, *Goal 3: Ensure healthy lives and promote well-being for all at all ages*, 2017; Nowogrodzki, Artificial Intelligence Offers a Better Way to Diagnose Malaria, *MIT Technology Review*, 2016.

³⁵⁷ UN DPI, *Good Health and Well-Being: Why it Matters*, 2017, pp. 1-2; UN DPI, *Goal 3: Ensure healthy lives and promote well-being for all at all ages*, 2017.

³⁵⁸ WHO, *Speech by Director-General of the World Health Organization Dr. Margaret Chan Opening remarks at the Artificial intelligence for good global summit on 7 June 2017, in Geneva*, 2017.

³⁵⁹ Pickup, Instant Diagnosis by Smartphone: How Artificial Intelligence can save lives, *The Telegraph*, 2016.

reading AI reports about potential disease outbreaks.³⁶⁰ Last year, Chinese corporation Baidu introduced an AI bot that could virtually allow doctors to diagnose patients, which has potential to be used in remote and rural regions, allowing marginalized people to access their right to healthcare, and opening options for further development projects.³⁶¹

Diagnostics systems such as IBM's algorithm Medical Sieve and the medical start-up Enlitic have begun to pair deep learning technologies with existing databases of medical information to provide specialized support to medical professionals for more accurate patient diagnoses.³⁶² Atomwise is a company using AI supercomputers to run simulations on molecular structures, speeding up the usual time that clinical drug trials would require.³⁶³ In 2016, the program took less than a day to find two existing drugs that could be used to reduce Ebola infectivity, a process that could have taken years under traditional clinical trials.³⁶⁴ On a domestic level, AI is already being used to improve Member States' healthcare systems.³⁶⁵ The company Zorgprisma Publiek used the Netherlands' extensive digital healthcare invoices to mine data and then explain which clinics make repeated diagnosis mistakes, to improve patient treatment.³⁶⁶ Singapore also recently announced an investment of more than \$100 million over the next five years into AI to address major challenges facing the city-state, including healthcare.³⁶⁷

Former WHO Director-General Dr. Margaret Chan voiced caution at the AI for Good Global Summit, noting that she would be "hard-pressed to recommend AI for healthcare in regions where standard machines don't work due to lacking access to electricity."³⁶⁸ Chan also noted that while early diagnoses in developing countries may be achievable through AI, these diagnoses may ultimately be pointless if treatment is not accessible or affordable.³⁶⁹ Additional concerns are seen in Google's DeepMind flagship AI collaboration with the American National Health Service, which resulted in extensive complaints over inappropriate handling of private patient medical records.³⁷⁰ Moreover, many patients do not currently trust AI, as seen in the professional services research firm PricewaterhouseCoopers' extensive 2016 survey across Europe, the Middle East, and Africa, which noted that 38 % of participants said that they were unwilling to have AI involved in health diagnoses.³⁷¹ Accordingly, there are potential challenges and opportunities for the international community to consider in relation to AI and healthcare.³⁷²

Case Study: XPRIZE

More data has been produced in "the past two years than in the entire history of humanity," with 2.5 quintillion bytes of data created each day.³⁷³ By 2020, it has been predicted that each person on the planet will create an average of 1.7 megabytes of new data every second.³⁷⁴ With such massive amounts of data being produced in the future, collecting and analyzing the existing information in order to make pragmatic policy decisions will become increasingly complex.³⁷⁵ XPRIZE, a non-profit organization that partnered with ITU to co-host the AI for Good Global Summit, advocates for group-driven innovative solutions, and aims to find out how humanity can harness the

³⁶⁰ Cheney, How artificial intelligence might help achieve the SDGs, *Devex*, 2017.

³⁶¹ Choudhury, AI can be a game-changer for health care but convincing doctors, clinicians can be 'tricky,' *CNBC*, 2017.

³⁶² *Artificial Intelligence will Redesign Healthcare*, TMF, 2017; IBM, *Medical Sieve*, 2017; Enlitic, *Enlitic uses deep learning to make doctors faster and more accurate*, 2017.

³⁶³ Levy, Atomwise finds first evidence towards new Ebola treatments, *Atomwise*, 2015.

³⁶⁴ *Artificial Intelligence will Redesign Healthcare*, TMF, 2017.

³⁶⁵ *Ibid.*

³⁶⁶ *Ibid.*

³⁶⁷ Choudhury, AI can be a game-changer for health care but convincing doctors, clinicians can be 'tricky,' *CNBC*, 2017.

³⁶⁸ WHO, *Speech by Director-General of the World Health Organization Dr. Margaret Chan Opening remarks at the Artificial intelligence for good global summit on 7 June 2017, in Geneva*, 2017.

³⁶⁹ *Ibid.*

³⁷⁰ Burgess, *DeepMind accused of accessing NHS data on an 'inappropriate legal basis'*, 2017.

³⁷¹ PricewaterhouseCoopers, *Consumers ready to embrace AI and robots for their healthcare needs*, 2017.

³⁷² *Ibid.*; WHO, *Speech by Director-General of the World Health Organization Dr. Margaret Chan Opening remarks at the Artificial intelligence for good global summit on 7 June 2017, in Geneva*, 2017.

³⁷³ Banifatemi, ITU Partners with IBM Watson's XPRIZE to Promote AI Innovation, *XPRIZE*, 2016; IBM, *Big Data Analytics*, 2017.

³⁷⁴ IBM, *Big Data Analytics*, 2017.

³⁷⁵ UN ITU, *ITU launches global dialogue on Artificial Intelligence for good: AI for Good Global Summit aims to ensure that AI benefits humanity*, 2017.

intelligent machine learning of AI to make sense of these datasets.³⁷⁶ XPRIZE runs innovation competitions to solve some of the greatest challenges facing humanity, through tactics such as “gamification, crowd-sourcing, incentive prize theory, and exponential technologies.”³⁷⁷

XPRIZE has noted that developers are increasingly using AI as a tool across their competitions, from “creating personalized learning experiences for children with no access to formal education in Tanzania, to empowering consumers to make healthcare decisions with a medical Tricorder device.”³⁷⁸ In response to increasing demand for AI development, XPRIZE has also created the “IBM Watson A.I. XPRIZE” competition to promote the progress of AI research, citing recent technologies that have the ability to map poverty via satellite imagery or improve efficiency of agricultural planning, as developments to build upon.³⁷⁹ Even though the competition only began in January 2017, successful products have already emerged, including “Harvesting,” a new global development intelligence platform for sharing agricultural knowledge.³⁸⁰ XPRIZE’s unique approach to providing forums and funding for innovators is a key example of how, in an increasingly tech-dependent world, rapid multi-sector collaboration is necessary to ensure that emerging ICTs such as AI can be best harnessed for human rights and development needs.³⁸¹

Conclusion

The potential of AI to aid human rights and development is immense.³⁸² At the opening of Cambridge University’s Leverhulme Centre for the Future of Intelligence (LCFI) in 2016, physicist Stephen Hawking stated that AI will “either be the best, or the worst, thing to ever happen to humanity.”³⁸³ Nowhere is this clearer than in human rights and development, where some of the world’s most marginalized populations stand much to gain or lose by the usage of new smart technology.³⁸⁴ As the technology gains widespread usage, attention must be paid to ensure that AI is examined critically, that safeguards are inherent to the software, and that human-built AI does not reflect human biases.³⁸⁵ While AI still remains a relatively new frontier for the UN, its ability to accelerate Member States’ progress on the SDGs and to expand the existing paradigm of ICTs for development and human rights is highly valuable, and discussion on its regulation and application must be prioritized.³⁸⁶

Further Research

AI technology development is already occurring rapidly, and as the UN seeks to get ahead of this process through determining the role that AI should play in development and human rights, delegates should consider the following questions: How can the UN strategically harness AI to support development and human rights processes? How can AI be used to accelerate the achievement of the SDGs? In what ways might AI further marginalize groups, and how can this impact be mitigated? What role should the UN and ITU play in regulating AI technology “for good?” How can issues of accessibility, such as illiteracy or lack of funding, deepen the global digital divide on AI?

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³⁷⁶ Banifatemi, ITU Partners with IBM Watson’s XPRIZE to Promote AI Innovation, *XPRIZE*, 2016.

³⁷⁷ UN ITU, *ITU launches global dialogue on Artificial Intelligence for good: AI for Good Global Summit aims to ensure that AI benefits humanity*, 2017.

³⁷⁸ *Ibid.*

³⁷⁹ Zamary, Artificial Intelligence – Why Compete in the IBM Watson AI XPRIZE, *Huffpost: The Blog*, 2016; Banifatemi, ITU Partners with IBM Watson’s XPRIZE to Promote AI Innovation, *XPRIZE*, 2016.

³⁸⁰ Cheney, How artificial intelligence might help achieve the SDGs, *Devex*, 2017.

³⁸¹ Zamary, Artificial Intelligence – Why Compete in the IBM Watson AI XPRIZE, *Huffpost: The Blog*, 2016.

³⁸² UN ITU, *ITU launches global dialogue on Artificial Intelligence for good: AI for Good Global Summit aims to ensure that AI benefits humanity*, 2017.

³⁸³ Hern, Stephen Hawking: AI will be ‘either best or worst thing’ for humanity, *The Guardian*, 2016.

³⁸⁴ *Ibid.*

³⁸⁵ Cheney, How artificial intelligence might help achieve the SDGs, *Devex*, 2017.

³⁸⁶ UN ITU, *ITU launches global dialogue on Artificial Intelligence for good: AI for Good Global Summit aims to ensure that AI benefits humanity*, 2017.

Banifatemi, A. (2016, September 6). ITU Partners with IBM Watson's XPRIZE to Promote AI Innovation. *XPRIZE*. Retrieved 25 August 2017 from: <https://ai.xprize.org/news/blog/itu-partners-ibm-watson-xprize-promote-ai-innovation>

Providing a brief but fundamental explanation of the ITU/XPRIZE partnership, XPRIZE writer Banifatemi delivers statistics and statements to support the need for UN and non-profit collaboration on the topic of Artificial Intelligence (AI). Discussing the new XPRIZE IBM Watson competition for teams interested in AI innovation, this article examines XPRIZE's goal of supporting the Sustainable Development Goals (SDGs) and ITU through technological development and innovative crowd-sourcing projects. Delegates will find this discussion on supporting independent AI research in order to further global frameworks, such as the SDGs, to be a useful summation of some of the current key partnerships supporting AI research.

Human-Compatible AI: Design Principles to Prevent War Between Machines and Men. (2017, June 9). itunewslog. Retrieved 16 July 2017 from: <http://newslog.itu.int/archives/1571>

This article and the attached video interview with Stuart Russell, Professor of Electrical Engineering and Computer Science at UC-Berkeley, from the AI for Good Global Summit, discusses the concept of "human-compatible AI," or AI that is created to do more good than harm. Dr. Russell discusses the evolving relationship between AI and humanity, and the potential that obstacles such as misinformation, malware, and autonomous weapons present to sustainable development. This interview provides a good overview over the future challenges facing AI policy, and the nuances of regulating technological innovation, providing valuable, concrete examples for delegate research.

Nowogrodzki, A. (2016, February 10). Artificial Intelligence Offers a Better Way to Diagnose Malaria. *MIT Technology Review*. Retrieved 16 July 2017 from: <https://www.technologyreview.com/s/600779/artificial-intelligence-offers-a-better-way-to-diagnose-malaria/>

This article provides additional examples of how AI can influence healthcare development, as well as information on how civil society is working to create technological innovation. In particular, this article provides useful information on how the use of intelligent technology such as AI can benefit developing countries, in this case providing more accurate diagnostics for drug-resistant and severe malaria. Simultaneously, this piece also provides needed dialogue on the challenges of using AI in the field, which delegates will find useful to contextualize the debate on practical AI usage.

Shetty, S. (2017, June 9). Artificial Intelligence for Good. *Amnesty International*. Retrieved 25 August 2017 from: <https://www.amnesty.org/en/latest/news/2017/06/artificial-intelligence-for-good/>

While there are several resources on the intersection of AI and human rights available under the UN, Amnesty International Secretary-General Salil Shetty provides the most comprehensive civil society perspective on this issue through this speech delivered at the June 2017 AI for Good Global Summit. Succinctly discussing the divide between the potential AI holds to better the world or to worsen the conditions of vulnerable populations, Shetty delivers concrete examples and statistics to express the concerns of human rights advocates on emerging AI technology. He also asks key questions ("What world do we want in 2037?") that could inspire further delegate research into the issues he poses.

Soltau, F. (2016). *Automation and artificial intelligence - what could it mean for sustainable development?* Retrieved 16 July 2017 from:

https://sustainabledevelopment.un.org/content/documents/968825_Soltau_Automation%20and%20artificial%20intelligence%20-%20what%20could%20it%20mean%20for%20sustainable%20development.pdf

This brief discussion provides a solid background for delegates on the history of automation influencing employment and development progress, and the legacy of social concerns over technological progress. This article also poses key questions on how policy-makers should act in order to protect economically-vulnerable populations in the face of technological development. This article discusses key concerns over growing use of unregulated technology, and helps provide additional research to guide understanding of the risks and opportunities AI presents. Delegates should read this to have a good understanding of the sustainable development nexus, in

order to understand UN priorities on sustainable development, and the role that AI can play in furthering the UN's specific targets.

United Nations, High-Level Political Forum on Sustainable Development. (2017). *Summary record of the Multi-stakeholder forum on science, technology and innovation for the Sustainable Development Goals (E/HLPF/2017/4)*. Retrieved 22 September 2017 from: <http://undocs.org/E/HLPF/2017/4>

The meeting summary from the multi-stakeholder forum on science, technology and innovation for the Sustainable Development Goals provides an excellent example of the type of productive dialogue between multiple stakeholders on issues of technological innovation. Delegates will find the mention of AI in relation to building resilient infrastructure and evolving innovation developments to be useful in framing their research, in addition to understanding AI within a larger context of other new and emerging technologies such as games, biotechnology, robotics, and automation. Moreover, the discussion of viewing exponential technological change through a social impact perspective will be useful for delegates seeking to comprehend the socio-political impact of new technological projects in their research.

United Nations, International Telecommunication Union. (2017, January). *AI for Social Good*. *ITUNews Magazine*, 1. Retrieved 25 August 2017 from: http://www.itu.int/en/itu/news/Documents/2017/2017-01/2017_ITUNews01-en.pdf

This special AI edition of the ITUNews Magazine is a solid research resource for delegates, providing a statement from the ITU Secretary-General and interdisciplinary articles from experts in the field. Topics discussed include the relationship between AI and the SDGs, AI's capabilities in development, and sector-specific information on agriculture, healthcare, computing, and ethics. Additionally, this resource provides valuable statistics on the current prevalence of AI in developed countries, providing a comprehensive yet accessible overview of the current state of AI and development that will be helpful for framing the scope and context of delegate research on AI for human rights and development.

United Nations, International Telecommunication Union, Telecommunications Standardization Section. (2017). *Artificial Intelligence* [Website]. Retrieved 16 July 2017 from: <http://www.itu.int/en/ITU-T/AI/Pages/default.aspx>

This is the main page for Artificial Intelligence under ITU, and provides the definition of AI and the role of ITU in providing a neutral platform for stakeholders to discuss the future of emerging technologies. Included on this page are interviews with key civil society stakeholders, as well as links to ongoing AI-related events at the UN. Additionally, links to the documentation from the AI for Good Global Summit and a brief discussion of ITU's partnership with XPRIZE are included, making this a useful starting point for delegate research.

United Nations Office for Disarmament Affairs. (2017, June 7). *AI for Global Good Summit: Plenary 1: State of Play* [Speech]. Retrieved 16 July 2017 from: <https://s3.amazonaws.com/unoda-web/wp-content/uploads/2017/06/HR-AI-summit-remarks-June-2017.pdf>

This statement by Izumi Nakamitsu, the United Nations High Representative for Disarmament Affairs, represents her opening remarks as Secretary-General of the AI for Good Global Summit Plenary, where she discusses the potential and risks of AI technology development. She briefly addresses the present AI-enabled military technologies, legged locomotion and autonomous navigation, and soldier support robots. Most importantly, Nakamitsu thoroughly describes both the advantages and disadvantages of technological development in AI, posing three main thoughts on the potential of AI to be used to threaten global security, and providing future paths to developing multilateral standards and regulations on the issue. This speech is an excellent summary for delegates on some of the risks that AI development poses, and presents a starting point for future research on these divisive issues.

XPRIZE. (2017). *AI Solving Sustainable Development Goals* [Website]. Retrieved 22 September 2017 from: <https://ai.xprize.org/AI-For-Good/sustainable-development-goals>

This source from XPRIZE's IBM Watson AI competition contains tangible examples of how the topics of AI and development interconnect in different sectors. This comprehensive list of how AI supports the SDG targets will make researching specific AI projects that address different aspects of development issues more accessible to delegates. Discussing topics from increasing agriculture

productivity to big data education analysis, to predicting sanitation and consumption patterns for improved safe water and sanitation, this list is a useful groundwork for understanding how AI can holistically and concretely support the SDGs.

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