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**Round-table discussion:
technology as a lever for gender equality in the Arab region**

Summary

The present document considers the prospects of enabling technologies, particularly information and communications technologies (ICTs), in implementing Sustainable Development Goal 5 on gender equality. Based on examples of good practice, it discusses how ICTs can be leveraged to bridge some gender gaps through increased access to income, employment opportunities, services, knowledge and training for women. It also underlines the potential risks that may arise when ICTs are not properly used.

The present document concludes with policy recommendations for discussion, focused on improving the affordability and accessibility of digital technologies, overcoming normative barriers, increasing cybersafety for women and girls, and building an enabling environment to advance women's empowerment in the Arab region.

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Introduction

1. Gender equality is a vital human right that lies at the heart of a just society and a prosperous economy, leading to sustainable inclusive growth. Since the adoption of the Beijing Declaration and Platform for Action in 1995, the Arab region has succeeded in decreasing gender inequality in the areas of education and health. However, achieving gender equality requires a multidimensional approach to development that leads to equal rights and opportunities for men and women in all aspects of life. This remains a key persistent challenge in the Arab region.
2. The 2030 Agenda for Sustainable Development mainstreams gender equality throughout the Sustainable Development Goals (SDGs) as a cross-border principle and dedicates a complete goal to it, SDG 5. It features information and communications technology (ICT) as the second of three means of implementation for that Goal: 5.b Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women. Arab countries have made efforts at the legal and policy levels to advance gender equality and empower women; however, efforts to harness ICTs for gender equality in the Arab region remain limited and the knowledge gap on the “how to” remains relatively wide.
3. The Economic and Social Commission for Western Asia (ESCWA) is undertaking a series of activities to bridge this gap, including a study on the prospects of leveraging ICTs to achieve gender equality in the Arab region. The present document summarizes the findings of the study. It is submitted to the Committee on Women at its ninth session as a background paper for a round-table discussion on technology as a lever for gender equality in the Arab region.

I. INTERNATIONAL FRAMEWORKS AND MANDATES

4. The role of ICTs in empowering women and girls and fostering gender equality is not new to global development agendas and frameworks. It was underlined in the Beijing Declaration and Platform for Action, which focused on enhancing women’s skills, knowledge and access to information technology, and on enabling them to contribute to developing new technologies. Reviews of its implementation have reaffirmed ICTs as fundamental to the effective participation of women and girls in civil, political, economic, social and cultural life.
5. Harnessing ICTs for gender equality was a theme of the fifty-fifth session of the Commission on the Status of Women (New York, 12 March 2010, 22 February – 4 March, and 14 March 2011). In its agreed conclusions, the Commission stressed that equal access to education, training, and science and technology empowered women and girls in the context of global economic and technological changes. The Commission also underlined that addressing the barriers to equal access of women and girls to education, training, and science and technology required a systematic, comprehensive, integrated, sustainable, multidisciplinary and multisectoral approach, and called for strengthening national legislation, policies and programmes, expanding access and participation in education, strengthening gender-sensitive quality education and training, including in the field of science and technology, and supporting the transition from education to full employment and decent work.¹
6. The World Summit on the Information Society (WSIS) committed to mainstreaming a gender equality perspective and using ICTs as a tool to that end.² Ten years later, in paragraph 6 of resolution [70/125](#), the General Assembly expressed concern about the significant digital divide and the related gender divide, and encouraged all stakeholders to ensure the full participation of women in the information society and women’s access to new technologies, especially ICTs for development. In Busan, Republic of Korea, in 2014, the International Telecommunication Union (ITU) revised its resolution [70](#) on mainstreaming a gender perspective

¹ [E/2011/27-CN.6/2011/12](#), paras. 6, 21 and 22.

² [WSIS-03/GENEVA/DOC/4-E](#), paras. 2 and 12.

in ITU and promoting gender equality and women's empowerment through ICTs, considering them as integral to the creation of societies in which both women and men can substantively contribute and participate.

II. REGIONAL TRENDS

7. There are considerable differences in the levels of ICT development between world regions and countries. As per the ICT Development Index, the Arab region is witnessing progress in connectivity, use and access, notably in Internet bandwidth and fixed and mobile broadband subscriptions. However, this progress does not necessarily translate into equal use and access to ICTs: Internet penetration rates remain higher for men, standing at 47.7 per cent in 2017 compared with 39.4 per cent for women, with a digital gender gap in access and use of the Internet amounting to 17 per cent. Index data show that the gap decreased between 2013 and 2017; however, it is still above the average for developing countries. The digital gender divide is fuelled by digital illiteracy, which often translates as a lack of comfort in using technology and accessing the Internet. Such 'technophobia' is often a result of concurrent factors, including education, employment status and income level.³

ICT DEVELOPMENT INDEX RANKINGS AND VALUES, 2017 VERSUS 2016

Economy	Regional Rank 2017	Global rank 2017	2017 Index value	Regional rank 2016	Global rank 2016	2016 Index value	Global rank change 2016-2017	Regional rank change 2016-2017
Bahrain	1	31	7.60	1	30	7.46	-1	0
Qatar	2	39	7.21	3	36	7.12	-3	+1
United Arab Emirates	3	40	7.21	2	34	7.18	-6	-1
Saudi Arabia	4	54	6.67	4	45	6.87	-9	0
Oman	5	62	6.43	5	64	6.14	2	0
Lebanon	6	64	6.30	6	65	6.09	+1	0
Jordan	7	70	6.00	7	66	5.97	-4	0
Kuwait	8	71	5.98	8	70	5.75	-1	0
Tunisia	9	99	4.82	9	95	4.70	-4	0
Morocco	10	100	4.77	10	98	4.57	-2	0
Algeria	11	102	4.67	12	106	4.32	+4	+1
Egypt	12	103	4.63	11	104	4.44	+1	-1
Libya	13	115	4.11	13	112	3.93	-3	0
State of Palestine	14	123	3.55	14	122	3.42	-1	0
Syrian Arab Republic	15	126	3.34	15	124	3.32	-2	0
Sudan	16	145	2.55	16	141	2.56	-4	0
Mauritania	17	151	2.26	17	152	2.08	+1	0
Djibouti	18	158	1.98	18	161	1.80	+3	0
Comoros	19	164	1.82	19	162	1.78	-2	0
Average			4.84			4.71		

Source: Data from ITU. Available at <https://www.itu.int/net4/ITU-D/idi/2017/index.html> (accessed on 1 July 2019).

8. Mobile phones provide an important channel to access the Internet in low- and middle-income countries. Mobile ownership and connection to the Internet are an important indicator of gender equality in ICTs. Globally, women are 10 per cent less likely than men to own a mobile phone, and 26 per cent less likely than men to use mobile Internet.⁴ In the region, mobile ownership and mobile use of the Internet are below the global average by 1 per cent and 5 per cent, respectively. Women in the Arab region are 9 per cent less likely than men to own a mobile phone, and 20 per cent less likely than men to use mobile Internet.⁵

³ Organisation for Economic Co-operation and Development (OECD), *Bridging the Digital Gender Divide: Include, Upskill, Innovate*, 2018.

⁴ GSMA, *Connected women: the mobile gender gap report 2018*, February 2018, p. 3.

⁵ *Ibid*, pp. 9 and 13.

9. Contrary to stereotypical perceptions, the percentage of women enrolled in and graduating with degrees in science, technology, engineering and mathematics (STEM) is relatively high in the region.⁶ According to the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the World Bank, Arab women are actively pursuing STEM subjects: in 2014, women represented 59 per cent of total enrolment in computer science in Saudi Arabia compared with 16 per cent in the United Kingdom of Great Britain and Northern Ireland, and 14 per cent in the United States of America.⁷ The paradox lies in that this educational achievement does not translate into participation in the STEM labour force, leading to a lack of female representation in related sectors, including the ICT sector.

III. ICTS AND SDG 5

10. The targets of SDG 5 represent development areas in which the Arab region continues to face many challenges. ICTs provide key opportunities for progress in those areas and expedite gender equality.

A. GENDER-BASED DISCRIMINATION

11. ICTs contribution to challenging gender norms and stereotypes and influencing household decision-making and resource distribution patterns is widely documented. ICTs can promote women's economic, social and political participation, and empower women and girls by increasing their self-confidence and social status. In India for example, when computers were introduced to a village through telecentres, female operators were regarded as experts in a sophisticated technology that most inhabitants of the village did not master. Operators were proud of their status as the "girl/woman with the computer"; they were also able to leverage acquired opportunities and resources to increase their agency.⁸

12. Social media is an increasingly important tool for women's empowerment in the region. It enables women to take on a new form of leadership by building connections and networks; avoiding restrictions on their movement; raising their voices in the public space; challenging and disrupting dominant social and cultural codes and systems; and directing public attention to the restrictions imposed on them.⁹ The hashtag #Women2Drive created by Saudi women is one example of how ICTs enabled them to be agents of change. The hashtag #BringDevBack created by Yemenis is an example of how ICTs also enable women to be agents of peace and development.

13. ICTs can influence household decision-making and patterns of resource distribution. The Dimitra listeners' clubs, a project by the Food and Agriculture Organization of the United Nations (FAO), brings together rural groups of women, men and young people to discuss daily life challenges and solve problems. Participants access information and communicate with other groups and radio stations through wind-up solar-powered radios and mobile phones. Interaction between women and men to address community and household issues prompted changes in behaviour. Women were encouraged to speak up in public, took on leadership roles, and engaged in new income-generating activities.

14. Nevertheless, measures should be put in place to minimize the potential threats that ICTs pose in reinforcing discrimination against women. In 2008, a survey found that less than 13 per cent of Wikipedia

⁶ Samira I. Islam, Arab women in science, technology, engineering and mathematics fields: the way forward, *World Journal of Education*, vol. 7, No. 6, 2017.

⁷ Data (cited in Islam, Arab women in science) from the National Science Board (available from <http://www.nsf.gov/statistics/seind14/content/etc/nsb1401.pdf>) and the Famous Female Scientists website (available from www.famousfemalescientists.com). Data on the United Kingdom and the United States comprise international students, some of which are Arab.

⁸ Elisa Oreglia and Janaki Srinivasan, ICT, intermediaries, and the transformation of gendered power structures, *MIS Quarterly*, vol. 40, No. 2, pp. 501-510, 2016.

⁹ Racha Mourtada and Fadi Salem, The role of social media in Arab women's empowerment, Arab Social Media Report, vol. 1, No. 3, 2011.

contributors worldwide were women. The free online encyclopaedia that ‘anyone can edit’ was outed as being mostly run by men. A follow-up survey in 2011 found similar results. The limited number of Wikipedia female editors,¹⁰ and the development of applications that perpetuate gender-insensitive perspectives on the Internet, such as female characters in video games that tend to conform to a ‘thin body’ ideal and are often in need of rescue by male characters,¹¹ are examples of issues that need to be addressed to avoid reinforcing gender discrimination. One way to do so is by increasing the number of women providers of digital content, and of women programmers and computer professionals, to lead to gender-sensitive digital content and design of ICTs, given that technology reflects the people who make it.

B. VIOLENCE AGAINST WOMEN AND GIRLS

15. Violence against women (VAW) is a widespread phenomenon in the Arab region. One in three women has experienced physical or sexual violence by an intimate partner in their lifetime,¹² affecting their health, access to education, and economic and political participation.

16. Women and girls feel safer and more independent when owning a mobile phone, as per a survey conducted in Bolivia, Egypt, India and Kenya.¹³ They use their mobile phones in public places to deter potential harassers. Many applications exist in the tech industry to allow online identification and reporting of dangerous incidents, such as HarassMap and Resist Harassment developed in Egypt and Lebanon, respectively. ICTs also play a role in conflict situations where women may be unreachable by regular service organizations. ICTs enable sending messages, and tracking, storing and distributing information and evidence. For example, to support the prosecution of perpetrators, incidents of violence against women in areas of conflict are tracked through apps such as MediCapt, developed by Physicians for Human Rights. MediCapt allows clinicians to record medical examination results digitally and to photograph victims’ injuries, upload them online and send them directly to law enforcement officials and lawyers. Developed to identify incidents of sexual violence, it can also serve as an early warning signal to track mass violence and provide evidence of war crimes.¹⁴

17. ICTs can be an instrument for tracking and reducing harmful practices, and for keeping issues alive, leading to changing norms. The #MeToo movement, a social movement started by a group of women to share experiences about harassment and violence in the workplace, expanded swiftly and led to a series of changes with a direct positive impact on women’s status. ICTs increase awareness, connect victims with specialized non-governmental organizations, and facilitate reporting of sexual harassment. Women can designate a trusted person to track their movements where they do not feel safe: StreetPal and SafeNes in Egypt and Tunisia, respectively, are examples of applications developed to support women in that regard. ICTs can also serve as means of raising women’s voices. In the case of Iraq, Wadi, a women’s group, succeeded in campaigning against female genital mutilation using online tools, television and other ICTs, and contributed to the enactment of legislation in 2011 in Kurdistan that prohibited the practice from being carried out in any of its provinces. In Egypt, Shoft Taharosh, an initiative driven by social media campaigns, raised awareness on sexual harassment of women in public spaces, leading to parliamentary action and adoption of law No. 50 of 2014.

¹⁰ Heather Ford and Judy Wacjman, ‘Anyone can edit’, not everyone does: Wikipedia and the gender gap, *Social Studies of Science*, vol. 47, No. 4, pp. 511-527, 2017.

¹¹ Ewan Kirkland, Restless dreams in Silent Hill: approaches to video game analysis, *Journal of Media Practice*, vol. 6, No. 3, pp. 167-178, 2005.

¹² World Health Organization, *Global and Regional Estimates of Violence against Women: Prevalence and Health Effects of Intimate Partner Violence and Non-partner Sexual Violence*, 2013.

¹³ GSMA, Cherie Blair Foundation and Vital Wave Consulting, *Women & Mobile: A Global Opportunity: A Study on the Mobile Phone Gender Gap in Low and Middle-income Countries*, 2010.

¹⁴ Kieran Guilbert, Medical app aims to tackle rape, flag war crimes in conflict-torn Congo, *Thomson Reuters Foundation*, 14 June 2017.

18. While ICTs are providing women with new means to organize their action, advance their status and position in society, and alter dominant social attitudes, they can also increase the scale and scope of violence against women. This was noted in 2018 by the United Nations Special Rapporteur on violence against women, its causes and consequences, whose report showed that technology-related VAW was aggravated, in part or fully, through ICT use (A/HRC/38/47). The report also noted that technology-related violence took many forms, and targeted women and girls in multiple ways. A 2015 United Nations report by the Broadband Commission for Digital Development Working Group on Broadband and Gender entitled “Cyber violence against women and girls: a world-wide wake-up call” revealed that almost three quarters of connected women had been exposed to some form of cyberviolence, and that women aged 18-24 were more likely to experience stalking, sexual harassment and physical threats. Reforming and strengthening legal, regulatory and procedural frameworks are a necessity, and awareness-raising among individuals and institutions about such risks and their impact on work and personal life are also key.

C. WOMEN’S SOCIOECONOMIC EMPOWERMENT

19. The gender gap in labour force participation in the Arab region was around 58 per cent in 2015, down from 60 per cent in 1995.¹⁵ However, it remains the highest globally. In 2018, men’s labour force participation reached 77.2 per cent, compared with 18.9 per cent for women.¹⁶ The gender gap in unpaid care work is also highest in the Arab region and contributes to limiting women’s economic participation: women spend 4.7 times more of their time than men caring for children and older persons, and doing household chores in Arab countries.¹⁷ Technological advancements have given rise to a growing digital economy, creating new forms of work and leading to a transformation of employment. Access to ICTs offers key opportunities for women to engage in income-generating and entrepreneurial activities, and increases their access to financial resources and information leading to enhanced productivity.

20. The Arab region is home to several ICT initiatives to support women’s employment, including the ongoing project of the United Nations Industrial Development Organization (UNIDO) on “Promoting women’s empowerment for inclusive and sustainable industrial development in the Middle East and North Africa Region”, implemented in Algeria, Egypt, Jordan, Lebanon, Morocco, the State of Palestine and Tunisia. The project increases women’s ICT literacy through training on Internet marketing and language in advertising, and online sales, including familiarizing them with payment methods and how to store and update data and information, among other skills. Private or non-governmental initiatives are flourishing, such as Yummy in Libya (a food delivery application that provides meals cooked by women in their own kitchens) and Women Weavers Online in Morocco (that enables women weavers from rural Moroccan villages to sell hand-made rugs directly over the Internet, thus maximizing profits).

21. Effective use of ICTs helps to overcome several challenges faced by women entrepreneurs in developed and developing countries. These include accessing markets, virtual business coordination, advertising and marketing communication, increasing revenue streams, saving time/money, and teleconferencing. Recent statistics show that 1 in 3 startups in the Arab region is founded or led by women – a higher percentage than in Silicon Valley.¹⁸ Many entrepreneurs from the region believe that technology is one of the few areas where everything is possible, including breaking gender norms. It is thus important to create enabling conditions for women’s entrepreneurship, including making universities more entrepreneurial.

¹⁵ Mona Badran, Achieving gender equality in the Arab region amidst the changing world of work, paper presented at the Tripartite Arab Meeting on the Future of Work, Beirut, April 2017.

¹⁶ International Labour Organization (ILO), *World Employment Social Outlook: Trend for Women 2018 – Global Snapshot*, Geneva, 2018, p. 7.

¹⁷ ILO, *Care Work and Care Jobs for the Future of Decent Work*, Geneva, 2018.

¹⁸ Kelly Ommundsen and Khaled Kteily, How women are transforming the Arab world’s start-up scene, 16 July 2018.

22. ICTs enable access to financial services, such as digital transfers and payments, and mobile money, which can increase women's control over the money they earn. Building inclusive financial systems and providing inclusive access to ICTs are key to capitalizing on such benefits.¹⁹

D. WOMEN'S PARTICIPATION IN PUBLIC LIFE

23. Despite progress in women's political representation and participation in the Arab region, they remain low compared with global averages. ICTs enable the formation of virtual communities that provide women with new channels for self-expression and interaction in the public and political spheres. A global survey on women, technology and democracy revealed that women from the region were the most likely to use ICTs to engage in discussions.²⁰ Increased use of social media by women has contributed to changing gender norms by providing space for advocacy and feminist movements for empowerment and emancipation, in which men also participate.²¹

24. Women use ICTs to support their leadership aspirations, promote their political agendas, and develop networks. In the 2013 municipal elections in Jordan, women candidates were trained in strategies to reach potential voters, including through short message services (SMS). This election witnessed an unprecedented number of women elected to office – 36 per cent, up from 28 per cent in the previous election.²² ICT training for indigenous women leaders in Bolivia is thought to have contributed to an increased number of women gaining political positions at the local, regional and national levels.²³

25. Governments are also increasingly using ICTs to promote citizens' participation and provide information on and access to public services. Such delivery modes overcome barriers traditionally faced by women, such as distance, mobility and restrictions on interactions outside the family. In South Africa, girls and boys identified spaces where they felt safe or unsafe through a participatory mapping project. The results were used by the Government to create new safe spaces where adolescent girls could socialize safely.²⁴ In the Arab region, municipalities use social media to reach their citizens (announce events, send out public service messages and recruit volunteers, etc.).²⁵

E. UNIVERSAL ACCESS TO SEXUAL AND REPRODUCTIVE HEALTH

26. Services and knowledge in the area of sexual and reproductive health are still limited in the Arab region. However, the situation is changing with increased access to ICTs, which provide women with access to information despite cultural barriers. ICTs enable dissemination of public health information and dialogue on major health threats; remote consultation, diagnosis and treatment; facilitated collaboration among health workers, including sharing learning and training approaches; more effective health research, and dissemination and access to research findings; strengthened monitoring and timely response; and improved efficiency of administrative systems in health-care facilities.

¹⁹ Martin Čihák and Ratna Sahay, Women in finance: an economic case for gender equality, *IMF Blog*, 19 September 2018.

²⁰ National Democratic Institute for International Affairs, *Women, Technology and Democracy Survey*, 2014, p. 12.

²¹ Ahmed al-Rawi, Framing the online women's movements in the Arab world, *Information Communication and Society*, vol. 17, No. 9, pp. 1147-1161, February 2014.

²² International Republican Institute, "Jordanian women make strides in municipal elections", 8 October 2013.

²³ Caroline Wamala, Empowering women through ICT, Spider ICT4D Series, No. 4, Swedish Program for ICT in developing regions, 2012.

²⁴ Jeni Klugman and others, *Voice and Agency: Empowering Women and Girls for Shared Prosperity* (Washington, D.C., World Bank Group, 2014).

²⁵ Rania Qutieshat, Using social hub media to expand public participation in municipal urban plans, *Procedia Engineering*, vol. 198, pp. 34-42, 2017.

27. In Bhubaneswar, India, a project to educate adolescent girls in the city slum on menstrual hygiene resorted to radio and podcasts to convey information, complemented by individual counselling, focus group discussions and film screenings in slums and in nearby high schools.²⁶ In Indonesia, the Aceh Besar initiative relied on mobile phones to connect midwives working in isolated communities to obstetricians and gynaecologists in hospitals and health centres. Benefits included greater time efficiency, better access to medical information and faster responses in cases of emergency.²⁷

IV. RECOMMENDATIONS FOR DISCUSSION

28. Based on the above evidence of the benefits of ICTs in advancing gender equality, the following recommendations are proposed for discussion, in particular to determine means to operationalize them:

- Enhance access to and affordability of digital technologies:
 - Develop ICT infrastructure;
 - Invest in women and girls' digital literacy and ICT access through public-private partnerships, and include ICT literacy and capacity-development programmes in national educational programmes;
 - Increase gender-sensitive digital Arabic content to overcome the language barrier;
- Ensure online safety of women and girls:
 - Adopt the necessary legislation and regulatory processes to tackle cybercrime;
- Build an enabling environment to advance women's empowerment in the Arab region:
 - Increase women's participation in STEM education, and provide economic opportunities to capitalize on women graduates;
 - Retain female talent in the ICT sector by taking measures to ensure equal rights (equal pay, equal access to technical trainings, etc.);
 - Increase collaboration between stakeholders, namely Governments, the private sector, academia and civil society, and create a mechanism for collaboration between national women's machineries, actors in the ICT sector and national statistical offices to create national ecosystems aimed at harnessing ICTs for gender equality;
 - Mainstream a gender perspective in national ICT policies and integrate ICTs in national policies, strategies and plans to advance women's empowerment;
 - Support women entrepreneurs and their engagement in innovation;
 - Collect sex-disaggregated data on the ICT sector to inform digital policymaking and monitor progress.

²⁶ See https://cooperation.epfl.ch/tech4dev-conference-vision/tech4dev2018/2018tech4dev-program_1/2018tech4dev-program-sessions_1/2016tech4dev-program-sessions-day2-am_2/2018tech4dev-program-sessions-day2-am-se03-drr_1.

²⁷ Arul Chib and others, Midwives and mobiles: Using ICTs to improve healthcare in Aceh Besar, Indonesia, *Asian Journal of Communication*, vol. 18, No. 4, pp. 348-364, 2008.