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Statement submitted by International Network of Women Engineers and Scientists, a non-governmental organization in consultative status with the Economic and Social Council*

The Secretary-General has received the following statement, which is being circulated in accordance with paragraphs 36 and 37 of Economic and Social Council resolution 1996/31.

* The present statement is issued without formal editing.

Statement

The International Network for Women Engineers and Scientists (INWES) represents women in science, technology, engineering and mathematics (STEM) across all six continents of the world. INWES is committed to gender equality in STEM in line with the UN Sustainable Development Goals.

The COVID19 pandemic has reminded us of the importance of international cooperation and collaboration and the need for continuous scientific advancement. The world has witnessed that digital technology could provide us with alternative communication channels when travel was restricted and borders were closed during the past three years of the pandemic. We are also convinced more than ever that investing in vaccine and drug development is not just for funding researchers but for saving lives of all global citizens. Moreover, we have witnessed the contributions of women scientists and engineers revealing that science and engineering is done by women and men together. Yet the human resources in science and engineering is far off from being gender balanced globally. The Gender Gap Index Report 2021 published by the World Economic Forum shows that it will take 135.6 years for the world to reach gender parity.

Gender equality in STEM careers are more important than ever in reaching the UN Sustainable Development Goals (SDGs) by 2030. INWES thus strongly supports the statement by UN Secretary General Antonio Guterres that “the clear objective of our time is parity rooted in women’s empowerment” (stated while addressing the Town Hall, CSW61, March 2017). The significance of increasing the participation of women in the workforce, especially in science and engineering sectors, has been recognised around the world as being essential for economic growth, for innovation, developing new industries and the knowledge economy, as well as for achieving the UN SDGs.

One of the important objectives of INWES is to expand the opportunities for education and careers in STEM for girls and women. INWES plays an important role in developing and supporting programmes that encourages girls to study the enabling subjects of science and mathematics in school. Our organization encourages the support of girls to study and pursue careers in science or engineering by providing advice to industry and government to retain women in the workforce, support women in their STEM careers, encourage them to achieve leadership positions and celebrate their achievements.

We support Clause 24 of the Agreed Conclusions of the Commission on the Status of Women at CSW61 in March 2017 that also noted “the lack of progress in closing gender gaps in access to, retention in and completion of secondary and tertiary education and emphasizes the importance of lifelong learning opportunities.” and “new technologies, which are changing the structure of labour markets, provide new and different employment opportunities that require women and girls to acquire skills ranging from basic digital fluency to advanced technical skills in science, technology, engineering and mathematics and in information and communications technology.” The International Network for Women Engineers and Scientists also reaffirms the conclusion relating to “managing technological and digital change for women’s economic empowerment” and agrees that there is a need to:

- “Support women’s access, throughout their life cycle, to skills development and decent work in new and emerging fields, by expanding the scope of education and training opportunities in, inter alia, science, technology, engineering and mathematics, information and communications technology and digital fluency, and enhance women’s and, as appropriate, girls’ participation as users, content creators, employees, entrepreneurs, innovators and leaders; and

- "Strengthen science and technology education policies and curricula, so that they are relevant to the needs of and benefit women and girls, encourage investment and research in sustainable technology, particularly to strengthen the capacities of developing countries, so as to enable women to leverage science and technology for entrepreneurship and economic empowerment in the changing world of work".

These conclusions and statements remain relevant today and more important in a post pandemic world on the threshold of the Fourth Industrial Revolution. The COVID-19 lockdowns forcing the closing of schools and businesses resulted in a sharp increase in the use of internet and communication technologies (ICT) for education and business. The sharp increase has also highlighted the need to address the gender digital divide, i.e. to address the gap in the proportion of women using the internet globally, currently 48 per cent, compared to 58 per cent of men, meaning that the global internet user gap is 17 per cent. In Africa, the gender gap has been growing from 20.7% in 2013 to 33% in 2019. Reasons cited by the GSMA, an association of mobile network companies worldwide, indicates reasons for lower rates of mobile phone and data usage among women are: illiteracy and a lack of internet knowledge, unaffordable mobile data, irrelevant content, and a lack of security.

There is ample evidence that digital skills accelerate every stage of a person's career – powerful in both education and employment, and increasingly important as women advance into the ranks of leadership. Closing the digital gender gap will accelerate gender equality in many other areas.

The UN Commission on the Status of Women recognized the importance of technology and new innovations such as advanced automation, telecommunications, robotics and 3D printing as transforming the world of work and the participation of women in the new digitally-connected workforce. Mobile communications and the Internet have facilitated access in different sectors and at various income levels to banking, financial and information services. For example, mobile communications have supported the development of women's entrepreneurship, especially in small business enterprises, in many countries.

It is estimated that more than 7 million jobs are at risk in the world's largest economies over the next five years, principally in office and administrative services, manufacturing and production, and health care. In this scenario, women will lose their jobs at a faster rate than men, since they are less likely to be employed in sectors in which the adoption of new technology will create jobs. This is partially the result of women's relatively low participation in STEM professions, in which jobs are expected to be created. Digital fluency may help to close some gender gaps, especially if the rate at which women become frequent users of digital technologies is doubled.

The significance of increasing the participation of women in the workforce, especially in science and engineering sectors, has been recognised around the world as being essential for economic growth, for innovation, developing new industries and the knowledge economy, and for achieving the UN Sustainable Development Goals (SDGs).

Therefore, it is clear that more must be done to equip women with the skills to engage in the jobs that are most in demand. For countries that do not address this issue, there is an additional economic cost of not doing so due to the skills shortages that will result. Secondly, it is important to support women at work while they juggle multiple duties at home and at work. Research by LinkedIn shows that even qualified women have lower participation rates compared to men.

Also, it is increasingly important for women to contribute to new technologies and to participate in innovation. A Harvard Business School study in 2019 showed

that “Where gender diversity is accepted (inclusion at all levels), productivity (including innovation) increases” Therefore, STEM careers will have an increasingly important role in society and the economy and empowering women to participate in the workplace of the future is essential.

It is anticipated that 75 percent of future jobs will require STEM skills, so it is imperative that women recognise the importance of engagement in science and technology and consider careers in these fields; which should no longer be considered to be “male dominated” but a career pathway for all young people worldwide.

In addition to participating in science and engineering, women will also benefit from technology in terms of improved education and health. Improvements in communications and access to technology will enable more women to participate in the new economy as entrepreneurs and play key roles in achieving the UN SDGs.

The International Network for Women Engineers and Scientists is committed to advancing the 2030 Agenda and that increasing the participation of women in STEM careers is critical to achieving these Goals. Our organisations will continue to develop projects and programs in these areas and include them as themes/major tracks in their regional and international conferences. Efforts range from outreach programs to girls, informational workshops for parents and educators, leadership development seminars for women in STEM, conducting studies to challenging member corporations and government entities to address the need for diversity in STEM fields and achievement of the UN SDGs through support of research and highlighting innovative projects. It is imperative that the United Nations bodies and Member States ensure that women receive the education, legal and social protections, and the support for pursuing careers in STEM in order to achieve their personal aspirations and effectively contribute to the economic futures of their countries and while improving the health and viability of their environments.