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Statement submitted by International Network of Women Engineers and Scientists, and World Federation of Engineering Organizations, non-governmental organizations 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) and the World Federation of Engineering Organizations (WFEO) together represent women in science, technology, engineering and mathematics (STEM) across 100 nations. These two organizations are committed to attracting girls to undertake careers in STEM and play an important role in developing and supporting programmes that encourage girls to study the enabling subjects of science and mathematics in school. Our organizations encourage parents, teachers and counsellors to support girls to study and pursue careers in science or engineering and provides support and 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.

In 2020, the COVID-19 pandemic has brought into focus the important role of science and engineering in combating the impacts of the pandemic, from developing rapid diagnostic tools to detect the virus infection, the use of advanced manufacturing and 3D printing for the rapid deployment of personal protective equipment to the use of artificial intelligence in detecting a suitable vaccine and development of online courses for education from elementary school through college. Scientists and engineers, especially women who can provide a different perspective, are needed for all these important tasks.

While progress has been made for gender equality in many parts of the world, there are still significant areas where there is much to be done. The World Economic Forum 2020 Gender Gap Report indicates that at the current rate, it will take nearly 100 years to close the gender gap. In simple terms this means that gender parity across a range of sectors including health, education and work, will take nearly three generations to achieve.

INWES and WFEO agree with the United Nations Secretary General that, gender parity at all levels – political, cultural, economic and social – is a ‘central objective’ and that this will come from the education of women especially in science and engineering.

We therefore support Clause 24 of the Agreed Conclusions of the Commission on the Status of Women at CSW61 in March 2017 which it reaffirmed the right to education, as well as access to quality and inclusive education, contributes to the achievement of gender equality and the empowerment of all women and girls.

We support the conclusion in Clause 24 that 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.

INWES and WFEO also reaffirm 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.

2020 has been an extraordinary year with COVID-19 lockdowns forcing the closing of schools and businesses and 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. In relative terms, this means that the global internet user gap is 17 per cent.

Most countries with a large gender gap in mobile phone ownership also have a large gender gap among internet users. 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.

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 United Nations Sustainable Development Goals (SDGs).

Therefore, it is clear that that more must be done to equip women with the skills to engage in the jobs that are most in demand. Also, it is increasingly important for women to contribute to new technologies and to participate in innovation, especially as this drives productivity and innovation in organizations where gender diversity and inclusion is accepted at all levels. 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. There are also well-recognized gender gaps in technology startups and in research funding in the science and engineering fields. These gaps not only impact on the career aspirations of women, but also have a negative impact on business innovation and in finding new solutions to addressing global challenges.

It is anticipated that 54 per cent of all jobs will require digital skills by 2022 and women will be more adversely affected than men especially as they are unrepresented in the STEM sector. 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.

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 United Nations SDGs.

INWES and WFEO are committed to advancing the 2030 Agenda and that increasing the participation of women in STEM careers is critical to achieving the United Nations SDGs.

Accordingly, we declare our commitment to:

Continue to develop projects and programs to attract more girls, especially in Africa and Asia to undertake studies in science and mathematics in high school.

Encourage young women and girls to consider careers in science, technology and engineering.

Continue to showcase the achievements of women scientists and engineering in our regional and international events and conference and include topics relating to gender and sustainable development as themes/major tracks.

Continue our efforts in outreach programs to girls with information workshops for parents and educators on careers in STEM.

Encourage and support leadership development of women engineers and scientists through seminars.

Encourage governments and industry to attract and support women in STEM, and to address the need for diversity in STEM fields at all levels in the efforts to achieve the United Nations SDGs in their organisations.

Support research and develop innovative projects on the role of women in science, technology and engineering.

INWES and WFEO believe that it is an imperative that United Nations bodies and Member States ensure that women receive the education, legal and social protections, and support to pursue careers in STEM to achieve their personal aspirations, contribute to the economic futures of their countries and achieve the empowerment of women and the 2030 Agenda.
