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Access and participation of women and girls to education, training and science and technology, including for the promotion of women's equal access to full employment and decent work

WRITTEN STATEMENT*

by

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*The views expressed in this paper are those of the author and do not necessarily represent those of the United Nations.

Excellencies,
Distinguished delegates,
Dear colleagues,
Ladies and gentlemen:

It is a great honor to address this 55th session of the Commission on the Status of Women (CSW), on behalf of Madam Sherry Ayittey, the Chair of the Commission on Science and Technology for Development (CSTD). Madam Chair Ayittey sincerely regrets not being able to address you at this special occasion. The fact that Madam Chair Ayittey is herself a woman, a biochemist by training, and a Minister for Environment, Science, and Technology, is a visible example of how the important role of gender in science, technology, and innovation is in the DNA of the CSTD.

It is worth noting that scientists, engineers, and mathematicians, both women and men, have become important leaders and role models in both laboratories and the public sector. Among current CSTD member States, several are headed by scientists, medical doctors, and engineers. (In my own country, the Philippines, we had two women presidents: the former President Corazon C. Aquino who minored in Mathematics in college and former President Gloria Macapagal Arroyo who is an economist). The Honorable Michelle Bachelet, who was the first woman President of Chile, also a member of the CSTD, and who now serves as the first Executive Director of the new United Nations Entity for Gender Equality and the Empowerment of Women, is herself a pediatrician and epidemiologist.

There is no doubt as to the timeliness and relevance of this year's priority theme of the Commission on the Status of Women. Science and technology, when used appropriately and taking into account the needs of both men and women, can contribute to all the Millennium Development Goals (MDGs), from poverty eradication to promoting environmental sustainability; improving maternal health; reducing child mortality; combating HIV/AIDS, malaria, and other diseases; achieving universal primary education; and last but not least, promoting gender equality and the empowerment of women. Progress towards the MDGs has been uneven and many countries will miss the target if there is business as usual. Concerted efforts are required at all levels to accelerate progress during these last four years left before the 2015 deadline. Science and technology are essential in this process.

On 10 July 2010, the Economic and Social Council adopted resolution 2010/3 on "Science and Technology for Development," which invited the CSTD to make a contribution to this 55th session of the CSW.

By way of background, the CSTD has historically played a leadership role in examining gender and development and addressing how science and technology could be used to empower women in addressing the challenges they face in development.

As early as 1993, prior to the Fourth World Conference on Women, the CSTD set up a Gender Working Group to examine the role of science and technology in promoting gender equality. The Working Group produced *Missing Links: Gender Equity in Science and Technology for Development*, a ground-breaking work which concluded that men have disproportionately benefited from science and technology developments, mainly because science and technology

policies and programs have not clearly recognized the role of gender in development. Secondly, serious obstacles impede the participation of girls and women in science and technology education and careers. The Working Group proposed a number of "transformative actions" for national governments and the international community. These actions include: improved gender equity in science and technology education, removing obstacles to women in scientific and technological careers, making science responsive to the needs of society and more gender aware, better tapping into local knowledge systems, ensuring science decision making institutions are more gender aware, addressing ethical issues, and improving the collection of gender disaggregated data.

As a follow-up, in 1995, the CSTD established a Gender Advisory Board to monitor the implementation of these transformative action recommendations and to advise the CSTD on the gender dimensions of its priority themes. We are very proud to state that CSTD is the only functional commission of the United Nations system with a gender advisory board.

During the most recent annual session of the CSTD held in May 2010, an interactive expert panel discussion on gender and science and technology noted that there is a pressing need for a greater role for women in science and technology, as well as for making greater use of science and technology to address women's needs. Currently, generally speaking, women are undereducated, have fewer credentials, and are underemployed in science and technology fields around the world. Even in some countries where there is a high degree of participation of women in higher education, there is still a low degree of participation of women in professional life. I say that this is the general picture because the profile varies very widely among countries. A major barrier to the participation of women and girls in science and technology is sociocultural attitudes which persist in education, academic appointments, and science and technology professions.

The CSTD panel highlighted a number of ways to address these challenges. At an early age, educating girls in science and information and communication technologies (ICTs) can stimulate their interest in pursuing higher education in engineering, science, and mathematical disciplines. Science and technology training courses specifically designed for women and special educational awards or incentives for women and girls have also been successful. Gender-equal pay structures can improve participation of women in the formal workforce and gender budgeting analysis can ensure that organizations achieve gender equality through better financial decisions.

Most recently, in response to ECOSOC resolution 2010/3, and in close collaboration with the CSTD Gender Advisory Board, the CSTD Secretariat has undertaken a study on "Applying a Gender Lens to Science, Technology and Innovation," which will be presented to the 14th session of the CSTD session in May. This study examines the cross-cutting themes of gender, science, technology, and sustainable livelihoods, with a view to highlighting best practices and case studies as well as identifying forward-looking strategies for capacity-building and partnership.

Ladies and gentlemen,

Allow me to highlight some of the main findings of this work. Women make major

contributions to all main aspects of human wellbeing—namely food production, water and sanitation, energy, and biodiversity conservation. However, many obstacles in existing science, technology, and innovation systems prevent women from having access to the information, technologies, resources, and opportunities required to fulfill these tasks and responsibilities successfully and sustainably. For example, in most developing countries, even though women make substantial contributions to the production and preparation of food, they lack access to capital, clean water, seeds, mechanical power, other inputs and technologies as well as knowledge that would dramatically increase food production, reduce labor required, and save time. Additionally, even though most illnesses are caused by unsafe water and unsanitary conditions, women are not able to obtain sufficient clean water for sanitation and hygiene because their priorities do not tend to be taken into account in determining locations, technologies, or training of water initiatives.

The challenges women and girls face are not limited to the home or the farm, but also exist in the classroom and laboratory. In all parts of the world, girls and women do not participate in science, technology, and innovation education as much as males. At the primary and secondary levels, fewer girls than boys choose to study science and technical subjects. Girls that do enroll in these subjects encounter bias in teaching materials and methods that discourage them and erode their self-confidence in science and technology. The girls that succeed and seek advanced education face further difficulty accessing technical and vocational education. In colleges and universities, although women are more highly represented in behavioral and life sciences, they are less represented than men in physical sciences, technology, engineering, math, and particularly computer science. The effects of these challenges can be seen in the decreasing representation of women in scientific fields from first-level degrees to third-level degrees and then professional employment. Even in developed countries, women occupy less than 30% of research and development positions.

Although the CSTD study documents these and other serious challenges that women and girls face, this work also highlights several promising means whereby we can empower women and girls. Specifically, the international community must enact science, technology, and innovation policies and programs that empower women and men in sustainable development. Gender dimensions of both men and women must be integrated throughout all stages of policymaking, institutions must build capacity, and there must be continuous monitoring and assessment of gender impact. Indeed, we should incorporate science into policymaking itself. Just as the scientific method consists of using experimental data to test hypotheses and reach conclusions, policies should be based on evidence and result from rigorous gender-sensitive research. We must work with women in developing, selecting, and using technologies; ensure they have access to adequate resources; and incorporate and support their local knowledge and innovation.

Integrating gender considerations and including women are vital to efforts to achieve each of the MDGs. Simply improving local agricultural productivity by equipping smallholder farmers with modern and sustainable agricultural science, technology, and practices can improve food security and contribute to each of the MDGs. Examples of effective means of addressing developmental challenges with a gender perspective include helping women obtain land ownership rights, tailoring agricultural extension services to women, and including more women in agricultural

extension and research. Providing rural areas with access to modern energy services that take into account women's needs, can provide a safer work and study environment and free women and girls from burdensome, time-consuming household tasks.

An important area in which women participate in innovation systems is in both formal and informal private enterprise. Gender differences in access to resources and benefits dictate whether women's enterprises can succeed at local and global levels. Science, technology, and innovation can help women in business to improve production and quality, as well as access markets. While supporting women microentrepreneurs is essential, the CSTD Gender Advisory Board has also noted that having women in management and leadership positions of medium and large-scale enterprises is important for "national innovation systems and the ability of countries to compete in global innovation systems."

A primary obstacle that is particularly acute for women in private enterprise is the lack of access to technical and scientific education and training. ICTs can make this information available and facilitate continuing education and technical training to help women gain skills and knowledge tailored to their needs and priorities and support them to access services and markets. ICTs can facilitate networking and entrepreneurship and provide information and learning to women in all areas, including rural areas. Additionally, for women scientists, engineers, and mathematicians who choose to raise children full-time, distance learning and online education can help them keep their knowledge current and become equipped with the latest tools including ICTs should they decide to return to the laboratory, academia, or public service.

One of the areas in which the CSTD actively promotes greater ICT access and connectivity for both women and men is through its mandate to coordinate efforts to implement the outcomes of the World Summit on the Information Society (WSIS). In just a few months at our next CSTD session, we will review the substantial progress made in reaching WSIS targets over the past five years and we hope to continue to count on the support of governments, intergovernmental organizations, academia, civil society, and the private sector to help all women and men realize the tremendous potential of the Information Society.

I appreciate this opportunity to have introduced the work of the CSTD in improving access and participation of women and girls in education, training, science, and technology, including for the promotion of women's equal access to full employment and decent work. I encourage you to read the full text of our forthcoming study and to partner with us in these important efforts. Thank you.