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**Key policy initiatives and capacity-building on gender
mainstreaming: focus on science and technology**

**PROGRESSING TOWARD GENDER-
RESPONSIVE SCIENCE AND TECHNOLOGY***

by

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This paper presents key findings and recommendations from the expert group meeting (EGM) on *Gender, Science and Technology*, Paris, France, 28 September-1 October 2010.¹

The potential of science and technology (S&T) to advance development and contribute to people's well-being has been well-recognized. Science and technology are vital for achieving internationally agreed-upon development goals, for instance by facilitating efforts to eradicate poverty, achieve food security, fight diseases, improve education, and respond to the challenges of climate change. S&T have also emerged as important means for countries to improve productivity and competitiveness and to create decent work opportunities.

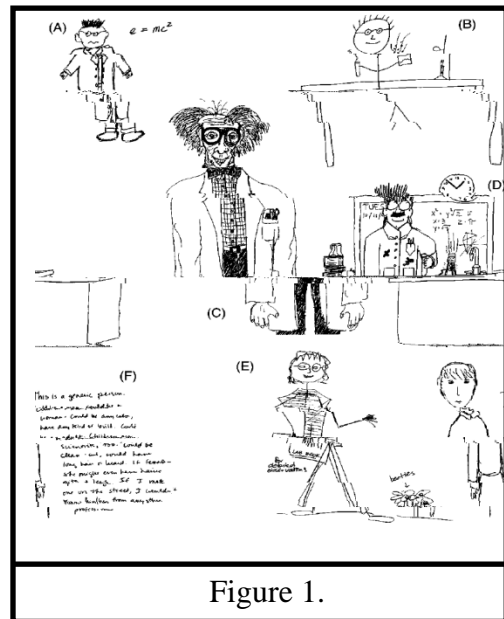


Figure 1.

of Africa. Consequently, women have detailed knowledge of soils and their water yield. Tapping into this specific knowledge can help civil engineering teams optimize well placement. A study of water projects in 13 nations revealed that “equal representation and participation by women contributes to the success of community-managed water services.”¹⁴ Women’s participation also correlates strongly with project sustainability.¹⁵

Integrating Gender Analysis and Innovations into Science, Public Health, and Technology

The expert group’s third area of concern was gender analysis and innovations in scientific knowledge and technology design. Including a gender perspective in S&T development stimulates creativity, enhances scientific knowledge production as well as technological and business innovations, and leads to greater social applicability.¹⁷ Gender analysis and innovations focuses **not** on fixing women or scientific institutions but on research. In addition to “fixing the number of women” and “fixing the institutions,” we need to “fix the knowledge.”

But why do we care? Why is it important to include women’s views and gender analysis in the content of S&T?

1. **Social justice:** Women have a right to benefit from science and technology to the same extent as men.

2. **Economic development:**

A. On the positive side, including women’s views and utilizing gender analysis bring new perspectives and knowledge that can fuel creativity and new jobs.

B. On the negative side, gender bias can be costly—in terms of human life as well as financially. Women have a basic right to health and well-being, which governments have an obligation to protect and promote. When basic research is done, for example, using only men’s bodies, the consequences can be dangerous—perhaps even fatal—to women.

Two quick examples:

i. The first comes from medicine: Between 1997 and 2000, 10 drugs were withdrawn from the United States market because of life-threatening health effects; 4 of these were more severe in women—because testing on both animals in the lab and on humans in clinical trials were done primarily on males. This failure to test properly harmed women

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women in the Philippines, for example. These women's ethnobotanical knowledge helps their local community secure foods and medicines, prevent deforestation, and better adapt to climate change.²²

It is important to highlight how **gender analysis also benefits men**. Osteoporosis is a disease traditionally seen as affecting post-menopausal women, and men have historically been excluded from osteoporosis research. Analyzing sex in diagnostic reference models has turned attention to understanding the disease in men. As a result, diagnostic criteria are beginning to include men and improve their health, especially in old age.²⁴

The expert group recommended a **systematic review of existing methods of gender analysis for S&T and implementing these methods and concepts in all science, medicine, engineering and technology research**. When developing methods of gender analysis, it is important to:

- Draw methods from all regions of the world;
- Draw methods from across disciplines;
- Analyze differences and similarities between and within groups of women and men;
- Analyze other factors that interact with sex and gender, such as age, ethnicity, and cultural variables;
- Analyze sex and gender in research subjects at all levels, for example in the life sciences from single cells to animal models to human subjects;
- Include users' perspectives, for instance by means of user-driven participatory design methods;
- Integrate gender analysis throughout the research process from funding agency decisions about the research priorities, to methods used to design a project, to the process of hiring and promoting research personnel, to the process of reviewing manuscripts for publication.

Conclusion

Science and technology contribute better to development when gender is taken into account. Governments and research organizations are encouraged to work on three related issues: the participation of women and girls in science and technology education and employment, their access to and use of technology, and the need to integrate a gender dimension into S&T research.

Including women as researchers, innovators, and decision-makers represents more than a gain in talent and skilled labour: it also leads to innovation by including specific types of knowledge women develop and maintain as a consequence of gender roles.

In addition, governments and funding agencies now seek to employ gender analysis as a *resource* to stimulate innovation in S&T, and by doing so to enhance the lives of both men and women around the world. This action is important for all stakeholders to undertake, including

ministries of education, S&T, labour, and the environment; funding agencies; universities and research institutions; professional bodies; NGOs and the like.

Innovation is what makes the world tick. Innovation is seen as a way to address major social problems. Both women's equal participation and gender analysis in science and technology are important to enhancing social justice and economic development. Can we afford to ignore such opportunities?