Input to the Secretary-General's report on the system-wide follow-up to WSIS

By

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Introduction and History

In 1993 and in anticipation of the 1995 World Conference on Women to be held in Beijing, the UN Commission on Science and Technology for Development (UNCSTD) sought to affect the inclusion of S&T into consideration of issues that would come before the UN in 1995. There were two major initiatives on the horizon: the Social Summit and the Women’s World Conference. Work groups were convened to begin to collate the research related to S&T’s impact on these topics.

Despite the fact that UNCSTD had few women members, the Commission decided to explore how it might make an intellectual contribution to the upcoming Beijing Conference. Collaborating with the Secretariat for the Conference, it met in concert with an expert panel meeting in New York, made up of primarily of women. It was determined that the Commission would have a better chance to develop innovative thinking around these concerns if they drew on the talent of some of the panel participants, and in this way the Gender Working Group (GWG) of UNCSTD was formed.

Over the next two years the GWG commissioned studies and met four times to consider the extent of the research base which existed to support the idea of a “gender perspective” in science and technology. This work resulted in a book, Missing Links: Gender Equity in Science and Technology for Development, and a policy document that proposed so-called “transformative actions” for nations to implement in moving toward a greater role for women in S&T as well as a greater use of S&T to address women’s needs.

Both the GWG and its successor the Gender Advisory Board (GAB), which was established to implement and monitor the transformative action recommendations, were supported by the Ministry of Foreign Affairs of the Netherlands. The Carnegie Corporation of New York also contributed to the work of the Gender Working Group.

1 Web site.
The Gender Advisory Board was created in 1996 as a monitoring, technical assistance and implementation body following the 1995 acceptance of the UNCSTD recommendations by ECOSOC. Its mandate is to monitor the implementation of the recommendations made by the Commission on gender and science and technology and to provide assistance in their implementation. The second is to advise the Commission on the gender implications of its new work programmes. It is made up of a voluntary Board made up of nine members from Brazil, Egypt, India, Netherlands, Pakistan, Romania, UK and US.

It also received a mandate to support national governments in understanding the challenges relating to the CSTD Recommendations, and assist in developing policy and programming for their implementation at the national level. With funding from the Ministry of Foreign Affairs of the Netherlands, the GAB has worked to support the formation of National Committees to assess and recommend appropriate local action and to create regional secretariats to provide “closest to source” support for country by country initiatives as well as training, learning and sharing of experiences.

Overall, the GAB operates on three levels – international, regional and national – and also bilaterally – with the CSTD and other UN agencies; and also with national and regional governmental machinery.

**Accomplishments : United Nations and International Policy**

- Inputs on gender dimensions of S&T into the Secretary-General's report on Science and Technology in the context of the Millennium Development Goals. This report was used in the Millennium Task Force Report on Science, Technology and Innovation, and key sections on gender provided by the GAB found their way into the Millennium Report.
- Work with UNESCO and NGOs at the World Conference on Science in 1999 to ensure a high profile of gender issues at the Conference, resulting in numerous gender references in the Framework for Action. In particular, Para 90:

  “Taking into account the outcome of the six regional forums on women and science sponsored by UNESCO, the conference stresses that special efforts should be made by government, educational institutions, scientific communities, non-governmental organizations and civil society, with support from bilateral and international agencies, to ensure the full participation of women and girls in all aspects of science and technology, and to this effect to:

  - Promote within the education system the access of girls and women to scientific education at all levels;
  - Improve conditions for recruitment, retention and advancement in all fields of research;
  - Launch, in collaboration with UNESCO and UNIFEM, national, regional and global campaigns to raise awareness of the contribution of women to science and technology, in
order to overcome existing gender stereotypes among scientists, policy-maker and the community at large;

• Undertake research, supported by collection and analysis of gender-disaggregated data, documenting constraints and progress in expanding the role of women in science and technology;
• Monitor the implementation and document best practices and lessons learned through impact assessment and evaluations;
• Ensure an appropriate representation of women in national, regional and international policy and decision-making bodies and forums;
• Establish an international network of women scientists
• Continue to document the contributions of women in science and technology goals. To sustain these initiatives governments should create appropriate mechanisms, where these do not yet exist, to propose and monitor introduction of the necessary policy changes in support of the attainment of these.”

– Networking and collaboration with women in science NGOs around Beijing +5 and the WSIS processes. A group of NGOs promoting gender S&T issues organized a Forum on Women in Science and Technology in New York during Beijing +5. The forum's goal was: 1) To clarify the value and importance of science and technology in relation to the relevant critical areas of concern from the Beijing Platform for Action, and increase the visibility of women in science in the global arena; and 2) To foster participation and understanding of the scientific community, including professionals and students, in the role they can play in policy initiatives. At WSIS, the GAB and supporting groups developed a series of recommendations on gender in the information society; and set up an exhibit promoting women's role in the IT workforce at the WSIS Geneva NGO Forum.

– Major inputs to the forthcoming UNESCO International Report on Science, Technology and Gender, the recently released InterAcademy Panel Report, Women for Science, and the UNESCO/GAB Toolkit on Gender Indicators in Engineering Science and Technology (updated version to be released in April 2007).

Accomplishments: National and Regional Policy

National committees have been established in:

– Brazil – hosted by the Brazil Academy of Sciences,
– Egypt – hosted by the National Council on Women
– Indonesia – Ministry of Research and Technology
– Kenya – National Council for Science and Technology,
– Philippines – Department of Science and Technology
– Rwanda – Ministry of Gender and Family Promotions
– Tanzania – Commission for Science and Technology
– Uganda – Women and Gender Studies, Makerere University
– Vietnam – Ministry of Science and Technology.
National Focal Points (individuals with national connections to convene a National Committee) are established in Cambodia (University of Phnom Penh), China (Chinese Association of Science and Technology), Myanmar (Myanmar Women’s Union), Sudan (UNESCO Chair for Science and Development), Swaziland (Forum for Africa Women Educationalists (FAWE) and Tunisia (GIS International).

National committees and regional secretariats have developed strong working links with many of the key organizations in the respective countries and regions, either through membership on national committees, hosting of committees and/or regional secretariats, or programme links:

1. **Key Collaborating Organizations – East, North and Southern Africa:**

   **Regional:**
   - FAWE – Federation of African Women Educationalists
   - UNESCO

   **National:**
   - **Egypt:** National Council on Women; Cairo University; National Research Centre; Academy for Scientific Research and Technology
   - **Kenya:** Ministry of Education, Science and Technology; Ministry of Trade and Industry; National Council for Science and Technology; Ministry of Finance and Planning; Women's Bureau; Kenyatta University; National Environment Secretariat
   - **Rwanda:** Ministry of Gender and Family Promotions; Ministry of Education; Kigali Institute of Science and Technology; Kigali Institute of Education;
   - **Swaziland:** Ministry of Education; Swaziland Water Service and Corporation; University of Swaziland; FAWE; Swaziland Electricity Board
   - **Tanzania:** Tanzania Commission for S&T; Ministry of Youth, Employment, Women and Children Development; Ministry of Education and Culture; University of Dar Es Salaam; Tanzania Gender Networking Programme; Ministry of Science, Technology and Higher Education
   - **Uganda:** Ministry of Agriculture, Animal Industry and Fishers; University of Makerere, Department of Women and Gender Studies; Ministry of Trade, Tourism and Industry; Women of Uganda Network (WOUGNET); FAWE-Uganda; WETSU – Association of Women Engineers, Technicians and Scientists
   - **South Africa:** SET4Women, Department of Science and Technology

2. **Key Collaborating Organizations – South and Southeast Asia**

   **Regional:**
   - UNESCO Office in Jakarta
   - UNIFEM

   **National:**
   - China Association for Science and Technology (CAST)
   - Bureau of International Scientific and Technical Cooperation, Academy of Sciences, Democratic Republic of Korea
   - Myanmar Women's Affairs Federation
   - Science Education Institute, Department of Science and Technology, Philippines
   - Association of Korean Women Scientists and Engineers, Republic of Korea
   - National Science and Technology Development Agency, Thailand
   - Vietnam National Center for Natural Science and Technology
3. Key Collaborating Organizations – Americas Secretariat

Regional/International:
- UNESCO
- Organization of American States (OAS), Department of Science and Technology
- International Council on Science (ICSU)
- Inter-American Commission on Women
- American Association for the Advancement of Sciences (AAAS)
- L’Oréal Program on Women for Science
- International Task Force on Women and ICT

National:
- Brazilian Academy of Sciences
- University of Sao Paulo
- University of Rio de Janeiro
- International Development Research Centre (IDRC), Canada
- Canadian International Development Agency (CIDA)

The three Regional Secretariats in Africa, Southeast Asia and the Americas engage in regional facilitation, policy and networking activities:

1. Key Activities in Africa include:
- Establishment of Eight National Committees/NFPs in North, East and Southern Africa
- Guidelines for Mainstreaming Gender into Science and Technology Policy Formulation and Review Processes in Africa
- Dissemination of information materials targeted at different audiences, including a film to create awareness about the importance of girls' education and factors that inhibit their study of science and technical subjects, and “Best Practices that have Promoted Gender Equality and Women Empowerment in Science and Technology” in the region.
- Training of teachers on the importance of and tips on mentoring and gender responsiveness in education, including mentorship, orientations to gender responsiveness to education, common constraints and possible remedies to gender stereotypes and other factors that affect girls enrolment and performance in schools especially science and technical subjects.
- Studies and analysis in key areas, including data collection and analysis of gender disaggregated data on enrolment, persistence and performance in selected schools and tertiary institutions in Central and Eastern Uganda.

2. Americas Secretariat

Organization of American States (OAS) Summit of the Americas 2005
- Collaboration with the Office of S&T of the Organisation of American States (OAS) to develop a set of policy recommendations on the gender dimensions of national S&T. They were presented
and accepted at the Meeting of First Ministers and High Officials of Science and Technology of the OAS in November 2004. A reference to gender equality

- and to the entire set of gender recommendations is included in the Lima Declaration. This Declaration was forwarded to the Summit of the Americas in November 2005.
- Coordinated lobbying with other NGOs in the Summit process resulted in the Summit Plan of Action containing several references to the importance of S&T for "Creating Jobs to Fight Poverty and Strengthen Democratic Governance". The Plan of Action specifically includes references to improving the quality of science education, including science, technology and innovation in national action plans, and recognizing the role of S&T in sustainable national development. It also includes a commitment to ensure equal opportunities for all to employment, remuneration and access to education and training, and "pay special attention to gender-differentiated needs".
- GAB is collaboration with the OAS Office of S&T, the Inter-American Commission on Women and the UNESCO Chair on Women in S&T in Latin America among others, on a follow-up to this process, “Promoting the integration of a gender perspective in science and technology policies and programs in the Americas.” The program will focus on improving women's role and participation in S&T government entities, research councils, academies, associations, enterprises, etc. It will emphasise specific efforts and projects highlighted during the first stage to advance the hemispheric initiative, particularly related to increase women opportunities and contribution in S&T.
- This experience was documented in an article in the MIT journal Information Technology for International Development (ITID), "Female Empowerment and Development in Latin America: Use versus Production of Information and Communication Technology" co-authored by Sophia Huyer and Mary Jane Parmentier of Arizona State University.

GAB Brasil - Brazil National Committee

- The First meeting of GAB Brasil was held on October 31, 2006, coordinated by Dr. Alice Abreu, Programme Director for Latin America, ICSU and hosted by the Brazil Academy of Sciences. Thirteen distinguished scientists and researched have accepted to be on the Committee.

Seven main areas of activity were identified by the Committee:

1) Pilot project to create and use gender related material of S&T as a source to the diffusion of women participation in science and technology aiming to stimulate the interest of girls for scientific professions in private and public schools in the area of São Carlos, São Paulo.
2) Analysis of science and technology data bases from a gender perspective
3) Strengthen the decision making process in public policies in Science and Technology aiming at increasing the participation of women.
4) Develop a series of activities to make advocacy within the Congress to increase awareness of issues related to gender, science and technology
5) To increase the visibility of women in science by creating role models, establishing a network between young scientists and mentors, increasing the visibility of women scientists and changing the image the general public has of a women scientist.
6) Increase the presence and participation of women in the national innovation system.
7) Promoting science education for girls.
3. Southeast Asia - RESGEST

- Establishment of three National Committees, 5 NFPs, and a regional network engaging in GST activities,
- Asia and Pacific Gender Mainstreaming Training Manual in Science and Technology. The Manual was designed as guidelines for mainstreaming gender at policy and project level for leader of S&T, gender and S&T experts, and other S&T practitioners.
- Indonesia National Seminar and Training on Gender Mainstreaming in S&T Policy Formulation, co-organized by the Indonesian GEST National Committee, UNESCO Office Jakarta, Indonesian Institute of Sciences, Ministry of Women Empowerment and Ministry of Research and Technology.
- Guidelines on Gender Mainstreaming - provides stakeholders with guidelines for gender mainstreaming in the development and application of science and technology including guidelines regarding the Scope, Target Groups and Institutions. The book has been translated into Indonesian with the funding from Ministry of Women’s Empowerment
- Joint Comparative Study on Gender Dimension of Policies Related to the Development and Application of Science and Technology for Sustainable Development, based on the study conducted jointly by RESGEST, APGEST and Science Council of Asia (SCA) in China, India, Indonesia, Philippines, Rep. of Korea and Vietnam.
- Technical Meeting on the Regional Policy Study on Innovative Grassroots Technology and Gender Mainstreaming held with support from Japan Fund in-Trust through UNESCO Office Jakarta, the Engineering, Science and Technology Unit of UNESCO Office Jakarta.
- Seminar on Gender in Science and Technology Development: New Directions for Action, Jakarta, Indonesia, 26-27 June 2006, organized by RESGEST-UNESCO Office Jakarta in cooperation with the Deputy of Societal Dynamics, Ministry of Research and Technology, Indonesia. The main objective of the seminar was to ensure that gender equity issues in science and technology are brought to the awareness and consideration of policy makers, and to leverage on the STEPAN network to reach the S&T policy-makers
- Project on Gender, Science and Technology in Five Asian Countries which compiled the gender data and statistics for these countries that had been gathered in 2005 and completed in 2006.

NFP: China Association of Science and Technology

- Survey of women in S&T in 2005, with the participation of the Chinese Academy of Sciences, Chinese Academy of Engineering, and All-China Women’s Federation. Five aspects were addressed: the distribution of women in the various fields, the relationship between gender and S&T development, the pros and cons of female involvement in S&T, disturbing factors that affect female involvement, and good experience from abroad on how to encourage female involvement.
- Survey Do You Care about S&T — Female University Students and S&T (2005).
- Compete and Contribute through Knowledge and Technology: peasant women receive agricultural training and take part in competitions, with social services being provided for them. They are also encouraged to participate in the projects Women Help the Poor and Women’s Green Project. About a billion have been trained in some applied skill, of whom 70 thousand won the title of agricultural technician, and 75 thousand were awarded a Green Certificate
- Technology for Communities program 67 thousand wide-scale S&T activities were held, with 1.6 billion people taking part and women benefiting most. A total of 27 million books, 2.2 million
CDs, 6.8 million posters and billions of pamphlets were distributed, over three million people attended S&T community lectures, while 29 million attended courses run by schools and universities

- In 2002 while implementing the State Council’s survey *Index of Major Data on Gender Research for the Development of Chinese Women and Children* CAST added four kinds of gender data to its own survey, including female employees in government organizations, those in leading positions and outstanding women in S&T.

- The *Award for Young Chinese Female Scientists* was established to encourage young women to excel in the life sciences. Five awards and five honorable mention citations are presented every year.

**Looking Ahead**

At its recent meeting with UNESCO and other interested agencies and donors in Paris, the GAB identified several areas for moving forward: organizationally, in collaboration with UN and donor agencies, and in programming.

**Expansion and Consolidation**

Support will be sought to support the continuation and expansion of activities of the existing Regional Secretariats in Africa, the Americas and Southeast Asia, and to establish Regional Secretariats in regions where there are some National Committees and NFPs, but no regional coordinating body: such as the Middle East, North Africa, East Europe and South Asia.

The number of national committees will be expanded, building on NFPs and Committees which currently exist, but also in areas where coverage is weak or nonexistent.
Collaboration with UN and Donor Agencies

This will continue and move into new directions. Discussions with UNESCO are continuing around GAB input into its activities in promoting policy dialogue and building capacities in the formulation of science, technology and innovation policies". Activities in this area include support to national and regional formulation of S&T policies and strategies as well as mechanisms for S&T systems improved, as well as promotion of participatory governance of national and regional S&T systems. Input in particular could be explored concerning the UNESCO subregional, regional and international Science Policy Forums and the national Parliamentary committees on S&T.

The Gender Advisory Board provided the expert panelists on "The Gender Dimension of STI Capacity Building" at the recent World Bank Science, Technology and Innovation Forum. The reception of the panel at the conference, and the number of donors attending an informal lunch with the GAB the following day, indicate that gender continues to increase in impact on the STI agenda of national governments and international agencies and donors. Discussions with the World Bank and CIDA following the event indicate real interest on the part of both agencies in using the expertise represented by the GAB in its programming and policy.

In view of the new CSTD mandate to monitor the UN-system-side followup to the WSIS, the Gender Advisory Board sees this as an opportunity to revisit the original survey in 1998 by UNIFEM on behalf of the Board of how the UN system and UN agencies were addressing gender science and technology, in expanding the WSIS review on gender-related activities to include all gender-related STI activities.

The GAB will also pursue new links and build on existing links and collaboration with other development agencies and banks, including the IADB, the OAS and IDRC.

Programme Agenda

The following projects were identified as areas where the GAB is uniquely situated to draw on its resources and its networks to develop forward-looking activities.

Data: identification, awareness of problem
There is opportunity to build on the Orbicom work on gender indicators in the knowledge society, through promotion and use of national and regional level data collection and indicator assessment. Work here can be done at two levels: 1) macro data and 2) gender analysis of subgroups and subregions to complement taking into account varying factors and variables, such as culture, income level, socioeconomic position, etc. to show barriers and situations

Design of a reporting document/score card for national achievement in the Transformative Action Areas – for national committees and to chart developments, progress, plans, obstacles and challenges. The scanning done by the RESGEST network is one example and could be a useful starting point.

Need for best practices and assessment frameworks
A clearly identified need was that of the identification, compiling and disseminating of best practices, to demonstrate that something can be done, and what can be done. While best practices exist, they exist in an isolated and non-systematic manner, and results are not disseminated. There is also a lack of systematic analysis for preconditions, contextual factors, etc. to replicate and scale up best practices. Here again the RESGEST-APGEST regional scanning with the national focal points is worth re-visiting, especially since some countries are continuing this activity.
**Increasing the role of women in higher education.** There could be a role for the GAB to play in contributing to the understanding of strategies and models for institutions, governments and individuals in promoting and encouraging equal access and participation of all groups in higher education in S&T. This could involve an assessment of existing experiences, developing guidelines and establishing baseline criteria and determining factors.

**Update Missing Links**
Over the last 10 years new data, issues and activities have emerged around the issues and areas identified by the Gender Working Group and addressed in Missing Links. An updating and revisiting of the work and its supporting research would be a useful and timely activity. This could involve a re-orienting of approach in view of the issues and trends identified, including increasing availability of data and research on the experience of men and boys in different sectors. Some of the work to be included already exists.

**Comparative policy analysis on gender mainstreaming, S&T policy and gender,** to train and educate donors, agencies and governments on what this is "all about"; to analyse successes and lessons learned, in order to assess the success of mainstreaming and successful strategies for its achievement.

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More details on activity and committees can be obtained from:

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