6. Summary: actions for academies

It is important that each of the world's science and engineering academies develop strategies for implementing the recommendations of this report. These strategies must necessarily be customized, as each academy performs a different set of functions as a result of its own and its country's history.

Thus the Advisory Panel presents below a summary of the report's recommendations grouped according to the most prominent of those functions. Each academy can then select action points that fit its particular profile.

Science and engineering academies as honorific societies

All academies in the world share the characteristic that they honour the achievements of eminent scientists and engineers. The Advisory Panel recommends that they take the following steps to become societies hospitable to and inclusive of women scientists and engineers:

- **Put gender issues on the agenda**
  Some academies have appointed a person or created an office responsible for gender-equity issues. Preferably, a committee with responsibility for diversity—and that reports directly to the academy leadership—is to be established. That committee should enlist academy members, women and men alike, committed to women's full inclusion. Working with the president and council, it charts a course of action, and regularly monitors progress.
- **Increase the number of women academy members**
  A fundamental way of increasing the membership of women is by widening the nomination pool of eligible women scientists and engineers. The academy president leads by reminding members of the need to correct women's low representation and by proposing initiatives to enlarge it. The diversity committee complements the president's efforts by, among other things, collecting and distributing names of eligible women candidates to nominating committees.

- **Increase the visibility of women scientists and engineers**
  Academies are asked to include women among the scientists and engineers they portray in their publications and websites, recognize them at academy events and invite them to make presentations, and pay attention to gender balance on speakers' platforms.
- **Offer awards, grants, and fellowships**
  The Advisory Panel asks that academies encourage the nomination of women scientists and engineers for prestigious awards and that they explicitly call, in their announcements of grants and fellowships, for nominations of women, encourage them to apply, and ensure that there is gender balance on the decisionmaking juries.

Academies as advocates of global capacity building

A public commitment and sustained effort by the academies is needed so that grassroots women throughout the world may, in full partnership with men, acquire the skills for building their countries' capacities in science and technology.

- **Knowledge centres**
  The Advisory Panel asks academies to advocate and participate in the establishment of science and technology 'knowledge centres' for women in rural areas and urban enclaves. These centres provide training in S&T-based skills for local applications. Training in information technology and access to the Internet are essential elements in this process.
- **Educating S&T professionals**
  Academies are urged to advocate for and support the higher education of women in science, engineering, and industrial management, including entrepreneurship. Some of these women, associated with regional research institutes, may in turn train rural women in their own cultures through links to local knowledge centres.
- **Networking**
  Academies are asked to support collaborations between developed and developing countries that give women scientists, engineers, and S&T students the opportunities to acquire contacts, build networks, and generally gain greater access to new learning opportunities.

Academies as employers

Most academies employ staff—and in some cases manage sizeable in-house operations—that function in a culture largely dominated by men.

The institutional climate needs to be transformed into one that expects both women and men employees to perform to their full potential for the benefit of the organization.

- **Commitment at the top**

  An academy's working environment can be transformed only if top management, convinced that including a variety of talents, perspectives, and experiences is a worthwhile organizational goal, commits to acting accordingly.

- **Creating an inclusive working environment: Good management practice**

  The organizational transformation to an inclusive culture uses the tools of good management practice described in Chapter 2. Conditions for hiring, promotions, and awards must be made clear. Women need to be included in networking to end their isolation. The decisionmaking inner circle is gradually widened through attracting and preparing women for leadership. Both women and men employees deserve a healthy work-family balance.

Academies as sponsors of research and as evaluators of research institutes

- **Establishing criteria**

  When performing reviews of research institutes, panels should preferably consist of both women and men. Working conditions of women researchers need to be among the evaluation criteria.

- **Gender in scientific research**

  Academies that fund research must require that the researcher considers the differentiated impact of the work on women and men and ensures that the results are not biased by the sex of the researcher. Evaluation panels are required to assess whether gender issues have been adequately addressed. Granting organizations must analyze whether their funding allocations are distributed to women and men researchers without bias.

Academies as national advocates for education, science, and engineering

Many academies have formal roles as advisers to government, while others may be able to influence government—as well as other sectors— by virtue of the prestige their institution carries.

- **National office**
  Academies are asked to advocate for a national office that facilitates the entry and participation of women professionals in fields, such as science and engineering, traditionally dominated by men.
- **Public awareness**
  Academies are urged to emphasize that raising public awareness of science and technology is important to all aspects of society.
- **Educational reform**
  The Advisory Panel asks that academies advise government education agencies on reforms—in textbooks, teaching materials, exams, and career counselling—to remove gender bias.
- **Eliminating barriers to full inclusion**
  Academies are asked to advocate that governments remove barriers to the education and employment of women scientists and engineers, and redress women's underrepresentation; and that work and family responsibilities be balanced by a variety of measures, from child-care facilities to flexible work schedules.

Academies acting in concert

- **Global coordination**
  The InterAcademy Panel is encouraged to coordinate with other organizations, such as the Academy of Sciences for the Developing World (TWAS), the Third World Organization for Women in Science (TWOWS), and UN organizations, such as UNESCO and UNCSTD Gender Advisory Board, for implementation of the recommendations in this report. In particular, the InterAcademy Panel might want to work with UNESCO in two ways: establishing global indicators and the standardized compilation of sex-disaggregated data; and developing a global strategy to establish gender equity throughout the S&T community.
- **Dissemination**
  The Advisory Panel recommends that the InterAcademy Panel make use of various means of communication, such as S&T-friendly radio and television programming, for increasing the public understanding of science, with particular focus on girls and women. The Advisory Panel also requests that the InterAcademy Panel establish a website for women in science and engineering. In addition to providing an important bridge to the many other related sites on the Internet, the InterAcademy Panel website will help share information about varied

gender-equity programmes around the world. For example, the large amount of material reviewed in the preparation of this report should be made accessible for academies and the wider women-for-S&T community.

Statement of commitment

Academies across the world are requested to approve, and formally adopt, a statement of their commitment to the full inclusion of women in their organizations and throughout the S&T community. A sample for their consideration is given in Box 6.1.

A better future is within our reach—if we all take part

Women must become active and valued participants—full and equal partners with men—in the science and technology enterprise, as well as in the transfer of knowledge and skills to areas where the need for such skills is greatest. This must happen not only because it is their right, but also because women's contributions to scientific and technological advances are essential. In addition, women are urgently needed to help enlist their sisters at the grassroots in the ongoing knowledge transformation of the world.

As this past century has seen the gradual erosion of rigid views about which gender does what jobs, women have proved their mettle in many fields. Women have taken their places at all levels of government, they are no longer rarities among university professors (as well as university presidents), they are surgeons and astronauts, and are increasingly found in company boardrooms and other traditionally male bastions.

Thus women have strikingly confirmed their intellectual abilities and wide range of skills. It is now time to eliminate the remaining obstacles that keep women from becoming fully involved in the vital work—including leadership—of science and technology innovation and global capacity building. Academies must lend their prestige and resources to accelerating the inclusion process. The world cannot afford to wait another century for this to happen.

Sample commitment statement for academies.   **Box 6.1**

The president and council of the academy commit to full inclusion of women in science and technology. The academy will:

- Adopt good management practice—tools for inclusiveness—in its institutions, and advocate such practice across the S&T community.
- Establish a committee that addresses gender issues, monitors progress, and ensures follow-up
- Promote women members to decisionmaking levels and include them in panels and committees.
- Increase the number of women scientists in the nomination pool for membership, prizes, and awards.
- Give visibility to women scientists, and represent women in the academy's portrayal of science.
- Pay attention to gender implications of research sponsored or evaluated by the academy.
- Ensure that the criteria for evaluation of research institutes include organizational culture.