

Creating the future: Policy guidelines for promoting women in science

SUMMARY¹

“Creating the Future”, published by NACI in 2006, proposes a policy and action plan to tackle gender challenges in South African science. It focuses on:

- **Women in Science:** How many women participate in SET and at what level?
- **Science for Women:** Do women benefit from science?

This policy guide is intended for all science, engineering and technology (SET) institutions in South Africa’s National System of Innovation (NSI). It includes a monitoring and evaluation framework for achieving gender and race equity and diversity up to 2020.

THE CONTEXT FOR A NEW POLICY AROUND WOMEN AND SCIENCE

South Africa’s severe shortage of SET skills is aggravated by the under-representation of women, particularly black women. The 2003/4 National R&D survey shows that only about one third of South Africa’s 18 500 researchers are women. While more women than men enrol for tertiary SET studies, their numbers drop sharply at postgraduate levels and they are grossly under-represented at doctoral level. This is especially true for black women. At universities female staff members typically have lower levels of qualifications than their male colleagues; they generally produce fewer, lower-impact research publications and receive fewer and smaller research grants. Universities rarely appoint women as professors.

Some of the critical **challenges faced by women throughout their life cycle** were highlighted during two conferences around women and science organised by the DST in 2005. The following challenges are discussed in detail:

- Historical factors (legacy of discriminatory practices during apartheid);
- Gender stereotyping (myths about males’ superior science aptitude and ability);
- A range of barriers to science confronting girls and young women at school and university;
- Obstacles and constraints facing women once they enter or re-enter the SET workplace.

Women often don’t benefit from research, for the following reasons:

- Women’s needs are not taken into account when defining research agendas;
- Gender issues are not sufficiently addressed throughout the SET research process;
- SET companies are not sensitive to the needs of women and shy away from products with a gender focus;
- Criteria for science funding are not designed for gender impact.

RECOMMENDATIONS REGARDING WOMEN IN SCIENCE

The following strategies are recommended to achieve **a more equitable participation**:

- Target funding to increase the number of productive women researchers from 6 500 to a critical mass of 9 500 by 2014;
- Provide an enabling environment and incentives to increase the flow of girls and young women into SET through better infrastructure access and more bursaries, including full PhD funding;
- Award “life cycle grants” to promote women through various phases of post-doctoral studies, with no age restrictions or penalties for career interruptions, including re-entry programmes to support women scientists returning to their careers after family obligations;
- Review the process of awarding research ratings to allow greater participation by women;
- Explore mechanisms to increase participation of women in SET-orientated industry and universities, for example through a “Women’s SET Trust” and entrepreneurship programmes;

¹ The comprehensive policy advisory document to the Minister for Science and Technology, entitled: “Creating the Future: Gender, Race and SET Sector Policies for Capacity Building and Innovation”, published August 2006 is available from the National Advisory Council on Innovation.

- Recognise successful women scientists publicly to curb the perception that science is a white, male profession;
- Ensure that women participate fully in all decision-making instruments of the NSI;
- Offer gender awareness training to staff at granting and research institutions.

“Creating the Future” recommends the following actions to **leverage public funds** in order to achieve equity in the value of public research and development funds allocated to women:

- Invest in the development of research skills, mentoring and supervision of women scientists, especially black women;
- Remove all systemic barriers (including age limits) that prevent women from accessing funding for SET study, research and career development;
- Earmark funds for women who are principal investigators or lead research teams;
- Ensure gender parity in the research chairs awarded by the National Research Foundation;
- Channel funds towards more and better science outputs (articles and patents) by women;
- Contribute towards childcare and family services to create an environment where both men and women can make an optimal contribution towards science and innovation.

Government departments must **work together more effectively** to support women in science. Key areas for collaboration include:

- The mathematics, science and language education of girls and young women;
- Joint studies on barriers to women in science, and strategies to overcome these barriers;
- A shared “Code of Good Practice on Women’s Participation in SET” to eliminate discrimination.

RECOMMENDATIONS REGARDING SCIENCE FOR WOMEN

The needs and priorities of women must play a greater role in shaping research priorities and agendas. Research must deliver more tangible benefits for women, in particular poor black urban and rural women. Three key actions are called for to help **transform the lives of women**:

- Recognise the fact that research may benefit men and women differently and take this into account when research funds are awarded;
- Ensure that women are equitably represented when decisions are made about research priorities, funding and evaluation;
- Evaluate the outcomes of publicly funded research in terms of its impact on women.

The Department of Science and Technology (DST) must collaborate with other government departments in **gender awareness programmes**, for example by showcasing SET products beneficial to women and by publicly recognising the SET outputs relevant to women’s needs.

Under the banner of “New Frontiers in Engendered SET Research”, there should be special emphasis on the needs of rural and/or poor women. The policy also calls for further exploration of the **ethics around research conducted on women**.

MEASURING IMPACT

“Creating the Future” calls on all role players in the NSI to adhere to the proposed “Gender, Race and SET Monitoring and Evaluation Framework”. This framework specifies nine constructs (each with specific indicators) to monitor the implementation of the proposed policy and identify future priorities. The monitoring data will provide a comprehensive profile of women in SET in South Africa that can be used for different purposes (for example reporting to the Minister, developing future interventions, international benchmarking and comparisons, and long-term reviews).