

**‘Women in SET in Europe’**

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The Women and Science Unit in the European Commission's Research Directorate-General has conducted invaluable work on the issue of women in science, engineering and technology (SET). It has collected and disseminated statistics where none existed before, documented case studies of good practice, and published a series of reports making radical recommendations (1). These reports rehearse the social justice case for developing women in SET: these have been especially significant for public sector policies. But they have also addressed the business case. Indeed, in Berlin last year, the Commission launched a 'wake up call' to European industry on the need to make much better use of women in research and development in SET.

### **Social justice arguments for developing policies on women in SET**

The social justice arguments for women to have a role in SET unfettered by stereotypes about their gender are self-evident on democratic and equality grounds. Nevertheless, throughout Europe, women are restricted in their access to decision-making about how SET budgets should be spent, who should have access to opportunities to develop careers in SET and what constitutes 'excellence' in SET.

European Union countries have sought to address these issues. Some have legislation ensuring a reasonable gender balance on public committees including academic and science committees. All have achieved a threshold in equal treatment legislation. Many have developed positive action measures to try to kick start women's opportunities in SET. However, gender mainstreaming approaches, which seek to promote gender equality in all policies, programmes and actions are likely to have a more significant impact on organisational and cultural change. While there are some good examples of progress in this field, it is a long-term strategic approach that requires considerable commitment.

### **The business case for developing policies on women in SET**

There are three elements to the business case that we hear about from companies:

- the present and projected shortage of qualified people in science, engineering and technology. This is a shortage to which the Council of Ministers have drawn attention. Indeed, their commitment to an average of 3% of European Union GDP being spent on R&D by 2010 means there is an estimated need for about 700,000 more qualified researchers.
- an awareness that women are fast becoming a very significant group of consumers, both in an individual capacity but also as senior buyers for the organisations for which they work. To ignore women's purchasing power is a dangerous strategy. More women will be needed in research and development, as well as a broader spectrum of men, to ensure that products and services are designed with the growing diversity of consumers in mind.
- there is growing evidence that diversity is a key factor in generating creativity and innovation. As Astra Zeneca say, 'cloned people produce cloned ideas'. Women are needed for the variety of experiences and perspectives they can bring to the table – and the laboratory.

Having accepted the business case however, opening companies up to women researchers is far from a straightforward matter. Long-term strategic policies are needed to:

- modernise human resource (HR) management practices. The old boy network is outmoded as a method of recruiting talent. Transparent, merit driven mechanisms for assessing people are needed.
- Company policies that value individuals in all their diversity are vital. Gender pay audits are helpful, to ensure that the value of individuals and groups is appropriately rewarded. HR policies need to acknowledge and respond to the differences among groups, while recognising that one size does not fit all: stereotypical assumptions must be avoided. Zero tolerance of bullying and harassment is essential.
- Worklife balance is an issue for all employees, men as well as women. Companies need to develop imaginative and flexible policies to meet a wide variety of needs that tend to change over the life course. Listening to employees on an individual basis about how they would like to manage their work/life balance can lead to creative solutions that value individuals, reduce stress and promote effective working. They are also good for retention and growing company loyalty.
- Targets are important targets can be - 'if it gets measured, it gets done'!

However, that these are just the first steps towards the essential organisational and cultural change necessary for women, as well as men, in all their diversity, to maximise their potential. Some companies that have been successful in their policies to recruit and retain women in R&D report how they reached a critical mass but then found they could progress no further. They needed to move out of their comfort zone, to re-examine the issue, listen to their employees and try new approaches to move beyond that threshold. It is important to avoid stereotyped assumptions in the process about identifying 'high potential' employees. Some companies speak of the need for 'subtle communication' channels (listening, again). Ownership of the agenda needs to be both top down and bottom up, and to be built into performance review mechanisms. Role models, mentoring and networks can support the growth and development of women in SET, both for those in the early stages of their careers, those in mid career or returning to work and for women in the boardroom.

### **The wake up call**

A group of chief executive officers of major companies employing industrial researchers in SET, led by Mr. Andrew Gould of Schlumberger, responded to the European Commission's 'wake up call' in a very exciting initiative. They have all been working successfully on this issue for some time and are now encouraging others to follow their example. They are committed to something far beyond a small, tokenistic improvement in numbers: they are leading the way in fundamental organisational and cultural change. They have made a public commitment to a series of actions, both internally and externally to address the issue. This is very welcome. And bodes well for changing company cultures to make them more inclusive, more open to diversity and better climates for fostering creativity.

## Conclusion

Measures that lead to organisational and cultural change in both the public and the private sector are vital if women are to be able to contribute to and benefit from SET. Equal treatment and positive action measures are vital, but they need to be accompanied by long term strategic measures designed to change the culture. The UK Resource Centre for Women was a recommendation of the Greenfield report (2). I'm delighted to be here at its launch. It has a very important role to play in this agenda, and will hopefully become a showcase initiative not just in the UK but in Europe, in addressing the issue of women in SET.

1. See for example:

### **The ETAN report on women and science in the public sector**

Osborn, M., Rees, T., Bosch, Ebeling, H., M., Hermann, C., Hilden, J., McLaren, A., Palomba, R., Peltonen, L., Vela, C., Weis, D., Wold, A., Mason, J. and Wennerås, C. (2000) *Science Policies in the European Union: Promoting excellence through mainstreaming gender equality*. A report from the ETAN Network on Women and Science, Luxembourg: Office for Official Publications of the European Communities  
[http://europa.eu.int/comm/research/science-society/documents\\_en.html](http://europa.eu.int/comm/research/science-society/documents_en.html)

### **The Helsinki Group Report**

Rees, T (2002) *The Helsinki Group on Women and Science: National Policies on Women and Science in Europe* Luxembourg: Office for Official Publications of the European Communities  
<http://www.cordis.lu/improving/women/policies.htm>

### **The Women in Industrial Research Report**

Rübsamen-Waigmann, H., Sohlberg, R., Rees, T., Berry, O., Bismuth, P., D'Antona, R., De Brabander, E., Haemers, G., Holmes, J., Jepson, M., Leclaire, J., Mann, E., Needham, R., Neumann, J., Nielson, C. N., Vela, C. and Winslow, D. (2003) *Women in Industrial Research: A wake up call for European Industry* Luxembourg: Office for Official Publications of the European Communities  
<http://europa.eu.int/comm/research/wir>

Blagojević, M., Bundele, M., Burkhardt, A., Calloni, M., Ergma, E., Glover, J., Groó, D., Havelková, H., Mladenich, D., Olesky, E.H., Srettenova, N., Tripsa M.F., Velichová, D., and Zvinkliene, A. (2004) *Waste of talents: turning private struggles into a public issue Women and Science in the Enwise countries*. Brussels: Directorate General for Research, European Commission  
[http://europa.eu.int/comm/research/science-society/women-science/enwise\\_en.html](http://europa.eu.int/comm/research/science-society/women-science/enwise_en.html)

### **2. The Greenfield Report on Women in Science**

Greenfield, The Baroness Susan, Peters, J., Lane, N., Rees, T. and Samuels, G. (2002) *Set Fair: A Report on Women in Science, Engineering and Technology from The Baroness Susan Greenfield to the Secretary of State for Trade and Industry*, London: Department for Trade and Industry, pp. 73 + appendices  
[http://www2.set4women.gov.uk/set4women/research/the\\_greenfield\\_rev.htm](http://www2.set4women.gov.uk/set4women/research/the_greenfield_rev.htm)