Preface

The issue of women and science is at the core of the idea of a European Research Area (ERA). Indeed, the under-representation of women in science is preventing the full realisation of the ERA's potential and the achievement of the Lisbon objectives. Furthermore, the exclusion of women from science, in particular in senior positions, is an unacceptable and unaffordable waste of human resources and a distortion of the relationship between science and society.

Industry plays a leading role in research, innovation and development. About 56% of research and technological development investment in the EU Member States – Research and Development (R&D) expenditure – is funded by industry. The Barcelona Council of Ministers (2002) agreed that R&D investment in the European Union Member States should approach 3% of the Gross Domestic Product (GDP) by 2010. This represents an increase from 1.9% in 2000. By 2010, it is anticipated that about two thirds of this R&D investment will be financed by industry.

The Communication Women and Science: Mobilising women to enrich European research was adopted by the European Commission in February 1999 (CEC, 1999), and backed by the Council Resolution on Women and Science in May 1999 (Council of the European Union, 1999). It was also supported by a Resolution of the European Parliament in February 2000 (European Parliament, 2000). On the basis of this, the Commission acknowledged the severe under-representation of women in science and set out an action plan. The ETAN report *Science policies in the European Union: Promoting excellence through mainstreaming gender equality* (Osborn et al, 2000), drew attention to problems in the situation of women in research but mainly focused on the public sector. It pointed to the paucity of information available on women in industrial research.

It is therefore opportune that the Commission launched the Women in Industrial Research (WIR) expert group in January 2002 at a time when the problems of recruiting sufficient numbers of highly qualified researchers and engineers had already been identified as a policy concern .

The work was organised in plenary sessions, subgroups (young scientists, good practices, women entrepreneurs, top women, communication and changing the public image of industrial research) and by electronic exchange of data and views, proceeded with lively and free discussions, great enthusiasm and concentration. About 50 senior experts from leading R&D companies, universities, research institutions and professional organisations from Europe and North America have contributed to this report.

The situation of women in industrial research in Europe has never been analysed before. The results are alarming. The first official statistical data show that the participation of women in industrial research is less than half that of the higher education sector. There are remarkable differences between countries in the mechanisms enabling the reconciliation of family responsibilities with research careers and hence in the inclusion of highly qualified women in the innovation process. In terms of entering such education, up until now, not one country has really been successful in

attracting enough young girls to careers in natural and computer sciences, engineering/technology or mathematics. However, there is a positive trend. Concerted actions at European, national and regional levels are now needed to keep women with a completed science education active in scientific careers and to allow newcomers to enter. If visible changes are to be reached by 2010, such activities have to start immediately.

Some positive examples already exist and will be discussed. Leading companies are going ahead and a few countries are setting good examples. However, if a real difference is to be made, concerted efforts will be needed from policy-makers, industry and women themselves. Europe needs to be transformed into a region where combining children with a career is no longer so difficult to reconcile, for either women or men.

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