



## **Gender Issues**

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## Introduction

This report has been carried out with the aim of optimising SME Environment project on assisting the participation of women researchers employed by small and medium sized enterprises in the new member states and accession countries in FP6 projects in environment and energy fields at the highest possible degree.

In order to reach the above objective the report will describe the current situation of women researchers in the studied area; select the necessary concepts and analytical tools necessary to carry out an ex ante assessment of the project impacts; examine the direct and indirect impacts of the projects; and draw consequences on the characteristics need to be built in the project.

The report intends to provide practical information rather than *l'art pour l'art* analysis since, the consequences will be applied during the planning, execution and evaluation of the project.

## Description of current situation

Following studies in the field of women in science and women in the private sector, we can extrapolate the situation to have picture of the situation of *women in environmental SMEs in the New Member States and Acceding Countries*.

Several statistics and deep researches show the great impact of the communist period on the participation of women in sciences. The importance of education, and access to it, has led to the emergence of a considerable proportion of highly-qualified women active in all public spheres and notably in science. In addition, this gender policy included the equal right to and the obligation of full- time employment, as well as access to education regardless of gender. Furthermore, this policy was supplemented by the availability of childcare facilities, legal protection and state support for the working mother.

After the political changes, the situation turned dramatically as in the research and development system, and in the working possibilities of women in general.

A deep analysis among CEE countries was carried out to see the situation of women in research (ENWISE project):

“The prospects of young female scientists are very bleak due to the unavailability of funding, the rigid patterns of promotion and recognition, and the lack of appropriate welfare policies, all of which are potential causes of brain drain. This report shows that even in the countries where the overall presence of women and men as researchers is fairly balanced, there are gender differences in the concentrations across the various R&D sectors and fields of science, whereby women are squeezed out of competitive, high-expenditure R&D systems, but absorbed into struggling low-expenditure systems as a kind of *back-up* human resource”<sup>1</sup>

In European scientific research, women are still under-represented, especially in senior positions. Private industry is funding 56 % of all European scientific research. Every second researcher is based in industry - by now, only 15 % of the industrial researchers are women. To analyse and improve the role and the participation of women in industrial research the European commission has started the new WIR - Women in Industrial Research initiative. As first step a high level expert group Women in Industrial Research group has been established to provide advice to the

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<sup>1</sup> Annex1: [http://europa.eu.int/comm/research/science-society/women/enwise/pdf/enwise-report\\_3.pdf](http://europa.eu.int/comm/research/science-society/women/enwise/pdf/enwise-report_3.pdf), ENWISE report, 2003

European Commission, European Member states and industry on moves to support women research scientists working in industry.<sup>2</sup>

**Table 1** Gender distribution of researchers from the Enwise countries within each country and R&D sectors, head count and percentage, 2001 (Source: EC, 2003b)

		Business Enterprise		Higher Education		Government		Private Non-profit		All Sectors	
Bulgaria	Women	605	49 %	875	35 %	3 301	49 %	16	31 %	4 797	46 %
	Men	620	51 %	1 613	65 %	3 462	51 %	35	69 %	5 730	54 %
	Total	1 225	100 %	2 488	100 %	6 763	100 %	51	100 %	10 527	100 %
Czech Republic	Women	1 341	17 %	3 504	32 %	2 234	32 %	54	19 %	7 133	27 %
	Men	6 777	83 %	7 580	68 %	4 853	68 %	229	81 %	19 439	73 %
	Total	8 118	100 %	11 084	100 %	7 087	100 %	283	100 %	26 572	100 %
Estonia	Women	164	32 %	1 434	43 %	349	52 %	22	54 %	1 969	43 %
	Men	343	68 %	1 913	57 %	326	48 %	19	46 %	2 601	57 %
	Total	507	100 %	3 347	100 %	675	100 %	41	100 %	4 570	100 %
Hungary	Women	1 208	25 %	6 313	35 %	1 842	36 %	:	:	9 363	33 %
	Men	3 700	75 %	11 958	65 %	3 330	64 %	:	:	18 988	66 %
	Total	4 908	100 %	18 271	100 %	5 172	100 %	:	:	28 351	100 %
Latvia	Women	518	56 %	2 059	51 %	419	53 %	4	80 %	3 000	52 %
	Men	405	44 %	1 974	49 %	381	47 %	1	20 %	2 761	48 %
	Total	923	100 %	4 033	100 %	800	100 %	5	100 %	5 761	100 %
Lithuania	Women	248	42 %	3 439	48 %	1 114	47 %	10	42 %	4 811	47 %
	Men	343	58 %	3 800	52 %	1 269	53 %	14	58 %	5 426	53 %
	Total	591	100 %	7 239	100 %	2 383	100 %	24	100 %	10 237	100 %
Poland	Women	3 332	28 %	24 925	39 %	5 307	43 %	:	:	33 564	38 %
	Men	8 464	72 %	39 072	61 %	7 054	57 %	:	:	54 590	62 %
	Total	11 796	100 %	63 997	100 %	12 361	100 %	:	:	88 154	100 %
Romania	Women	4 835	41 %	2 470	40 %	2 802	49 %	:	:	10 107	43 %
	Men	6 821	59 %	3 707	60 %	2 962	51 %	:	:	13 490	57 %
	Total	11 656	100 %	6 177	100 %	5 764	100 %	:	:	23 597	100 %
Slovak Republic <sup>(1)</sup>	Women	644	29 %	2 089	43 %	1 083	44 %	:	:	3 816	40 %
	Men	1 612	71 %	2 801	57 %	1 355	56 %	:	:	5 768	60 %
	Total	2 256	100 %	4 890	100 %	2 438	100 %	:	:	9 584	100 %
Slovenia	Women	471	30 %	1 007	34 %	862	45 %	18	17 %	2 358	36 %
	Men	1 114	70 %	1 947	66 %	1 057	56 %	86	83 %	4 204	64 %
	Total	1 585	100 %	2 954	100 %	1 919	100 %	104	100 %	6 562	100 %
Enwise-10	Women	13 366	31 %	48 115	39 %	19 313	43 %	124	24	80 918	38 %
	Men	30 199	69 %	76 365	61 %	26 049	57 %	384	76	132 997	62 %
	Total	43 565	100 %	124 480	100 %	45 362	100 %	508	100	213 915	100 %
EU-15 <sup>(2)</sup>	Women	51 952 <sup>(3)</sup>	15 %	200 981	33 %	43 268	31 %	:	:	296 201 <sup>(4)</sup>	27 %
	Men	294 194 <sup>(3)</sup>	85 %	399 142	67 %	96 742	69 %	:	:	790 078 <sup>(4)</sup>	73 %
	Total	346 146 <sup>(3)</sup>	100 %	600 123	100 %	140 010	100 %	:	:	1 086 279 <sup>(4)</sup>	100 %

Source: European Commission 2003b.

Exceptions to the reference year: BG, EE, LV (HES+GOV), PL, SI: 2000

Notes:

(1) FTE as exception to HC

(2) Reference year: 2000 (exception: AT: 1998)

(3) Excludes BE, NL, LU, SE, UK because no sex-disaggregated data for the BES are available from these countries

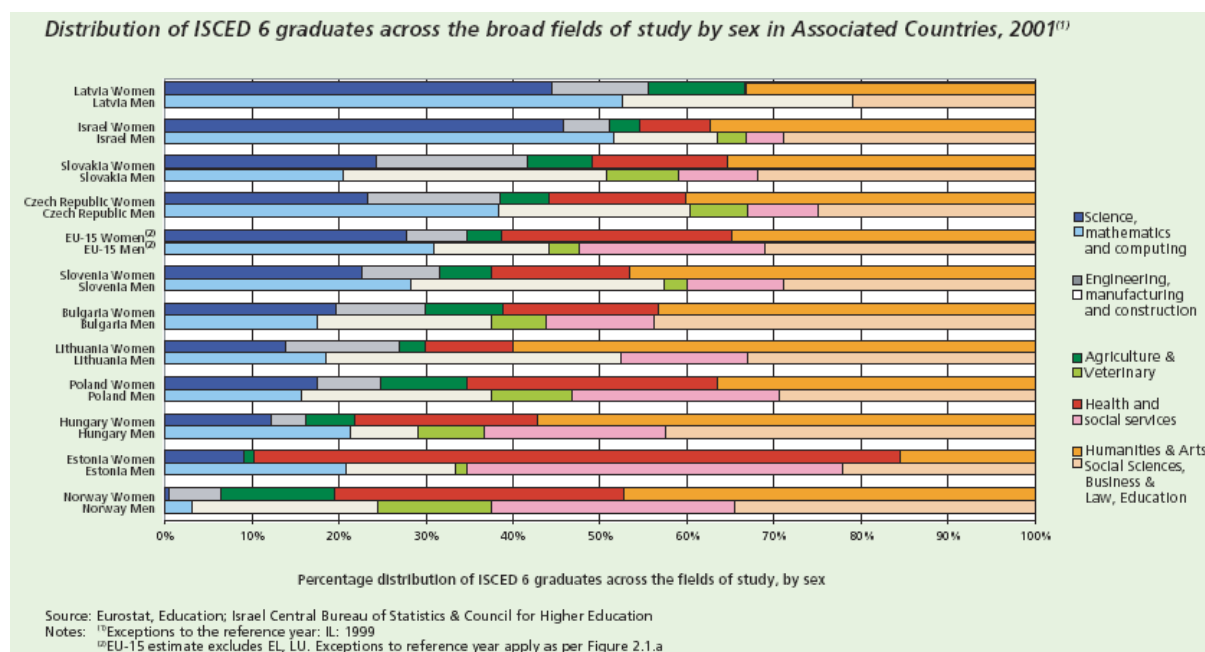
This amounts to an additional 150 000 researchers, representing about 30% of the BES

(4) PNP not included in calculation

Methodological and statistical work undertaken by the European Commission in co-operation with the Statistical Correspondents of the Helsinki Group on Women and Science resulted in "She Figures" (EC, 2003a).

<sup>2</sup> [http://europa.eu.int/comm/research/science-society/women/wir/index\\_en.html](http://europa.eu.int/comm/research/science-society/women/wir/index_en.html)

Figure 1 Statistical data on women researchers in the New Member States (Source: EC, 2003a)



*Percentage of researchers who are women by field of science in HES in Associated Countries, FTE, 2000<sup>(1)</sup>*

Percentage Women	NATURAL SCIENCES	ENGINEERING AND TECHNOLOGIES	MEDICAL SCIENCES	AGRICULTURAL SCIENCES	SOCIAL SCIENCES	HUMANITIES
Bulgaria	45,3	15,8	47,2	0	41,4	47,7
Cyprus	16,3	16,7	0	0	33,7	40,9
Czech Republic	34,3	26,9	34,8	36,3	39,3	38,7
Estonia	33,3	23,8	55,7	45,7	51,6	59,2
Hungary	:	:	:	:	:	:
Iceland	17,5	41,0	41,1	46,7	43,6	36,2
Israel	11,8	12,1	38,1	13,6	30,3	35,6
Latvia	35,2	34,9	78,4	59,0	41,9	79,3
Lithuania	37,9	24,5	55,2	39,3	57,1	66,5
Malta	:	:	:	:	:	:
Norway <sup>(2)</sup>	23,5	17,4	44,7	34,0	39,4	40,4
Poland	33,8	15,8	43,3	33,1	37,9	33,0
Romania	36,4	34,3	51,5	24,5	22,8	27,3
Slovakia	33,2	33,9	50,8	:	50,5	49,9
Slovenia	30,6	18,8	51,7	51,4	41,4	48,9

Source: Eurostat, S&T statistics; DG Research, WIS database  
 Notes: <sup>(1)</sup>Exceptions to the reference year: IL, LT, NO, PL: 2001; IS, LV: 1999  
<sup>(2)</sup>HC as exception to FTE

By presenting the results from these indicators, this publication describes some of the common trends in the employment of European women and men scientists and researchers:

- There are broadly equal numbers of men and women working in science and technology occupations when a wide definition of S&T is examined.
- On the other hand, women are consistently under-represented as PhD graduates, as researchers – especially in the Business Enterprise Sector, among senior university staff and as members of scientific boards.
- Only a third of researchers in higher education and government research institutions are women. Furthermore only 15% of researchers in the business enterprise sector are women.

“Two other aspects of success and fairness that are central to the scientific system are explored. The first of these is the attribution of research funds. The figures reveal a general pattern whereby the success rates are slightly but consistently higher for

men than for women. Statistical tests show that these differences are in fact significant for several countries. The second aspect is concerned with the representation of women in scientific decision-making and therefore examines the sex composition of scientific boards. The indicators show that women are under-represented in all countries, with only one exception.”<sup>3</sup>

To conclude, it is demonstrated that the situation of women in the private research sector is weak and need to be reinforced. European research cannot allow such a waste of talent and human resource. Balanced development is needed for the two pillars to improve the situation, namely giving the floor and equal possibilities in one hand, and encourage women on the other hand. The first pillar is getting a great political impetus already, now the second one needs more attention. With appropriate education and trainings, women can be competitive in applying and realising projects in the research field, to complement this men dominated area and participate in the efforts to reach the Lisbon goals. Environment, as a very complex and interdisciplinary field needs the creativity and the different view of women to find solutions and new approaches.

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<sup>3</sup> EC, 2003a



## Basic concepts for managing gender issues

Most of the companies would say they provide equal opportunity for genders since they are applying a **neutrality** policy. Often women are the main advocates of this type of policy because they would feel uncomfortable having a positive discrimination in their professional carrier. It is true that women have the necessary skills to professionally compete with men. However, many research have concluded that policies often have different impacts on men and women since they have specific working characteristics. Thus an equally applied neutral policy may result in unequal impact on the two genders. This approach is called **gender-blindness** and results in **indirect discrimination**. Since many of the existing policies applied are more favourable for men than women there is a general widespread systematic discrimination existing and resulting in the previously described current situation.

**Mainstreaming** is a management tool to handle gender issues efficiently (Fitzgerald, 2002). According to mainstreaming equality should not be treated separately from decision-making, but as an integral part. Thus through the planning and design gender impacts should be considered and applied in the decision-making. An element of mainstreaming is called a **good practice**. In case of equal employment opportunities good practices cover strategies to attract, recruit, retain and promote women. Examples for good practices in women employment are (non-comprehensive, keyword list):

- Diversity programmes – integrated programmes
  - Awareness of different working styles
  - Quarterly diversity network meetings
  - Flexible work arrangements
    - reduced work schedules, family care leave, care for dependants while travelling, flexible work schedules, job sharing, working from home
  - Top management leadership, clear on business benefits, work/life balance, change organisational style, ‘style workshop’ for working in a diverse work-style environment
- Time management practices
  - Flexibility of work organisation
    - Flexibility of working hours
    - Compressed working weeks
    - Teleworking
  - Reduction of working time; part-time work
    - E.g. until her children is 10-12 years old
    - Optional part-time return to work after giving birth
    - Yearly basis working time reduction
- Management of pregnancy and maternity
  - Part-time work option
  - Maternity, paternity, parental leave
  - Special childcare service (e.g. for meetings)
  - Career breaks (with opportunities for training or substituting others in order to remain updated)
  - Telework
  - Childcare vouchers

- Crèche
- Recruitment, promotion, wages and a mixed workforce
  - Diversified workforce for good teamwork and smooth functioning
  - Gender preferred recruitment (when other factors equal)
  - Personal mentorship to help promotion
- Network building
  - Networks
  - Conferences
  - Mentoring up (younger manager introduce equality issues to senior managers)
  - IT supported networks
  - Internet databases
- Continuous training
  - Management training (based on different styles)
  - Time management, team work (because of more tasks)
- Partnership between companies and schools
  - Company visits
  - Awareness raising on science and technology education opportunities
  - Study grants

An efficient tool to assess gender impacts is called the **gender impact assessment (GIA)**. GIA is applied to compare and assess, according to gender relevant criteria, the current situation and trend with the expected development. This is carried out through four dimensions ([EC, 1997](#)):

- Participation
- Resources
- Norms and values
- Rights

## Gender Impact Assessment of SME Environment

A simplified gender impact assessment will be carried out for the direct and indirect impacts of the SME Environment project. This will be done through four matrices.

**Table 3 Classification of gender impact assessment categories in the SME Environment project**

	Current situation and trend	Expected development
Direct Impacts (participation in the e-learning course)	I	III
Indirect Impacts (employment of women researchers at CEE SMEs)	II	IV

The following tables will provide the results of a simplified GIA in the mentioned four categories.

**Table 4 I – Current situation and trend – direct impact**

	Comparison of gender relevant criteria
Participation	There are much less women in the target group of the course
Resources	Less time (for taking part in conventional courses), or interrupted time (during maternity break) Slightly less access to Internet Less money (due to general discrimination in salaries)
Norms and values	“women are to take care of family, it is unnecessary for them to learn”
Rights	It is assumed that there are no legal barriers for women to take part in the course. In some cases it is possible that family members may not allow women to take part due to above mentioned norms.

**Table 5 II – Current situation and trend – indirect impact**

	Comparison of gender relevant criteria
Participation	There are approximately equal graduates in both genders. There are fewer postgraduates among women. There are even fewer women employed in the for-profit research. Women are at a lower number members of formal or informal professional networks.
Resources	Due to the above reason women are more in the lack of postgraduate research knowledge than men. Women have less time for carrier due to family. Women have less capital to start own business. Women have less contact capital in formal or informal professional networks. Women have different type of management and work style than men (and currently the latter is the more widespread).
Norms and values	“women are less reliable workers due to current or future family enrolments”
Rights	There are generally no direct discrimination, however indirect discrimination survives through gender-blindness and applied neutrality policies.

**Table 6 III – Expected development – direct impact**

	Comparison of gender relevant criteria
Participation	The course should train higher ratio of women than their participation in the target group.
Resources	The course should provide a flexible time arrangement, inexpensive opportunity to learn.
Norms and values	The course should be directly offered to women and widely communicate that it is a special course tailor made to women's needs.
Rights	The course should be directly offered to women and widely communicate that it is a special course tailor made to women's needs.

**Table 7 IV – Expected development – indirect impact**

	Comparison of gender relevant criteria
Participation	<p>The course should be offered to graduate students and women at maternity break as well in order to help their (re)introduction to the market.</p> <p>The training material should introduce companies good practices how and why to employ women.</p>
Resources	<p>The training material should provide specific information on different work style of genders and their best utilisation.</p> <p>Links should be offered to women's scientific networks as well as venture capital opportunities.</p> <p>The course should provide sufficient knowledge to increase women researcher's chance to find employment or strengthen their company.</p>
Norms and values	The training material should raise awareness on the benefits of women employees.
Rights	The training material should raise awareness on the practice of mainstreaming.

The next chapter will describe the consequences on the planning and execution of the SME Environment e-learning course activities.

## Consequences on SME Environment

**The course** will be, besides general promotion, directly offered to women. Special target groups could be graduate students and women on maternity leave. It will provide flexible time arrangement with “easy to follow, interrupt and return” flow of the materials with guiding visuals, summaries, etc. in order to help the process of learning even if it is sometimes interrupted. The course will be free of charge during the project period and solutions will be considered in order to keep it inexpensive even after the project period. The course will provide competitive knowledge in order to help women’s efforts for the introduction and reintroduction to the market.

**The training material** will introduce companies in good practices how and why to employ women. It will list the benefits of employing women as well as provide good management practices to provide really equal opportunities for women. This will be done by providing specific information on the work characteristics of different genders. The material will also offer information on women’s networks and venture capital opportunities.

**The dissemination** will communicate that women are a distinguished target group of the course as well as promote the gender specific content of the training material.

**The evaluation process** will address whether the goals have been met also by objective indicators and by offering women a special section of the evaluation form measuring their satisfaction.

## References

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- Fitzgerald, R. (2002) Making mainstreaming work, European Policies Research Centre, University of Strathclyde, Scientific report, 16 pp.

Other information sources:

The Women in Industrial Research Initiative (WIR) -

[http://europa.eu.int/comm/research/science-society/women/wir/index\\_en.html](http://europa.eu.int/comm/research/science-society/women/wir/index_en.html)

Women & Science - Statistics and Indicators

[http://europa.eu.int/comm/research/science-society/women/wssi/index\\_en.html](http://europa.eu.int/comm/research/science-society/women/wssi/index_en.html)

<http://europa.eu.int/comm/research/science-society/women/wssi/pdf/table2-2004.pdf>

Cordis Women and Science - <http://www.cordis.lu/improving/women/home.htm>

Women and science – Women in Industrial Research -

[http://europa.eu.int/comm/research/science-society/women-science/industrial\\_en.html](http://europa.eu.int/comm/research/science-society/women-science/industrial_en.html)