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Synthesis Report

Gender in Research

Gender Impact Assessment of the specific programmes of the Fifth Framework Programme

An overview

FIFTH FRAMEWORK PROGRAMME

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European Commission

Gender in Research

Gender Impact Assessment of the specific programmes of the Fifth Framework Programme

An overview

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Table of contents

1. Introduction to the gender impact assessment studies of the FP5

1.1. Background to the gender impact assessment studies

Aims and objectives of the gender impact assessment exercise

This report presents a synthesis of the key findings and recommendations of seven studies carried out as part of the gender impact assessment exercise, launched by the European Commission in June 2000, with a view to assessing the way in which gender issues are being addressed within the Fifth Framework Programme (FP5).

Each study focused on one specific programme or sub-programme of the FP5, assessing whether and how gender issues have been taken into account and providing recommendations for a better integration of the gender dimension in future Community research in that area. As expected, the exercise as a whole has raised important points for consideration in the context of the new Multiannual Framework Programme 2002-2006 for Research, Technological Development and Demonstration.

A synchronised but decentralised operation

The gender impact assessment exercise was a synchronised, but decentralised operation. The studies were carried out by seven research teams representing European universities, research institutes and companies specialised in gender research, which were selected following a call for tender. The studies evaluated the following thematic programmes of the FP5 – Quality of Life and Management of Living Resources, User-Friendly Information Society and Energy, Environment and Sustainable Development – and the three horizontal programmes – Confirming the International Role of Community Research, Promotion of Innovation and Encouragement of Participation of Small and Medium-sized Enterprises and Improving Human Research Potential and the Socio-economic Knowledge Base. The exercise was co-ordinated and managed by the services of the Commission responsible for the FP5 implementation, the Directorates General for Research, Enterprise and Information Society.

The gender impact assessment studies correspond to the following FP5 programmes:

- ***Quality of Life Study*** *– Quality of Life and Management of Living Resources programme*
- ***IST Study*** *– User-Friendly Information Society programme*
- ***Energy Study*** *– Energy sub-programme of the Energy, Environment and Sustainable Development programme and the specific component "Research and training in the field of energy" of the Euratom programme*
- ***Environment Study*** *– Environment and Sustainable Development sub-programme of the Energy, Environment and Sustainable Development programme*
- ***INCO Study*** *– Confirming the International Role of Community Research programme*
- ***Innovation and SME Study*** *– Promotion of Innovation and Encouragement of Participation of Small and Medium-sized Enterprises programme*
- ***Human Potential Study*** *– Improving Human Research Potential and the Socio-economic Knowledge Base programme.*

For ease of reference in this report the above abbreviations have also been used for the programmes.

The studies each produced three working papers, covering the following aspects:

- Overview of the **current state of knowledge** of gender issues in each FP5 research area.
- Analysis of the implementation of each specific programme, including the **participation of women and men** and the **mainstreaming of gender** in programme management and implementation processes, for example proposal writing material and evaluation criteria.
- Assessment of the **gender impact on the research area** in terms of how the gender dimension has been incorporated into the content of each Work Programme and the proposals submitted.

Each study brought together key elements of their working papers in a final report, which included recommendations on how the gender dimension could be better integrated in future activities.

Balancing commonality and specificity: the driving principle of the synthesis report

This synthesis report aims to show the diversity of the studies and at the same time identify common elements across them. This first chapter presents the general background of the studies – it introduces the Community Framework Programmes and the development of equal opportunities policies in the field of European research. The second chapter brings together common elements of the gender impact assessment exercise drawn from the seven studies, which include the conceptual background, the participation of women in the FP5 and the way in which gender has been taken into account in the FP5 implementation cycle and research areas. The third chapter illustrates the specific elements and particularities of each study. The final chapter presents the identified challenges, and makes recommendations for a better integration of the gender dimension in future European research.

1.2. Community Framework Programmes for European research activities

Priorities and key elements of the Fifth Framework Programme

The FP5 defines the Community activities in the field of research, technological development and demonstration 1998–2002. Programme priorities have been selected on the basis of common criteria reflecting the major concerns of increasing industrial competitiveness and the quality of life for European citizens. These priorities follow three basic principles:

- European added-value and the subsidiarity principle, for example, research of a critical mass with the best European partners, or contribution to solving problems with a European dimension.
- Social objectives, such as quality of life, employment or protection of the environment in order to meet the expectations and concerns of European Union citizens.
- Economic development and the scientific and technological prospects of research in order to contribute to the harmonious and sustainable development of the European Union as a whole.

The FP5 differs considerably from its predecessors. It is designed to help solve problems and to respond to major socio-economic challenges facing the European Union. To maximise its impact, it focuses on a limited number of objectives and research areas combining technological, industrial, economic, social and cultural aspects. Management procedures have been streamlined with an emphasis on simplifying procedures. This is reflected by the introduction of **Key Actions** within each programme, focusing on well-defined problems and encouraging a multidisciplinary approach. The aim is to mobilise the wide range of scientific and technological disciplines required to address a specific problem so as to overcome the barriers that exist, not only between disciplines but also between the programmes and the organisations concerned. In addition funds are available for research networks, fellowships, conferences and workshops.

Intention to increase women's participation
"a special effort will be made to increase the participation of women in all activities of the Framework Programme and boost, through these activities, the place and role of women in science and research in Europe". European Commission Proposal for the new Framework Programme[2].

Towards a European Research Area

The development of future Community Framework Programmes will be guided by the European Research Area Initiative. The Commission Communication, **Towards a European Research Area**[1], adopted in early 2000, calls for a common EU policy for research. The aim of the European Research Area (ERA) is to strengthen the coherence of research activities and policies and increase the impact of European research in order to improve Europe's competitiveness in a world market.

1 COM (2000) 6 Commission Communication "Towards a European Research Area".

Proposal for the next Framework Programme 2002-2006

The new Framework Programme 2002–2006 aims to go further in the development of scientific and technical excellence, innovation and integration of research in EU and non-EU countries, especially the candidate countries for enlargement. As outlined in the Commission Proposal for a new Framework Programme[2], the Framework Programme aims to strengthen the scientific and technological bases of Community industry and encourage the competitiveness of the European Union. It will be structured around three targets, integrating European research, structuring the ERA and strengthening the foundations of the ERA.

2 European Commission (2001/ 94 final) Proposal for a Decision of the European Parliament and of the Council concerning the Multi-annual Framework Programme 2002–2006 of the European Community for Research, Technological Development and Demonstration Activities aimed at contributing towards the Creation of the European Research Area.

Principles of the new Framework Programme 2000-2006
- *Concentration on a selected number of priority research areas in which EU action can add the greatest possible value.*
- *Definition of activities so they have a more structured effect on European research – through stronger links with national, regional and other European initiatives.*
- *Simplification and streamlining of implementation arrangements.*

See the Cordis web-site http://www.cordis.lu/rtd2002/ for the latest news on the Framework Programme.

1.3 Development of equal opportunities policy in European Research

Gender mainstreaming
The Commission Communication[3] defines gender mainstreaming policy as "not restricting efforts to promote equality to the implementation of specific measures to help women, but mobilising all general policies and measures specifically for the purpose of achieving equality".

Launch of the gender mainstreaming policy at European level

As background it is helpful to review the development of Community equal opportunities policy in the research field. When the European Community was established in the 1950s, interpretation of the concept of equal opportunities was limited to the principle of equal remuneration. Since 1996 – following the United Nations' World Conference on Women in Beijing 1995 – the launch of gender mainstreaming or integrating gender into all major European policy areas has formed the strategic approach to the question of equal opportunities between women and men for the European Commission. This policy is to be implemented in all institutions, policies, programmes and practices of the European Union.

The approach towards gender mainstreaming was first set out in the Commission Communication (1996) **Incorporating equal opportunities for women and men into all Community policies and activities**[3], which aims at far more efficient action on equal opportunities together with simultaneously improving the quality of European policies. The follow-up report identified progress made and shortcomings remaining, such as lack of awareness of gender issues at decision-making levels, lack of human and budgetary resources allocated and lack of gender expertise.

3 Communication from the Commission (1996) Incorporating equal opportunities for women and men into all Community policies and activities. COM (96) 67 final.

The Treaty of Amsterdam – setting out gender legislation

Today, the European policy of equal opportunities between women and men is enshrined as one of the European Union's objectives in the Treaty of Amsterdam, signed in 1997. Articles 2 and 3 state the Community commitment to gender mainstreaming by establishing equality between women and men as a specific task of the Community, as well as a horizontal objective affecting all Community tasks. The Treaty seeks not only to eliminate inequalities, but also to promote equality. Furthermore, the Treaty reinforces principles of positive discrimination or affirmative actions requiring special measures to redress the disadvantages experienced by an under-represented sex. Positive discrimination programmes have been proposed to improve the situation of women at a Member State level.

The Gender Equality Programme

The overall Community Framework Strategy on Gender Equality (2001-2005)[4] embraces all Community policies and actions aimed at achieving gender equality, including gender mainstreaming policies and specific actions aimed at women. The Gender Equality Programme is one of the instruments necessary for its implementation. The fields of intervention concern economic life (gender segregation and gaps), equal participation and representation, social rights, civil life, gender roles and stereotypes. In addition, the gender dimension must be taken into account in the EU enlargement process, the Community's external relations and in development co-operation policies. Within this framework, the programme promotes and disseminates the values and practices underlying gender equality, improves understanding of issues related to gender equality and develops the capacity of players to promote gender equality efficiently. This strategy and Action Programme are implemented in close co-operation with Member States.

4 Communication from the Commission (2000) Community Framework Strategy on Gender Equality (2001-2005). COM (2000) 335 final.

Producing gender equality in European research

The Communication **"Women and Science: mobilising women to enrich European research"**[5] was adopted by the Commission in 1999. It outlines the measures to be undertaken by the Commission to take the gender dimension into

5 Communication from the Commission (1999) Women and Science: mobilising women to enrich European research. COM (99) 76 final.

account within European research policy. There are two main objectives:

- To stimulate discussion and the sharing of experience regarding the under-representation of women in research among the Member States, to allow action to be taken as effectively as possible at all levels.
- To develop a coherent approach towards the promotion of women in research funded by the European Union, using the Gender Watch System as a tool for ensuring that gender issues are taken into account wherever relevant.

The first of these objectives has been tackled from a number of perspectives. The so-called **Helsinki group** of national civil servants was set up in 1998 to create a dialogue among the Member States focusing on policy reviews and development of gender indicators in research. Simultaneously, links have been established between networks of female scientists in order to encourage discussions of their specific concerns. The Commission has also provided a forum in which ideas and experiences can be exchanged through a series of Women and Science conferences organised since 1998.

In 1999, a group of women scientists was set up to identify the challenges to women's participation in European science and technological development. Following this, the report of the ETAN Expert Group on Women and Science, **Science Policies in the European Union: Promoting excellence through mainstreaming gender equality**[6], was commissioned by DG Research and discussed in Spring 2000.

In addressing the second objective, the Commission recognises a threefold relationship between women and research, and has articulated its action around this:

- women's participation in research must be encouraged – research **by** women;
- research must address women's needs – research **for** women; and
- research must be carried out on the gender question itself – research **about** women.

Research **by** women means the promotion of women both as research workers and within the consultation and implementation processes of the FP5. This includes ensuring that women are informed about the schemes and programmes intended to increase their participation, promotion of equal opportunities between women and men and the collection of sex-disaggregated statistics. With regard to research **for** women, a potential gender dimension needs to be taken into account when compiling and implementing work programmes to ensure that research meets the needs of all citizens, including women. Research **about** women is concerned mainly with supporting gender-relevant research and contribution to an enhanced understanding of the gender question itself.

A dynamic and evolving system, known as the **Gender Watch System,** has developed as one of the Commission's tools for improving the integration of the gender dimension within the FP5 and research policy in general. For the time being, it consists of aiming at 40% representation of women in panels and advisory groups, collecting sex-disaggregated data, conducting these gender impact assessment studies and encouraging gender research within the FP5. The aim is to develop these measures further in the next Framework Programme, in particular drawing from the findings of this gender impact assessment exercise.

Some 150 representatives of networks, publications and web-sites of women scientists came together in 1999, at a conference entitled Networking the Networks. The event resulted in the adoption of a Declaration, which emphasised the importance of networking as both an empowerment and policy tool and set out the basis for future cooperation and action. The Commission will seek to build upon this preliminary work with a view to launching a European platform of women scientists. A Network Guide has also been published containing the profiles and contact addresses of some 70 existing networks. This is available on the Women and Science web-site at http://www.cordis.lu/rtd2002/science-society/women.htm.

6 *European Commission, Research Directorate General (2000) Science policies in the EU: promoting excellence through mainstreaming gender equality. A report from the ETAN Expert Working Group on Women and Science, Luxembourg: Office for Official Publications of the European Communities.*

ETAN report
The ETAN report reviews the position of women in science and technology, concluding that the under-representation of women threatens the scientific goal of achieving excellence. It displays how gender is a significant determinant of the organisation and funding of science in the European Union and makes recommendations to a wide range of bodies. The report constitutes a major contribution to the discussion of women and science policies in the European Union, providing a tool for a dialogue among Member States and within international forums. ETAN is the European Technology Assessment Network

7 *Commission Staff Working Paper SEC(2001) 771 Women and Science : the gender dimension as a leverage for reforming science.*

Priority actions for Women and Science:
- *To shape the Gender Watch System in the next Framework Programme.*
- *To continue the Policy Forum work, extending it to include the private sector and the enlargement perspective.*
- *To promote research on gender and science.*

Details can be found in the Commission Staff Working Paper SEC (2001)[7] and on the Women and Science web-site http://www.cordis.lu/rtd2002/science-society/women.htm.

2. Common elements of the gender impact assessment studies

This chapter brings together common elements of the seven gender impact assessment studies. It looks at the conceptual background for the studies, the participation of women in the implementation of the FP5, mainstreaming gender in the FP5, the research content of individual programmes and the proposals submitted.

2.1. Conceptual background for the studies

Each study reviewed the current state of knowledge of gender issues in their individual field. This led to some common elements in the conceptual discourse of their arguments.

Definition of gender – socially and culturally ascribed characteristics of, and relations between, women and men

A basic distinction is made between sex and gender. Sex refers to the biological differences between women and men. Gender is a socio-economic and cultural construct for differentiating between roles, responsibilities, constraints, opportunities and needs of women and men in a given context. Gender differences are the result of learned roles, which change over time and vary widely within and across cultures. Therefore, gender is not fixed within time or space, and it not only evolves in response to other social, cultural, economic and political changes, but is a dynamic factor influencing these changes. Gender is about deep-rooted values and concepts that underlie our thinking, behaviour and actions in all areas of socio-economic life – a factor in understanding many of the processes of social and economic change and thus, an important criteria to ensure the quality of research.

An understanding of the unequal power relations between women and men is necessary to understand the basic problem in gender relations. Power is directly related to gender with regard to the access, distribution and use of resources, which are unequally distributed between women and men. Power is indirectly related to gender in the operation of rules, norms and symbols concerning masculinity and femininity found in social interaction as well as in social organisations. The problem becomes apparent in societal symptoms such as unequal participation of women and men in public and private activities, for example the low value of unpaid household work predominantly carried out by women.

Gender mainstreaming – the shift from sex-counting to a transformative approach

Gender mainstreaming is taking place in a range of organisations, but all too often it is limited to a sex-counting approach to gender, which merely addresses issues of male/female equity and equal opportunities. The studies highlight the need to reach beyond a **sex-counting** approach by recognising the transformation implicit in a more far-reaching gender mainstreaming policy. Within organisations women tend to be treated the same as men, rather than equal to them. Men are taken as the norm and consequently women are expected to behave like them with the same characteristics and life pattern. While some women are happy to embrace the male model and working practices, for many women gender mainstreaming is about changing the working culture just as much as changing the research agenda.

A true integration of gender into research would profoundly affect the way in which scientific knowledge is defined, valued and produced, the methodologies that are invoked, and the theoretical reflections to which such new modes of knowledge give rise.

A transformative understanding of gender and science includes the need to question the dominant paradigm in relation to both gender and science.

A socio-cultural understanding of gender is necessary to move towards a more **transformative** gender approach. At its best gender should help to form the design and implementation of research and lead to transformation in the way in which research is carried out while at the same maintaining or enhancing research quality. A new trend can already be seen with a move away from quantitative measures, such as positive discrimination in recruitment, toward measures that promote a diverse workforce.

Call for sustainable science

The studies argued that Western sciences have a masculine character. Gender stereotypes dominate the scientific discourse, epistemological assumptions of science are gender-biased and the shaping of the scientific agenda is male dominated. Furthermore, technology is perceived as a male preserve while femininity is constructed in terms of technological incompetence leading to a situation in which technological products are outcomes of production processes which are dominated by men and thus reflect their interests. This means that men are generally perceived as "makers" and women as "users" of modern technology. The scientific work of Schiebinger (1997 & 1999)[8] was frequently referred to, particularly with regard to the impact of gender research when looking at the interdependency of scientific discourses and different forms of "how to do science". The world cannot be explained exclusively with models that exclude all social dimensions. A re-constructive perspective is needed in basic research, which can be applied to research questions in all scientific fields from the gender perspective. Schiebinger names this goal sustainable science.

8 *Schiebinger, L. (1999) Has feminism changed science? Cambridge: Harvard University Press + Schiebinger, L. (1997) Creating sustainable science. Osiris, 12, 201-206.*

According to Schiebinger, sustainable science needs to be considered in a pragmatic way, not only the epistemological issues of science but also the goals and outcomes of science should be looked out from the gender perspective. There is a need for a fundamental change in the scientific approach, including the use of a diversity of research subjects and a move away from the dominant research questions. To achieve sustainable science, the studies called for interdisciplinary and transdisciplinary research and methods aimed at unifying natural, technological and social sciences. Sustainable science requires recognition of socio-economic elements to provide entry-points for the identification of gender impacts.

Uncritical use of language and concepts

The use of language and concepts can determine the direction of scientific practice, the questions asked, the results obtained and the interpretations of those results.

Several studies point to how the use of language and concepts can constitute and create gender bias, or simply fail to take account of gender, or other, differences (for example, within research categories such as consumers, workers or citizens). Attention needs to be paid to the meaning given to concepts and to the recognition and understanding of gendered concepts. Different interpretations are also given to commonly used terms. For example, 'people' is used to refer to businesses, industrial and policy-making groups, rather than groups of people such as women or migrants, which in effect serves to exclude a gender or diversity dimension.

"There is no universal woman" – need for gender analysis to recognise diversity

Feminists have contributed to the radical re-think about the production of knowledge calling for the need to acknowledge diversity of all kinds. Within gender analysis not only gender, but other forms of diversity are considered, such as age, ethnicity and sexual orientation. Gender impacts may be different among different groups of women or even individuals, there is no such thing as a universal woman. Therefore, strategies to incorporate gender issues into research should start with a reflection on how to acknowledge the biological, social and other differences between individuals.

Lack of data on women

The studies emphasised the importance of the collection of sex-disaggregated statistics to show the participation of women in science and technology and their views on specific issues. There are many areas in which research on gender issues is either non-existent, scarce or fragmented due to a lack of statistics, for example: women and innovation (scarce), gender in the development of science and technology policy (scarce), women and energy priorities in industrialised countries (non-existent). Harmonisation of statistical classifications is also needed between countries. Even more difficult than quantative analysis is the elucidation of more qualitative issues. The development of gender-sensitive indicators on the basis of appropriate sex-disaggregated statistics is regarded as indispensable for the integration of the gender dimension in European research.

Gender-biased education systems in science and technology

Women are affected by gender stereotypical approaches in formal education, in particular in science and technology. Gender bias lies in the education system and its teaching practices rather than in any inherent physical or intellectual barrier on the part of women. Educational gender inequality is a way through which inequality is transmitted from one generation to another. This problem relates to a variety of gender issues such as:

- Educational disparities between girls and boys;
- Pressure to conform to traditional gender roles in primary and secondary schools;
- Skewing science curricula in favour of interests and values of boys;
- Stereotyped sex roles in teaching materials;
- Lack of positive role models for girls in science and technology.

Gendered division of labour

The gendered division of labour refers to a complex set of values, norms, rules and practices in the field of labour where an asymmetrical distinction is produced. This distinction is shown between women and men, paid and unpaid work, work inside and outside home, female and male tasks and professions. Occupational segregation

is one of the key factors in the field consisting of both horizontal and vertical segregation. With horizontal segregation, choices of jobs for women are limited and stereotyped leading to women's concentration in certain labour markets. The association between "feminisation/ masculinisation" in an occupation, and its status, is very strong and helps cause women's under-representation in technological sectors. With regard to vertical segregation, the term **glass ceiling** refers to the fact that relatively few women are promoted into managerial and higher positions despite their qualifications. Vertical and horizontal segregation of labour results in a gender pay gap – the appearance of gender roles in which men's authority is more highly valued both economically and socially than that of women.

Unequal representation of women in decision-making processes and leadership

Despite the strategies introduced to address the under-representation of women in political life, such as quotas, processes of decision-making and leadership are highly gendered, both in political arenas and economic fields. The lack of women in key decision-making positions within science is not just a matter of gender equity and influencing research agendas, it may affect the extent to which the gender dimension is treated in research itself. Organisations dominated by men tend to be resistant to gender mainstreaming and to employing women in decision-making positions. It takes time to change attitudes of individuals and institutions and specific measures are needed in order to secure women's access to decision-making and leadership positions.

Gendered effects of globalisation

The effects of globalisation and its structural adjustments in many countries affect women and men differently. Environmental research is looking at the impacts of globalisation both on gender relations and environment. For example, new forms of spatial segregation are emerging in big cities due to globalisation. This restructuring of urban space according to class, social milieux and ethnicity is characterised by a strong gender bias. Disadvantaged urban neighbourhoods are typical living areas for female-headed households and families with many children and are often situated in environmentally deprived locations, for example beside a mass dump or built upon contaminated soil. Despite the relevancy of gender for the environmental research topic, studies on European cities regarding this issue are generally lacking. With regard to research in the social sciences, human trafficking, sex work and prostitution are seen as having close links with the effects of globalisation and causing negative gender impacts on women.

Gender impacts of transition in Central and Eastern European countries

It is important to recognise different impacts of globalisation in the European Union compared with the Central and Eastern European countries. Transition economies have an unequal impact on women and men. In post-socialist countries economic restructuring has negative gender impacts on women resulting in high unemployment rates, low income levels, loss of social benefits, disappearance of equal opportunities laws, re-emergence of patriarchal values and decline of political representation. Additionally, the effects of economic restructuring and ecological deprivation have different impacts on women and men in the field of environment, resulting in serious health effects on women, children and other vulnerable people.

2.2. Participation of women in the FP5 implementation process

2.2.1. Data collection in its early stages

The Commission has made considerable efforts to promote a more systematic collection of data on the participation of women in advisory and decision-making bodies of the FP5 and in project activities. As this process is still in its early stages, however, studies did not have sufficient statistical matter available to them to be able to make a full analysis, for example by discipline and nationality.

The Commission's work on developing gendered indicators to monitor progress towards gender equality in European research is also relatively new, which made it almost impossible for studies to make comparisons with female participation in science and technology at Member State level.

Targets for female participation
As part of its policy to integrate gender into European research, the Commission has set a target of at least 40% female participation in Marie Curie Scholarships, advisory groups and assessment and monitoring panels of the FP5. This target does not apply to Programme Committees, Commission staff or project partners.

2.2.2. Women's participation in External Advisory Groups

External Advisory Groups
External Advisory Groups (EAGs) provide the Commission with independent advice concerning the content and direction of FP5 research. They were established for the first time in the FP5 and cover all Key Actions of the Framework Programme, with some EAGs covering more than one Key Action, such as the Information Society Technologies Advisory Group (ISTAG). They can advise on any reorientation necessary during the course of programme implementation. EAGs usually have about 20 members, appointed by the Commission. Members are usually high level industrialists, academic researchers, research users, members of regulatory bodies and representatives of other socio-economic fields connected with research.

Mixed participation across the EAGs

Three of the studies considered the Commission to have been successful in achieving the target of 40% female representation in the EAGs, introduced as part of the gender mainstreaming policy. The Human Potential and the Environment and Sustainable Development programmes have met the target and the Quality of Life programme has an average female participation of 37% in its five EAGs, four of which are chaired by women. However, the percentage of women in ISTAG is only 15% and in the Scientific and Technical Committee for the Energy programme it is also very low. The Quality of Life Study found a surprisingly low proportion of women in the High Level Expert Group on Biosciences, which was specifically created to improve the public understanding of the social aspects of the science and therefore expected to have a high female involvement. A key issue is whether the knowledge and experience of gender issues among EAG members, both women and men, is adequate for the advice the groups should provide. For example, the majority of the EAG members for the Socio-economic Key Action of the Human Potential programme do not appear to have any experience in, or knowledge of, gender issues.

2.2.3. Women's participation in Programme Committees

Programme Committees
Programme Committees consist of delegates from Member States and Associated States. In addition to delegates, countries can appoint experts who have an advisory function only. Programme Committees assist the Commission in the FP5 management and implementation.

The studies revealed a considerable range in the proportion of women in the FP5 Programme Committees, from 35% in the Human Potential programme in 1999 to well below 20% in some programmes. Two studies, Quality of Life and Environment, looked at the composition of the Programme Committees in more

detail and found that female representation is higher among individuals with expert status and lower among those with delegate status. For example, in the Quality of Life Programme Committee women account for 37% of experts and 24% of delegates, and in the Environment and Sustainable Development Programme Committee, 38% of experts and 19% of delegates[9]. So female experts with advisory roles are higher in numbers than female delegates with a decision-making status.

9 *The figures refer to Member States' representatives in the Quality of Life Programme and representatives from both Member States and Associated Countries for the Environment and Sustainable Development sub-programme.*

2.2.4. Women's participation in monitoring panels

The Commission monitors the FP5 implementation with both annual and five-year assessments carried out mid-way through programme implementation. Programme monitoring panels, made up of independent experts nominated by the Commission, produce reports on the progress of programme implementation.

Women's participation improving

There has been an active attempt to select women for some programme's monitoring panels. The results vary, but on the whole women count for between 20% (Environment and Sustainable Development) and 50% (Quality of Life)[10] of the members of the monitoring panels. The IST monitoring panel is lower, with women accounting for 14% of the panel members, though it was pointed out that this corresponds to the composition of the relevant database.

10 *These figures correspond mainly to the composition of the monitoring panels in 1999.*

2.2.5. Women's participation in expert evaluation panels

In the evaluation of proposals, the Commission is assisted by panels of independent expert evaluators, selected from its expert database using keywords appropriate to the research area concerned.

Evaluation panels
The Call for applications for inclusion on the list of expert evaluators[11] states that "the Commission will ensure that panels are set up in a balanced way and that there is appropriate rotation of experts. It will take account of applicants' geographical origin and professional background (industry and services, research and innovation, socio-economic users and sectors). The Commission also seeks the balanced participation of women and men".

11 *Commission call for Applications for inclusion on lists of experts for the evaluation of proposals No 98/C 385A/02 of 11 December 1998.*

Lack of women in the pool of experts

The shortage of women in the Commission's expert database forms a major obstacle for ensuring the gender balance of expert evaluation panels. Efforts have been made to improve the gender balance of the panels against the low percentage of women in the Commission's expert database, however the proportion of women remains small and varies significantly between specific actions.

Commission's expert database
In 2000, women accounted for only 16% of the experts registered in the Commission's expert database. In some cases the percentage of women on evaluation panels was almost twice this level, but in general panels failed to reach the Commission's 40% target.

Practical constraints

Women may have a lower interest in applying for evaluation positions due to family commitments and their being in high demand from other organisations. The fact that Brussels-based evaluation meetings last several days was seen as a major obstacle.

Constraints due to selection practices

The IST Study found that in some cases the criteria of evaluation experience is applied, giving preference to previously selected candidates. This may form a barrier to the inclusion of women, as newcomers, in expert evaluation panels. The Environment study pointed out that the requirement to rotate expert evaluation panels will have the effect of reducing the pool of women experts. Studies also noted that while gender balance is one of the criteria for evaluator selection it is

applied after the criteria of knowledge of the research area, knowledge of FP5 and geographical origins. The INCO programme officers noted a problem in identifying gender expertise, which is presented on the application form for expert evaluators as a main scientific discipline and not as a set of complementary skills and experience. This infers that gender will only be recognised if the applicant has considerable experience on the topic, such as a scientific degree. It is crucial to help applicants understand that gender has a crosscutting nature in relation to all other scientific disciplines.

2.2.6. Women's participation in project activities

Proportion of female partners is low

The overall participation of women in project activities was found to be low. The IST Study analysed the hours worked by female scientific staff in projects and concluded, on the basis of limited data available, that female involvement is far less than could have been anticipated from the overall personnel structure of the organisations concerned. Female participation also varies between different actions of the programmes. The Environment Study found that in all Key Actions and Generic Activities, even where women are well represented within the management bodies, the number of women partners in proposals remains under 20%. It is encouraging to note, however, that in general women tend to be better represented among project coordinators.

Proportion of women in the Quality of Life programme

- Percentage of women partners 14-18%
- Over 27% of projects lacked female partners
- Over 33% had only one female partner

"this means – given the fact that the mean participation of women per project is 8.3 persons – that for the majority of proposals research is an (almost) all male enterprise". Quality of Life Study.

Percentage of female project coordinators

- *13% for the Human Potential programme (of proposals selected for funding under the 1st Call in 1999 and the 2nd Call in 2000);*
- *18.5% for the Quality of Life programme (of projects under the 1st Call 1999);*
- *15.8% for the Environment and Sustainable Development sub-programme (of proposals under the 1st and 2nd Calls 1999);*
- *11% the IST programme (of projects under the 1st, 2nd and 3rd Calls in 1999 & 2000).*
- *20% for the Innovation and SME programme (of projects under the 1st Call 1999 and IRC and NCP networks. When networks are excluded, female coordinators fall to 12.5%).*

Research community at the learning stage of gender mainstreaming

Most experts questioned in the Environment Study thought the low proportion of women in proposals simply reflects the situation in the research community in general – the under-representation of women in hierarchical positions of research organisations which apply for European funding and a lack of national support for women in science[12]. The Human Potential Study suggested that the low participation of women was a result of organisations not paying adequate attention to the equal participation of women and men, despite the encouragement given in the Guides for Proposers. For many organisations the commitment to equal participation is limited to inserting a standard phrase into a proposal.

12 *A survey was carried out on experts involved in the Environment and Sustainable Development sub-programme, that is all EAGs, the Programme Committee, Monitoring Panel and the scientific staff of Directorate D.1.* Preserving the Ecosystem. *Statements made are subjective opinions, there are no statistics nor indicators on the situation of female scientists in the research community in general.*

2.2.7. Women's participation in mobility actions

High levels of participation by women

The INCO and Human Potential programmes include actions applied horizontally through all thematic programmes aimed at enhancing the mobility of researchers. These mobility actions seek to promote and share scientific excellence by providing bursaries for researchers to carry out scientific work abroad or by supporting research training networks. In both programmes the level of female participation was impressive. With regard to two types of fellowships granted by the INCO programme, women comprised 40% of the grants for young researchers from Developing Countries from the sample examined. However, in relation to fellowships for Japan, the ratio of men to women was very much higher.

Specific equality measures show good results

As to Marie Curie Individual Fellowships under the Human Potential programme, 37% of the eligible applications in response to the 1st Call were from women. The success rate for candidates was fairly balanced – 39% for women and 42% for men. The long-applied specific measures to promote female participation in the Marie Curie Fellowships and Research Training Networks may be responsible. These include an extension to the 35 year age limit by two years for each child, in recognition that parental leave has been taken, and a similar measure for men undertaking military service. Other positive measures include the fact that Marie Curie Training Sites and Development Host Fellowship advertisements must make a reference to equal opportunities, particularly between women and men.

Despite the improvements, many difficulties remain, such as a requirement for full-time participation of Fellows that may restrict the participation of some women with children. Similarly, age limits, regardless of extensions, pose difficulties since it may be easier for women to take up research assignments abroad early in their career or after the period spent caring for small children. Furthermore, no information is provided in the proposal preparation material for the Marie Curie Fellowship with regard to what happens in the case of maternity.

2.2.8. Gender balance of European Commission staff

Strong vertical segregation in most programmes

- The Environment Study deduced the same conclusion as that of the ETAN report (2000: 49) "women among the staff of DGXII [DG Research] have had a minor role in the formulation of scientific policy".
- Over 90% of senior staff managing the IST programme are men.
- 40% of A-grade staff responsible for implementing the Human Potential programme are women

The studies confirmed the vertical segregation of women within the Commission, the FP5 programme structures employ a lower proportion of women at the higher levels of the hierarchy. However, notable progress has been made in the Human Potential programme, with 40% of A-grade posts in the service responsible for implementing this programme held by women. The Innovation and SME Study did not look at staffing in the Directorate responsible for the FP5 within DG Enterprise, but noted that 28% of representatives of the Group of Senior Officials, which is involved in the formulation of the programme's research priorities, are women.

The Quality of Life Study found strong vertical segregation of women among A-grade staff in the DG for Research and some evidence of horizontal segregation, where women and men are clustered in different research areas or disciplines. It noted that women appear to be clustered in different areas of the programme management, for example over-represented in the Key Action Ageing Population but underrepresented in the Generic Activities.

Perceived male-dominated culture

There was concern that the potential male-dominated culture of Commission services responsible for programme implementation could hinder awareness-raising of both socio-economic and gender issues, resulting in missed entry-points for the integration of the gender dimension. These issues need to be promoted from the early stages of the programme such as in the production of promotional materials and at Information Days. Moreover, a programme with a masculine public face inherently discourages female participation. There was a perception that male dominant hierarchies lack the capacity to create enabling surroundings for promoting gender mainstreaming. Transforming the culture is seen as a prerequisite for promoting research by, for and about women. Increasing the gender sensitivity of staff is crucial.

Masculine public face
The gender impact of promotional activities should not be overlooked. For example, the IST programme has a perceived male public face at information and promotion events due to the gender imbalance in the senior positions of DG Information Society, and the fact that men account for 71% of the programme's National Contact Point management. However, some positive initiatives have been implemented as part of other Community programmes to promote the development of Information Society in general and the participation of women in particular.

2.3. Mainstreaming gender to the FP5 implementation cycle and research areas

2.3.1. Work Programmes

The Work Programme is central to determining whether or not the gender dimension will be taken into account in the implementation of the programme. The Commission Communication (1999) Women and Science states that: "…When drawing up and implementing the Work Programmes, account will be taken of a possible gender dimension in the problems and challenges addressed by the Key Actions and, in a broader sense, by the specific programmes as a whole. Where ever the topic merits consideration from a gender point of view this will be stated in the Call for Proposals…"[13]. It is recognised that this is part of a process, and its effectiveness will depend upon the gender awareness of the Commission officials responsible for the Work Programme, until the overall level of gender expertise is improved and opportunities to incorporate the gender dimension are made explicit. The gender impact assessment studies will contribute to the latter.

13 *Communication from the Commission (2000) Community Framework Strategy on Gender Equality (2001-2005). COM (2000) 335 final.*

Experience shows that even when Work Programmes make full reference to equality of opportunity for women and men and promoting women in science, as is the case for some parts of the INCO programme, a process of 'evaporation' occurs at the implementation stage. This 'evaporation' was also noted between project proposals and project implementation.

The Work Programme is the main reference document for proposers, describing the research objectives and the topics subject to calls for proposals. It guides the formulation of proposals, setting the priorities to be met in order to achieve the strategic objectives of each specific FP5 programme and outlining the quality criteria applied in the evaluation and selection process.

Overall aims of the FP5 broaden the research horizon towards gender

Against the state of knowledge review of gender issues, the studies analysed the integration of gender into the overall aims and objectives of the FP5 and the content of Work Programmes[14]. This can be achieved by changing epistemological assumptions of science and integrating gender analysis into science. Several studies identified multidisciplinarity and multisectoral activities in the general documents of the FP5 (Annex II to the Council Decision 182/1999/EC), as being significant in terms of broadening the research horizon in a direction that allows gender aspects to be introduced.

14 *Most studies based the gender impact assessment on the Work Programme 1999. However, the Energy study assessed versions 1999 and 2000; the IST study versions 1999, 2000 and 2001and the Quality of Life study version 2000 (with review of 2001).*

The first innovative key element, multidisciplinarity, allows the integration of socio-economic dimensions in research and so provides entry-points for gender aspects. The second key element, multisectoral activities, relates to the way the FP5 encourages the involvement of a variety of actors from different sectors in research activities. The inclusion of social scientists in a team is likely to lead to consideration of not only social dimensions but also end-users and gender issues. The INCO staff have made specific efforts to foster this aspect in the programme implementation. A more balanced gender composition of scientific teams might make a difference as

regards the gender awareness of researchers. However, the Human Potential Study felt that more balanced female participation in the scientific team while necessary, is not sufficient, for the integration of gender issues.

"…rich areas for gender-relevant research tend to be found wherever people are part of the research question … research into technology should go hand in hand with research into the social implications of technology…" Energy Study

Social aspects of research poorly addressed

While the overall objectives of the Work Programmes mentioned socio-economic aspects of research, they were not addressed adequately to open up the gender dimension. Some studies found that the weight given to technical aspects in the Work Programmes was so great that it ***de facto*** excluded any social implications, and consequently gender dimensions.

Only in the Quality of Life programme are the entry-points for a gender dimension not restricted to the socio-economic aspects or the social implication of the science. For example, if biological differences between women and men are not taken into account, medical research takes the male body as a norm, resulting in medical advances which are not tailored to the needs of women.

"the IST priorities will be completed with a stronger focus on social and economic policy…equal opportunities, social cohesion and sustainability in the Information Society". IST Work Programme 2000

The Environment Study called for Key Actions with a focus on integrated socio-economic dimensions. Research into the impacts of human actions on human beings from different social groups can provide an opening for a gender-perspective. However, in some cases research carried out under socio-economic topics did not actually address socio-economic problems. This led the study to conclude, in line with the findings of the Commission's 1999 Annual Report on the Socio-economic Dimension in the FP5 that there is a lack of rules governing the implementation of socio-economic research, which tends to remain a side activity. The studies in the other areas of the FP5 had similar findings.

Gender does not feature as a research topic

Gender-specific research, that is research about women, is not generally included as a topic within the Work Programmes, even within the Key Action of the Human Potential programme, "Improving the Socio-economic Knowledge Base". Despite this gender issues have been mainstreamed within some research areas as a result of references to gender-related topics in the Task descriptions. This has encouraged proposals which focus on or take into account gender issues. The Energy Study felt that the Commission's focus on gender-specific research under the socio-economic Key Action may indirectly relieve the pressure on other areas to promote such research.

2.3.2. Proposal preparation material

Proposal preparation material is key in providing guidance on the integration of the gender dimension. The main reference documents are the Guides for Proposers, the Proposal Form and the Work Programmes. Guides for Proposers outline the objectives and priorities of the programme and the specific actions, and the eligibility criteria and procedures to be followed. They also give guidance on how to formulate a proposal and how to complete the Proposal Form. The Proposal Form provides evaluators with sufficient information to assess whether proposals meet the common criteria and priorities.

Neither statements encouraging women to be involved in proposal submission, nor the standard statement "applications from female scientists will be encouraged" with regard to bursaries, are likely to be sufficient to encourage women's participation in the FP5 or the integration of gender in proposals.

Gender mainstreaming approach incomplete

Proposal preparation material makes clear references to the importance of promoting equal opportunities for women and men and encouraging the participation of women. However it lacks a fully integrated gender mainstreaming approach. The current statements deal with only one part of this approach, research by women, and do not concern the integration of the gender dimension in the content of policies, programmes, specific research topics or FP5 actions, failing to address research for and about women. Some studies found the language of proposal preparation material, such as the Guide for Proposers, not to be consistently gender neutral, for example referring to the project co-ordinator as "he".

Pre-proposal check offers opportunity for gender advice

The pre-proposal check service offered by some research areas presents an opportunity to improve proposals before submission. Proposers submit a one-page proposal description to the Commission Scientific Officers, who assess the idea in terms of eligibility and its compliance with the action line concerned. The scientific quality of the proposal is not addressed. A strengthened pre-proposal check system could be used to make explicit recommendations regarding the integration of gender into proposals. However, the provision of such advice would be dependent upon the gender awareness and competence of individual Commission officials, who would be likely to need training.

2.3.3. Proposal evaluation procedures and criteria

Proposal Evaluation

The evaluation process ensures that the research funded under the FP5 contributes to the priorities and common criteria of Community research policies. It consists of three stages:

- Eligibility check against criteria referred to in the Call for Proposals.
- Evaluation of eligible proposals against the evaluation criteria by a panel of independent external experts.
- Ranking of proposals that pass the required thresholds by Commission staff. Normally, ranking follows the marks received and takes into account any advice concerning the priority for proposals receiving the same marks. The Commission pays attention to the programme priorities, for example, coverage of the programme objectives, compatibility with EU policy objectives and ethical considerations, if appropriate.

Evaluation criteria
- *Scientific and technological quality and innovation;*
- *Community added value and contribution to EC policies;*
- *Contribution to Community social objectives;*
- *Economic development and scientific and technological prospects;*
- *Resources, partnership and management.*

Guides for Evaluators fail to mention gender

The Human Potential Study drew attention to the fact that the Guide for Evaluators contains no mention of gender in the evaluation criteria, in terms of the participation of women and men in the proposal, attention to equal opportunities or gender issues within the project's objectives and activities. Similarly, there is no mention of gender or equal opportunities in other documents presenting the evaluation criteria, such as the evaluation assessment form, even in the criteria for assessing "Community added value and contribution to EU policies" and "Contribution to Community social objectives". Neither the clear general commitment to gender equality in the Treaty of Amsterdam, nor its specific policy importance in relation to employment and human resources are reflected in the criteria used to assess proposals' contribution to EU policies and Community social objectives.

Manual of Proposal Evaluation Procedures

The Energy study analysed the Manual of Proposal Evaluation Procedures, which establishes the general criteria and procedures for the evaluation process. The "equality of treatment" principle of the Manual requires that "…all proposals should be treated alike, irrespective of where they originate or the identity of the proposers…". The promotion of research by women may be better served by a

proactive approach such as the prioritisation of proposals that include women researchers, where two proposals are ranked equally in terms of scientific quality and innovation.

Mainstreaming gender into proposal evaluation

The studies concluded that the gender dimension is not yet integrated into the evaluation criteria and procedures and so limited attention is currently paid to gender issues during evaluation. Assessing the integration of gender in proposals is very much a qualitative issue reaching far beyond the quantitative approaches currently undertaken by expert evaluators. Introduction of this complex issue would have significant implications in terms of increased resources, requiring specific gender competence of expert evaluators and the Commission officials involved.

Most studies found a low-key approach to gender during proposal evaluation and selection:

- *There are no instructions or tools for the programme management staff or expert evaluators as regards the integration of gender in the evaluation process.*
- *There is little or no briefing of evaluators on gender mainstreaming by Commission staff. This could reflect lack of gender knowledge or the perception that gender issues are irrelevant or even contradictory to the objective assessment of the proposal quality.*
- *Evaluation reports do not contain provisions for feedback on the topic.*

In a review of 195 evaluation summary reports for proposals submitted under the Human Potential programme 1st Call in 1999, it was found that evaluators pay only limited attention to gender.

Comparable success rates for women and men

In general, there was found to be no discrepancy between the success rates of women and men, in terms of the evaluation process. Only the Human Potential Study found that proposals co-ordinated by men stand a greater chance of being selected. A similar pattern emerged with regard to the selection of projects with male partners. However, the study highlighted that the data analysed was too small to verify for statistical significance.

2.3.4. Analysis of proposals and projects

The studies used different representative samples of projects and/or proposals for their gender analysis. For example, some studies limited their assessment to proposal abstracts due to the lack of availability of full proposals. Where both existed, it was found that assessments based on full proposals supported the trends identified in the abstracts. Some studies analysed all proposals submitted under selected calls for proposals, others based their assessment on a representative sample. Finally, some studies concentrated on analysing projects, that is proposals selected for funding. One of the studies also made a comparison between rejected proposals and funded projects regarding the treatment of the gender dimension.

- Of 2125 proposal abstracts assessed under the Environment Study only one mentions the term "women".
- The Quality of Life Study found that 79% of the Key Action proposals and 82% of the Generic Activity proposals did not address sex and / or gender differences.
- Both the IST and Innovation and SME studies found only one gender-specific project
- However, 8% of proposals assessed under the Human Potential programme have a primary research focus on gender

Gender dimension is missing in proposals

The main outcome of the analysis is that the gender dimension is not being integrated in proposals. Results were similarly disappointing when the studies limited their assessment to proposals with a clear socio-economic dimension, the majority ignored the gender dimension although it appeared relevant for the research topic.

Very few proposals focused on topics advancing knowledge of women's needs and gender in general. However, under the Human Potential programme 8% of proposals assessed have a primary research focus on gender. This result must be regarded as a direct outcome of the Commission's gender mainstreaming policy which outlines the aim to promote gender-specific research under the socio-economic Key Action.

3. Specific elements of the gender impact assessment studies

This chapter consists of study-specific sections, which review the key concepts and the approach used in each study, highlighting the different perspectives from which the gender analysis itself can be carried out, and the specificity brought by gender analysis of different scientific fields.

3.1 Quality of Life and Management of Living Resources

Concepts of quality of life and sustainable development

The Quality of Life Study paid considerable attention to aspects of health, health care and public health in its theoretical approach, since these are an important feature of the programme. Two key concepts of the programme deserve particular attention: **quality of life** and **sustainable development**. From the gender perspective, quality of life takes into account that different people live different lives and that the quality of one will not necessarily be the same or depend on similar factors or conditions as that of another. The second concept, sustainable development, means that the needs of the present generation should be met without compromising future generations' ability to meet their needs. The concept should be understood from the gender perspective as a process of change leading towards a relationship between women and men that will be characterised by equality. For this reason, it is important to identify whether, and in which ways, research in the life sciences can contribute to the intended equality.

Any strategy to incorporate gender issues into research, specifically in the health sector, must start by acknowledging the difference between sex and gender. The study interprets sex as a quality aspect and gender as a process aspect. The distinction between **sex differences** and differences resulting from the **workings of gender** is indispensable for any health-related analysis since both kinds of difference are implied in biomedical research.

Literature and abstract review and development of methodological instruments

The comprehensive literature and abstract review of research in the field of gender and health, particular to the study, adds considerable value to the state of knowledge of health related research from the gender perspective. This illustrated that many gender aspects of the research areas under the programme are well documented and

also that gender should not be understood just as an issue for women, as it has an influence on the health of both women and men.

Two methodological instruments were developed for the gender impact assessment task:

- **Gender Impact Resource (GI-Resource)** – a background resource to assess the gender aspects of the research areas covered by the programme. The tool was compiled on the basis of international database searches and contains recent literature specifically addressing gender aspects in the various fields covered by the programme.
- **Gender Impact Assessment Protocol (GIA-Protocol)** – a tool to analyse projects. Its development was inspired by a number of existing gender impact assessment instruments designed to evaluate diverse topics – such as research, health education, curriculum development and policy decisions – from the gender perspective. The tool looked at identification of **where** in projects gender aspects might be involved; **how** gender aspects are taken into account and the setting of **evaluation criteria.**

Review of research in the field of gender and health
The literature search was based on the International Information Centre and Archive for the Women's Movement IIAV (specialised in gender literature) and MEDLINE (health related literature).

Success in approaching the 40% target for female participation

Female participation in the external advisory groups (EAGs) is noteworthy at 37%, given that women only account for approximately 15% of the database from which experts are selected. Moreover, women chair four of the five EAGs. Women account for 25% of expert evaluation panels, again impressive compared with the percentage of women available as avaluators, and 24% of the Programme Committee. The High Level Expert Groups showed both vertical and horizontal segregation of women and men, with women concentrated among the ***softer*** rather than ***harder*** aspects of life science research.

The Commission's target of 40% is only really justified for Committees involved in policy-setting and decision-making. The pulling effect of the 40% target is recognised, but targets should reflect the recruitment potential for women in the field. On the basis of the limited information available, the recruitment potential for women in leading positions in the life sciences field is 5–13% and for a broader group of researchers 14–52%, so different targets should be set, for example, within expert evaluation panels and within projects. To increase women's participation at any level the Commission's first priority must be to enhance the number of women in the expert database, without lowering quality standards.

Geographical origin of participants

The Quality of Life Study addressed geographical origin. In the Programme Committee, nine Member States (Denmark, France, Greece, Ireland, Italy, the Netherlands, Portugal, Spain and Sweden), were not represented by female delegates and five Member States (Belgium, Denmark, Ireland, Luxembourg and the Netherlands), did not have any female experts, at the time of the study. The highest percentage of female expert evaluators came from Finland, Ireland, Portugal and Spain (for the 1st call, 1st deadline, which was the only one examined). Within projects, France and the UK had the highest percentage of women participants with the Netherlands, Portugal, Greece and Ireland having the lowest.

New avenues of gender relevant research

It is important to involve third parties, such as women's groups, networks and institutes, as well as patient and consumer organisations in setting Work Programme research priorities. In this context, some new avenues of gender relevant research could be focused on in the future.

Potential areas for gender-relevant research:
- *Avoidance of medicalisation, psychologisation and trivialisation;*
- *Reproductive health (new contexts of embryo research, cloning, genetics);*
- *Access to health care and health care delivery for refugees;*
- *Diseases without diagnosis;*
- *Work related illnesses and entitlement to benefits;*
- *Gender and family care with a focus on the changing social reality concerning women and paid labour;*
- *Impact of gender on the health of women and men.*

Addressing sex and gender differences in research projects

From an assessment of 307 abstracts of the projects under the 1st Call for Proposals with the 1st Deadline in 1999, 118 projects were selected for analysis. 83 projects, in which humans were involved as objects of research, were selected for a more in-depth analysis according to the GIA Protocol.

Projects that address sex and/or gender differences do so in a very limited way. This could be improved considerably if the Work Programme and proposal preparation material provided specific guidance. One common characteristic of projects which do not address sex and/or gender differences is that they do not address differentiated human populations. Research should use a variety of groups, such as consumers, babies, elderly, patients and women, and address diversity within the group, even if it is only of one sex. For instance, when postmenopausal women are the subject of research the diversity among them should be acknowledged (such as ethnicity and class). Furthermore, even if projects are not designed to take sex differences into account, they should at least ensure that the results are given in a sex-disaggregated form.

The composition of the research population is often not argued for in project design and may lead both to the under-representation of women and to taking males as a norm. Similarly, data collection methods are not explicitly explained in terms of their suitability for both sexes. It is important to build gender and a socio-cultural dimension explicitly into research methods. Levels of data analysis are often aggregated resulting in a lack of attention to the gender dimension. Another problem is that projects possess little awareness of gendered effects of research which could, for example, lead to the development of technological designs that only suit men. The evaporation of gender was evident. Where the Work Programme does highlight the relevance of the gender dimension, the issues are not addressed explicitly in projects. Finally, projects sometimes draw attention to ethnicity and genetic variability, for instance, in research on the incidence of particular cancers. In this context the cross-cutting nature of gender should not be forgotten.

Under-representation of women in clinical trials and omission of gender in public health

Two final particularities were highlighted in the study: the under-representation of women in clinical trials and the effects of the omission of gender of public health. The guidelines produced by the US National Institutes of Health (NIH) for conducting clinical studies, require that women and other minority groups are included in clinical trials under any NIH research. The development of European guidelines on taking sex and other differences into account should be discussed. With regard to public health, the omission of a gender dimension in research in this area could have magnified effects.

3.2 User-friendly Information Society

The User-friendly Information Society programme has a strong orientation towards Information and Communication Technology (ICT) industries, and participants are organisations which are either involved with, or represent, the ICT industry or the corresponding academic departments. The absence of women from those areas is conspicuous – ways must be found to tackle the difficulties faced by female scientists in ICT research and to market ICT as a field of science for women.

Impact of the Information Society on women and men

The study founded its approach on identifying the potential for a gender impact, and understanding the nature of the gender impact, within the IST Programme. As part of its theoretical framework, the study defined the impact of the Information Society on women and men as **users**, distinguishing between **citizens**, **workers** and **consumers**. With regard to the user as citizens, the concept **digital divide** was considered from the gender perspective. The term refers to a gap between the users and non-users of the Information Society that leads to the exclusion of non-users from certain information, activities and advantages it provides.

Examples of the gender impacts of the Information Society on different user groups:
User as citizens *– Perception of technology as a male preserve and femininity in terms of technological incompetence, resulting in technological products which are outcomes of production processes dominated by men and reflect men's interests. Traditional formal education systems that maintain gender stereotypical approaches in computer and science subjects.*
User as workers *– Gender differences in the loss or creation of jobs and the impact of new technology on transforming methods of working, e.g. the effects of automation resulting in women finding jobs using new applications in "mirror" tasks, e.g. in typing and administration, perceived as classic female roles.*
User as consumers *– The emergence of e-commerce creating buyer clubs with access to computers from which people economically less well off, such as women, are excluded. The privacy of the Internet where victims of harassment are usually women and perpetrators men.*

The gender impact of the digital divide and its causes are interrelated with specific problems affecting women. For instance, the less-favourable socio-economic conditions that may prevent women from purchasing ICT equipment or having access to the Internet. Furthermore, women's lack of interest and computer skills and their own perception of ICT as not being relevant for their lives, may help to retain women on the wrong side of the digital divide. The unequal participation of women in the information society is currently reducing among users as consumers, but increasing among users as citizens and is particularly visible among users as workers in core ICT industries. A key factor found to have a strong bearing on the propensity of women to participate in the information society and make use of available technologies was the nature of the applications available and, more particularly, the content. Some forms of content are more appealing to women and will encourage use, whilst others are more appealing to men and so act to discourage female participation. Currently the content is male-dominated.

Surprisingly low female representation in ISTAG and the Programme Committee

The participation of women in ISTAG, an EAG responsible for the entire IST Programme, was only 15%. The strong industry and information technology orientation of the programme, in particular the focus towards ICT, may play a role, as having an ICT industry origin is a criteria for selection, surpassing that of academic background in the field. However, there was also a very low involvement of women, only 15%, in the Programme Committee.

Important roles for ISTAG and Cross-Programme Actions

The role of ISTAG, which has responsibility for the scientific orientation of the Work Programme, is very important with regard to the incorporation of gender issues. However, social and gender dimensions have so far been neglected in its discussions and outputs. It may be that the current ISTAG gender composition does not provide much support to the integration of the socio-economic approach – an approach which is regarded as a precondition for the incorporation of the gender dimension into research.

However, the potential exists to introduce the gender dimension into the programme's policy-making system. For example, links could be developed between ISTAG and the Work Programme and Cross-Programme Unit as regards implementing the Cross-Programme Actions (CPA), particularly those concerning socio-economic issues. CPAs are specific actions of the IST Programme which provide opportunities to carry out research on socio-economic issues, and remain one of the key means to address socio-economic aspects of the Information Society from the gender perspective. CPAs have not to date developed any specific approaches to gender issues and the attention to gender seems disproportionately small when compared with the extent and importance of the subjects being researched. An exchange of experience gained from projects and the work of other Units in DG Information Society at the action line level, could help improve the situation.

The Work Programme and Cross-Programme Unit
The Work Programme and Cross-Programme Unit has responsibility for the high-level management of the IST Programme. It monitors the implementation of the Cross-Programme Actions (CPA) together with ISTAG.

Addressing the gender imbalance in the programme's image and culture

There are very few women at a senior level in DG Information Society and the absence of women among senior staff responsible for the FP5 management could have an impact on the internal programme culture. A male-dominated culture may lead to technologically oriented research being favoured over socio-economic research and to the development of promotional activities that appeal mainly to male interests. The way in which the IST Programme is promoted has definite potential to address the gender imbalance experienced in both the programme and the ICT research and industry sector. This finding is of crucial importance – the programme's image will influence women's attraction to the programme in particular and to the fields of ICT research and industry, in general.

The IST programme has, however, moved some way towards recognising gender distinctions in its consideration of typical users. It has identified a number of scenarios for a longer-term vision of the challenges and opportunities for the sustainable development of the IST industry. These scenarios give female names to some of the fictional characters that are intended to illustrate the possible outcomes of RTD. However, the lifestyles and working habits of these characters indicate that they would belong to the top end of the skills, decision-making and income scales, which are currently mainly occupied by men. Thus, the programme development still continues to be dominated by masculine perspectives.

Key socio-economic problems missing from the Work Programmes

The Work Programmes 1999, 2000 and 2001 pay limited attention to the gender dimension of research. However, some of the priorities of the Work Programme 1999, individual or collective user applications and non-technologically oriented research, do open up opportunities for the assessment of gender impact. Furthermore, some priorities that create entry-points for gender state the need for socio-economic research, encouraging the submission of proposals investigating the gender differences in ICT.

The overall objectives of the Work Programmes 2000 and 2001 do not refer explicitly to some socio-economic problems recognised in Information Society, such as socio-economic factors causing the unequal participation of women and men.

For example, lone parenthood is one of the determinants regarding women's access to information technology. Lone parent families, which are mostly headed by women, lack financial means and opportunities to access and exploit the potential of the information society. Furthermore, problems linked to the gender impact of the digital divide are not addressed. Nevertheless, where the Work Programmes state the intention to reinforce the synergies between technology developments and priority policy areas, the promotion of equal opportunities and social cohesion are mentioned explicitly.

Budget allocation causing a gender impact

The allocation of the programme budget has a gender impact. Half of the budget is allocated to RTD actions with a strong ICT infrastructure orientation – Key Action 4 "Essential Technologies and Infrastructure" and the Action "Future and Emerging Technologies". These address subjects that are considered gender neutral, but may in fact maintain existing gender divides. The very low female involvement in Key Action 4 is highlighted as a further cause for concern. Overall, the programme supports many projects being implemented by ICT companies, where women are more or less absent. In this context, the study refers to North American gender specialists who challenge the gender neutrality of the ICT infrastructure. In effect, the absence of women when information technologies are developed may lead to the production of ICT infrastructure which is based on a male thinking model and to which women need to adapt themselves. The other half of the budget is channelled to Key Actions and activities which bear more potential for gender integration since they address actors beyond the core ICT industry.

EMERGENCE

EMERGENCE is a socio-economic study analysing the impact of tele-mediated work on social exclusion and gender equality. This is one of the best examples of a project likely to have a positive gender impact. The project explicitly includes gender in its objectives and the production of baseline data. Moreover, it analyses gender differences in the new methods of work.

Proposals need to address end-user

Analysis of proposal content from the gender perspective was discouraging. Projects addressing the end-user as an individual, and those with a socio-economic dimension, are most likely to include the gender dimension. However, none of the project abstracts where the end-user is addressed as an individual acknowledge gender differences among technology users. With regard to the projects including the socio-economic dimension, few projects appear to concentrate on aspects relevant for gender issues. However, one project, EMERGENCE, focused on gender and may lead to further initiatives in terms of improving the gender equality in the IST Programme.

3.3. Energy, Environment and Sustainable Development – Energy sub-programme

Energy – a cross-cutting sector

The Energy study covered both the non-nuclear and nuclear energy components of the programme. There were considerable difficulties in acquiring data partly because the compilation of information on women in the energy sector, both in industry and research, is so complex. Energy is not a single field, but a distinct and critical intersection of many areas involving technology, society, resources and environment. Furthermore, since energy is a cross-cutting subject, it can be studied under disciplines ranging from physics, engineering and chemistry to economics and public administration. Comparisons between countries are also problematic since definitions of scientific disciplines and degrees vary. Most of the literature available focuses on women in developing countries where gender analysis in energy has been studied extensively. In industrialised countries, energy has not been a centre of focus for, nor incorporated into, gender analysis. The World Energy Council is proposing the development of a database to redress the problem of insufficient data, which is recognised as a barrier to the facilitation of women's greater participation in the sector. Against this background, the study had to gather data via surveys and interviews.

For simplicity, the parts of the Energy programmes assessed by the study are referred to as follows:

- **The non-nuclear energy component:** the Energy, Environment and Sustainable Development sub-programme – Energy – Key Action 5: Cleaner energy systems, including renewable energies; Key Action 6: economic and efficient energy for competitive Europe; Generic Activities: socio-economic aspects of energy within the perspective of sustainable development.
- **The nuclear energy component:**
  – the Euratom programme
  – the specific component of the programme "Research and training in the field of energy".

Low female participation in the energy sector

Despite their considered strong affinity with environmental issues, women do not appear to be joining the energy sector in significant numbers nor translating their environmental concerns into technical jobs. This may in part be due to the highly masculine image of the industry, and the perception that work involves heavy labour, despite automation. Furthermore, the working culture within energy companies may be off-putting – female peer groups are missing and male managers may not know how to deal with women in technological areas. There is a real danger that Europe will lose women energy researchers to the USA and Canada where their access to research jobs, funding and promotion is more favourable. In this context, the ENEQO project, funded by the Fourth Medium-Term Action Programme on Equal Opportunities for Women and Men, which aims to advance equal opportunities within the energy sector in Europe is welcomed.

Role of female energy networks

To help overcome the perception of energy as a masculine sector and to provide support for women energy specialists several female energy networks have been established. Examples include: ENERGIA – the international network on gender and sustainable energy, WIN – Women in Nuclear, GWEN – Global Women's Energy Network (being set up by the World Energy Council), PAWNS – Professional Women in America Nuclear Society, and national level organisations such as "Energiefrauen" in Germany and Women in Energy (Hellen Reddy Kilowatt) in America.

Few women in Energy research and programme implementation

There is a lack of women in both the programme implementation and non-nuclear and nuclear energy research projects. Only 8% of Commission staff responsible for the Energy Programmes are female. These staff set the tone of and participate in the formulation of the programmes, are the point of contact for researchers applying to and participating in the programmes, and select the external experts for proposal evaluation and project monitoring. Hence, both their gender composition and gender sensitivity are critical in determining the capacity of the organisation to incorporate gender in its work.

Female representation in the advisory groups and committees responsible for strategic planning is also low. This bears great relevance for the better integration of the gender dimension in the Work Programmes, since these bodies are largely responsible for strategic planning and so determine the focus of the research. For the nuclear energy component, female representation was particularly low, only 3% in the Scientific and Technical Committee and less than 10% in the two Programme Committees for the Euratom Programme. Similarly, the nuclear energy EAGs contain very few or no women at all. Female representation was slightly higher in

the management bodies for the non-nuclear energy component, the Programme Committee has 20% female members and the EAG for the Key Action 5 Cleaner Energy Systems, 15%.

Overwhelming focus on technical energy research

One of the key specificities is the programmes' overwhelming focus on the technical aspects of energy, a focus to the near exclusion of the social implications, which impedes the integration of the gender dimension in research. However, a broad range of research topics was identified with an inherent potential for inclusion of the gender dimension, which could, in turn, also promote research by women.

Potential new avenues for gender integration

Some Key Actions and Generic Activities in the non-nuclear energy Work Programme 2000 version could open new avenues for gender integration:

Key Action 5: Cleaner Energy Systems, including Renewable Energies, in particular the section Integration of new and renewable sources in energy systems;

Key Action 6: Economic and Efficient Energy for a Competitive Environment, in particular the part of the Key Action dedicated to "socio-economic research related to energy technologies and their impact";

Generic Activity: Socio-economic aspects of energy within the perspective of sustainable development.

Both quantitative and qualitative gender indicators needed

The Energy study proposed that the following groups of indicators be applied across all Framework Programme research areas:
Enabling indicators look at the context in which the monitored activity is taking place, such as institutional structure, legal system, policy environment;
Input indicators focus on the allocation of human and non-human resources, for example measurement of Commission resources allocated to achieve the goal of gender mainstreaming;
Process indicators concentrate on the usage of resources during any delivery activity to achieve a specified goal, for example measurement of the usage of resources allocated to staff training on gender mainstreaming within the Commission;
Output and outcome indicators: output indicators monitor whether immediate objectives have been achieved – such as the increase in number of female evaluators – while outcome indicators measure long-term changes – such as a better gender integration in research area content.

In order to integrate the gender dimension in energy research, there is a need to develop both quantitative and qualitative gender indicators in order build a holistic view of the situation. Indicators should measure not only the progress made in recruitment, retention and career advancement, but also the progress achieved in policies, procedures and programmes which have an influence on the relative position of women and men. The development of indicators is a complex task since energy is a cross cutting theme not an individual field of science, and indicators require a clear definition of what is to be measured.

Perspectives arising from the energy surveys

When surveyed, those researchers who had previously participated in the Energy programmes suggested specific actions for the next Framework Programme. These covered measures such as earmarked fellowships for female Ph.D. researchers, reduction of bureaucracy in grant applications, and investigations into the low number of women in energy research. As to the future energy research agenda, topics proposed included studies on gender-specific user behaviour in the energy field and on the relationship between electricity availability at home and the welfare of children. A survey of women political decision-makers and researchers in the energy field proposed that higher priority be given to renewable energy and energy efficiency. In this context, one important particularity that could lead to the transformation of male dominated and technically oriented research agendas is a need to involve more men who ascribe to the values of women researchers. This requires awareness-raising on gender mainstreaming to be specifically addressed to men.

One concern with the new Framework Programme is the development of Networks of Excellence, which will lead to large joint programmes built around a specific research theme. Since female energy researchers are probably better represented in smaller organisations, which will stand less chance of accessing such Networks, there is concern that this may have a negative impact on women's future advancement.

Increasing gender-sensitivity at all levels of the Commission

A major conclusion of the study is that gender is not recognised as a key issue in energy research by those implementing the programme. There is a general lack of knowledge of what gender issues and gender-oriented research are about, and what gender-relevant energy research could be. This means in practice that staff are not equipped to incorporate gender questions. There is a need to transform the organisational culture of the services responsible for the programmes' implementation in order to attract more women to the sector. A transition to a more gender-balanced and gender-sensitive organisation would help to improve the integration of gender in research. A good understanding of the Commission's gender mainstreaming policy, commitment from the senior management levels and awareness-raising and training at all levels are key elements in this regard.

3.4. Energy, Environment and Sustainable Development – Environment and Sustainable Development sub-programme

Concepts of gender equity/equality and sustainable science

The study discussed the meanings of gender and gender impacts as part of its theoretical framework, emphasising **gender and diversity** as an important concept. For policies to take gender differences into account, different needs and interests of diverse social and other target groups must be recognised within policies. The evaluation concept was based on two key evaluation goals: **gender equity/equality** and **sustainable science** (as described in detail in Chapter 2). The goal of gender equity/equality aims to promote women's participation in the FP5 research activities, enhance the understanding of gender issues within the FP5 and ensure the inclusion of women's needs and interests in the research agenda. The second goal calls for the recognition of gender impacts, in addition to impacts such as risk impact assessment and ethical issues of sustainability. With regard to methodology, the approach requires interdisciplinary and transdisciplinary methods. In this context, it is considered that science should be oriented towards scientific and political discourse about sustainable development and its ethical principles in the field of environment. The approach emphasises that the shaping power of women, that is women's role as changing agents, must be analysed as a key element in any future environmental research.

Success in reaching targets for female participation

One success of the Commission's mainstreaming policy is the notable progress made to achieve the target of 40% female participation in advisory groups and other committees of the FP5. Women account for around 44% of the programme's three EAGs, rising to more than 50% in the EAG for the Key Action City of Tomorrow and Cultural Heritage.

The role of women in specific interest groups, notably the Users and Regulators group within the EAGs, is very significant. This group is important with regard to applying research results, and so should take into account the needs and interests of women who often determine what is used in private households. Unfortunately, the Users and Regulators group is the smallest group of all in each EAG, leading to an assumption that their influence is relatively low. Furthermore, the total absence of women within this interest group in the EAGs for the Key Actions Management and Quality of Water and Global Change, Climate and Biodiversity is critical since these two Key Actions address issues with significant gender implications. Female representation in the Programme Committee was relatively high at 27%.

Considerable efforts have been taken to increase the number of female evaluators, particularly during the 1st Call for Proposals in 1999. However there was a noticeable decrease in the numbers in the 2nd Call. This highlights a problem linked to the Commission's procedure to replace at least one third of its evaluators between calls. Given the limited number of female experts in the Commission expert database, ensuring a high percentage of female evaluators in one call results in fewer women being available for successive calls.

Female participation in implementation bodies

The percentage of women in committees and bodies is considerably higher than in proposals, where the average across activities is 16%. The experts surveyed highlighted the fact that committees consist of nationally appointed or Commission selected members, and that the application of gender as a criterion may have played an important role. This situation may also simply reflect the discrepancy between women's participation in research and in policy-making in general. It was noted that there is often a connection between the proportion of women in a scientific field and their representation in respective bodies and institutions. Female participation is highest in the implementation bodies for the Key Action City of Tomorrow and Cultural Heritage. This is caused not only by the social science oriented content of the Key Action, but also by women's higher involvement in this specific research area in general.

Asked about the reasons for the relatively high share of women in the Environment Programme Committee, many experts surveyed were of the opinion that environmental issues are particularly attractive to women. Other reasons mentioned were that women had special qualifications in this field of research and that the newness of this research area made it more attractive to women. This led to the conclusion that **a potential for female researchers may lie in environmental research,** and to the recommendation that the Commission draw on this to promote female researchers and women in environment and sustainability related research.

Horizontal and vertical segregation throughout programme implementation

Gender imbalances are found at both horizontal and vertical levels of the programme. On the horizontal disciplinary level, women are clustered in certain Key Actions and Generic Activities corresponding with their disciplinary background. On the vertical level, few women are found in positions where power and decision-making are located. This situation has not improved from FP4 to FP5. However, there is discernible success in the promotion of gender balance where the Commission has direct influence. Nonetheless, positive discrimination for women is necessary in order to achieve a better gender balance in proposals and all areas of programme implementation, particularly in decision-making positions.

Work Programme lacks socio-economic approach

The Work Programme places a strong focus on natural science research in many research fields (such as Global Change Research, Marine Ecosystems), and lacks a socio-economic approach, regarded as indispensable for the integration of gender, in many areas. The Work Programme was analysed with regard to the three gender dimensions bearing importance for environmental research: the gendered division of labour, the organisation of intimacy and the shaping power of women in science, technology and politics. These three gender dimensions are either not addressed at all or not explicitly mentioned in the Work Programme. Key Action 4 "City of Tomorrow and Cultural Heritage" and Generic Activity 3 "Socio-economic Aspects of Environmental Change" offer the most possibilities for their inclusion.

Gender dimensions important in environmental research
Gendered division of labour *– women's work in different professional fields and in the household; gendered access to ownership; gendered control of resources; gendered patterns of natural resource use.*
Organisation of intimacy *– women's rights, human rights, reproductive rights and their relevance for environmental issues; women's needs and needs of different target groups, (such as children), in environmental strategies; organisation of intimacy in environmental strategies, for example. against data abuse.*
Shaping power of women in science, technology and politics *– women's and men's positions in science, technology and politics; participation of women from NGOs involved, for instance, in environmental strategies and decision-making.*

Lack of gender issues within proposals

To analyse proposals two profiles were identified: those with an **impact assessment oriented profile** (for example, environmental impact assessment, risk impact assessment) and those with a **social issues oriented profile** (such as participation, target groups). The more socially oriented thematic fields provided better opportunities for gender-integrated research compared with those thematic fields producing proposals with the assessment profile. With respect to the objective of sustainable science, the two profiles should be combined. Although the thematic research areas of the programme bear greatest potential for the incorporation of gender into research, this was not the case in practice.

Thematic areas identified as socially oriented research fields:
Key Action 1 "Sustainable Management of the Quality of Water";
Key Action 4 "City of Tomorrow and Cultural Heritage";
Generic Activity 3 "Socio-economic Aspects of Environmental Change

Gender and women are almost entirely absent as thematic issues in proposals, only one of 2125 proposals explicitly mentions the term "women", reflecting the limited attention to these issues in the Work Programme. The potential for gender relevant research does not differ considerably between those proposals funded and not funded and there was no general correlation between proposal content and the gender of the co-ordinator. Proposals co-ordinated by women do not seem to be more likely to address gender issues than those co-ordinated by men.

Given the sustainability approach of the programme surprisingly few proposals pay attention to ethical questions of environmental research suggesting that the normative implications of sustainability are not yet considered a focal issue. However, there are specific areas such as environmental education, health, risk prevention and risk mitigation, needs, attitudes and knowledge with potential for exploring gender aspects. Gender research could be regarded as a bridging concept for social-ecological research providing the possibility for linking social science and natural science research on environmental and sustainability issues.

3.5. Confirming the International Role of Community Research

Conceptual approach and practical framework

The INCO programme aims to encourage scientific cooperation with partners outside the European Union, across all thematic priorities and scientific disciplines. Recognition of five groupings of countries with diverse needs and various possibilities for partnerships of European and non European research institutes offers an important potential for problem-solving research in many contexts, and so contributes to the implementation of EU policies.

The INCO Study focused in particular on:
Developing Countries – INCO-DEV: *research co-operation with developing countries with the aim of contributing to the socio-economic progress in these countries;*
Mediterranean Partner Countries – INCO-MED: *activity supporting the development of the Euro-Mediterranean partnership, enhancing the research potential and innovation capacity and focusing research priorities on strategic sectors of sustainable development around the Mediterranean Sea;*
Newly Independent States (NIS) and Central and Eastern European Countries (CEEC) not in the pre-accession phase – Copernicus-2: *activity focusing on safeguarding these countries' scientific and technological potential.*

The bibliographic part of the study sought to reflect the important international dimension to research and the diversity of the countries funded, looking at both theory and practice in relation to gender issues in science and technological research. The lessons learned from current theory, practice and existing assessments in the field were similar. Taken together they raised a comprehensive set of issues concerning women and science and the international dimensions to gender integration in research. The findings also pointed to the conclusion that effective gender mainstreaming, that is, research by, for and about women, was most likely to take place within a **transformative** gender approach. This is defined as an approach which goes beyond integrating gender issues into the existing policy agenda and rather aims to transform the agenda itself, broadening its goals to enable it to address issues of social justice.

Having identified this approach, the elements relevant to research in science and gender were defined at the conceptual, institutional and implementation level. These formed the basis for the analysis of the INCO programme and included factors such as inter-disciplinarity, located analysis, reflexivity, equal opportunities, interactive research and mutually beneficial partnerships. The study constructed an analytical framework based on the institutional framework which forms part of the OECD/DAC publication, *Source book on concepts and approaches linked to gender equality*. This was adapted in relation to the European Union research context and the INCO programme in particular.

Differences between scientific and regional panels

Despite considerable efforts to meet the target of 40% female representation, the participation of women remains on the whole low at all levels of programme implementation. This is particularly noticeable in INCO-MED and INCO-DEV, where the two-stage evaluation uses both scientific and regional panels. Scientific panels can draw on the entire database, while for regional panels evaluators are only drawn from the region concerned. Women comprise only 19.6% of the experts from countries in the regions of concern to INCO-DEV. Regional panel evaluators are required to have government advisory experience as well as being highly qualified scientists. In the most recent INCO-DEV panels only around 15% of members were women, while for scientific panels (in agriculture, health, natural resources and

policy) the average was 32%. However, women comprised an impressive 30% of the Programme Committee.

No gender bias was detected in the gender composition of project research teams; evidently, considerable efforts are made to support equal participation. However, there is a need to compile sex-disaggregated statistics in order to monitor the gender composition of proposals.

Gender in the Work Programme

One of the keys to the integration of a gender dimension into scientific research is through a socio-economic dimension. A concern with problem solving has called for action to improve the socio-economic knowledge base for research. This knowledge base is clearly enhanced through integration of the gender dimension. So science with a socio-economic dimension and gender integration can have mutually reinforcing objectives. Where there is a socio-economic dimension in the Work Programme it is likely to be reflected in proposals, so providing entry points for a recognition of end users and the gender dimension.

There are clear socio-economic and socio-cultural elements to most areas of the Work Programme, which also clearly supports a sustainable approach to development issues. Despite this, gender is only made explicit in the INCO-DEV part of the Work Programme, and here only in the policy research area.

Opportunities for incorporating gender within priorities, such as the preservation and use of cultural heritage, or promoting healthy societies (INCO-MED), or the environment and health priorities focused on in support to NIS and CEECs (INCO-A2), have largely been missed at programme level, although some programme officers are clearly aware of the issues. It is essential to make gender explicit as a cross cutting issue within the programme.

Accompanying Measures, although relatively small elements of the programme, offer a degree of flexibility and may provide opportunities for promoting the integration of the gender dimension in strategic fora, as well as increasing women's participation in conferences.

Proposal calls and proposal content

The analysis of calls for proposals, how the proposers responded to the calls and the extent to which the proposals incorporated a gender perspective was focused on the INCO-DEV and NIS and CEEC countries, as two thirds of the INCO budget goes to these areas. NIS and CEECs are societies in transition and would clearly benefit from the integration of a gender dimension in research focusing on inter alia the "health consequences of changing socio-economic situation and changing lifestyle of the population". Preliminary indications are that groups of men in some countries are extremely vulnerable, and that striking gender disparities are appearing in some indicators such as life expectancy and mortality rates. However, gender issues are not mentioned specifically in the call dealing with environment and industry, nor improving health care in a changing society. When there is a clear socio-economic dimension to the call, proposals are more likely to mention 'people' and/or 'end-users'. However, proposals tend to be written in a gender-neutral language (other examples include 'farmers', 'consumers' and 'households') and it is then difficult to gauge whether gender issues have been consciously taken into account.

There are some, rare, examples of INCO-DEV proposals that integrate gender fully into their methodology, reflecting a multidisciplinary approach and presenting research teams with a mix of competence including gender competence. There are also several examples of useful gender work resulting from calls under

Accompanying Measures. For example, in INCO-DEV, a conference was supported on gender and population involving female and male researchers from North and South. Another initiative is a pilot study analysing health sector projects which, among other issues, addresses the application of research findings. Where gender issues are reflected in proposals, evaluators appear to react favourably. Frequently, more information or emphasis is called for on the socio-economic impact or on the needs of the users, during the evaluation process. However, even if the importance of gender is recognised – there may be a gap between the recognition and the proposer's capacity or ability to integrate gender where relevant in all aspects of the proposal.

Strengthening of regional partnerships needed

EU policy is aimed at fostering regional partnerships, a fact reflected at all levels in the INCO programme. This is clear in both the Work Programme and in the evaluation criteria "Contribution to the evolution of one of more EU policies" and, in relation to INCO-DEV particularly, "Coherence with European or Member State development policy". The scope of partnerships is fairly narrowly defined however, and although governments and institutions from partner countries are consulted during the formulation of the Work Programme, partners are not involved in agenda setting or defining priorities for calls. As regional links are weak in several INCO activity areas, the potential for mutual learning, supporting and informing country representatives and fostering local initiatives in research is limited.

International links are central to the INCO programme and are key if institutions and individuals are to learn from each other about good practice in science. Good practice is understood to include examples of gender relevant research outcomes, as well as examples of research which, through the integration of a gender dimension, is shown to be relevant to the needs and priorities of specific groups of women and men in countries and regions which are confronting social change and transition.

INCO staff recognise the need for increased efforts to strengthen regional links and networks in order to address some of the constraints. For example, partner country representatives at government level not only often lack information and expertise, but also lack strong links to their own research communities and to those research is supposed to benefit, that is the end-users. Strengthening regional networks would facilitate the consultation process, enhance understanding of and participation in the programme and improve the quality of feedback to INCO on regional priorities. Considerable effort is made to support equal partnerships in research teams and to foster understanding of and participation in the INCO programme.

The challenge of gender mainstreaming

Gender equality in terms of equal opportunities for women and men is reflected and clearly understood in terms of the promotion of women on various bodies and panels and the policy of equal opportunities which is reflected in many procedures. However, attempts to mainstream gender in INCO are relatively recent, and while the relevance of gender is mentioned in some policy documents it is not yet systematically reflected in all related procedures and processes. For example, during the monitoring and evaluation of project implementation, officials scrutinise bi-annual and annual reports of projects. However, there are currently no criteria or instructions for the monitoring of gender indicators. Gender-aware monitoring is dependent on the gender competence of the officials concerned.

The fact that gender mainstreaming is a strategy to reach gender equality goals, rather than a goal in itself, is not widely understood within INCO. There is some confusion as to the operational implications of committing to a mainstreaming strategy, which is only to be expected given its relatively recent introduction into the

FP5 generally and INCO in particular. This is combined with the fact that there has not yet been any initiative to build gender competence among INCO staff through training.

3.6. Promotion of Innovation and Encouraging the Participation of SMEs

Data scarce but still shows lack of women

The state of knowledge review included a comprehensive overview of the specific features linked to women's involvement in business life, and SMEs in particular. This highlighted two key issues. Firstly, a significant lack of statistics and raw data about women and their involvement in SMEs and innovation processes. Secondly, the scarce data available shows that women are underrepresented not only in the scientific fields of business development and innovation, but also in the SME sector. Qualitative issues, such as the roles of women in the decision-making processes of business life, are even more difficult to clarify. The labour market and access to executive-level management positions remain segregated by sex. This is partly due to differences in demands of household and family responsibilities between women and men, but also to the difficulties derived from the current organisation of social and business life, which differs between men and women. Furthermore, women entrepreneurs or would-be entrepreneurs face additional barriers such as access to finance, networks and markets, lack or role models, and lack of specific skills (financial, managerial, marketing).

Lack of studies linking women and innovation. Research undertaken on gender issues and business life is limited and fragmented. Most studies on entrepreneurship, which include women as a variable, focus on personal characteristics, socio-cultural values, barriers encountered and the potential gender impact on organisational strategies. Little is known, due to the lack of sex-disaggregated data, of the possible gender differences in business creation and management or of the real contribution of women entrepreneurs and managers to the economy.

The growing importance of women in business life and the design of more efficient policies call for an improved awareness of factors that affect women's access to management positions and involvement in the creation of enterprises. There is also a need to investigate the particular characteristics and management approaches of women entrepreneurs that may differ from the better-known male entrepreneur culture.

A survey was used to collect data on female involvement in the programme due to the lack of statistical data and the specific characteristics of the programme and its structures. For example, there are no EAGs, although Commission personnel responsible for programme management consult informally with various advisors. The survey results have some limitations due to difficulties such as the low response rate, particularly from evaluators and policy-makers.

Survey groups
Contractors – project partners (contractors represented Innovation Projects, Mechanisms to facilitate the setting-up and development of innovative firms, Innovation Relay Centres (IRC), and National Contact Points for the programme);
Evaluators – members of the external evaluation panels of the Innovation part of the programme;
Policy makers – Programme Committee experts, the Group of Senior Officials (GSO) and the Programme Monitoring Panel participating at different stages in the design and/or implementation of the programme.
In addition some personal interviews were conducted with evaluators and policy-makers.

Few women involved in programme implementation

Women do not usually represent more than 25% of the members of all the groups surveyed – contractors, evaluators and policy-makers. In the contractors group female representation reaches 40% in certain projects, although the share of female coordinators is notably lower, varying between 5% and 26%. Female participation in the external evaluation panels for the Innovation part of the programme is 14–25%. However, participation in the group of policy-makers is slightly better: the Group of Senior Officials has 28% female members, the Monitoring Panel, 25% and the Programme Committee, 17%.

Women's participation in SME-specific measures

The overall female participation in SME-specific measures, CRAFT projects and Exploratory Awards, is approximately 5% – a figure corresponding to the average female representation amongst entrepreneurs in industrial fields. When analysed by country, female involvement in SME specific measures is well above average in

Finland, Greece, Italy and Spain, and yet the great majority of companies involved in SME specific measures are from Sweden, the Netherlands and Denmark, and are normally male-led.

Profile of women participating in the programme

One particularity of the study is that it compiled an average profile of the women who participate in the programme implementation process. With regard to the demographic characteristics, women tend to be younger than men in all the groups analysed. In terms of education, most female participants have at least a Bachelors degree, but there are fewer women among the higher educational levels. In particular, notably more men than women with Ph.D. degrees are represented among all the groups. Furthermore, women are nearly twice as likely as men to be unmarried and, if married, are more likely than men to be amongst the group of married persons without children. As regards the professional background, the number of women decreases when the higher professional categories are looked at. In general, women participants are found in the same types of organisations as men, although in the group of contractors a slightly higher proportion of women work in the service sector. Female participants perceived that they possess less decision-making power than men. Among contractors only women believe that they have either limited or no decision-making power.

Perceptions of barriers to women's participation

Particular attention was paid to whether the barriers for women's participation in business life, and in particular SMEs, are perceived differently by women and men. Only small differences in female and male perceptions were detected. For instance, among contractors both women and men consider that a lack of education and training followed, by limited access to networks and markets were the biggest barriers. Evaluators and policy-makers regarded difficult conciliation of work and family life and the existence of a male business culture, together with societal attitudes/expected traditional roles, as the major obstacles. There are some differences in perceptions between women and men in the groups responsible for programme design and implementation. Certain issues relevant for women may not be considered as important within policy-making structures given the small number of women involved at this level.

Work Programme gender-blind

The Work Programme is, on the whole, gender-blind, or at least fails to show a gender dimension. Only in one area, Economic and Technological Intelligence, is specific attention given to women entrepreneurs and their networks. Yet numerous activities were identified with a clear gender component, providing opportunities for better integration of gender mainstreaming.

In this context, the study displayed an important specificity: some aspects considered relevant for promoting women's involvement both in business life and in the scientific fields of business development, fall clearly outside the scope of the programme. These aspects relate, for example, to factors that have an influence before a person starts a career as an entrepreneur or a business manager, and may be linked to experiences gained from formal education and management training. Moreover, societal attitudes and expectations regarding traditional gender roles may influence a person's decision to become an entrepreneur. It is not in the remit of the Innovation and SME programme to tackle these factors. Some of the Commission staff responsible for programme management commented that supportive efforts should be taken as part of other horizontal programmes of the FP5 and at national level in order to promote gender mainstreaming within the programme.

Gender dimension lacking in current research

Proposals tend not to give consideration to the gender dimension of work undertaken. Indeed, only one gender-specific proposal was identified among the abstracts analysed. However, some proposals focus on issues which have been considered as obstacles for women pursuing careers in business life, such as access to networks, mentoring and management skills. Only a final project assessment would show how gender issues have actually been recognised and treated.

Horizontal segregation among SMEs

While technologically-oriented companies are invited to participate in the programme, a significant proportion of women are found in SMEs which operate in the retail, trade and service sectors, likewise many female-led SMEs do not meet the requirement of technology orientation and so are ineligible. Hence, relatively little can be done to incorporate the gender dimension better and increase female participation unless the factors that lead to the current segregation in the labour market are first identified and then tackled in future policies, in horizontal programmes and at a national level.

3.7. Improving the Human Research Potential and the Socio-economic Knowledge Base

Understanding gender, gender mainstreaming and gender equality

The study based its theoretical approach upon the two main concepts – gender and gender mainstreaming. Concerning the treatment of gender in research, a number of different uses were identified. This extends from the very basic understanding of gender as sex counting through recognising that certain special characteristics are associated with one sex or another, to more complex approaches to gender, such as gendered structures and gendered concepts.

Gender definitions
Gender differences *– differing roles and responsibilities in socio-economic life that are ascribed to women and men, as well as differing identities, values and behaviour, for example, concentration of women and men in particular occupational sectors and different roles of women and men in family care.*
Gender inequalities *– gender differences are characterised by gender inequalities, in rights, in access to and control of resources, and in powers of decision at different levels and in different domains. For example, there is a recognition that the labour market is not only marked by gender segregation, but that this segregation is related to inequalities in pay and conditions between women and men.*
Gendered structures *– the social, cultural and economic systems and processes by which these differences and inequalities are reproduced or are altered. The focus is, for example, on the values, procedures and practices of institutions or of policy-making and on how these not only incorporate assumptions about gender roles but also impact on gender inequalities.*
Gendered concepts *– the ways in which we conceptualise and understand ourselves and our world are fundamentally gendered such as the concepts of science and work.*

The study contributed to the understanding of the gender mainstreaming concept by identifying ten elements which can be used for analysing or planning the process of gender mainstreaming in an institution or policy area. These are: Women's and men's experience and interpretation of reality; Policy; Representative political structures; Institutional culture; Political commitment; Resources (human, technical, financial); Procedures and instruments; Information; Location of responsibility for gender issues; and Staff development.

The objectives of gender mainstreaming are three-fold. The first concerns **the principle of participation of women and men** – all policies and programmes, throughout their cycle and at all levels, should be examined to ensure that women and men have equal opportunities to participate. Secondly, **the diversity aspect** – all policies and programmes must systematically take into account the different situations, needs and interests of women and men. Thirdly, all policies and programmes must contribute to **reducing inequalities between women and men.** As part its theoretical approach, the study drew on the existing Community policy and legislation in support of gender equality and gender mainstreaming. The policy and legislative frameworks are important not only in assessing the treatment of gender issues in the FP5, but also in establishing possibilities for further efforts to improve gender equality and the treatment of the gender dimension within the future Framework Programme.

Notable progress made in improving female participation

Considerable efforts have been made to reach the 40% target for female involvement in committees and evaluation panels. The programme has met the target in the case of the EAG, while the other committees and panels are close to the 40% target, for example the Programme Committee has 35% female members and in 2000 the evaluation panels had 37%. Furthermore, 40% of the staff responsible for programme management were women at the time of the study. Various measures have been introduced to encourage female participation, such as the Women and Science section in the Cordis web-site, which encourages women to apply for inclusion in the list of experts.

Despite the progress made in promoting the participation of women many important opportunities are being missed. Across the various Improving the Human Research Potential actions, very few projects pay attention to equal opportunities of participation of women and men, in spite of clear references in the Guides for Proposers. In particular the **Raising Public Awareness** actions could play a leading role in promoting the participation of girls and women in science and in raising the awareness of scientists and researchers about the gender dimension in science. The intended target groups of the activities are defined in exceptionally broad terms – such as the public, young people and children. This has consequences on the effectiveness of the action, since knowledge of the target groups is needed in order to formulate the most appropriate methodologies.

Comparing success rates in proposal assessment and selection

A potential difference in success rates was detected in the project selection process when assessing the success rates of both female and male co-ordinators and proposal partners. Overall, the success rate of female co-ordinators is 37% compared with 47% for men. Data for project partners, the official signatories for the partner institutions, indicated a similar difference between the female and male success rates (33% / 40%). While the difference may be small, the same difference, in favour of proposals submitted by men, appears across all actions. One explanation could be that a higher value is given to the seniority of the proposal co-ordinator or their reputation which would indirectly favour men given the sex imbalance at higher levels of the profession. Gender patterns in success rates of proposals should be monitored carefully in order to ensure that the selection is based on scientific quality and not on the sex of the co-ordinator and participants.

The human dimension is missing in research proposals

One consistent characteristic is the widespread and uncritical use of universal research categories – such as employee, citizen, learner, the public – without any

explanation or description of key differentiating characteristics. These so-called **conceptual silences** make it difficult to assess whether the methodology to be applied is appropriate and whether the results are applicable to large and diverse populations. In addition, there is a general absence of attention to the human dimensions of the structures and processes being studied. This applies not only to horizontal research activities financed by actions such as Raising Public Awareness, High-Level Conferences and Research Training Networks, which cover all thematic areas of FP5, but also to many projects under the Socio-Economic Knowledge Key Action. As expected, where the human dimension was in general poorly addressed, the specific gender dimension was also not well addressed.

Even socio-economic research can be blind to gender

More than half of the projects under the Key Action "Improving the Socio-Economic Knowledge Base" made no mention of gender, even though gender is a relevant factor in the issues being studied. 53% of projects under the first call and 59% of proposals financed under the second call were characterised as **gender-blind**. The apparently better treatment of gender in the first call might be explained by the different approaches taken to the gender dimension in the two Work Programmes. In the first call, the gender dimension was presented as a cross-cutting dimension to be incorporated into the design of proposals wherever relevant. In the second call, gender was only mentioned within specific examples of research topics under some of the task headings. The presentation of gender as a cross-cutting dimension may have encouraged a more systematic treatment of the issue and been more effective in terms of integrating the gender dimension in the research content.

Different ways of treating gender in proposals

Under the socio-economic Key Action 17% of projects were identified as **gender-integrated**, meaning that gender is integrated in the project design even though the main focus of the project does not address gender directly. There were variations in the treatment of gender between the thematic areas covered by the Key Action, with higher levels of attention to gender in thematic areas addressing social cohesion, family structures, welfare and employment and lower levels in thematic areas such as European identity, integration, governance and citizenship. This might be due to the relatively high profile of gender equality in social and employment policies, as well as the fact that the former areas address human beings and the human condition in a more direct way, and are areas in which the gender dimension has been unequivocally identified.

8% of proposals were defined as being **gender-specific**, that is having a primary research focus on gender. The programme's socio-economic orientation, together with the explicit statements of the Commission's gender mainstreaming policy as regards conducting gender-specific research under this programme, may have encouraged this. Interestingly, gender is understood in a variety of ways in the gender-specific proposals. The basic pattern for gender-integrated and gender-specific proposals, is that less attention is paid to gendered structures and concepts, which are often complex to address, while greater attention is given to the special characteristics of women, as well as to gender differences and inequalities which are more visible and easily proved.

A new avenue, **research about men** is a significant development within the school of gender studies which extends our understanding of the gender issue as a whole. However, there remains a tendency to treat gender as a stand-alone factor in proposals – women and men are treated as homogenous groups. This does not help improve our understanding of the gender dimension since there is no "universal" woman or man.

Integration of gender in project design and scientific teams

The majority of proposals do not include gender in their design, even in the gender-integrated proposals, it is not comprehensively integrated. For example, it may be mentioned in the preamble and objectives, but not clearly addressed in the research methodology. Inputs referred to are mainly human resources, for example gender expertise in the scientific team. In only a very few cases are any other inputs mentioned such as the use of data sources on gender issues or contacts with organisations specialising in gender issues.

Concerning gender balance in scientific teams, a more balanced female participation is a necessary condition, but not a guarantee, for the integration of gender issues into research. 97% of proposals where the team has a male participation of 75% or more can be classifed as gender-blind. In contrast, 86% of proposals where the team is composed of 50% or more women take gender into account. Furthermore, only one fifth of the proposals assessed give any indication that the scientific team includes gender expertise. Similarly, very few proposals make reference to gender balance or the promotion of equal opportunities within the team or the measures to ensure attention to gender issues in the research activity.

Analytical concepts and tools essential

To summarise, all of the gender-specific proposals will advance the knowledge of specific situations of particular groups of women and men, and of particular obstacles for gender equality. However, it is debatable whether all will advance knowledge of the gender dimension of social, economic, political and cultural change and of how to address gender within socio-economic research. In this context, the study called for an application of analytical concepts and tools to allow the fullest possible understanding of the phenomena in order to be able to develop the most appropriate and adapted policies. In all, the majority of projects under the programme Key Actions will not contribute to the understanding of the gender dimension itself.

4. Recommendations

The final chapter of this report summarises the key recommendations from the seven gender impact assessment studies of the FP5. Most of the recommendations made by individual studies are applicable to all research areas, and are presented here. The main study-specific recommendations are presented in Annex 3. By its very nature, a synthesis report does not cover the full recommendations of each study. These can be found in each of the Final Reports, which are available as part of this series of publications.

*The Quality of Life Study differs from the other studies in that it addresses a research area where both **biological sex** and **socially constructed gender differences** have an impact. Both kinds of difference are relevant for, and should always be addressed in, health research and all its avenues including basic and molecular research. Consequently, the Quality of Life Study recommendations address both sex and gender differences, resulting in suggestions which differ slightly from the other studies. For instance, a socio-economic approach to research is not regarded a precondition for gender integration in health research due to the impact of biological sex differences, which call for a natural science approach.*

4.1. Recommendations for mainstreaming gender in the Framework Programme implementation cycle and research areas

4.1.1. Putting policy into practice for Programme implementation

Wider dissemination of a reinforced policy message

It is important to develop awareness of the benefits that integrating gender into research and development will bring to the research community as a whole. Resources will be maximised not just by using the variety of skills that women and men offer, but by ensuring that the needs of both women and men are addressed within research and that gender relevant research is undertaken. The results will help to develop competitive technologies making a positive contribution to the main goals of the Framework Programme. It was recommended that Community policy on equal opportunities and gender mainstreaming should be systematically referred to in all parts of the Programme, from the overall objectives to guidance to proposers and evaluation criteria. Statements about the importance of enhancing women's contribution to science should be given a higher profile, for example, on

the Europa and Cordis web-sites, and sent, along with good practice on gender mainstreaming, to Commission staff and all other groups involved in Programme implementation

Developing Commission capacity to put policy into practice

There is evidently clear commitment to gender mainstreaming within the Commission at a political level, but it was felt that there is no clear **strategy on how to put this into practice** in programme implementation. Institutional commitment has to be backed with organisational procedures calling for technical accountability from programme officers. It was recommended that organisational structures for gender mainstreaming be established and/or enhanced with clear mandates for overseeing and monitoring policy implementation. This is key for building institutionalised gender competence and could assist in tackling the problem of gender evaporation, for example where gender mainstreaming is mentioned, at the Work Programme level but evaporates in the stages of the programme implementation.

The need to **clarify responsibility** for the implementation of gender mainstreaming policy, in particular the leading role of Directors and Heads of Units, was recognised. Staff at management and decision-making levels should be provided with clear descriptions of their responsibilities in policy implementation. **Gender mainstreaming officials**, who ensure a coherent link between the strategy of the Women and Science Unit and staff involved in the FP5 implementation, should represent staff who influence the management and implementation of policies and programmes. In this way, responsibility for gender mainstreaming is at mainstream levels of management, and is not only seen as allocated to female staff, who have an interest in women's issues. Officials responsible for FP5 management should ensure that gender issues are included in the agenda for meetings where Work Programmes are discussed, and distribute information and guidelines regarding opportunities to incorporate a gender dimension to the relevant Committees.

It was widely recognised that a transition to a both **gender balanced and gender sensitive organisation** is needed to promote gender integration into research. The Directorates General responsible for the FP5 must have a good understanding of the Commission's gender mainstreaming policy, with senior management guiding and encouraging the need to translate policy into practice. Training was recommended to increase staff capacity and competence of gender issues including why such issues are important elements of Community research and how gender-relevant research could be promoted by the programme.

It was recommended that greater efforts be made to **employ more women** among the A-grade staff, in particular in the top decision-making positions, with efforts to consider gender issues in recruitment practices. A policy to address the gender imbalance could be developed, including consideration of extending the 40% minimum target for participation of women to Commission staff. Some studies were concerned about the male-dominated public face of individual programmes. Positive discrimination measures could be considered, such as the preference of women in the case of equal qualification and merit. To investigate the most effective measures to address the gender imbalance in some areas of the Commission, some studies suggested to launch a study into the working conditions of A-grade personnel. There is a perception in some programmes that the gender imbalance could in part be addressed by increasing the attractiveness of working conditions, for example, more flexible and family-friendly working structures for both women and men to facilitate the compatibility of professional and care responsibilities. Such a study could include a review of flexible working hours, part-time work, job sharing, re-employment conditions for returners, child-care services and encouragement of fathers to take paternity leave.

It was recommended that institutional procedures be defined for **monitoring implementation of the gender mainstreaming policy** within each research area of the Framework Programme. One specific suggestion was that proposers systematically supply information concerning the intended and actual participation of women and men in project activities. It was recommended that completed projects should be monitored against quantitative objectives to promote the equal participation of women and men, and qualitative objectives to integrate the gender dimension in the content of research and the research methodology. While one suggestion is to establish specific gender panels of independent experts to ensure that gender aspects are systematically included in the monitoring of programme and project implementation, there was concern that this might introduce an unnecessary additional layer in Programme procedures.

The studies recognised the need to be able to draw on **expert gender expertise** where necessary and strongly recommended the involvement of gender experts from European networks in the process of designing the content of the new Framework Programme. One study proposed the establishment of a special working group and/or a mechanism for systematically obtaining expert advice on gender issues within each research area of the Framework Programme. This could provide expertise on measures needed to integrate gender in programme implementation and monitor the implementation of the gender mainstreaming policy. However, most studies highlighted the need to strengthen the number of experts with knowledge and experience of gender issues within the existing Programme implementation structure, for example in EAGs or monitoring panels.

4.1.2. Mainstreaming gender in the research areas

The overall objectives of gender mainstreaming should be realised at all levels of the FP5 and reflected in the Work Programme text. Gender issues should be covered from the programme objectives to the respective action lines and guidance should be given to identify potential gender impacts of the research areas and encourage proposers to conduct gender-sensitive research. The two innovative approaches of the FP5, **integrated multidisciplinarity** and **multisectoral activities,** were seen as being important since they broaden the research horizon in a way which can provide entry-points for the integration of gender.

At present, the promotion of research about gender is confined to the Human Potential Programme. The studies recommended the introduction of **gender as a target of research** in all Work Programmes as well as a transversal theme encouraging and guiding proposers to address gender systematically in each part of research design where relevant. Gender-sensitive research could be made more visible in the Work Programmes by including examples of important gender issues within research themes. It was recommended to establish a system or a working group to **gender-proof** all draft Work Programmes. Such a group could also potentially review and monitor the work of the Programme Committees, which it was agreed must be made more gender-sensitive.

The **socio-economic approach of research** was considered a precondition for the integration of the gender perspective, apart from in the Quality of Life Programme where biological sex differences can call for a natural science approach. It was recommended that the socio-economic dimension of research be enhanced in the new Framework Programme. In addition, research design should allow the identification of diverse human populations to be studied and research methodology should include socio-economic analysis methods in order to integrate the gender dimension. The studies called for continuity in research themes and subjects, as research communities and gender networks need time to adapt to new avenues of research and new scientific networks take time to be set up.

It was suggested that projects with a gender dimension could be clustered at Action line, Key Action or Programme level to encourage the networking of women involved in implementation of these projects. This recommendation could be particularly valuable in those areas where there are few women working in the field, such as IST and energy research.

It was recommended to draw lessons and build upon the existing experience of gender integration to feed into the process of shaping the policy-related research agendas. In this respect, efforts should be made to identify and collaborate with regional gender networks which have played an important role in the Beijing and Post-Beijing process. Outcomes of the Beijing process should be seen as outlining explicit priorities for the Community research agenda. The new Framework Programme should aim more directly at experts who have competence to implement research including the gender dimension. For instance, the Networks of Excellence proposed in the new Framework Programme would provide an opportunity to link gender specialists and researchers in different scientific fields.

4.1.3. Mainstreaming gender in documentation and Programme promotion

Development of proposal preparation material

It was strongly recommended that proposal preparation material be revised to help integrate gender systematically throughout the Programme and make more explicit the importance placed on gender issues. Guidance should be provided not just on equal opportunities and gender equality, but the integration of gender issues within research and how to put this into practice.

Specifically:

- Statements should address not only the under-representation of women in research but also encourage proposers to undertake gender-sensitive research.
- Documents should explain that attention to gender is not equivalent to women's issues, but promotes the interests of both sexes – women and men.
- Proposers should be encouraged to integrate the gender dimension in the research design of the project, such as populations studied, data collection and analysis methods used, and concepts applied, as well as in the expected socio-economic impact.
- Guidance should be given to use a range of research target groups and to address the diverse elements within any one such group, for example consumers can be divided by sex, age or background.
- Guidance should be given to consider the diverse end-users of the achieved results and/or developed technology and describe their socio-economic profile.
- A specific guide for applicants could be drafted to illustrate the better integration of gender in proposals.
- Proposers should be asked to provide information on how they will ensure the equal participation of women and men in activities.
- Proposers should be asked to provide sex-disaggregated statistics to reflect the gender balance of project teams.
- All documents should use gender-neutral language.
- The Partnership database on the Cordis website should allow potential partners who register to include their gender expertise as a crosscutting subject in the Skills and Competencies section.

Promotional material and events

It was recommended that a new promotion policy be put into place, with stronger emphasis on the equal participation of women and men, and stressing the desire to increase female involvement. For example, there is a lack of awareness amongst European gender experts that the Framework Programme places specific emphasis

on supporting proposals with an integrated gender dimension and encourages research in gender-related research areas. It was also suggested that the promotion of the Programme be monitored, to ensure that events appeal to both women and men. Actions should also be taken to raise the awareness of Programme promoters on equal opportunities and gender mainstreaming policy.

4.1.4. Mainstreaming gender in the evaluation process

Gender should be included as an evaluation criteria

While recommending that equal opportunities and gender be integrated into documentation, it was recognised that this was not sufficient in itself to increase the participation of women, or the level of gender-relevant research. Proposers should be encouraged and guided by the inclusion of gender as a criteria for proposal evaluation and selection. Evaluators should consider the extent to which gender is covered, regarding the participation of women, the scientific content and the methodology.

In addition, some studies proposed consideration of prioritising proposals which meet the eligibility criteria and demonstrate positive contribution to meeting gender equality objectives. This could be implemented by awarding marks to those proposals with gender-balanced teams and/or with a female co-ordinator, provided that scientific and technical quality of the proposals are ensured, or used as a ranking criteria between proposals with equal evaluation marks. This would encourage organisations to seek and give value to the contribution of women to excellence.

Evaluation panels should be gender sensitive

Specific recommendations were made to ensure the gender balance and expertise of panels:

- Specific briefings on Community gender policies and on the integration of the gender dimension in research should be provided for evaluators.
- Gender expertise relating to the thematic areas should be represented in evaluation panels.
- Training could be organised to build the gender competence of evaluators, supplemented by the development of a manual on how to assess the gender dimension of proposals.
- The Commission expert data-base should be modified to allow the recording of applicants' gender expertise and other cross-cutting competencies such as environmental knowledge. The application form for expert evaluators should guide the applicants to indicate such knowledge.
- Consideration should be given to the development of a separate database registering the gender expertise in regional networks and organisations of countries participating in the Framework Programme.

4.2. Participation of women in the Framework Programme

4.2.1. Compilation of data

Harmonised sex-disaggregated statistics – a precondition for integrating gender

The collection of sex-disaggregated statistics in the FP5 presented difficulties. The actions taken by the Women and Science Unit to harmonise the collection of such statistics are therefore fully supported and should be continued. Statistics should cover all activities, from programme design, implementation and monitoring to proposal preparation and implementation. At a project level the collection of data on all partner organisations should be mandatory and closely monitored to ensure accuracy.

Development of gender sensitive indicators

The development of gender-sensitive indicators on the basis of appropriate sex-disaggregated statistics is regarded as indispensable for the integration of the gender dimension in European research. It is recommended that the contacts and collaboration established by the Women and Science Unit and the Helsinki Group on Women and Science in this context be continued. The studies covered both quantative and to a lesser extent, qualitative indicators, for example to monitor changes in organisational culture which have gender impacts within a working place.

4.2.2. Actions to increase women's participation in the Framework Programme

It was widely recognised that women's participation at all levels of Programme implementation remains low and that action should be taken to ensure such participation is maximised. However, it was stressed that care must be taken to ensure that this, most widely understood, aspect of gender mainstreaming policy does not take dominance over others. Research by women is only one aspect and by itself will not necessarily lead to better research results. Likewise women were generally found to be no more likely than men to take gender issues into account.

Commission targets for participation of women should be continued

It was strongly recommended to continue to take actions to increase the involvement of women in the Framework Programme. For example, the 40% minimum target for the participation of women should be continued and consideration given to extend such a target to other areas of the Programme, such as the gender composition of project partners, recruitment of Commission staff and women's participation at high-level public events, both as keynote speakers and participants. Although rarely met, there has been notable progress towards this target in some areas of the Programme. However, it was recognised that a common 40% target does not distinguish adequately between different aspects of the organisation and implementation of research, and it was recommended to set realistic and distinct target figures for different aspects of the Programme. For example, a 40% or even 50% target for the participation of women could be applied to Programme Committees and EAGs, whereas the target figures for evaluation panels and project activities could be lower to reflect the recruitment potential of female researchers in the field. Proposers should be well informed of such targets and if unable to reach them should at least aim to build project teams which reflect the overall gender composition of their organisation.

The Commission's 40% minimum target for participation currently applies to Marie Curie Scholarships, advisory groups (EAGs and High Level Expert Groups), expert evaluation panels and programme monitoring committees.

It was noted that the expert groups where the Commission plays an active role in selection of members tend to have a better gender balance. The policy of parity for participation of women and men in groups and committees selected by Member States should be strongly advocated by the Commission, which could draft Good Practice Guidelines for a balanced gender representation. Efforts should be made to present examples where female participation has brought added-value.

However, it must be borne in mind that simply setting targets is in itself unlikely to achieve increased participation by women. Additional efforts are needed to encourage and facilitate women's participation. Furthermore, some studies stressed that the participation of women merely reflects the situation in their sector of the research community and that longer-term strategies are needed to increase the proportion of women entering the field, in both industry and academia.

Actions to facilitate women's participation as experts

It was strongly recommended to increase the number of women in the Commission expert database and make expert positions more attractive. Specifically:

- Research should be conducted into the difficulties women encounter in attending evaluation panels.
- A comparative study of the recruitment potential of women working in the respective fields of science, both academic and industrial, in the Member States should be launched. The experience and views of these women are an important resource and should be fed into the policy-making system of the Framework Programme.
- The Commission should make better use of its networks, in particular women's networks and associations and National Contact Points, and better disseminate information in the scientific community regarding its search for female experts.
- Programme-specific calls for experts should be launched, tailored to reach women in the research community.
- Evaluation procedures should be reviewed. For example, the evaluation period could be shortened or organised in a more flexible manner to facilitate the participation of experts with family or caring responsibilities. Evaluation panels could be organised in separate rounds to ease long absences from families, subject to the setting up of procedures to guarantee confidentiality throughout the evaluation process.
- The use of new technologies, such as video-conferences, should be considered.
- Requirements such as previous knowledge of the Framework Programme, or previous evaluation experience could be eased and/or training provided to allow more newcomers to enter the field.

Participation of women in project activities

The task to increase the level of women in project activities as co-ordinators and as members of project teams is rather complex. Most recommendations in this area looked to examine the conditions under which female scientists apply for European research funding and the problems they encounter in project preparation, such as whether they have adequate administrative and financial support for proposal preparation. It was recommended that awareness-raising and information actions be launched to encourage research institutions to analyse the situation of their female researchers, identifying obstacles to women's equal participation and positive steps to promote participation. Some studies also raised the possible introduction of positive measures during proposal evaluation, such as giving preference in the priority ranking to gender-balanced proposals, which meet the technical standard. It was also suggested that it be made obligatory for proposals to introduce gender-balanced steering committees.

Mentoring and role models play an important role

Specific channels, such as women's networks and European level information services should be harnessed for disseminating information on European research funding, including successful case studies that involve female role models. In particular, the introduction of initiatives providing women with mentoring and female role models in scientific and technological fields was strongly recommended as a means to encourage women's participation in research in general. In this respect the important role already played by women's networks and associations to create awareness of gender issues in specific science and technology sectors and to help overcome the isolated position of many women in these field, was recognised.

Suggestions for additional mechanisms to promote female participation in proposals include:

- The establishment of a special entry-point for women and / or female co-ordinated proposals, similar to the CRAFT scheme in the Innovation and SME Programme.
- The formation of an expert group of women researchers, possibly in connection with the National Contact Points, in order to have a better access to female researchers.
- Research into the cultural and sociological aspects of being a female researcher.
- Research into the education and core professions of technology to provide baseline information on why so few women study or work in the field. This would assist in the design of the Programme and also its promotion.

Ensuring gender equality in mobility actions

A two-fold strategy was recommended to ensure gender equality in future mobility actions:

- Increased efforts to obtain and disseminate data and information on the gender aspects of mobility in public and private fields in both Member States and Associated Countries; and
- The formulation of a strategy to ensure gender equality, making full use of existing Community policy and legislation, for incorporation in the emerging policy on mobility actions.

The information gathering and dissemination exercise should address:

- The participation of women and men in mobility schemes, such as access to and the impact on their professional careers, by country, host institution, discipline/occupation, qualification level and status.
- Information on the different experiences, needs and interests of women and men concerning mobility, due to issues such as discipline, occupation and marital status.
- The nature and extent of gender-specific obstacles to mobility experienced by different groups of women and men. These include age restrictions, bias in informal networking, bias in selection criteria and procedures, difficulties of insecure professional situations, problems for partners obtaining work permits, intensity and inflexibility of research work and the impact of maternity.
- Examples of good practice for the promotion of gender equality in mobility schemes.

Specific recommendations include:

- Improved information to researchers, particularly female researchers, on mobility schemes.
- A contractual requirement by the Commission that the responsible contracting institutions should take concrete steps to reduce gender inequalities and

promote gender equality with respect to the activities financed by the Commission.
- Review of the criteria for selection of host institutions to include the efforts made to promote gender equality in science and technology.
- Possible action against institutions not respecting the Community legislation concerning equal opportunities.
- Establishment of a system for monitoring gender equality in mobility schemes, such as equality of access and participation and subsequent impact on professional careers.

4.3. Additional opportunities offered by the new Framework Programme and the European Research Area

Most of the recommendations set out above are also directly applicable to the new Framework Programme. However, in addition to these, some of the specific features of the new Framework Programme offer additional opportunities for incorporating the gender dimension in European research.

Mapping excellence

An exercise to map excellence in research and technological development in all Member States is currently underway, the aim being to allow greater advantage to be taken of existing potential across the European Union. This exercise provides an exceptional opportunity to integrate the gender dimension in the European Research Area, establishing a benchmarking situation as well as enabling the monitoring of the evolution of gender equality in relation to scientific resources in Europe. It is recommended that indicators being used to map excellence should be sex-disaggregated wherever relevant and allow determination of gender equality in research as one aspect of the criteria.

Furthermore, it is commonly recognised that many researchers, in particular female scientists, work outside the main public institutes of science, for example conducting private sector research, under temporary contracts. For example, many women researchers work as freelancers in order to combine better family and working life. It is strongly recommended that this diversity of female scientists' positions should be recognised in the mapping exercise.

There is evidence of scientific professions being male-dominated and being characterised by value judgements and priorities, which maintain male/masculine dominance and female/feminine exclusion. It is recommended that considerable caution be exercised in the process of identifying excellence on the recommendations and decisions based on peer review or value judgements by senior scientists or known experts. Careful attention should also be paid to aspects such as the selection of fields for the mapping exercise, keywords for the bibliometric analysis, evaluation methods, collection of data on the entities and the criteria for recommendations.

Instruments for integrating research

*Support for **Networks of Excellence,** one of the proposed instruments for the new Framework Programme, "is intended to promote excellence in Europe by means of a deep and lasting integration of excellence capacities existing in universities, research centres and industries in several Member States into a critical mass of expertise by creating 'virtual centres of excellence'".*[15]

15 *A new Framework Programme for European Research. Proposal for a Decision of the European Parliament and of the Council concerning the multi-annual Framework Programme 2002-2006 (COM 52001) 94 final of 21 February 2001.*

It is strongly recommended to adopt a wide definition of **entity**, which currently refers to a range of institutions implementing research, such as universities and public and private research establishments, to include **research groups** in which women may be numerously represented. These research groups may be located within individual departments of research institutions, may link departments within or between institutions, or may take the form of European networks.

Actions to ensure gender expertise of the expert groups and panels, which are to be established to work on Networks of Excellence are recommended, in order to include the gender dimension in their work. The establishment of specific working group on gender aspects should be considered in order to provide the Commission and the expert groups and panels with high-quality advice.

***Integrated projects** are instruments proposed to mobilise significant resources around precisely defined objectives in terms of products, processes and scientific and technological knowledge. These projects will be carried out by consortia, often involving strong university/industry collaboration.*

It is recommended that specific invitations could be made to encourage integrated project proposals from teams and partnerships involving gender experts. Furthermore, individuals and entities possessing excellence in gender in relation to each thematic area of the new programme could be identified and registered in a database. This would also provide sources of gender expertise for other parts of programme implementation such as evaluations, expert groups and high-level events.

Science and society

The activities to be implemented under the science and society part of the new Framework Programme encourage the development of harmonious relationships between science and society in Europe as a result of the establishment of new relations and an informed dialogue between researchers, industrialists, political decision-makers and citizens.

The actions to be implemented under this area provide valuable opportunities to promote gender equality in science and research. It is strongly recommended to develop a specific gender mainstreaming strategy for these actions ensuring, for example, gender-sensitive themes and topics, gender-neutral language and images, equally accessible locations and media, high-profile awareness raising initiatives addressing diversity and gender equality of prizes and competitions.

Annex 1.
Glossary of gender concepts

Gender research has, as have other disciplines, developed its own terminology. The purpose of this glossary is to provide brief definitions of the main gender concepts for those readers without extensive gender expertise.

Sex and gender differences

The existing differences between women and men are of a biological and social nature. Sex refers to the biologically determined differences between women and men. Gender refers to the social differences. These are learned, changeable over time and have wide variations both within and between cultures. For example, while only women can give birth (biologically determined), biology does not determine who will raise the children (gendered behaviour).

Gender blind

A perspective which completely ignores the gender dimension, or differences between women and men. For instance, policies can be gender blind if the differences between women and men are not considered, although they are relevant for the policies concerned. Gender blind policies often implicitly reproduce the male norm.

Gender equality

Gender equality refers to a situation in which all human beings are free to develop their personal abilities and make choices without limitations set by strict gender roles. The different behaviour, aspirations and needs of women and men are equally valued and favoured.

Gender impact

There are substantial differences in the lives of women and men in most fields. These differences may cause apparently neutral policies to impact differently on women and men and reinforce existing inequalities. This is known as a gender impact.

Gender sensitive

Policies are gender sensitive if they take into account the particularities pertaining to the lives of both women and men, while aiming at eliminating inequalities and promoting an equal distribution of resources.

Horizontal gender segregation

Horizontal segregation refers to concentration rates in certain occupational sectors or disciplines.

Leaky pipeline

The term used to describe the gradual loss of women from science throughout the career path, even though women and men go into higher education in equal numbers.

Positive/ affirmative action

Agreed unequal treatment or incentive measure to compensate discrimination and improve gender equality.

Sex counting

Gender is treated as a biological statistical variable only. For example, if the objectives of an equal opportunities policy were based only on a sex counting approach, they would be fulfilled if the balanced participation of women and men were ensured.

Sex-dissaggregated statistics

Statistics divided by sex.

Vertical gender segregation

Vertical segregation concerns the position of women and men within the hierarchies of science.

Annex 2. Glossary of terms related to the Fifth Framework Programme

This glossary provides definitions of the key terms related to the Fifth Framework Programme used in this report, but not explained in the text. More information about the structure of the FP5 and its various programmes, can be found on the Internet. General information is available on the EUROPA site: http://europa.eu.int/comm/research/, and more detailed information on the CORDIS site: http://www.cordis.lu/.

Associated State

Associated States have entered into an agreement with the Community involving reciprocal rights and obligations. Under the Fifth Framework Programme they may participate as non-EU legal entities with Community funding. The Associated States are : Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Iceland, Israel, Latvia, Liechstenstein, Lithuania, Malta, Norway, Poland, Romania, Slovakia, Slovenia.

CORDIS

Community Research and Development Information Service. The service consists of an Internet site providing information on Community RTD, together with paper-based and electronic information services.

CRAFT

Co-operative Research Action For Technology. A special shared-cost measure designed to encourage the participation of SMEs in European research projects. It enables at least three mutually independent SMEs from at least two Member States to jointly commission research carried out by a third party.

External Advisory Group (EAG)

The role of the External Advisory Groups is to provide the Commission with independent advice concerning the content and direction of research work to be carried out under the key actions of the Fifth Framework Programme.

Framework Programme (FP)

A multi-annual (normally five-year) programme defining EU RTD policy, priorities and the overall budget to be allocated. It is implemented through specific programmes.

Generic activities

(Research and technological development activities of a generic nature)

Generic activities are carried out in a limited number of areas not covered by the **Key Actions**. Complementing the key actions, their main aim is to help the Community maintain and improve its scientific and technological capability in those areas of research and enabling technologies which should be used widely.

JRC

The Joint Research Centre is the European Union's scientific and technical research laboratory, an integral part of the European Commission providing the scientific advice and technical know-how to support EU policies. Its institutes carry out extensive research of direct concern to European citizens and industry.

Key action

The Fifth **Framework Programme** consists of specific programmes which are divided into 19 Key Actions (plus activities allowing RTD on generic technologies and support to research infrastructure). Each Key Action has a defined set of objectives, addresses critical problems and ensures an integrated, problem-solving approach. It targets many and varied aspects of economic and social issues, and normally supports the entire spectrum of disciplines and activities, ranging from basic research, through applied and generic research, to development and demonstration.

Marie Curie Fellowships

Marie Curie fellowships are either fellowships where individual researchers apply grants directly from the Commission, or host fellowships where institutions apply to host a number of researchers.

National Contact Points

Programme-specific National Contact Points of the FP5 are located in the Member States and in the countries associated to the FP5. They promote the individual programmes at national level and give assistance to organisations submitting proposals under the FP5.

Research Training Networks and Thematic Networks

Research Training Networks are shared-cost actions which promote training-through-research especially for researchers at pre-doctoral and at post doctoral level, while thematic networks aim to bring together manufacturers, users, universities and research centres around a given scientific and technological objective.

RTD

Research, technological development and demonstration activities

SME

Small and Medium-sized Enterprises. A common definition at the Commission level is: a maximum of 250 employees, a turnover of less than 40 million EUR or a balance sheet of less than 27 million EUR, and less than 25% owned by one, or more, non-SMEs – except an investment or venture capital company not exercising control.

Work programme

A description of the research objectives and priorities required to achieve the strategic objectives of a specific programme, and serving as a basis for the call for proposals to the scientific community.

Annex 3. Main study-specific recommendations not addressed in Chapter 4.

Studies	Main study-specific recommendations
Quality of Life	• Inclusion of women and minorities in clinical research required – European guidelines and harmonisation concerning the issue are to be stimulated. • Awareness for sex differences in genomics, basic and molecular research called for. • Research should take into account the gendered effects of common policies for sustainable agriculture, fisheries and forestry. • Research themes launched under the emergent needs (area 1.2. of the proposal for the new Framework Programme for RTD 2002–06): populations with particular health needs, environmental health, occupationally related diseases, diseases without diagnosis[1]. • Continuation of studies into ethical and socio-economic aspects of life sciences called for. • Exploitation of insights of science and technology studies on the co-construction of technology and users and on interactive ways of technology assessment wanted.
IST	• The work of the ISTAG should be reviewed to ensure that it is more gender sensitive. • The gender sensitivity of the IST programme promotion should be reviewed. Women's experience of the Information Society should be researched and the findings fed back into the policy-making process. • DG INFSO should co-ordinate the collection and analysis of data on the socio-economic profile of IST users (as citizens, workers and consumers), leading to a greater understanding of the gender dimension of user communities. • DG INFSO could co-ordinate research into women and information society related professions, feeding results into future developments of the IST programme.

1 The Quality of Life Study introduced a detailed set of recommendations for integrating the gender dimension in the research areas of the programme and especially attuned to the new Framework Programme. The priority areas for the gender integration cover genomics and biotechnology for health and food safety and health risks – in these areas sex differences have the particular impact on genomics and basic/molecular research. These recommendations of the study can be reviewed in the final report of the study.

Energy

- Affirmative actions should be undertaken at Member State level to encourage the participation of women in the energy sector.
- The ENEQO project should be extended beyond the electricity industry – its actions should be applied to all the sectors of energy.
- A European research network of women in renewable energy should be established.
- The gender-integrated and more socio-economically oriented research should be encouraged under the Key Action 6 "Generic Activities".
- A dialogue and public debate called for at European level on the issues addressing women and energy.
- Awareness raising and training on gender mainstreaming needed among the Commission staff responsible for the management of the Energy Programmes.
- The Eurobarometer survey should present sex-disaggregated statistics, indicating both women's and men's views on, for example, energy priorities.

Environment

- The participation of women in the EAG "Users and Regulators" and the percentage of representatives of "Users and Regulators" amongst the EAGs in general should be increased.
- A Network of Excellence of gender and environment researchers should be established.
- Three basic gender dimensions should be addressed at the content level of environmental research: 1) women's work / gendered division of labour, 2) the organisation of intimacy and 3) the shaping power of women in science, technology and politics.
- Gender aspects could be explored in topics such as environmental education, health, risk prevention and risk mitigation, needs, attitudes and knowledge.
- The understanding of stakeholders within environmental research should be broadened towards gender and diversity (eg. different social target groups).
- In addition to research on gender issues in applied research there should be a place for a type of basic research on "gender and environment"[2].

INCO

- Gender impact assessment protocols should be implemented in all research activities supported.
- Specific "gender-budgets" should be formed to allocate resources for eg. strategy implementation, pilot research initiatives, networking and support activities advancing the understanding of gender – the allocation of existing research resources should be reviewed from the gender perspective.
- Strengthening of regional partnerships needed.
- Local capacities of partner countries should be reinforced to reflect and express priorities in the development of research agendas.

2 The Environment Study introduced a detailed set of recommendations for integrating gender in the different research areas of the programme. See final report of the study.

Innovation and SME

- The IRC and NCP networks and other instruments (eg. LIFT helpdesk, SME line) could participate in the collection of gender-disaggregated data and act as repositories of gender-relevant information (in areas where this is particularly lacking).
- Gender should also be included in current tools (eg. CIS and Trend Chart of Innovation) used to evaluate the socio-economic impact of innovation and related policies.
- The Work Programme should include specific activities responding to gender issues identified in the field such as support activities identifying and eliminating barriers to women's participation in business life or activities focusing explicitly on women (eg. similar to the ETI measures).
- Specific initiatives aimed at enhancing the position of women entrepreneurs could be implemented in the sectors of finance, mentoring and networking.
- Activities of the other FP5 programmes, in particular those having a socio-economic approach, should be harnessed to support the gender mainstreaming in the Innovation and SME Programme.

Human Potential

- The Work Programme could include a specific Task on gender focusing on gender equality and mainstreaming policies at European level as well as the gender dimension in socio-economic knowledge.
- "Raising Public Awareness" actions should be exploited better in the promotion of gender equality in science and technology.
- Future socio-economic research should focus on gender and science, eg. the gendered construction of science, gender and the social, economic and human sciences, how gender awareness changes scientific paradigms and research methods, the production and reproduction of gender by science[3].
- Policy-oriented research is called for improving the understanding of gender and gender mainstreaming in general as well as in relation to important policy areas.
- More attention should be given to ethical research methodologies and participatory or empowering research processes.
- Future activities should pay particular attention to facilitating gender equality in mobility actions.

3 The Human Potential Study introduced a detailed set of recommendations for integrating gender in the different research areas of the programme. See final report of the study.

Final Reports of the gender impact assessment studies of the Fifth Framework Programme

- Ineke Klinge & Mineke Bosch (2001). Gender in Research – Gender Impact Assessment of the specific programmes of the Fifth Framework Programme – Quality of Life and Management of Living Resources.
- Ecotec (2001). Gender Impact Assessment of the Specific Programme of the FP5 User-friendly Information Society.
- Joy Clancy, Deborah Cornland & Jenniy Gregory (2001). Gender in Research – Gender Impact Assessment of the specific programmes of the Fifth Framework Programme – Energy, Environment and Sustainable Development – Energy sub–programme.
- Irmgard Schultz, Diana Hummel, Doris Hayn & Claudia Empacher (2001). Gender in Research – Gender Impact Assessment of the specific programmes of the Fifth Framework Programme – Energy, Environment and Sustainable Development – Environment and Sustainable Development sub-programme.
- Marguerite Appel, Jo Beall, Kristien de Boodt, Sue Fleming, Charlotte Martin & Marni Pigott (2001). Gender in Research – Gender Impact Assessment of the specific programmes of the Fifth Framework Programme – Confirming International Role of Community Research.
- SOCINTEC (2001). Gender Impact Assessment of the Specific Programme of the FP5 – Promotion of Innovation and Encouragement of Participation of Small and Medium-sized Enterprises.
- Mary Braithwaite (2001). Gender in Research – Gender Impact Assessment of the specific programmes of the Fifth Framework Programme – Improving Human Research Potential and the Socio-economic Knowledge Base.

Interested in Women and Science?

For further information about action taken at European level to promote gender equality in research, please consult the Women and Science web-site: http://www.cordis.lu/rtd2002/science-society/women.htm

A great deal of additional information on the European Union is available on the Internet. It can be accessed through the Europa server (http://europa.eu.int).

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